THE CANADA YEAR BOOK 1954

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ON THE DAY OF HER CORONATION
JUNE 2, 1953

THE CANADA YEAR BOOK 1954

THE OFFICIAL STATISTICAL ANNUAL OF THE RESOURCES, HISTORY, INSTITUTIONS, AND SOCIAL AND ECONOMIC CONDITIONS OF CANADA

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PREFACE

The Canada Year Book, the official annual compendium of information on the institutions and the economic and social development of the nation, presents extensive statistical and analytical commentary designed to describe and co-ordinate essential elements in the progress of Canada.

While the regular chapter material has been brought up to date, special feature articles of current interest have been introduced in the 1954 edition including the following: "The Barren-Ground Caribou" (pp. 33-36); "Crown Corporations" (pp. 79-86); "International Activities" (pp. 103-117); "The National Health Grant Program" (pp. 215-223); "Scientific and Industrial Research" (pp. 341-356); "Major Developments in Organization and Policy of the Federal Department of Agriculture" (pp. 366-370); "Administration of Crown Forests in Canada" (pp. 458-465); "Developments in Canada's Mineral Industry" (pp. 482-506); "Canadian Crude Petroleum Situation" (pp. 540-544); "Review of Canadian Manufacturing" (pp. 615-619); "Canals of the St. Lawrence Waterway" (pp. 830-833); "History of Pipeline Construction in Canada" (pp. 861-869); "Review of Foreign Trade" (pp. 961-967); and "Post-War Financial Policy" (pp. 1061-1065).

The present edition continues the extended analysis of the 1951 Census of Canada introduced in the 1952-53 Year Book. A summary of census statistics on dwellings, households and families appears in the Population Chapter along with other basic demographic material; statistics of the 1951 Census of Agriculture relating to farms, farm operators, mechanization, electrification, area, crops and live stock appear in the Agriculture Chapter; labour force statistics of the 1951 Census are given in the Labour Chapter. The 1951 Census of Merchandising and Service Establishments will be analysed in the 1955 edition of the Year Book.

In addition to the special articles and demographic material mentioned above, the current edition introduces other new features in its various chapters. References to the Revised Statutes of Canada 1952 have been made throughout the volume when citing Acts administered by Federal Departments of Government. Those portions of Chapter II, "Constitution and Government", dealing with the Executive and Legislative branches of the Federal Government have been transferred to Appendix I at the close of the volume to permit the publication of data becoming available subsequent to the General Election of Aug. 10, 1953. In Appendix II are listed the personnel of three provincial governments elected to power during the summer months of 1953. Moreover, Canadian citizenship statistics have been augmented; the tables of vital statistics have been recast to show the main trends since 1921; occupational trends of the labour force have been tabulated on a decennial basis since 1901; an extended analysis of capital expenditures on construction, machinery and equipment has been introduced covering the three years 1951-53. Numerous new diagrams and maps (listed at p. vii) assist in portraying the remarkable economic development of Canada presented in summary for 1952 and 1953 in the Introduction to the volume (pp. xi-xviii).

The "Statistical Summary of the Progress of Canada, 1871-1952" has been transferred to Chapter XXVIII, "Sources of Official Information and Miscellaneous Data", which includes also a directory of such sources, a reference list of special

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articles published in former editions of the Year Book, a register of official appointments, a list of federal legislation passed during 1952-53, and a Canadian chronology of events since 1867.

A large, folding map of Canada (1953), especially printed for the Year Book, is provided in the pocket on the inside back cover of the volume.

The co-operation of numerous officials of the various Departments of the Federal and Provincial Governments in the preparation of material for the Year Book is hereby gratefully acknowledged. Where possible, credit is given to the persons and various services concerned by means of footnotes to the respective sections.

The present volume has been produced in the Information Services Division of the Bureau under the editorship of C. C. Lingard, M.A., Ph.D., Director of the Division, assisted by Miss Margaret Pink and the Canada Year Book Staff. Charts and graphs have been prepared under the direction of J. W. Delisle, Senior Draughtsman of the Bureau.

With a view to the improvement of future editions, the Director welcomes information bearing on any errors or omissions that may have escaped notice and suggestions respecting methods of treatment.

Herbert Marshall

Dominion Statistician.

Dominion Bureau of Statistics,
Ottawa, Jan. 18, 1954.

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WEIGHTS AND MEASURES AND OTHER INTERPRETATIVE DATA

In Canada, as a rule, the imperial system of weights and measures is followed. An exception, however, is the ton where, unless otherwise stated, the short ton of 2,000 lb. is meant.

The following table shows the weights and measures used in Canada in connection with the principal field crops and for wheat flour and fruits:—

	Pounds per Bushel
Grains—	
Wheat	60
Oats	34
Barley	48
Rye	56
Buckwheat	48
Flaxseed	56
Corn	56
Mixed grains	50
All others	60

Wheat Flour—

1 barrel equals 196 pounds and approximately 4·5 bushels of wheat are used in the production of a barrel of flour.

	Pounds
Fruits (standard conversions)—	
Apples, per barrel	135
Apples, per box	43
Pears, per bushel	50
Plums " "	50
Cherries " "	50
Peaches " "	50
Grapes " "	50
Pears, per box	42
Strawberries, per quart	1·25
Raspberries " "	1·25
Loganberries " "	1·25

Relative Weights and Measures, Imperial and United States

The following tables of coefficients may be used to translate amounts expressed in one unit to the other.

1 Imperial pint = 20 fluid ounces.
1 United States pint = 16 fluid ounces.
1 Imperial quart = 40 fluid ounces.
1 United States quart = 32 fluid ounces.
1 Imperial gallon = 160 fluid ounces.
1 United States gallon = 128 fluid ounces.
1 Imperial proof gallon = 1·36 United States proof gallon.
1 Short ton = 2,000 pounds.
1 Long ton = 2,240 pounds.
1 Barrel crude petroleum = 35 Imperial gallons.

FISCAL YEARS OF FEDERAL AND PROVINCIAL GOVERNMENTS

The fiscal year of the Federal Government and of each of the ten Provincial Governments ends on March 31.

Throughout the Year Book, fiscal-year figures are indicated in the text and headings of tables; in all other cases figures are for calendar years.

THE CANADIAN ECONOMY IN 1953*

Since 1950, Canada's national output has been increasing at an annual rate of about 6 p.c., nearly double the rate of earlier post-war years. The increased level of activity began with the broad expansion in demand that accompanied the defence build-up in NATO countries following the outbreak of hostilities in Korea. The effect on the Canadian economy was to increase the demands on certain end products immediately required, to increase exports of basic materials, and to accelerate the expansion of defence and defence-supporting industry and resource development. These demands, together with a temporary surge of precautionary buying on the part of both consumers and business, had an inflationary effect on prices that diminished as speculative influences subsided and as production increased.

By late 1952, defence demands were levelling off, exports, apart from grain shipments, had lost their previous buoyancy, and non-defence activity such as housing was resuming importance in the capital expenditure program. The high and rising level of domestic consumer demand was becoming an increasingly important stimulus to the continued growth of the Canadian economy, while the level of imports was rising to supplement expanding domestic production.

Although the nature of the stimuli has been changing, the strong expansionary trend of the previous years has continued in 1953. National output in 1953 has increased by about 5 p.c., in both value and volume, over that in 1952. Increased production has been accompanied by higher employment and income levels. The labour force, augmented by a sustained flow of new immigrants, has continued to expand. Yet, on the whole, manpower has been fully employed. At the same time, prices have remained generally stable with only limited variation in certain of the principal price indexes since mid-1952. The General Wholesale Price Index held within a range of 1·5 p.c. for a year after September 1952, and except for the two extreme months, May and August, the range in that period was 0·5 p.c. The Consumer Price Index declined 3·2 p.c. between January 1952 and May 1953, then rose very moderately until October when it again turned downward. The price index of merchandise exports fluctuated less than 2 p.c. from August to August, and the import price index rose 3·5 p.c. in the same period.

The Consumer Market.—The wave of consumer buying which commenced in the latter part of 1950 levelled off early in 1951. The apparent high level of personal stocks, resistance to rising prices, the growing realization that shortages would not be as severe as first anticipated, increased taxes, and the adoption of credit controls were all factors in curtailing consumer demand. During 1952, however, most of these influences disappeared. As *money* incomes continued to increase, declining retail prices, especially of foods, were raising *real* incomes. Credit restrictions were suspended in May 1952.

By the beginning of 1953, therefore, the domestic consumer market had strengthened appreciably. This strength was to be one of the dominant features of the Canadian economy throughout the year. In the first ten months, for example, retail sales reached a total of $9,920,338,000, some 5 p.c. above the level of the corresponding period in 1952. This reflected a slightly greater increase in volume, since retail prices were lower in the second period.

* Prepared in the Economics Division, Department of Trade and Commerce, Ottawa.

The continuing strength of consumer demand has been caused primarily by the first prolonged post-war increase in per capita real income. Increasing employment levels, together with high and rising wages, have resulted in a continuing rise in labour income. For at least eighteen months the relative movements of wages and prices were such that per capita real income was increasing. Although the rate of increase slowed during the latter half of 1953, real income continued higher than in 1952.

Increases in income have been augmented by the accelerated growth of consumer credit. Net outstanding consumer credit increased sharply commencing in the second quarter of 1952, following removal of the restrictions adopted in 1950 and 1951. Since mid-1952 the increase in total consumer credit has kept pace with the rising value of retail sales, and about one-third of total sales value has been credit-financed. The purchase of consumer durables is, of course, responsible for the bulk of credit buying, with automobiles by far the largest single category affected.

Since early 1952, therefore, effective domestic consumer demand has increased. This rise has been sustained by the continued increase in money incomes and by their improved relationship to the retail price level. Consumer credit is an important supplementary element. During 1953 personal expenditure on consumer goods and services has been absorbing in the neighbourhood of 50 p.c. of final goods and services available in Canada. This compares with 48 p.c. in the second quarter of 1951 and 54 p.c. in 1949. In other words, personal consumption, having given way for a time to the more urgent needs of the defence build-up, is again increasing in relative importance.

Defence.—By the latter half of 1952 the growing domestic market began to replace the defence build-up as the principal stimulus to expansion in the Canadian economy. Preliminary indications are that total defence expenditure for 1953 will be very modestly higher than that for 1952, in contrast to a rise of more than one-half between 1951 and 1952. This levelling-off in the defence program means that it has now taken on the role of a sustaining rather than an expansionary element in the economy.

The nature of defence demands on the country's resources and output has also changed. In 1950, the immediate requirements of the operations in Korea were added to Canada's commitments under the North Atlantic Treaty. This meant not only an increased rate of procurement of end items but also a stepped-up rate of defence construction and of industrial production. A major requirement of such a program was expansion of industrial capacity. Existing facilities had to be adapted and re-tooled, and new facilities constructed not only for defence production but also for the production and processing of raw materials and for producing capital equipment. With little slack in the economy, resources had to be diverted to these ends from other uses. Although some cutting back occurred in non-defence sectors of the economy, the shift in resources was achieved principally by controlling the direction of expansion. Thus, the importance of defence expenditures in the first two years of the defence build-up lay in their stimulus to the expansion of the economy and their influence on the direction of its growth.

Construction of defence installations was well under way by the beginning of 1953, both in Canada and in Europe, and expenditures on this phase of defence have been declining. Capital expenditures on the conversion and expansion of

defence industry were also slowing down by the beginning of the year. The early stages of the defence effort absorbed considerable quantities of soft goods, such as clothing, footwear and personal gear, as Canada's Armed Forces expanded both for Korean service and to take part in NATO defence in Europe. By 1953 this aspect of defence procurement was declining in importance and expenditures on soft goods have continued to diminish. There has been, on the other hand, a growing volume of production of defence equipment. The items that required developmental work or special productive facilities have become increasingly available, and a larger proportion of output for defence has been coming from the shipbuilding, gun and ammunition, aircraft and electronics industries.

Capital Investment.—The nature of capital investment in Canada has also been changing in 1953. In the two previous years, investment was heavily concentrated in resources development, in facilities for processing raw materials and in industries producing for defence. New investment in housing and in service and business fields not essential to defence decreased during this period. These developments were accelerated by a variety of measures designed both to promote the first type of investment and to restrict the second. During this phase the annual value of new investment grew from $3,815,000,000 in 1950 to $5,122,000,000 in 1952, an increase of 20 p.c. in the first year and 12 p.c. in the second.

By 1953, as stated above, the build-up phase of the defence effort was giving way to the phase of sustained high output. Moreover, increasing production both of basic materials and of productive equipment was progressively easing the supply situation. The principal controls affecting the direction of investment had been removed by the beginning of 1953. These developments paved the way for the resumption of trends interrupted in 1950, and for catching up during the next two years on the secondary development postponed. Surveys of investment plans for 1953 showed that, while maintaining the broadening base of resource development and heavy industry, Canadian investment is moving back into fields temporarily subordinated to the defence build-up.

Total new investment in Canada in 1953, on the basis of preliminary figures, is estimated at $5,600,000,000, a 9-p.c. increase over 1952. Comparative stability of prices means a roughly similar increase in volume. New housing accounted for the largest dollar increase over 1952. The sharpest percentage increases were realized in the trade and finance groups. Reflecting the growing importance of the domestic consumer market, these expenditures represent construction of shopping centres and other retail outlets, and of wholesaling and office facilities. The investment program also reflects continued expansion in utilities such as electric power and telephone service, while railway outlays provide for the modernization of rolling-stock as well as for the extension of service to new developments of natural resources. During 1953 there has been further large-scale expansion in facilities for development and processing of natural resources. Petroleum and base metals are important in the mining category as are their processing counterparts in the manufacturing field. Several pipeline and refinery projects have been completed

or are in progress. New investment in heavy manufacturing, on the other hand, is declining in importance, while industries manufacturing for the domestic consumer market are increasing their outlays. New investment by agriculture and the construction industry has been on a smaller scale in 1953 than in the previous year.

Foreign Trade.—The world-wide upsurge in demand commencing in the latter part of 1950 had a pronounced effect on a number of Canada's basic exports, notably foodstuffs, metals and wood products. By 1953 much of the urgency previously attached to many of these demands had subsided and prices of international commodities had, in general, declined from the peaks reached earlier. Nevertheless, the physical movement of goods has shown little tendency to decline. The value of Canadian exports has remained at a high level with 1953 totals somewhat lower than those of 1952. When allowance is made for lower prices, the volume of export trade has not changed significantly.

Basically, conditions have continued favourable for Canadian exports. Non-dollar countries for the most part began 1953 with augmented dollar purchasing power and generally have maintained this position during the year with some exceptions, of which France and Brazil are the most important. In the United States, Canada's best customer, a high level of activity prevailed throughout the year. As a result, exports to that market have increased moderately, with lumber, newsprint and pork products showing significant gains.

On the other hand, sales in most overseas markets have been lower. In the United Kingdom and elsewhere in the Sterling Area, a drawing on stocks in the case of some items, together with increased availability of supplies from non-dollar sources, has resulted in considerably lower exports to these markets.

A number of South American countries have encountered increased exchange difficulties which by early 1953 were having an adverse effect on their purchases in Canada. The decrease in exports to these countries was especially marked in the first half of the year by contrast with the same period of 1952. Much of this decline was accounted for by lower automobile shipments. These had been unusually large during the early part of 1952 as a result of shipments being made from Canada on orders normally filled by parent plants in the United States.

Canadian exports to Western Germany increased but those to other European countries declined in the early months of 1953. Except in the case of France, this does not appear to have been a direct result of current exchange problems. Canadian exports seem to have suffered from the general slowing of economic activity in Europe, together with the tendency of European countries to use improved balances for increasing reserves rather than imports. Another notable feature of Canada's trade in 1953 has been the continued high level of sales to Japan which in recent years has become an important market for Canadian goods.

The increasing predominance of grains has been a feature of Canada's export trade since early in 1952. A considerable proportion of the subsequent increase in exports consisted of grain shipments. Because of poor crops in other important exporting countries, large shipments of Canadian wheat went to countries in Europe and the Near East normally supplied from other sources. In addition, the Far East began importing large quantities of Canadian barley for processing, in order to supplement short rice crops. Thus world crop conditions in 1951 and 1952

made possible unusually heavy grain shipments that contributed substantially to Canadian export totals, and the continuation of these grain shipments in the first half of 1953 increased further their share of total exports. However, in the latter half of 1953, grain exports, though still high, were below the levels of the corresponding period in 1952.

Beginning late in 1952, Canada experienced a further upsurge in imports. The underlying causes have been the very strong demand for both consumer and capital goods together with an apparent improvement in the competitive position of foreign producers. Increases in imports have been principally in the consumer goods categories, particularly durables and textiles. On the other hand, there has been some levelling off in 1953 of imports in the steel, chemicals and fuels categories, as Canadian productive capacity increased.

Increased purchases from the United States and from the United Kingdom accounted for nearly all of the higher import values in 1953. Price declines for raw materials have whittled the value of imports from the overseas Sterling Area, while totals from other areas appear to be changing very little from those of 1952.

Moderately lower exports and increased imports have resulted in a change from a positive trade balance in 1952 to a negative one in 1953. This in turn has caused a change from a surplus to a deficit in the international balance of payments on current account. However, in the foreign exchange market this deficit on current account has tended to be offset by a continued capital inflow, thus maintaining the Canadian dollar at a premium over the United States dollar.

A new International Wheat Agreement, to extend for a three-year period, was negotiated during 1953. The price provided for ranges from a maximum of $2.05 to a minimum of $1.55 per bu., both prices in U.S. funds basis No. 1 Northern in store Fort William-Port Arthur or Vancouver. Owing to the withdrawal of the United Kingdom from the Agreement, the quotas of exporting countries are reduced. Canada's quota under the Agreement amounts to 163,000,000 bu.

Canada participated in the 1953 meeting of the Contracting Parties to the General Agreement on Tariffs and Trade at which it was agreed to rebind, for an 18-month period commencing Jan. 1, 1954, the tariff changes previously negotiated under the Agreement.

Industry Conditions.—The continuation of favourable markets in 1953 has meant generally prosperous conditions throughout Canadian industry. Moreover, a more stable pattern of demand appears to have resulted in a more even balance of activity than had prevailed in the previous two years. In a number of lines, however, much of the increase in purchases of finished goods has been met through imports and, accordingly, domestic industry has not had the full benefit of the rise in final purchases.

Consumer Goods Industries.—The pick-up in consumer buying during the latter part of 1952 had, by the end of the year, brought a substantial improvement in consumer goods industries which, in the early part of 1952, had experienced considerable slack. Continuing strength in this sector has been one of the notable features of economic developments in 1953. The increase in consumer sales has been widely spread throughout all main consumer groups, including soft as well as hard goods.

Higher consumer incomes have been strikingly reflected in the consumption of food which has risen by 12 p.c. in a two-year period. Thus, per capita consumption of food has shown a significant rise for the first time since the immediate post-war years. The rise in meat consumption has been especially pronounced, beef and veal, for example, being up more than 25 p.c. in the first six months of 1953 compared with the same period in 1952.

The growth of domestic demand for household durables has also been pronounced since early 1952. In that period, low consumer buying had resulted in much unused capacity in these industries. Conditions improved during the year with strengthening of the home market and most durables industries entered 1953 at increased production levels. Continued high and rising incomes, an expanding housing program and a reviving replacement market have helped maintain demand for household appliances in 1953. Yet, during most of 1953, both production and imports have been running ahead of sales. As a result, toward the end of the year there have been signs of excessive accumulation of inventories in some appliance lines.

Sales of new passenger automobiles have shown a substantial increase over the previous record established in 1952. Aided by increased consumer credit, sales of automobiles, both new and used, have provided one of the best examples of the strength of the consumer market in Canada. Partly offsetting this growth of domestic sales, however, has been a decrease in 1953 in motor-vehicle exports, particularly to South America. Within Canada, while the strong demand has continued to attract British and American imports, the bulk of the rise in passenger-car sales has been reflected by output of Canadian factories. This, of course, has included not only assembly plants but also industries supplying raw materials, parts and accessories.

Rising incomes and the expansion of consumer credit have also been reflected in the purchase of clothing in 1953. Increases in retail sales over 1952 levels have not resulted in equivalent increases in manufacturing, however, because of a larger volume of imports both of textile fabrics and of finished garments.

Capital Goods Industries.—Activity in the capital goods industries has, of course, been strongly influenced by the changing nature of the defence and investment programs. Sales of agricultural implements and industrial machinery in 1953 have been below 1952 levels, while building materials, railway rolling-stock and office and store equipment have been in increasing demand. Higher levels of capital goods imports arose in part as a result of increasingly competitive offers among foreign sellers of mass-produced types of equipment. Perhaps more important has been the trend of investment towards industries that normally use imported machinery, such as the machine tools for manufacturing transportation equipment, and much of the apparatus used in non-ferrous metal manufacturing. At the same time, the pulp and paper industry, which uses principally domestically manufactured machinery, has been investing at a slower rate in 1953. Meanwhile, export sales of Canadian-made agricultural and industrial machinery, and office and store equipment have slowed in 1953, while exports of railway rolling-stock have been maintained at good levels.

Minerals, Forest Products and Chemicals.—Production of base metals in Canada increased in 1953, although market conditions differed considerably among the various metals. Nickel and aluminum have been in strong demand, while softer

market conditions have prevailed in the case of copper, lead and zinc. Output of the Canadian iron and steel industry has improved to such an extent that imports of primary shapes have been lower and exports higher than in 1952. Mineral production suffered considerably from the effects of labour disputes in 1953.

Production of crude petroleum has expanded in 1953 and imports have tended to level off. Exploration and development in the petroleum and natural gas industries have continued, but the emphasis in these industries has been increasingly on processing, transportation and marketing. In the case of natural gas this phase has involved complex problems that remain to be solved.

Partly as a result of the growing popularity of oil and gas as household fuels and the increasing use of diesel locomotives, both domestic consumption and imports of coal have been declining. This, together with a drop in exports in 1953, has reduced output and employment in the coal-mining industry.

The output of the Canadian chemicals industry also increased in 1953, principally in the first half of the year. This resulted not only from the opening of new capacity but also from the increased productivity of modernized existing plant. A rise in both exports and imports in the first half of the year resulted chiefly from sale of soda compounds and fertilizers to the United States and purchase of plastics materials from that country.

During 1953, the Canadian pulp and paper industry has continued to operate at a high rate of output. Wood-pulp was produced at a rate above that of 1952 during a good part of the year, and newsprint output showed somewhat less expansion. A heavy increase in the domestic use of newsprint, together with slightly greater American buying, more than offset declining exports to other countries. The expanding domestic market has also stimulated the increasing output of fine papers. During the first half of 1953, Canadian lumber production exceeded the 1952 rate, although neither domestic nor export sales kept pace during the early months of the year.

Agriculture.—Canadian agriculture has, in 1953, experienced another year of high production. Grain crops have been again exceptionally large, with wheat output estimated at 614,000,000 bu. This is second only to the all-time record set in 1952 which, in turn, had followed an unusually good crop in 1951. Despite record export sales, bumper crops in three successive years, together with good harvests in 1953 in other important grain-producing countries, have greatly increased Canada's available supply of grains. Harvests of fodder, fruit and vegetables in 1953 have not been as uniformly favourable as in the case of grains, less than average crops having been obtained for certain products particularly in the case of certain fruits.

Cattle marketings have increased substantially in 1953 but prices have been lower. In the United States, also, marketings have been heavy, resulting in prices too low to attract Canadian beef and cattle. As a result, despite the lifting of the United States embargo on live-stock products early in the year, cattle and beef exports to that market have been extremely low. On the other hand, hog marketings

in Canada have been lower in 1953 and prices have increased. With a firmer market prevailing in the United States also, a considerable volume of Canadian pork products has been sold in that country. Fluid milk production has been moderately higher in 1953 and dairy product prices have in general remained firm.

Total farm production in 1953 is estimated to be moderately lower than in the previous year. With prices of some products also lower, net farm income has declined considerably from the unusually high levels of 1951 and 1952 but remains well above those of previous years.

Summary.—Thus, 1953 has been a year of continued growth in the Canadian economy. The development of new basic material capacity has proceeded apace during the year accompanied by a marked pick-up in the rate of expansion of secondary and service facilities. Output and employment levels have increased, giving rise, in turn, to significantly higher incomes. A generally high volume of activity has prevailed in nearly all segments of Canadian industry. At the same time, markets have been more competitive. As a result of the increased flow of imports, particularly in manufactured goods lines, activity in some Canadian industries has not kept pace with the rising volume of domestic sales. By the end of 1953, expansionary trends in the economy were perhaps not quite as pronounced as earlier in the year but the over-all level of activity remained high.

SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:—

. . figures not available.

... figures not appropriate or not applicable.

— nil or zero.

- - amount too small to be expressed or where "a trace" is meant.

^{p} preliminary figures.

^{r} revised figures.

ERRATUM

Page 219, Table 1, Total of Percentage Expended, 65·9 should read 55·9.

CHAPTER I.—PHYSIOGRAPHY AND RELATED SCIENCES

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found on the facing page.*

PART I.—GEOGRAPHY*

Canada comprises the whole northern part of the North American Continent, except for the territory of Alaska. The most easterly point is Cape Spear, Newfoundland, at west longitude 52° 37′, and the most westerly point is Mount St. Elias, Yukon Territory, at west longitude 141°. The southernmost point is Middle Island in Lake Erie at north latitude 41° 41′ and northward Canada extends to the North Pole and includes the Arctic Archipelago between Davis Strait, Baffin Bay and the connecting waters northward to and along the 60th meridian on the east and the 141st meridian on the west. Thus, Canada covers in all 48° of latitude and 88° of longitude. It is bounded on the west by the Pacific Ocean and the 1,539·8 linear miles of Alaskan territory, on the south by the United States, a distance of 3,986·8 miles, and on the east by the Atlantic Ocean, Davis Strait and the dividing waters between Ellesmere Island and the Danish territory of Greenland.

Canada is the second largest country in the world, having an area of 3,845,774 sq. miles. It is exceeded in size only by the Union of Soviet Socialist Republics with 8,598,701 sq. miles.† Other comparisons are: China 3,759,191 sq. miles,† continental United States and Alaska 3,608,653 sq. miles,† Australia 2,974,471 sq. miles,† and the Continent of Europe (excluding the European part of the Soviet Union) 1,899,612 sq. miles.†

The sea-coast of Canada comprises the following estimated mileages:—

Mainland.—Atlantic 6,111, Pacific 1,579, Hudson Strait 1,245, Hudson Bay 3,157, Arctic 5,771; total 17,863 miles.

Islands.— Atlantic 8,677, Pacific 3,979, Hudson Strait 60, Hudson Bay 2,307, Arctic 26,786; total 41,809 miles.

* Revised by the Geographical Branch and the Editorial and Information Division, Department of Mines and Technical Surveys, Ottawa.

† Taken from the *United Nations Statistical Year Book, 1962.*

Canada's fresh-water area is extensive, constituting nearly 7 p.c. of the total area of the country. Its inland waterways, particularly with respect to transportation and the development of electric power, are among the most vital influences in the national economy.

1.—Approximate Land and Fresh-Water Areas, by Province

NOTE.—For a classification of land area as agricultural, forested, etc., *see* p. 20.

Province or Territory	Land	Fresh Water	Total	Percentage of Total Area
	sq. miles	sq. miles	sq. miles	
Newfoundland (incl. Labrador)	147,994	7,370	155,364	4·0
Prince Edward Island	2,184	--	2,184	0·1
Nova Scotia	20,743	325	21,068	0·6
New Brunswick	27,473	512	27,985	0·7
Quebec	523,860	71,000	594,860	15·5
Ontario	348,141	64,441	412,582	10·7
Manitoba	219,723	26,789	246,512	6·4
Saskatchewan	220,182	31,518	251,700	6·6
Alberta	248,800	6,485	255,285	6·6
British Columbia	359,279	6,976	366,255	9·5
Yukon Territory	205,346	1,730	207,076	5·4
Northwest Territories	1,253,438	51,465	1,304,903	33·9
Franklin	*541,758*	*7,500*	*549,258*	*14·3*
Keewatin	*218,460*	*9,700*	*228,160*	*5·9*
Mackenzie	*493,225*	*34,265*	*527,490*	*13·7*
Canada	**3,577,163**	**268,611**	**3,845,774**	**100·0**

Section 1.—Physical Geography

Subsection 1.—Physiographic Divisions

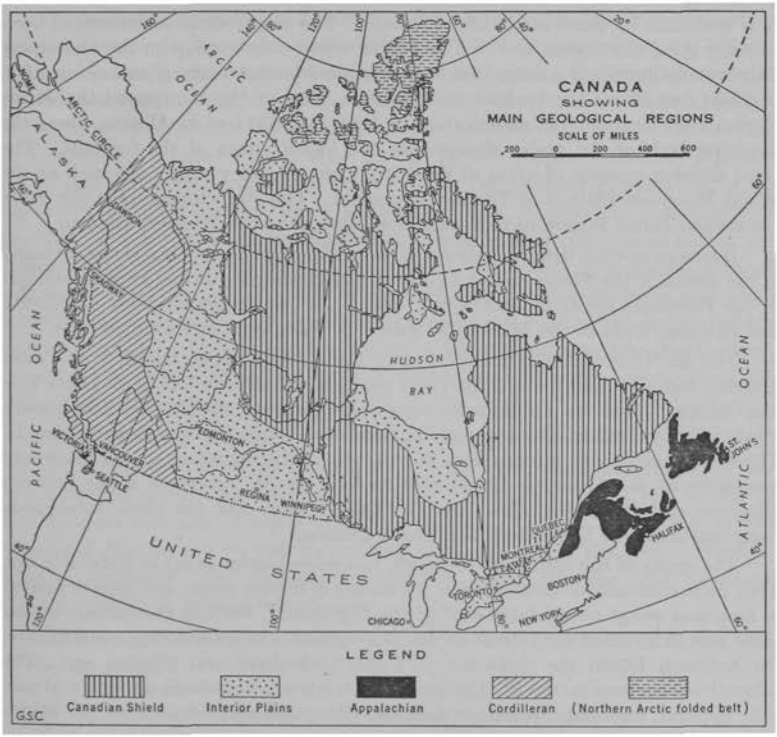
Canada divides naturally into four major physiographic regions which are differentiated by geological history and structure. They include the Canadian Shield, the Appalachian Region, the Interior Plains Region and the Cordilleran Region. A fifth division, about which much less is known, includes a belt of folded rocks of Palæozoic and Mesozoic age in the northern part of the Arctic Archipelago. The following is a short description of these regions from the standpoint of topography and geology.

The Canadian Shield.—The Canadian Shield is a vast V-shaped area of approximately 1,800,000 sq. miles surrounding Hudson Bay and extending from the coast of Labrador west to the Interior Plains Region and south to the International Border. It is an area, for the most part, of low relief rarely rising more than 1,500 to 2,000 feet above sea-level, except in Labrador where altitudes of 5,000 feet occur. Its surface is hummocky, marked by irregular hills and ridges but these, over wide areas, do not rise more than 100 to 200 feet above the adjacent lakes and valleys. The numerous lakes and rivers that are everywhere so characteristic of the Shield—for it is the great lake region of the world, probably containing more lakes than all the rest of the world put together—were formed as the result of erosion and deposition by continental glaciers that covered the region during the Pleistocene epoch.

One of these ice sheets gathered west of Hudson Bay, another in the heart of Labrador. From these centres the ice moved out in all directions and in its advance scoured off the residual soil, smoothed down the topography, polished and striated

rock surfaces and, by scattering debris irregularly, completely disorganized the drainage. The result was the formation of thousands of lakes of all sizes and shapes. In some of the temporary lakes situated in front of the ice during its retreat, clay and other fine stratified deposits accumulated forming what are known as clay belts.

Geologically, the rocks of the Shield are all very old having been formed in Precambrian time but include sedimentary, volcanic and intrusive varieties of widely different ages. In succeeding eras, the Shield suffered vertical movement at intervals but it has been unaffected by folding or mountain-building deformation. The Canadian Shield is a great storehouse of mineral wealth, particularly of metals. Its gold ores, the copper-zinc-sulphide replacement deposits of Noranda, Flin Flon, etc., and many other ore occurrences were formed by mineralizers given off by intrusive masses during the late stages of their cooling. In eastern Ontario and western Quebec, where granite has intruded limestone and other sediments, there occur deposits of mica, graphite, feldspar, magnesite, fluorite and other minerals.



The Appalachian Region.—This Region includes the Provinces of Nova Scotia, New Brunswick, Prince Edward Island, the Island of Newfoundland and that part of Quebec lying south and east of the St. Lawrence River. It is mountainous or hilly, the highest elevation—4,160 feet—is that of Mount Jacques Cartier on Tabletop Mountain, in the Shickshock Range in central Gaspe.

The rocks of this Region include sediments, volcanics and intrusives chiefly of Palæozoic age with rocks of Precambrian age in local areas on the Island of Newfoundland, New Brunswick, Cape Breton Island and southwestern Quebec. Ordovician strata in Newfoundland contain important deposits of iron. Rocks of Carboniferous age have large coal deposits and also gypsum. Zinc, lead and copper are mined at Red Indian Lake in Newfoundland and other mineral occurrences are known.

The Interior Plains Region.—The Interior Plains are part of the great plains region in the interior of the Continent and, in Canada, extend through Manitoba, Saskatchewan and Alberta northwest to the Arctic Ocean. Other areas, such as the St. Lawrence Lowlands stretching from Lake Huron northeasterly to Anticosti Island and the Hudson Bay Lowland bordering the west side of Hudson Bay, are regarded as outliers of this Region.

The Plains of Western Canada fall into three divisions. The most easterly division is known as the Manitoba Lowlands and has an elevation of about 500 feet. It is underlain by flat-lying Palæozoic strata. The second division consists of horizontally lying Cretaceous beds. The border where they overlap on the underlying Palæozoic sediments is a steep face known as the Manitoba escarpment rising 1,000 to 2,000 feet above the lowland to the east. West of the escarpment the Plains Region rises gradually to an elevation of 4,000 to 5,000 feet in Alberta where the flat-lying beds of the plains change into the folded strata of the foothills. The third division consists of areas of flat-lying rocks of still younger age such as the Wood Mountain Plateau of Tertiary sediments. The steep topographic rise from the central Plains Region to their summits is known as the Missouri Couteau.

Bituminous coal, lignites, petroleum, natural gas and bituminous sands are found in the strata of the Plains Region of Alberta and Saskatchewan and gypsum and salt in the Palæozoic strata in Manitoba. The oil in the important fields of Alberta and Norman Wells in the Mackenzie Valley, N.W.T., is from Devonian beds.

The St. Lawrence Lowlands fall into three subdivisions, the first and most westerly includes Manitoulin Island and that part of Ontario facing on Lakes Erie and Ontario. It shows a prominent topographical feature, the Niagara Escarpment, an abrupt rise of 250 to 300 feet extending from the Niagara River to Bruce Peninsula. The second subdivision extends from the east side of the Frontenac axis (a southward projection of the Canadian Shield that crosses the St. Lawrence River between Kingston and Brockville, Ont.) east to Quebec city, and the third subdivision comprises Anticosti Island and the Mingan Islands.

The strata of the entire belt of the St. Lawrence Lowlands are of Palæozoic age. They lie horizontally or with low dips, are mainly of marine origin, and were deposited in seas that swept over a large part of the Continent. Vertical movements caused these seas to advance and retreat so that the sediments deposited vary considerably. On Anticosti Island the rocks are of Upper Ordovician and Silurian age. The mineral occurrences in the St. Lawrence Lowlands are petroleum and natural gas, salt, gypsum, limestone, dolomite and also clay that can be used for the manufacture of bricks, tiles and cement.

The Hudson Bay Lowland, the other outlier of the Interior Plains, is underlain by flat-lying rocks mostly of Palæozoic age ranging from Ordovician to Devonian. It rises from sea-level with a very gradual gradient to a height of 400 feet. Lignite occurs in the Moose River Basin in beds of Upper Jurassic or Lower Cretaceous age overlying the Devonian beds.

The Cordilleran Region.—The Cordilleran Region comprises the mountainous country bordering the Pacific Ocean and covers an area of 600,000 sq. miles. It is made up of three zones. On the east is the Rocky Mountain Range, on the west along the coast is the Coast Range, and between the two is a third belt made up of upland and mountainous country.

The Rocky Mountains have a maximum width of 100 miles and peaks and elevations of from 10,000 to 12,000 feet. The Coast Range varies in width from 50 to 100 miles and rises abruptly from the coast to peaks of from 7,000 to 10,000 feet.

The northern part of the interior belt, known as the Yukon plateau, is a gently rolling upland broken into a series of flat-topped ridges by valleys several thousand feet deep; the southern part, in British Columbia, rises from 3,000 to 4,000 feet above sea-level. To the east between the upland and the Rocky Mountains are a series of mountain ranges, the Selkirks with peaks of 11,000 feet being the most important.

The geological history of the Cordilleran Region is complex but may be summarized as follows. In Precambrian time sediments which are now in the form of limestones, gneisses and schists were deposited in the interior belt. In Yukon, these strata are known as the Yukon group and in central British Columbia as the Shuswap group. These have been altered by intrusive rocks and included with them are the metamorphosed phases of much later rocks. In late Precambrian time argillites and related sediments accumulated on the site of the southern Rockies and in the region now occupied by the Purcell Mountains which are made up dominantly of quartzites of a thickness of over 20,000 feet. Sedimentation progressed during the Palæozoic era from Cambrian to Carboniferous time, and also during that of Mesozoic. Volcanism, the intrusion of granites, and mountain-building took place in the western part of the belt during the Jurassic period giving rise to the Selkirk and Coast Ranges. In late Cretaceous time and continuing over into the Tertiary, pressure from the west folded the rocks in the eastern part of the region giving rise to the Rocky Mountains.

The Cordilleran Region is a producer of gold (lode and placer), silver, lead and zinc, and contains deposits of mercury, tungsten and iron. Most of the known mineral occurrences are in the western Cordilleran belt and are related to late Mesozoic and early Tertiary granitic intrusions. Coal is widespread in the foothills of Alberta and oil and natural gas are also found in this area. Fluorite, gypsum, magnesite, hydromagnesite phosphate, saline deposits, and limestone form other valuable mineral occurrences.

Further details are given in the 1947 Year Book, pp. 19-29, and the 1951 edition, pp. 14-26.

Subsection 2.—Hydrographic Features

Lakes and Rivers.—Canada's fresh-water lakes and rivers cover an area of 268,611 sq. miles. The outstanding lakes are, of course, the Great Lakes, though only part of these are in Canadian territory. The International Boundary between Canada and the United States passes through Lakes Superior, Huron, St. Clair, Erie and Ontario. Details are given in Table 2.

2.—Elevations, Areas, and Depths of the Great Lakes

Lake	Elevation Above Sea-level	Length	Breadth	Maximum Depth	Total Area	Area on Canadian Side of Boundary
	ft.	miles	miles	ft.	sq. miles	sq. miles
Superior	602·23	383	160	1,302	31,820	11,200
Michigan (U.S.A.)	580·77	321	118	923	22,400	—
Huron	580·77	247	101	750	23,010	13,675
St. Clair	575·30	26	24	23	460	270
Erie	572·40	241	57	210	9,940	5,094
Ontario	245·88	193	53	774	7,540	3,727

There are no tides in these Great Lakes although considerable variation in water-levels is occasioned by strong winds.

Other large lakes of Canada, ranging in area from 9,000 to 12,000 sq. miles, are Lake Winnipeg, Great Slave Lake and Great Bear Lake. Apart from these, notable for size, there are innumerable lakes scattered over that major portion of Canada lying within the Canadian Shield. In an area of 6,094 sq. miles, accurately mapped, south and east of Lake Winnipeg, there are 3,000 lakes. In an area of 5,294 sq. miles, accurately mapped, southwest of Reindeer Lake in Saskatchewan, there are 7,500 lakes.

3.—Elevations and Areas of Principal Lakes, by Province

NOTE.—Areas given are for mean water levels. In the case of those reservoirs and lakes for which two elevations are given, HW means high water, LW low water, and N normal level.

Province and Lake	Elevation	Area
	ft.	sq. miles
Newfoundland—		
Deer	12	24
Gander	86	49
Grand	270	140
Melville	sea-level	1,133
Michikamau	1,650	566
Red Indian	500	65
Victoria	700	15
Nova Scotia—		
Bras d'Or	tidal	360
New Brunswick—		
Grand	tidal	65
Quebec—		
Abitibi (total, 350) part	868	55
Albanel	1,289	145
Baskatong (reservoir)	HW 732 / LW 677	109
Bienville	..	392
Burnt (Brûlé)	1,203	56
Cabonga (reservoir) (Kakabonga)	HW 1,185 / LW 1,169	66
Champlain (total, 360) part	95	18
Chibougamau	1,253	138
Clearwater	790	410
d'Iberville		260
Evans	612	180
Goëland	660	125
Indian House	..	125
Kaniapiskau	1,850	210
Kempt	1,372	63
Kipawa	884	95
Lower Seal	860	130
Manicouagan	..	110
Manuan	1,340	100
Maricourt		110
Mattagami	615	88
Minto	..	485
Mistassini	1,243	840
Nichikun	1,760	150
Olga	635	50
Payne	..	230
Pipmakan	..	90
Pletipi	..	138
Quinze, des	HW 867 / N 857	55
St. Francis, River St. Lawrence (total, 83) part	LW 151 / N 153	63
St. John	321	375
St. Louis	LW 65 / N 67	57
St. Peter	LW 11	130
Simard	856	59
Timiskaming (total, 110) part	HW 593 / N 584	55
Two Mountains	72	63
Waswanipi	680	75

3.—Elevations and Areas of Principal Lakes, by Province—continued

Province and Lake	Elevation	Area
	ft.	sq.miles
Ontario—		
Abitibi (total, 350) part	868	295
Dog	1,378	61
Eagle	1,192	137
Erie (total, 9,940) part	572	5,094
Huron, including Georgian Bay (total, 23,010) part	581	13,675
Kesagami	..	90
La Croix (total, 55) part	1,181	25
Long	1,025	75
Manitou, Kenora	1,215	60
Mille Lacs, Lac des	1,491	102
Minnitaki	1,177	72
Nipigon	852	1,870
Nipissing	643	330
Ontario (total, 7,540) part	246	3,727
Rainy (total, 345) part (reservoir)	HW 1,108 LW 1,103	275
Red	1,157	69
St. Clair (total, 460) part	575	270
St. Francis, River St. Lawrence (total, 83) part	LW 151 N 153	20
St. Joseph	1,219	187
Sandy	1,190	270
Seul (reservoir)	HW 1,172 LW 1,156	530
Simcoe	718	280
Stout, Berens River	1,039	50
Sturgeon, English River	1,342	110
Superior (total, 31,820) part	602	11,200
Timagami	962	90
Timiskaming (total, 110) part	HW 593 N 584	55
Trout, English River	1,294	156
Trout, Severn River	..	215
Woods, Lake of the (total, 1,485)[1] part (reservoir)	HW 1,062 LW 1,056	953
Manitoba—		
Athapapuskow	951	104
Atikameg	855	112
Beaverhill	651	70
Cedar	829	537
Cormorant	840	134
Cross Nelson River	679	274
Dauphin	853	200
Dog	815	64
Etawnei	..	28
Gods	585	319
Goose	935	53
Granville	850	181
Island	744	550
Kamuchawie (total, 56) part	1,153	30
Kipahigan (total, 59) part	963	29
Kiskitto	696	65
Kiskittogisu	709	99
Kississing	920	141
Manitoba	813	1,817
Molson	..	154
Moose	838	525
Namew (total, 79) part	873	8
Northern Indian	725	150
Nueltin (total, 336) part	..	76
Oxford	612	155
Paint	615	54
Pelican, west of Lake Winnipegosis	837	80
Playgreen	711	257
Reed	911	78
Red Deer, west of Lake Winnipegosis	862	86
Reindeer (total, 2,444) part	1,150	386
St. Martin	798	125
Setting	737	49
Sipiwesk	598	201
Sisipuk (total, 99) part	915	73
Southern Indian	835	1,060
Stevenson	..	75
Swan	849	100
Talbot	845	72
Todatara (total, 241) part	..	156
Walker	1,121	62
Waterhen	829	90
Wekusko	840	64
Winnipeg	713	9,094
Winnipegosis	831	2,086
Woods, Lake of the (total, 1,485)[1] part (reservoir)	HW 1,062 LW 1,056	69
Saskatchewan—		
Amisk	964	168
Athabasca (total, 3,058) part	699	2,165
Besnard	1,294	72
Black Birch	1,517	54
Candle	1,620	56
Canoe	1,415	78
Churchill	1,382	213
Cold (total, 136) part	1,756	36
Cree	1,541	350
Cumberland	871	93
Deschambault	1,072	209
Doré	1,506	248
Ile-à-la-Crosse	1,379	165
Kamuchawie (total, 56) part	1,153	26
Kipahigan (total, 59) part	963	30
La Plonge	1,476	90
La Ronge	1,250	450
Last Mountain	1,608	89
Loche, la	1,459	70
Montreal	1,608	162
Namew (total, 79) part	873	71
Nemeiben	1,259	63
Peter Pond	1,382	302
Primrose (total, 181) part	1,964	173
Quill	1,704	236
Reindeer (total, 2,444) part	1,150	2,058
Riou		75
Sisipuk (total, 99) part	915	26
Smoothstone	1,572	110
Snake	1,262	159
Tazin	1,130	156
Wollaston	1,300	768
Alberta—		
Athabasca (total, 3,058) part	699	893
Beaverhill	2,202	80
Biche, la	1,784	94
Buffalo	2,566	56
Calling	1,947	55
Claire	699	545
Cold (total, 136) part	1,756	100
Lesser Slave	1,893	461
Mamawi	699	64
Peerless	2,267	75
Primrose (total, 181) part	1,964	8
Sullivan (variable)	2,652	62
Utikuma	2,105	85

[1] Total includes 463 sq. miles in U.S.A.

3.—Elevations and Areas of Principal Lakes, by Province—concluded

Province or Territory and Lake	Elevation	Area
	ft.	sq.miles
British Columbia—		
Adams	1,334	52
Atlin (total, 308) part	2,200	307
Babine	2,330	194
Chilko	3,842	75
Eutsuk	2,817	96
François	2,345	91
Harrison	34	87
Kootenay	1,741	168
Kotcho (unsurveyed and estimated)	..	90
Lower Arrow	1,379	59
Okanagan	1,123	136
Ootsa	2,666	50
Quesnel	2,375	100
Shuswap	1,137	120
Stuart	2,225	139
Tagish (total, 138) part	2,148	93
Takla	2,270	102
Teslin (total, 161) part	2,250	65
Upper Arrow	1,395	88
Northwest Territories—		
Aberdeen	130	475
Artillery	1,190	207
Aylmer	1,230	340
Baker	30	975
Clinton-Colden	1,226	253
Dubawnt	500	1,600
Faber	753	163
Franklin	..	175
Garry	..	980
Gras, de	1,300	345
Great Bear	391	12,000
Great Slave	495	11,170
Hardisty	699	107
Hottah	..	377
Kaminuriak	320	360
Macdougal	..	265
Mackay	1,415	250
Maguse	..	540
Marian	495	90
Martre, la	..	685
Nueltin (total, 336) part	..	260
Nutarawit	..	350
Pelly	..	331
Point	..	295
Rae	748	74
Schultz	115	110
Thoalintoa	..	160
Todatara (total, 241) part	..	85
Yathkyed	300	860
Yukon Territory—		
Aishihik	..	107
Atlin (total, 308) part	2,200	1
Kluane	2,500	184
Kusawa	2,565	56
Laberge	2,100	87
Tagish (total, 138) part	2,148	45
Teslin (total, 161) part	2,250	96

The river systems of Canada, excluding those of the Arctic Archipelago, are best studied by segregating the main drainage basins as shown in Table 4.

4.—Drainage Basins

NOTE.—Classified by the Engineering and Water Resources Branch, Department of Resources and Development.

Drainage Basin	Area Drained[1]	Drainage Basin	Area Drained[1]
	sq. miles		sq. miles
Atlantic Basin		**Arctic Basin**	
Atlantic Provinces	213,885	Great Slave Lake	370,681
Great Lakes and St. Lawrence River	359,312	Arctic	559,676
Total	**573,197**	**Total**	**930,357**
		Pacific Basin	
Hudson Bay Basin		Pacific	273,540
		Yukon River	127,190
Northern Quebec	343,259		
Southwest Hudson Bay	283,997	**Total**	**400,730**
Nelson River	368,182		
Western Hudson Bay	383,722	**Gulf of Mexico Basin**	**10,121**
Total	**1,379,160**	**Area, Canada (less Arctic Archipelago)**	**3,310,396**

[1] Areas are approximate and are exclusive of those portions of the basins of all rivers that lie in United States territory.

In Eastern Canada, the Great Lakes and St. Lawrence drainage basin dominates all others and forms an unequalled system of navigable inland waterways through a region rich in natural and industrial resources. From Duluth at the head of Lake Superior to Belle Isle at the entrance to the Gulf of St. Lawrence, the distance is 2,280 miles. The St. Lawrence waterway and its tributaries, most of which have lakes available for reservoiring, have very large developed and potential power resources.

The greater part of Canada drains into Hudson Bay and the Arctic Ocean; the Nelson River drainage is exceptional in running *through* the most arable and the most settled part of Western Canada, but otherwise the rivers of the West, east of the Rockies, run *away* from the settled areas towards the cold northern salt waters and this adversely affects their industrial utility. The Mackenzie River, which drains Great Slave Lake, is, with its headwaters, the longest river in Canada (2,635 miles) and its valley constitutes the natural transportation route through the Northwest Territories down to the Arctic Ocean. From Fort Smith, on the Slave River, large river boats run without any obstruction down to Aklavik on the delta of the Mackenzie, a distance of 1,292 miles. Table 5 gives the lengths of the principal rivers with their tributaries classified according to the four major drainage basins.

5.—Lengths of Principal Rivers and Their Tributaries

NOTE.—In this table the tributaries and sub-tributaries are indicated by indentation of the names. Thus, the Ottawa and other rivers are shown as tributary to the St. Lawrence, and the Gatineau and other rivers as tributary to the Ottawa.

Drainage Basin and River	Length	Drainage Basin and River	Length
Flowing into the Atlantic Ocean	miles	**Flowing into the Atlantic Ocean**—concl.	miles
St. Lawrence (to head of St. Louis, Minn.)	1,900	Natashquan	241
Ottawa	696	Moisie	210
Gatineau	240	Hamilton	208
du Lièvre	205	Exploits	153
Coulonge	135	Naskaupi	152
Madawaska	130	Canairiktok	139
Rouge	115	Eagle	138
Mississippi	105	Miramichi	135
Petawawa	95	Marguerite	130
South Nation	90	Gander	102
Dumoine	80		
North	70	**Flowing into Hudson Bay**	
North Nation	60		
Saguenay (to head of Peribonca)	475	Nelson (to head of Bow)	1,600
Peribonca	280	Saskatchewan (to head of Bow)	1,205
Mistassini	185	South Saskatchewan	865
Ashuapmuchuan	165	Red Deer	385
St. Maurice	325	Bow	315
Mattawin	100	Belly	180
Manicouagan (to head of Racine-de-Bouleau)	310	North Saskatchewan	760
Outardes	270	Red (to head of Sheyenne)	545
Bersimis	240	Assiniboine	590
Richelieu	210	Souris	450
St. Francis	165	Qu'Appelle	270
Chaudière	120	Winnipeg (to head of Firesteel)	475
Via the Great Lakes—		English	330
French (to head of Sturgeon)	180	Churchill	1,000
Sturgeon	110	Beaver	305
Grand	165	Koksoak (to head of Kaniapiskau)	660
Thames	163	Kaniapiskau	575
Spanish	153	Severn (to head of Black Birch)	610
Trent	150	Albany (to head of Cat)	610
Mississagi	140	Dubawnt	580
Nipigon (to head of Ombabika)	130	Eastmain	510
Moira	60	Fort George (to Nichicun Lake)	480
Thessalon	40	Attawapiskat	465
St. John	418	Kazan	455
Romaine	270	Nottaway (to head of Waswanipi)	400
		Waswanipi	190

5.—Lengths of Principal Rivers and Their Tributaries—concluded

Drainage Basin and River	Length
	miles
Flowing into Hudson Bay—concluded	
Nelson (to head of Lake Winnipeg)	400
Rupert	380
Red (to head of Lake Traverse)	355
George (to Hubbard Lake)	345
Moose (to head of Mattagami)	340
Abitibi	340
Mattagami	275
Missinabi	265
Hayes	300
Winisk	295
Whale	270
Harricanaw	250
Great Whale	230
Leaf	165
Flowing into the Pacific Ocean	
Yukon (mouth to head of Nisutlin)	1,979
Columbia (total)	1,150
Fraser	850
Thompson (to head of North Thompson)	
North Thompson	304
South Thompson (to head of Shuswap)	210
Nechako	206
Stuart (to head of Driftwood)	287
Chilcotin	258
West Road (Blackwater)	146
Yukon (Int. Boundary to head of Nisutlin)	141
	714
Porcupine	590
Lewes	338
Pelly	330
Stewart	320
Macmillan	200
White	185
Columbia (in Canada)	459
Kootenay (total)	407
Kootenay (in Canada)	276
Skeena	360
Bulkley (to head of Maxam Creek)	160
Stikine	335
Alsek	260
Nass	236
Flowing into the Arctic Ocean	
Mackenzie (to head of Finlay)	2,635
Peace (to head of Finlay)	1,195
Finlay	250
Smoky	245
Little Smoky	185
Parsnip	145
Athabasca	765
Pembina	210
Liard	755
South Nahanni	350
Petitot	295
Fort Nelson	260
Hay	530
Peel (to head of Ogilvie)	425
Arctic Red	310
Slave	258
Twitya	200
Back	605
Coppermine	525
Anderson	430
Horton	275

Ocean Areas and Seas.—A comprehensive description of the ocean areas and seas of Canada would include sciences such as oceanography, marine biology and meteorology. However, the basic factor in any study of the oceanic-continental margin is the physical relief of the sea-floor and the scope of the information presented here is, therefore, restricted to this and a few salient features of the Atlantic, Arctic and Sub-Arctic and Pacific marginal seas surrounding Canada. Further details are given in the 1947 Year Book, pp. 3-12.

Atlantic.—Along this coastal area, the sea has inundated valleys and lower parts of the Appalachian Mountains as well as those of the Canadian Shield. The submerged Continental Shelf, protruding seaward from the shore, effects the transition from continental to oceanic conditions. This Shelf is distinguished by great width and diversity of relief. From the coast of Nova Scotia its width varies from 60 to 100 miles, from Newfoundland 120 to 50 miles (at the entrance of Hudson Strait), and northward it merges with that of the Polar Sea. The outer edge of the Shelf, known as the Continental Shoulder, is of varying depths of from 100 to 200 fathoms before the Shelf suddenly gives way to the steep declivity leading to abyssal depths. The over-all gradient of the Atlantic Continental Shelf is slight but the whole area is studded with shoals, plateaux, banks, ridges and islands and the coasts of Nova Scotia and Newfoundland are rugged and fringed with islets and shoals. Off Nova Scotia, the 40-fathom line lies at an average of 12 miles from

the shore and constitutes the danger line for coastwise shipping. The whole floor of the marginal sea appears to be traversed by channels and gullies cutting well into the Shelf.

The main topographical features of the Atlantic marginal sea-floor are attributed to glacial origin but land erosion is an important factor. Eroded materials are carried seaward by rivers, ice and wind, and wave action against cliffs and shore-banks washes away enormous masses that are deposited over the surrounding sea-floor. The conformation of the continental sea-floor is, therefore, constantly changing and navigation charts of Canada's eastern seaboard must be continuously revised.

Arctic and Sub-Arctic.—The submerged plateau protruding from the northern coast of North America is a major part of the Great Continental Shelf surrounding the North Polar Sea on which lie all the Arctic Islands of Canada, Iceland, Greenland and most of those of Europe and Asia. The Polar Shelf develops its maximum width on the 80th meridian of west longitude where it extends from the south of James Bay to the north coast of Ellesmere Island, a distance of over 2,000 miles.

The floor topography of this continental margin is somewhat hypothetical but sufficient has been charted to indicate an abrupt break at the northern oceanward edge. This steep continental terrace borders the whole western side of the Canadian Archipelago and constitutes one of the most striking and significant features of the Polar regions. From this declivity, deep well-developed troughs, cut by glaciers, enter between the western group of islands. A ridge across Davis Strait on which the depth is about 200 fathoms separates this basin from the open Atlantic.

Hudson Bay and Hudson Strait bite deeply into the Continent. Hudson Bay is an inland sea 250,000 sq. miles in area having an average depth of about 70 fathoms; the greatest charted depth in the centre of the Bay is 141 fathoms.

Hudson Strait separates Baffin Island from the continental coast and connects Hudson Bay with the Atlantic Ocean. It is 430 miles long and from 37 to 120 miles wide and its greatest charted depth of 481 fathoms is close inside the Atlantic entrance. Great irregularities of the sea-floor are indicated but, except in inshore waters, few navigation hazards have been located.

Pacific.—The marginal sea of the Pacific differs strikingly from the other marine zones of Canada. The hydrography of British Columbia is characterized by bold, abrupt relief—repetition of the mountainous landscape. Numerous inlets penetrate the mountainous coast for distances of 50 to 75 miles. They are usually a mile or two in width and of considerable depth, with steep canyon-like sides. From the islet-strewn coast, the Continental Shelf extends from 50 to 100 sea-miles to its oceanward limit where depths of about 200 fathoms are found. There the sea-floor drops rapidly to the Pacific Deeps, parts of the western slopes of Vancouver and Queen Charlotte Islands lying only four miles and one mile, respectively, from the edge of the declivity. These great detached land-masses are the dominant features of the Pacific marginal sea. Along the whole coast continuous navigation is afforded through an inside passage sheltered from the sea by a protective barrier of islands. As is to be expected in a region so irregular in hydrographic relief, shoals and pinnacle rocks are numerous, necessitating great caution in navigation.

Subsection 3.—Islands

The northern and western coasts of Canada are skirted by clusters of islands. Those on the north include a very large group within the Arctic Circle. On the west coast, Vancouver and the Queen Charlotte Islands are the largest and most important but the coastal waters are studded with many small rocky islands.

The Island of Newfoundland forming part of the Province of Newfoundland, the Province of Prince Edward Island, Cape Breton Island forming part of the Province of Nova Scotia, Grand Manan and Campobello Islands forming part of the Province of New Brunswick, Anticosti Island and the Magdalen group included in the Province of Quebec are the chief islands off the eastern coast.

Notable islands of the inland waters include Manitoulin Island, 1,068 sq. miles in area, lying in Lake Huron, the so-called Thirty Thousand Islands of Georgian Bay and the Thousand Islands in the outlet from Lake Ontario into the St. Lawrence River.

6.—Islands of Over 2,000 Sq. Miles in Area

Island	Area	Island	Area
	sq. miles		sq. miles
Arctic Ocean—		**Arctic Ocean**—concluded	
Baffin	178,700	Bylot	4,200
Victoria	81,930	Prince Charles	3,500
Ellesmere	81,430	Cornwallis	2,630
Banks	23,230	Amund Rignes	2,500
Devon	21,570		
Axel Heiberg	15,900	**Atlantic Ocean—**	
Melville	15,870	Newfoundland	42,734
Southampton	15,700	Cape Breton	3,970
Prince of Wales	12,830	Anticosti (Gulf of St. Lawrence)	3,043
Somerset	9,370	Prince Edward	2,184
Prince Patrick	6,000		
Bathurst	6,000	**Pacific Ocean—**	
Ellef Ringnes	5,130	Vancouver	12,408
King William	4,870		

Subsection 4.—Mountains

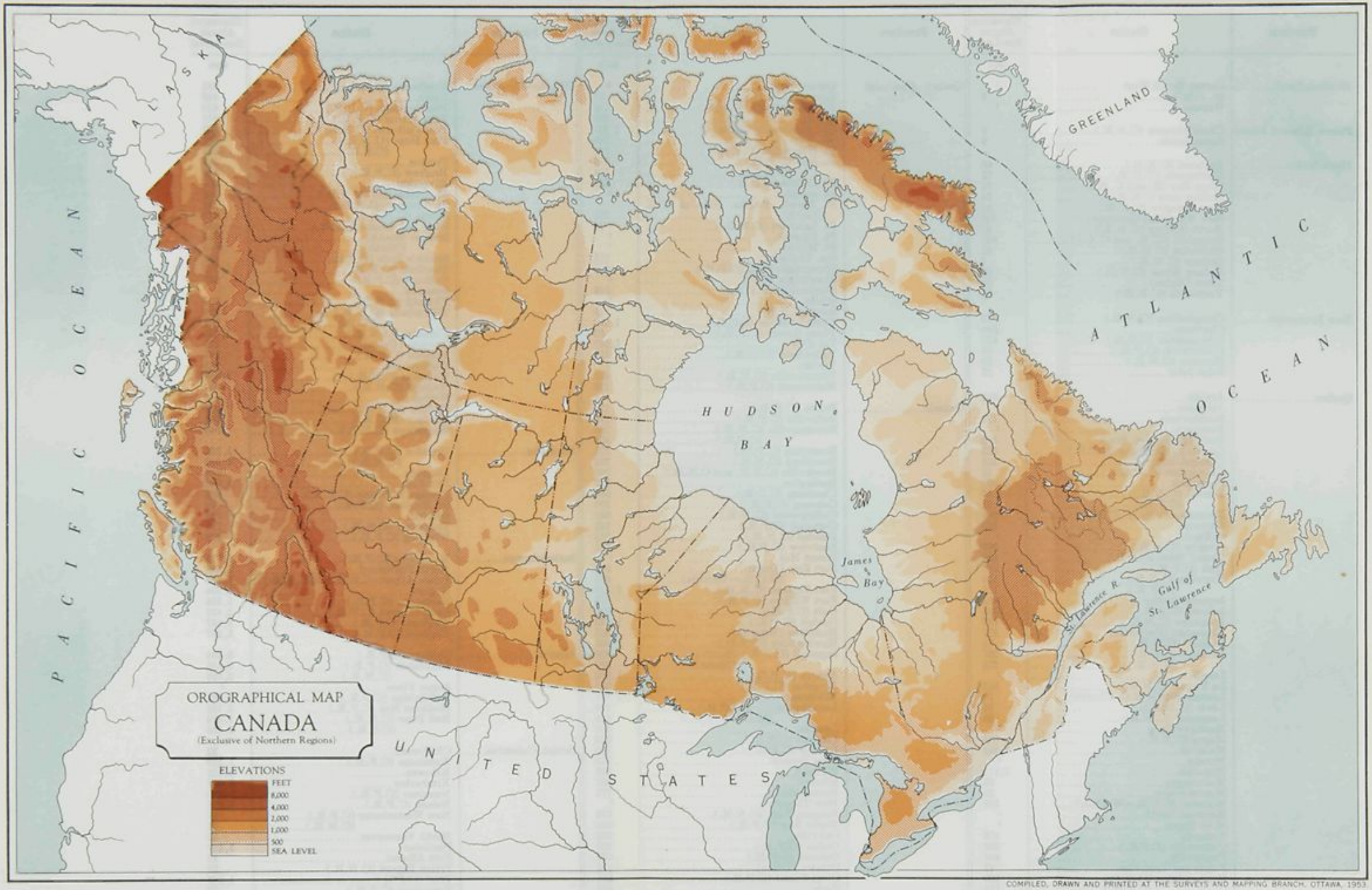
The predominant orographical feature in Canada is the Rocky Mountain System. The named peaks exceeding 11,000 feet in elevation are listed in Table 7.

7.—Mountain Peaks 11,000 Feet or Over in Elevation, by Province and Mountain Range

NOTE.—The highest elevations of Eastern Canada are peaks of the Torngats in Labrador which reach about 5,000 feet and Mount Jacques Cartier, a peak of Tabletop Mountain in the Shickshock Range of the Gaspe District, Que., which rises to 4,160 feet.

Province, Mountain Range and Peak	Elevation	Province, Mountain Range and Peak	Elevation
Alberta	ft.	**Alberta**—continued	ft.
Rocky Mountains—		Temple	11,636
Columbia[1]	12,294	Kitchener	11,500
Brazeau	12,250	Lyell[1]	11,495
The Twins	12,085	Hungabee[1]	11,457
	11,675	Athabasca	11,452
Forbes	11,902	King Edward[1]	11,400
Alberta	11,874	Victoria[1]	11,365
Assiniboine[1]	11,870	Snow Dome[1]	11,340

For footnotes, see end of table, p. 13.



COMPILED, DRAWN AND PRINTED AT THE SURVEYS AND MAPPING BRANCH, OTTAWA, 1953.

ELEVATIONS OF RAILWAY STATIONS IN CITIES AND TOWNS WITH OVER 5,000 INHABITANTS
(Census of 1951)

Province	Station	Elevation Above Sea-Level
		feet
Newfoundland	Corner Brook West	[1]
	St. John's	9
	Wabana	[1]
Prince Edward Island	Charlottetown (C.N.R.)	9
	Summerside	9
Nova Scotia	Amherst (C.N.R.)	60
	Dartmouth (C.N.R.)	13
	Glace Bay (S. and L. R.)	74
	Halifax (new C.N.R.)	24
	New Glasgow (C.N.R.)	31
	New Waterford (Junction)	103
	North Sydney (C.N.R.)	41
	Springhill (C. R. and C. Co.)	435
	Stellarton (C.N.R.)	62
	Sydney (C.N.R.)	7
	Sydney Mines (C.N.R.)	62
	Truro (Union)	62
	Yarmouth (C.N.R.)	15
New Brunswick	Campbellton (C.N.R.)	42
	Chatham	596
	Edmundston (C.P.R.)	479
	Fredericton (C.P.R.)	33
	Moncton (C.N.R.)	50
	Saint John	21
Quebec	Arvida	363
	Asbestos	[1]
	Beauharnois	129
	Beauport	[1]
	Buckingham (Jct. Sta.)	190
	Cap de la Madeleine (C.P.R.)	123
	Charlesbourg	121
	Chicoutimi (C.N.R.)	21
	Coaticook	1,006
	Dorval (C.N.R.)	86
	(C.P.R.)	91
	Drummondville (C.P.R.)	266
	Gatineau	183
	Giffard	[1]
	Granby (C.N.R.)	387
	Grand'Mère (C.P.R.)	426
	Hull (C.P.R.)	167
	Iberville (C.N.R.)	109
	(C.P.R.)	113
	Jacques Cartier	963
	Joliette (C.P.R.)	193
	Jonquière (C.N.R.)	487
	Kénogami (Jonquière)	487
	Lachine (C.N.R.)	81
	Lachute (C.P.R.)	207
	(C.N.R.)	228
	Lasalle	[1]
	La Tuque (C.N.R.)	545
	Lauzon (Site of R.C. Church)	73
	Lévis (C.N.R.)	16
	Longueuil (C.N.R.)	56
	Mackayville	[1]
	Magog (C.P.R.)	689
	Malartic	1,042
	Matane	[1]
	Mégantic	1,311
	Montmagny	55
	Montmorency	25
	Montreal (C.P.R.—Windsor)	109
	Montreal North	[1]
	Mont Royal	[1]
	Noranda	978
	Outremont (C.P.R.)	206
	Plessisville	444
	Pointe aux Trembles	43
	Pointe Claire (C.N.R.)	109
	(C.P.R.)	111
	Pont Viau	[1]
	Quebec (C.P.R. and C.N.R.)	21
Quebec—*Concluded*	Quebec West	[1]
	Rimouski (C.N.R.)	77
	Rivière du Loup (C.N.R.)	315
	Rouyn	962
	Ste. Agathe des Monts	1,207
	Ste. Foy	120
	St. Hyacinthe (C.P.R.)	109
	St. Jean (C.P.R.)	118
	(C.N.R.)	121
	St. Jérôme (C.P.R.)	308
	St. Joseph	[1]
	St. Joseph d'Alma (Site of R.C. Church)	301
	St. Lambert (C.N.R.)	75
	St. Laurent	[1]
	St. Michel	[1]
	Ste. Thérèse	121
	Shawinigan Falls (C.P.R.)	306
	Shawinigan South	[1]
	Sherbrooke (C.P.R.)	593
	Sillery	[1]
	Sorel (C.N.R.)	49
	Thetford Mines (Q.C.R.)	1,028
	Three Rivers (C.P.R.)	52
	Val d'Or	1,010
	Valleyfield (C.N.R.)	161
	Verdun	[1]
	Victoriaville (C.N.R.)	433
	Westmount (C.P.R.)	152
Ontario	Barrie (C.N.R.)	726
	Belleville (C.P.R.)	260
	Bowmanville (C.N.R.)	263
	(C.P.R.)	359
	Brampton (C.P.R.)	721
	Brantford (C.N.R.)	706
	Brockville (C.P.R. and C.N.R.)	283
	Burlington	327
	Chatham (C.P.R.)	594
	Cobourg (C.P.R.)	296
	Collingwood (C.N.R.)	589
	Cornwall (C.P.R.)	183
	Dundas (C.N.R.)	513
	Eastview (C.P.R.)	187
	Forest Hill	[1]
	Fort Erie (Union)	592
	(M.C.R.—Victoria)	605
	Fort Frances (C.N.R.)	1,122
	Fort William (C.P.R.)	617
	Galt (C.P.R.)	936
	Guelph (C.P.R.)	1,042
	Hamilton (King St.)	305
	Hawkesbury (C.N.R.)	163
	Ingersoll (C.P.R.) (South)	880
	(North)	890
	Kenora (C.P.R.)	1,090
	Kingston (C.P.R.)	253
	Kitchener	1,101
	Leamington (C. and O.R.)	620
	(M.C.R.)	628
	Leaside	430
	Lindsay (C.P.R.)	832
	London (C.P.R.)	805
	Long Branch	315
	Midland	593
	Mimico	307
	Newmarket	771
	New Toronto	[1]
	Niagara Falls (C.N.R.)	572
	North Bay (C.P.R.)	662
	Oakville	328
	Orillia (C.P.R.)	725
	Oshawa (C.P.R.)	330
	Ottawa (Union)	215
	Owen Sound (C.P.R.)	585
	Paris	829
	Parry Sound (C.N.R.)	644
	(C.P.R.)	686
Ontario—*Concluded*	Pembroke (C.P.R.)	381
	Perth	440
	Peterborough (C.P.R.)	632
	Port Arthur (C.P.R.)	614
	Port Colborne (C.N.R.)	583
	Port Hope (C.N.R.)	287
	(C.P.R.)	299
	Preston	926
	Renfrew (C.P.R.)	418
	Riverside	201
	St. Catharines (C.N.R.)	348
	St. Thomas (C.N.R.)	756
	Sarnia (C.N.R.)	612
	Sault Ste. Marie (C.P.R.)	636
	Simcoe (South)	714
	(North)	724
	Smith's Falls (C.P.R.)	428
	Stratford (C.N.R.)	1,103
	Sudbury (C.P.R.)	857
	Swansea	[1]
	Thorold (C.N.R.)	565
	Tillsonburg (C.N.R.)	759
	(M.C.R.)	803
	Timmins (O.N.R.)	1,029
	Toronto (Union)	273
	Trenton (C.P.R.)	295
	Wallaceburg	580
	Waterloo (C.N.R.)	1,058
	Welland (C.N.R.)	600
	Weston	429
	Whitby (C.N.R.)	286
	Windsor (M.C.R.)	606
	Woodstock (C.P.R.)	948
Manitoba	Brandon (C.P.R.)	1,206
	(C.N.R.)	1,262
	Dauphin	968
	Flin Flon	1,098
	Portage la Prairie (C.P.R.)	858
	St. Boniface (C.P.R.)	759
	Selkirk	744
	Transcona (C.N.R.)	771
	Winnipeg (C.P.R.)	772
Saskatchewan	Moose Jaw (C.P.R.)	1,778
	North Battleford	1,688
	Prince Albert (C.P.R. and C.N.R.)	1,414
	Regina	1,896
	Saskatoon (C.P.R.)	1,596
	Swift Current (C.P.R.)	2,432
	Weyburn (C.P.R.)	1,857
	Yorkton (C.P.R.)	1,657
Alberta	Calgary (C.P.R.)	3,439
	Edmonton (C.P.R.)	2,183
	(C.N.R.)	2,186
	Jasper Place	[1]
	Lethbridge (C.P.R.)	2,893
	Medicine Hat (C.P.R.)	2,182
	Red Deer (C.N.R.)	2,816
	(C.P.R.)	2,819
British Columbia	Chilliwack	32
	Kamloops (C.P.R.)	1,160
	Kelowna	1,131
	Kimberley	3,661
	Nanaimo (C.P.R.)	120
	Nelson (C.P.R.)	1,766
	New Westminster (C.P.R.)	12
	(C.N.R.)	34
	North Vancouver	12
	Penticton	1,127
	Port Alberni	13
	Prince Rupert (C.N.R.)	19
	Trail (C.P.R.)	1,363
	Vancouver (C.P.R.)	16
	Vernon	1,254
	Victoria (E. and N. R.)	29

[1] Elevation data not available.

7.—Mountain Peaks 11,000 Feet or Over in Elevation, by Province and Mountain Range—concluded

Province, Mountain Range and Peak	Elevation	Province, Mountain Range and Peak	Elevation
	ft.		ft.
Alberta—concluded		**British Columbia**—concluded	
Rocky Mountains—concluded		Rocky Mountains—concluded	
Stutfield	11,320	Chown	11,500
Joffre[1]	11,316	Resplendent	11,240
Murchison	11,300	King George	11,226
Deltaform[1]	11,235	Jumbo	11,217
Lefroy[1]	11,230	The Helmet	11,160
Alexandra[1]	11,214	Whitehorn	11,101
Sir Douglas[1]	11,174	Bush	11,000
Woolley	11,170	Sir Alexander	11,000
Lunette[1]	11,150		
Hector	11,135	St. Elias Mountains—	
Diadem	11,060	Fairweather[2]	15,287
Clearwater	11,044	Root[2]	12,860
Edith Cavell	11,033		
Fryatt	11,026		
Coleman	11,000	**Yukon Territory**[3]	
Wilson	11,000		
		St. Elias Mountains—	
British Columbia		Logan	19,850
		St. Elias	18,008
Coast Mountains—		Lucania	17,150
Waddington	13,260	King	17,130
Tiedemann	12,000	Steele	16,439
		Wood	15,885
Selkirk Mountains—		Vancouver	15,696
Sir Sandford	11,590	Hubbard	14,950
Farnham	11,342	Alverstone	14,500
Hasler	11,113	Walsh	14,498
Delphine	11,076	McArthur	14,400
Huber	11,051	Augusta	14,070
Wheeler	11,023	Strickland	13,818
Selwyn	11,013	Newton	13,811
		Cook	13,760
Rocky Mountains—		Craig	13,250
Robson	12,972	Badham	12,625
Clemenceau	12,001	Malaspina	12,150
Goodsir	11,676	Jeannette	11,700
Bryce	11,507	Baird	11,375

[1] This peak is on the interprovincial boundary between Alberta and British Columbia. [2] This peak is on the boundary between British Columbia and Alaska. [3] All the listed peaks are on or near the Yukon-Alaska boundary.

Section 2.—Main Physical and Economic Features of the Provinces

Politically, Canada is divided into ten provinces and two territories. Each of the provinces is sovereign in its own sphere, as set out in the British North America Act, 1867, and its amendments, and as new provinces have been organized they have been granted political status equivalent to that of the original provinces. The Yukon and Northwest Territories, with their present boundaries, are administered by the Federal Government. The chief physical and economic features of each of the provinces and of the territories are reviewed below. Details of resources and their development are given in later chapters.

Newfoundland.—Newfoundland, once the oldest colony of the British Empire, is the newest and most easterly province of Canada. It comprises the Coast of Labrador, an area of 112,630 sq. miles on the mainland, and the Island of Newfoundland. Separating the two portions is the Strait of Belle Isle, 9½ miles in width at its narrowest point. From Nova Scotia across Cabot Strait the distance is 70 miles. The Island is triangular in shape, the three sides each being about 320 miles long, and it has an area of 42,734 sq. miles. The climate of the Island is temperate, with cool summers and mild winters. Climatic conditions in Labrador are more severe.

The Island has low, rolling relief, with its highest elevations in the west where summits in the Long Range Mountains exceed 2,500 feet. Much of the surface is barren and rocky with innumerable ponds and swamps, and most of the land is unsuitable for farming. The river valleys and the west coast are thickly forested and support a thriving wood-pulp industry. The deeply indented coast line has many harbours providing safe anchorage for the fishing vessels that support the important fishing industry. Fishing, mainly for cod, is carried on along the coasts of Newfoundland and Labrador and on the Grand Banks. The Province of Newfoundland has extensive mineral deposits. Iron ore is mined from the huge Wabana deposits on Bell Island and production of iron ore from the large hematite deposits in the Labrador-Quebec region is expected to commence in 1954 following completion of the 360-mile railway to connect the deposits with the port of Seven Islands. Lead-zinc-copper ore is mined at Buchans in the interior of the Island. The vast water-power resources of Labrador are in the first stages of development.

Prince Edward Island.—This, the smallest province of Canada, is about 120 miles in length, with an average width of 20 miles and an area of 2,184 sq. miles. Prince Edward Island lies 10 to 20 miles off the mainland, east of New Brunswick and north of Nova Scotia, and is separated from these Provinces by Northumberland Strait.

The Island attains an altitude of about 450 feet above sea-level and is almost trisected by the deep indentations of Malpeque Bay and by the mouth of the Hillsborough River, which nearly meets Tracadie Bay on the north side. Its rich, red soil and red sandstone formations are distinctive features. The climate is tempered by the surrounding waters of the Gulf of St. Lawrence and, combined with fertile soil and sheltered harbours, offers great inducements to the pursuits of agriculture and fishing. The Province is noted for its production of seed potatoes, its lobster canneries, oyster beds and fur farms.

Nova Scotia.—The Province of Nova Scotia is 381 miles in length by 50 to 105 miles in width and has an area of 21,068 sq. miles almost surrounded by the Bay of Fundy, the Atlantic Ocean and the Gulf of St. Lawrence. The mainland is connected with the Province of New Brunswick by the Isthmus of Chignecto. The Island of Cape Breton, forming the northeast portion of the Province, is separated from the mainland by the narrow Strait of Canso and includes the famous salt-water Bras d'Or Lakes. On the Atlantic side, the mainland is generally rocky and open to the sweep of Atlantic storms; it is extensively indented and has numerous harbours providing safety for the large fishing fleets that support the extensive fishing industry of the Province. The slopes facing the Bay of Fundy and the Gulf of St. Lawrence are sheltered from the Atlantic by low ridges not exceeding an altitude of 1,500 feet and running through the centre of the Province. In striking contrast to the rocky Atlantic side, they present fertile plains and river valleys especially adapted by climate and situation to the growth of apples, pears and other fruits.

Nova Scotia is one of the leading provinces in the production of good-quality bituminous coal suitable for the production of coke and excellent for domestic use and for steam-raising purposes. The chief coalfields are in the Sydney and Inverness areas on Cape Breton Island, and in Pictou and Cumberland Counties on the mainland. Nova Scotia is also an important producer of salt, gypsum and barite.

New Brunswick.—New Brunswick is nearly rectangular in shape with an area of 27,985 sq. miles. The Bay of Chaleur on the north, the Gulf of St. Lawrence and Northumberland Strait on the east, the Bay of Fundy on the south, and Passamaquoddy Bay on the southwest, provide the Province with a very extensive sea-coast. It adjoins the United States on the west and the Province of Quebec on the north and northwest.

The surface of New Brunswick is mostly undulating, its highest elevation of 2,690 feet being in the vicinity of Grand Falls, on the St. John River. In the north-eastern half of the Province extensive areas of Crown lands carry valuable stands of merchantable timber and numerous rivers provide access to the lumbering areas. The Province is watered to the west and south by the St. John River, which, in its course of 400 miles, runs through country famed for its beauty.

Economically, the forest resources are of first importance followed by the fisheries, although large areas of rich agricultural land are found in the numerous river valleys, especially that of the lower St. John, and in the broad plains along the Bay of Fundy coast. The mineral resources of the Province include moderate amounts of coal, natural gas and petroleum. A development of exceptional importance occurred early in 1953 when announcement was made of the discovery of a lead-zinc-silver-pyrite deposit near Bathurst. Drilling has since outlined what appears to be a lead-zinc-copper deposit of substantial tonnage. The Federal Department of Mines and Technical Surveys carried out an aeromagnetic survey over the area in March 1950, and the anomalies shown on the resultant map and on other aeromagnetic maps of the district have been staked over an area 70 miles north-south by 40 miles east-west.

Quebec.—Quebec, the largest province of Canada, lies east and southeast of Hudson Bay; adjoining it on the south are the United States and New Brunswick, with Ontario on the west. It has an area of 594,860 sq. miles, and most of the surface is made up of Precambrian rocks of the Canadian Shield. North of the St. Lawrence is the broken rim of the Canadian Shield, rising sharply to the Height of Land (varying from 1,000 to 3,000 feet) from which it descends gently to sea-level at Hudson Bay and Hudson Strait. The Gulf of St. Lawrence and the River St. Lawrence penetrate the entire width of Quebec and divide the Eastern Townships and the Gaspe Peninsula to the south from the larger area of the Province to the north.

With the exception of the treeless zone, extending north of latitude 58°, most of the Province supports a valuable tree growth varying from the mixed forests in the southwest to the coniferous forests in the east and north. In addition to extensive timber limits, which form the basis of a great pulp and paper industry, Quebec is the foremost of the provinces in the development of hydro-electric power and has available water-power resources, at ordinary minimum flow, almost equal to those of Ontario and Manitoba combined. Quebec has made exceptionally rapid progress in the development of its mineral resources and ranks next to Ontario in annual value of mineral output. The Province produces about 70 p.c. of the world output of asbestos and is a leading Canadian producer of copper, gold and zinc. In the Quebec-Labrador region are huge deposits of hematite from which production is expected to commence in 1954. Also, important discoveries of iron ore have been made on the west side of Ungava Bay. At Allard Lake in eastern Quebec are large deposits of ilmenite, an ore of titanium and iron, output from which is shipped to Sorel for treatment. The fisheries in the St. Lawrence River and

Gulf are important and inland waters abound in game fish. The climate and soil of the upper St. Lawrence Valley and of the Eastern Townships are well suited to general farming operations, including dairying and the production of vegetables and maple products.

Ontario.—Lying between Quebec on the east and Manitoba on the west, Ontario has an area of 412,582 sq. miles and is usually regarded as an inland province but its southern boundary has a fresh-water shore line of 2,362 miles on the Great Lakes while its northern limits have a salt-water shore line of 680 miles on Hudson and James Bays.

The surface of Ontario is characteristic of the Canadian Shield, except in the southern triangle lying between the lower lakes and the Ottawa River where the surface is undulating to rolling, being higher to the west of the Niagara Escarpment, northwest of which the highest elevations are obtained. The highest point in Ontario is 2,120 feet, on the promontory at the northeastern corner of Lake Superior. Northwest from the Height of Land, the slope descends very gently to Hudson Bay where a large marginal strip (the Hudson Bay Lowlands) is less than 500 feet above sea-level.

Ontario has long been Canada's leading producer of minerals and accounts for practically all the Canadian production of nickel and for about 95 p.c. of the world output of this metal. It is a leading world source of copper and the platinum metals and, mainly as a result of developments in the Steep Rock and Michipicoten areas, it is rapidly gaining prominence as a source of iron ore. Ontario also produces several of the industrial minerals, a fairly recent addition to the list being asbestos from the Matheson area. The Province produces substantial quantities of natural gas and relatively small amounts of crude petroleum.

The Great Lakes waterways system permits economic international transportation of iron ore and coal for Ontario's basic iron and steel industries. This advantage, together with an abundance of natural resources, has made Ontario the foremost manufacturing province of Canada. Vast forest resources in proximity to hydro-electric power form the basis of a large pulp and paper industry, while the forests of the north are a rich fur preserve.

The lands along the St. Lawrence and the lower lakes possess excellent soil and constitute a highly productive farming district catering to the needs of a large urban population. In the Niagara Peninsula fruit farming has been scientifically developed into a highly specialized industry.

Manitoba.—Manitoba, covering 246,512 sq. miles, is the most central of the provinces. With the Provinces of Saskatchewan and Alberta, it constitutes the Interior or Prairie Plains section of Canada—world-renowned for the quality of its wheat.

Manitoba is a land of wide diversity, combining 400 miles of sea-coast along its northeastern boundary bordering Hudson Bay, great areas of mixed forests, large lakes and rivers covering an area of 26,789 sq. miles, a belt of treeless prairie extending to the southeastern corner of the Province, and patches of open prairie underlain by very fertile soil of great depth. The average elevation of the Province is between 500 and 1,000 feet. The greatest height of 2,727 feet is Duck Mountain, northwest of Lake Dauphin.

Most of that part of Manitoba lying north and east of Lake Winnipeg is underlain by rocks of the Canadian Shield. Within this area are numerous deposits of base metals and gold and from the mines in this area Manitoba obtains all its metal output. The largest operation is at Flin Flon where copper-zinc deposits are located. These deposits straddle the Manitoba-Saskatchewan boundary and, for a number of years, most of the output has come from the Saskatchewan portion. Large copper-nickel deposits are being developed at Lynn Lake.

Most of the southern portion of the Province forms part of the great plains region and from this area Manitoba obtains its output of several non-metallic minerals. Crude petroleum was discovered in the Virden district a few years ago and a number of wells are now in production in this general area, the present rate of output being in excess of 1,000 bbl. a day.

Saskatchewan.—Saskatchewan, 251,700 sq. miles in area, lies in the centre of the Prairie Plains between Manitoba and Alberta and extends, as do those Provinces, from the International Boundary on the south to the 60th parallel of latitude on the north. The Canadian Shield extends over the northern third of the Province. This portion is abundantly watered by lakes and rivers and is generally of low relief. It is rich in timber resources and from it comes Saskatchewan's metal output which is practically all obtained from the large copper-zinc deposits straddling the Saskatchewan-Manitoba boundary. The discovery of deposits of uranium ore in the Beaverlodge area north of Lake Athabasca has brought Saskatchewan prominently to the forefront as a potential world source of this ore; production in this area commenced in April 1953.

The southern two-thirds of the Province forms part of the great plains region and is generally fertile, with soil of great depth. Normally, there is sufficient moisture for rapid growth and the abundant sunshine during the long summer season in this northern latitude quickly ripens the crops. This portion of Saskatchewan is rich in non-metallic minerals, including the fuels, and is the source of all of Canada's output of sodium sulphate. During the past few years extensive exploration for crude petroleum and natural gas has been conducted here with increasingly successful results.

Alberta.—This Province covers 255,285 sq. miles and lies between Saskatchewan and British Columbia. The southern part of the Province is dry, treeless prairie, changing to the north into a zone of poplar interspersed with open prairie, and giving way to mixed forests. The Canadian Shield extends only into the northeast corner of Alberta so that, excepting the fringe of mountainous country on its western border, practically the whole of the Province is underlain by arable soil of great depth. Alberta has three marked physical features—the plains, the foothills, and the portion of the Rocky Mountains within its boundaries. Overlying these is the marked difference in vegetation of the arid southwest and the more humid parklands of the remainder of the Province which merges with mixed and coniferous forest. Permanent agricultural settlement reaches its farthest northern point in Canada in the Peace River Valley of Alberta. The southern half of the Province, rising towards the west, lies at a general elevation of from 2,000 to 4,000 feet but, in the northern half, the slope descends until elevations of well under 1,000 feet are reached at Lake Athabasca in the northwest corner.

Alberta has the most extensive coal resources of any of the provinces and, following the discovery of the Leduc oil field, about 20 miles southwest of Edmonton, in 1947, it is rapidly becoming a major world source of crude petroleum. Huge reserves of natural gas have been disclosed, mostly as a result of oil-drilling operations, and prospects are bright for further large discoveries of petroleum and natural gas. These resources provide the basis of Alberta's industrial development. Lumbering is important in the more mountainous western parts and in the north, and ranching is carried on in the dry sections of the south and west. In some southern prairie areas the quantity and distribution of the natural precipitation make permanent agriculture precarious and a number of large irrigation projects have been developed, taking their water supply from rivers rising in the mountains that form the western boundary of the Province. The climate of Alberta is a particularly pleasant one, cooler in summer than the more eastern parts of the country and tempered in winter by the chinook winds, particularly in the south.

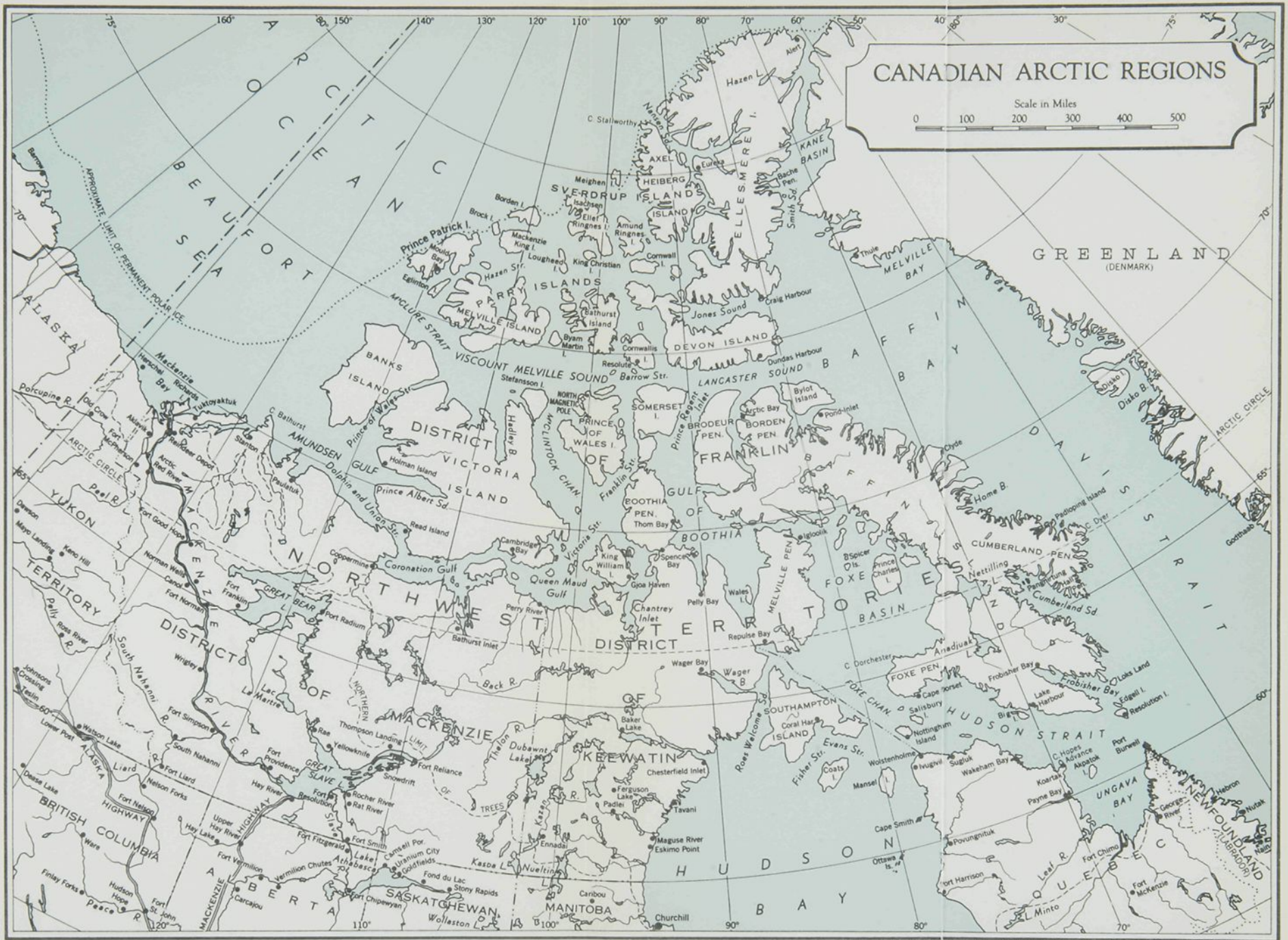
British Columbia.—British Columbia, 366,255 sq. miles in area, is the third largest and the most westerly province of Canada. It includes many islands of the Pacific, notably Vancouver Island and the Queen Charlotte Islands, the area of the former being 12,408 sq. miles.

The predominant feature of the Province is the parallel ranges of mountains that cover all except the northeast corner resulting in a set of parallel linear valleys. Many of these are extremely fertile with climatic conditions well adapted to mixed agriculture or fruit growing. Generally, the agricultural areas of these valleys are relatively small and broken. Two large areas in the Peace River Block and the Stuart Lake District have great agricultural possibilities. The shore-line of the Pacific is deeply indented with many inlets that are ideal for harbourage.

The wealth of the forest resources supports the lumbering and pulp and paper industries and places British Columbia first among the provinces in the production of lumber and timber. The Province excels in fishery products, chiefly on account of the famous Pacific salmon. The mineral resources are remarkable for their variety and wealth. Production of lead, zinc, silver, gold and, to a lesser extent, copper has played an important role in the economic life of the Province since its early days, while valuable coal deposits on Vancouver Island and at Crowsnest and Fernie in the interior have been worked for many years. The Province is one of the chief sources of tungsten ore in the free world and asbestos has been recently added to the list of minerals produced. Huge supplies of natural gas have been disclosed in the Peace River section of the Province. In water-power resources, British Columbia ranks second in Canada.

The Yukon and Northwest Territories.—These vast northern territories extend over an area of 1,511,979 sq. miles, from the 60th parallel of latitude to the northernmost limits. They comprise about 39 p.c. of the surface of Canada.

The Territories are areas of contrast and extremes in topographical characteristics, flora and fauna, and climate. Surface features vary from the treeless plains of the far north, the rolling hills of the Canadian Shield in the east, and the forested valley of the Mackenzie River, to some of Canada's highest mountain peaks in the west; from small streams and lakes to the longest rivers in Canada—the Mackenzie, which is over 2,600 miles in length, and the Yukon, which is approximately 2,000 miles long, and Great Slave and Great Bear Lakes, both of which are over 11,000 sq. miles in area.



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Since the Klondike gold rush near the close of the nineteenth century, the Yukon Territory has been an important producer of placer gold. Rich deposits of lead-zinc-silver ore occur in the Mayo area from which a substantial production of these metals is obtained. Interest in the mineral possibilities of the Yukon has been increasing steadily in recent years.

Mineral production in the Northwest Territories is still relatively small considering the size of the region but the prospects for a substantial increase seem to be bright. Oil from the Norman Wells area, pitchblende products from deposits at Port Radium on the east shore of Great Bear Lake, and gold from the Yellowknife area are the chief minerals produced.

The agricultural land of the Territories lies almost entirely in the extension into the Mackenzie Valley of the central plains of the Prairie Provinces and crops are confined to vegetable gardens. In the northern regions the flora and fauna have their own peculiar patterns. There are immense areas of lichens, which at first sight appear to be stretches of broken greyish rock. These, along with sedges, grasses, crowberries, ground-willow, etc., provide food for the caribou and muskoxen.

The winters along the Mackenzie River are bitterly cold, averaging 16° to 25° below zero, but in Yukon they are surprisingly mild and vary from 2° below to 21° below zero.

Hunting of caribou, seals, walrus and whales and fishing and trapping form the principal basis of existence for the native Eskimos, providing food and hides for the manufacture of clothing, sleeping bags, etc. The introduction of reindeer by the Federal Government in the Mackenzie District of the Northwest Territories has provided an important local industry to serve the people's needs.

PART II.—LAND RESOURCES AND PUBLIC LANDS

Section 1.—Land Resources

Extensive areas of arable and forested land, together with vast water-power resources, are the basis of Canada's industrial and commercial life. Agricultural land has been developed on a substantial scale and is well distributed from east to west. It is characterized by a diversity of contour, soil and climate and is thus capable of producing a great variety of crops in a volume well beyond domestic requirements. Of the total land area, 15·5 p.c. is estimated as suitable for cultivation and of this area a little less than 50 p.c. is, at present, occupied. Most of the unoccupied land considered potentially suitable for agriculture is now under forest. Altogether, about 37 p.c. of the total land area of the country is forested. This vast extent is of immense importance, not only in the production of lumber, pulpwood and fuel, but also in tempering the climate and conserving the water supply.

This Section of the Year Book is concerned only with those summary phases of the subject that can be regarded as falling under the definition of physiography used in its wider interpretation. Detailed information regarding individual natural resources and their development will be found in later chapters, together with data concerning the efforts directed to conservation of those resources.

Table 1 classifies the land resources as agricultural, forested or unproductive. Duplication is unavoidable between the totals of present and potential agricultural land and the totals of forested land to the extent of agricultural lands under forest. The figures of agricultural lands are based on the 1951 Census; those on forested land are obtained from the Department of Resources and Development while those for total land area of Canada and the provinces are supplied by the Surveyor General.

1.—Land Area, classified as Agricultural, Forested or Unproductive, by Province

Description	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles
Agricultural Land (Present and Potential)—												
Occupied—												
Improved—Crops and summerfallow	32	669	750	1,123	9,121	14,030	15,397	57,126	32,223	1,161	[1]	131,632
Pasture	9	309	242	381	4,196	5,055	914	2,252	1,739	536	—	15,633
Other	5	31	42	68	478	748	504	1,258	837	97	—	4,068
Unimproved—Forest (woodland)	58	541	2,884	3,194	9,179	6,020	2,832	4,602	4,477	1,807	—	35,594
Other	29	161	1,041	656	3,255	6,772	8,057	31,111	30,192	3,747	[1]	85,029
Totals, Occupied	133	1,711	4,959	5,422	26,229	32,625	27,704	96,349	69,468	7,348	[1]	271,941
Unoccupied—												
Grass, brush, etc.	[2]	64	3,677	1,056	1,500	5,899	8,541	9,242	26,872	2,948	10,065	69,864
Forested	[2]	80	3,000	9,500	36,893	61,990	16,000	23,000	45,000	11,450	4,000	210,913
Totals, Unoccupied	[2]	144	6,677	10,556	38,393	67,889	24,541	32,242	71,872	14,398	14,065	280,777
Non-forested	75	1,234	5,752	3,284	18,550	32,504	33,413	100,989	91,863	8,489	10,065	306,218
Forested	58	621	5,884	12,694	46,072	68,010	18,832	27,602	49,477	13,257	4,000	246,507
Totals, Agricultural Land[3]	**133**	**1,855**	**11,636**	**15,978**	**64,622**	**100,514**	**52,245**	**128,591**	**141,340**	**21,746**	**14,065**	**552,725**
Forested Land—												
Softwood—Merchantable	7,161[4]	90	4,600	5,000	139,080	59,891	1,835	18,937	7,700	36,344	4,200	284,838[4]
Young growth	4,059[4]	215	3,180	3,000	38,915	19,647	9,115	5,858	24,070	53,577	22,800	184,436[4]
Mixed wood—Merchantable	—	150	825	7,000	30,305	45,182	1,100	6,909	9,360	—	1,000	101,831
Young growth	—	130	480	5,000	29,658	8,967	5,120	3,273	31,430	—	5,000	89,058
Hardwood—Merchantable	—	15	1,620	1,000	4,208	19,058	1,680	8,777	3,620	—	2,800	42,778
Young growth	—	10	850	1,000	8,606	7,067	11,650	4,129	16,880	—	11,200	61,392
Totals, Productive Forested Land	11,220[4]	610	11,555	22,000	250,772	159,812	30,500	47,883	93,060	89,921	47,000	764,333[4]
Unproductive Forested Land	13,699[4]	—	—	190	115,694	63,400	62,500	62,804	37,560	124,141	76,000	555,988[4]
Totals, Forested Land	**24,919[4]**	**610**	**11,555**	**22,190**	**366,466**	**223,212**	**93,000**	**110,687**	**130,620**	**214,062**	**123,000**	**1,320,321[4]**
Net Productive Land[5]	**24,994[4]**	**1,844**	**17,307**	**25,474**	**385,016**	**255,716**	**126,413**	**211,676**	**222,483**	**222,551**	**133,065**	**1,626,539[4]**
Waste and Other Land[6]	**123,000[7]**	**340**	**3,436**	**1,999**	**138,844**	**92,425**	**93,310**	**8,506**	**26,317**	**136,728**	**1,325,719**	**1,950,624[7]**
Totals, Land Area	**147,994**	**2,184**	**20,743**	**27,473**	**523,860**	**348,141**	**219,723**	**220,182**	**248,800**	**359,279**	**1,458,784**	**3,577,163**

[1] Less than one square mile. [2] For purposes of this table, the unoccupied agricultural land of Newfoundland (figures for which are not available) is presumed to be nil. [3] Agricultural land of all classes and land that has agricultural possibilities in any sense. [4] Exclusive of Labrador. [5] Total agricultural land plus forested land minus forested agricultural land. [6] Includes open muskeg, rock, road allowances, urban land, etc. [7] Includes forested land in Labrador, area of which is not available.

Section 2.—Public Lands

In Table 2, classifying the land area of Canada by tenure, items 2, 3 and 4 are obtained from Federal Government sources and items 1, 5 and 6 from Provincial Government sources.

2.—Land Area classified by Tenure, by Province, (circa) 1953

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.
	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles
1. Alienated from the Crown or in process of alienation	6,681	2,173	15,619	16,438	36,000	41,013
2. Federal lands other than National Parks and Indian reserves	2	—	13	476	2,067[1]	1,126
3. National Parks	—	7	390	80	[2]	12
4. Indian reserves	—	4	30	59	281	2,437
5. Provincial lands, including leased lands and forest reserves but not Provincial Parks	141,269	—	4,691	10,420	465,486	298,341
6. Provincial Parks	42	—	—	—	20,026	5,212
Totals, Land Area	**147,994**	**2,184**	**20,743**	**27,473**	**523,860**	**348,141**

	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles
1. Alienated from the Crown or in process of alienation	44,727	104,413	78,377	19,695	67	365,203
2. Federal lands other than National Parks and Indian reserves	2	51	11,671	161	1,455,083[3]	1,470,652
3. National Parks	1,148	1,496	20,718[4]	1,671	3,625[5]	29,147
4. Indian reserves	819	1,881	2,370	1,283	9	9,173
5. Provincial lands, including leased lands and forest reserves but not Provincial Parks	173,027	110,656	135,555	322,388	—	1,661,833
6. Provincial Parks	—	1,685[6]	109	14,081	—	41,155
Totals, Land Area	**219,723**	**220,182**	**248,800**	**359,279**	**1,458,784**	**3,577,163**

[1] Includes the Gatineau Park (70 sq. miles) and the Quebec Battlefields Park (0·36 sq. miles) which are under federal jurisdiction but which are not technically National Parks. [2] Less than 1 sq. mile. [3] Includes 952,849 sq. miles set aside by Order in Council as native game preserves in which only Indians and Eskimos may hunt, as game sanctuaries in which hunting and trapping is otherwise forbidden, and as reserves for reindeer grazing, but which are not regarded as National Parks. [4] Includes Wood Buffalo Park (13,675 sq. miles) which, although reserved by the Federal Government, is not administered as a National Park. [5] That portion of Wood Buffalo Park in N.W.T. [6] Includes 1,392 sq. miles of unsurveyed lands—Provincial Park areas.

Subsection 1.—Federal Public Lands

Public lands under the administration of the Federal Government comprise lands in the Northwest Territories, including the Arctic Archipelago and the islands in Hudson Strait, Hudson Bay and James Bay, lands in Yukon Territory, Ordnance and Admiralty Lands, National Parks and National Historic Sites, Forest Experiment Stations, Experimental Farms, Indian reserves and, in general, all public lands held by the several Departments of the Federal Government for various purposes connected with federal administration. The Dominion Lands Act (R.S.C. 1927, c. 113) and the Ordnance and Admiralty Lands Act (R.S.C., 1927, c. 58) were repealed in 1950, while the Territorial Lands Act (R.S.C. 1952, c. 263) and the Public Lands Grants Act (R.S.C. 1952, c. 224) were enacted to replace them and became effective June 1, 1950.

The largest land areas under federal administration are the Northwest Territories and Yukon Territory amounting to about 1,458,784 sq. miles or 41 p.c. of the land surface of Canada. This part of the national domain, which is all north of the 60th parallel of latitude, is under the administration of the Northern Administration and Lands Branch of the Department of Resources and Development.

Subsection 2.—Provincial Public Lands

Public lands of Nova Scotia, New Brunswick, Quebec, Ontario and British Columbia (except the Railway Belt and Peace River Block) have been administered since Confederation by the Provincial Governments. In 1930, the Federal Government transferred the unalienated portions of the natural resources of Manitoba, Saskatchewan, Alberta and of sections of British Columbia to their respective Governments, and all lands in the Province of Newfoundland, except 6,681 sq. miles of alienated land and 2 sq. miles of federal land, became provincial public lands under the Terms of Union on Mar. 31, 1949.

All land in the Province of Prince Edward Island has been alienated except 11 sq. miles under federal administration.

Information regarding provincial public lands may be obtained from the respective provinces. (*See* the Directory of Sources of Official Information, Chapter XXVIII, under "Lands".)

Certain areas in most of the provinces have been set aside for parks and reserves; these are dealt with in Subsection 3.

Subsection 3.—National and Provincial Parks

The future of Canada in the field of outdoor recreation is being wisely provided for by the establishment of National and Provincial Parks. Many of these Parks are easily accessible by highway, rail or air and offer every type of accommodation from camping facilities to palatial hotels and cosy cabins. A wide variety of summer and winter recreational attractions are available in mountain, lakeland, woodland and seaside areas of exceptional scenic beauty.

The areas of the Parks are given in Table 3; location, year of establishment and main characteristics are given in Tables 4 and 5.

3.—Land Area of National and Provincial Parks, by Province, 1953

Province or Territory	National	Provincial	Total
	sq. miles	sq. miles	sq. miles
Newfoundland	—	42·00	42·00
Prince Edward Island	7·00	—	7·00
Nova Scotia	390·61	—	390·61
New Brunswick	79·63	—	79·63
Quebec	0·33[1]	20,026·10	20,026·43[1]
Ontario	11·74	5,212·17	5,223·91
Manitoba	1,148·09	[2]	1,148·09
Saskatchewan	1,496·05	1,685·13[3]	3,181·18
Alberta	20,718·00	109·09	20,827·09
British Columbia	1,671·00	14,081·00	15,752·00
Yukon and Northwest Territories	3,625·00	—	3,625·00
Canada	**29,147·46**	**41,155·49**	**70,302·94**

[1] Not including area of Gatineau Park, 70 sq. miles in extent (*see* p. 32). [2] Provincial park development is being carried out in some of Manitoba's forest reserves. [3] Includes Nipawin and Lac La Ronge unsurveyed lands, 1,392 sq. miles in extent.

National Parks.—From 1885, when the first National Park was established around the mineral hot springs at Banff, Alta., until 1953, 28 areas covering more than 29,000 sq. miles have been set aside as National Parks.

These Parks are maintained by the Federal Government for the protection of their flora, fauna and natural phenomena, for the preservation of their scenic beauty and interest and, in come cases, the marking of their historical significance in the building of the nation. They are supervised by the National Parks Branch, Department of Resources and Development, and are developed and maintained in such a manner as to provide perpetual inspiration, education and healthful recreation for present and future generations.

The National Parks are Canada's greatest single tourist attraction. Accommodation in privately owned hotels, bungalow cabins, chalets, lodges and cottages is available, and modern cabins have been built in several of the Parks by the National Parks Administration to afford low-rental accommodation to Park visitors. Recreational facilities include heated outdoor swimming pools with dressing-room buildings; equipped camp-grounds, some with trailer-park facilities; golf courses in superb scenic settings; tennis courts; bowling greens; well-equipped children's playgrounds; athletic fields; horseshoe pitches; outdoor checker-boards; and, in some of the Parks, amphitheatres where plays, concerts and film shows are held in the open. For winter sports there are down-hill and slalom ski courses, ski jumps, ski tows and a chairlift.

A park warden service protects the forests and wildlife and maintains constant vigilance for the safety and comfort of visitors. Stocking and transfer of game fish in order to improve angling opportunities in Park waters are carried out extensively and successfully; fish hatcheries are operated in three of the mountain National Parks. (A special article on Game Fish in Canada's National Parks is given in the 1952-53 Year Book, pp. 34-36.) Two of the National Parks are largely big-game preserves where herds of buffalo and other animals find sanctuary.

In addition to the scenic, recreational and wild animal parks, Canada has eleven national historic parks. The National Parks and Historic Sites Service of the Department of Resources and Development is also responsible for the marking, preservation and restoration of places of great historic interest in Canada. More than 450 such sites have been marked on the recommendation of the Historic Sites and Monuments Board of Canada. The most important recent additions to the list of historic places transferred to National Parks Administration are Lower Fort Garry in Manitoba, Fort Battleford in Saskatchewan, and the Citadel at Halifax, Nova Scotia.

4.—Location, Year Established, Area and Characteristics of National Parks

Park	Location	Year Established	Area	Characteristics
			sq. miles	
Scenic and Recreational Parks				
Banff	Western Alberta, on east slope of Rockies.	1885	2,564·0	Magnificent scenic recreational area; noted resorts, Banff and Lake Louise. Mineral hot springs; summer and winter sports. Accessible by rail, highway and air. Hotel and bungalow cabin accommodation. Equipped camp-grounds.

4.—Location, Year Established, Area and Characteristics of National Parks—continued

Park	Location	Year Established	Area	Characteristics
			sq. miles	
Scenic and Recreational Parks—con.				
Yoho	Eastern British Columbia, on west slope of Rockies.	1886	507·0	Lofty peaks, magnificent waterfalls, colourful lakes. Yoho and Kicking Horse Valleys. Accessible by rail and highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Glacier	Southeastern British Columbia, on summit of the Selkirk Range.	1886	521·0	Superb alpine region, towering peaks, glaciers and forests. Accessible by rail only. Climbing, skiing, camping.
Waterton Lakes	Southern Alberta, adjoining Glacier Park in Montana, U.S.A.	1895	204·0	Canadian section, Waterton-Glacier International Peace Park. Mountain playground with spectacular peaks and beautiful lakes. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Jasper	Western Alberta, on east slope of Rockies.	1907	4,200·0	Mountain playground and noted wildlife sanctuary. Majestic peaks, ice-fields, beautiful lakes and famous resort, Jasper. Mineral hot springs, summer and winter sports. Accessible by rail, highway and air. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Mount Revelstoke	Southeastern British Columbia, on west slope of Selkirks.	1914	100·0	Rolling mountain-top plateau. Colourful alpine meadows. Accessible by rail and highway. Summer accommodation in Park; all-year accommodation in town of Revelstoke. Championship ski runs and ski jump. Equipped camp-grounds.
St. Lawrence Islands	In St. Lawrence River between Morrisburg and Kingston, Ont.	1914	189·4 (acres)	Mainland area and 13 islands among Thousand Islands. Recreational and camping area. Accessible by highway: by boat from nearby mainland points.
Point Pelee	Southern Ontario, on Lake Erie.	1918	6·0	Recreational area. Remarkable beaches, southern flora. Resting place for migratory birds. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Kootenay	Southeastern British Columbia, on west slope of Rockies.	1920	543·0	Encloses Vermilion-Sinclair section of Banff-Windermere Highway. Broad valleys, deep canyons, mineral hot springs. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Prince Albert	Central Saskatchewan, north of Prince Albert.	1927	1,496·0	Forested region dotted with lakes and interlaced with streams. Summer playground and recreational area. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Riding Mountain	Southwestern Manitoba, west of Lake Winnipeg.	1929	1,148·0	Playground and wildlife sanctuary on summit of escarpment. Fine lakes. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Georgian Bay Islands	In Georgian Bay, north of Midland, Ont.	1929	5·4	Recreational and camping area. Unique pillars on Flowerpot Island. Accessible by boat from nearby mainland points. Equipped camp-grounds and annual youth camps on Beausoleil Island.

4.—Location, Year Established, Area and Characteristics of National Parks—concluded

Park	Location	Year Established	Area	Characteristics
			sq. miles	
Scenic and Recreational Parks—concl.				
Cape Breton Highlands	Northern part of Cape Breton Island, N.S.	1936	390·0	Rugged Atlantic coast line with mountain background. Fine seascapes. Recreational opportunities. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Prince Edward Island	North shore of Prince Edward Island.	1937	7·0	Strip 25 miles long on shores of the Gulf of St. Lawrence. Recreational area, fine bathing beaches. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Fundy	On Bay of Fundy between Moncton and Saint John in New Brunswick.	1948	79·5	Delightful recreational area. Forested region, wildlife sanctuary, rugged terrain. Bungalow cabin accommodation. Equipped camp-grounds.
Wild Animal Parks				
Elk Island	Central Alberta, near Edmonton.	1913	75·0	Fenced preserve containing large herd of buffalo; also deer, elk and moose. Popular recreational area. Accessible by highway. Bungalow cabin accommodation and equipped camp-grounds.
Wood Buffalo[1]	Partly in Alberta and partly in Northwest Territories, between Athabasca and Slave Rivers.	1922	17,300·0	Immense region of forests and open plains. Home of largest remaining herd of bison on the Continent. Other wildlife abundant.
Historic Parks			acres	
Fort Anne	Nova Scotia, at Annapolis Royal.	1917	31·0	Site of early Acadian settlement. Museum and well-preserved earthworks.
Fort Beauséjour	New Brunswick, near Sackville.	1926	81·3	Site of French fort erected in middle of 18th century. Museum.
Fortress of Louisbourg	Cape Breton Island, N.S., 25 miles from Sydney.	1941	339·5	Ruins of walled city erected by the French, 1720-40. Interesting excavations. Museum.
Port Royal	Port Royal, N.S., 8 miles from Annapolis Royal.	1941	17·0	Restoration of "Habitation" or first fort built in 1605 by Champlain, DeMonts and Poutrincourt.
Fort Chambly	Chambly, Que.	1941	2·5	French fort on Richelieu River, first built in 1665. Museum.
Fort Lennox	Ile-aux-Noix, Que., near St. Johns.	1941	210·0	Site of early French fort built in 1759.
Fort Wellington	Prescott, Ont.	1941	8·5	Defence post built 1812-13. Museum.
Fort Malden	Amherstburg, Ont.	1941	5·0	Site of defence post built 1797-99. Museums.
Fort Prince of Wales	Northern Manitoba, near Churchill.	1941	50·0	Ruins of fort built 1733-71 to secure control of Hudson Bay for England.
Lower Fort Garry	Manitoba, 20 miles north of Winnipeg.	1950	12·8	Stone-walled fort built by the Hudson's Bay Company between 1831 and 1839.
Fort Battleford	Saskatchewan, 4 miles south of North Battleford.	1951	36·7	North West Mounted Police post built in 1876.

[1] Administered by the Northern Administration and Lands Branch, Department of Resources and Development.

Provincial Parks.—In addition to the National Parks already described, most of the provinces have established Provincial Parks. These Parks, as in the case of the National Parks, are areas of great scenic or other interest maintained for the benefit of the public. The Provincial Parks are administered by the Provincial Governments concerned and, in most cases, have not yet reached the degree of development that marks the National Parks. In Prince Edward Island, Nova Scotia and New Brunswick there are no Provincial Parks. In Manitoba, provincial park development is carried out in certain of the province's forest reserves, particularly in Whiteshell Reserve and Cormorant Reserve.

5.—Location, Year Established, Area and Characteristics of Provincial Parks

Province and Park	Location	Year Established	Area	Characteristics
			acres	
Newfoundland—				
Serpentine.....	South of Humber Arm, west coast.	1939	26,880	Undeveloped.
Quebec—				
Laurentides.....	25 miles north of Quebec city, on both sides of Quebec-Chicoutimi highway.	1895	2,312,100	Altitude 3,000 ft. Numerous lakes, tumultuous rivers. Speckled trout, moose, deer, black bears, wolves, etc. No hunting. Three hotels and 50 fishing camps.
Trembling Mountain.	80 miles north of Montreal, Mont Tremblant Village close to the southern section of Park.	1895	782,720	Famous resort area, summer and winter. Ski school and lifts, 40 miles of ski trails, 9 ski slopes. Lac Tremblant 750 ft. above sea-level. Highest peak Mont Tremblant, 3,100 ft.
Gaspesian.....	Gaspe Peninsula.....	1937	328,960	Established to preserve caribou and wildlife on south side of St. Lawrence. Accessible from Ste. Anne des Monts, Gaspe. Speckled trout, 5 fishing camps. One hotel at Ste. Anne des Monts. Includes the highest peaks of the Shickshock Mountains. Highest peak Mount Jacques-Cartier, 4,160 ft.
Mount Orford.....	On Orford Mountain, 15 miles west of Sherbrooke.	1938	9,970	Altitude 2,860 ft. Skiing and golfing.
La Vérendrye.....	In western part of Province 140 miles northwest of Montreal on both sides of Montreal-Abitibi highway.	1939	3,038,000	Altitude 1,200 ft. Numerous lakes and rivers. Trout, pike, pickerel and bass. Tourist accommodation and stopping place. Twelve fishing camps maintained by Dept. of Fish and Game.
Chibougamau Fish and Game Reserve.	30 miles west of Lake St. John. Strip 80 miles long on both sides of Lake Chibougamau highway.	1946	2,176,000	Altitude 1,300 ft. Numerous lakes and rivers. Trout, pike and pickerel. Five fishing camps and one camping ground maintained by Dept. of Fish and Game.
Shick Shocks Fish and Game Reserve.	Adjacent to and completing Gaspesian Park.	1949	200,960	*See* "Gaspesian" above.
Kipawa Lake Fish and Game Reserve.	Approximately 8 miles northeast of Timiskaming.	1950	640,000	Altitude 1,000 ft. Numerous lakes and rivers. Trout, pike and pickerel.
Mistassini Fish and Game Reserve.	..	1953	3,328,000	Altitude 1,300 ft. Numerous large lakes. Speckled trout, grey trout, pike and pickerel.
Ontario—				
Algonquin.....	In southeastern Ontario in the District of Nipissing and the County of Haliburton, 141 miles north of Toronto, 105 miles west of Ottawa.	1893	1,754,240	Wilderness area, wildlife preserve. Hotels, summer cottage sites, camping facilities, canoe trips, fishing, bathing.

5.—Location, Year Established, Area and Characteristics of Provincial Parks—con.

Province and Park	Location	Year Established	Area	Characteristics
			acres	
Ontario—concl.				
Rondeau	In southwestern Ontario in the County of Kent, 20 miles southeast of Chatham, 70 miles east of Windsor.	1894	5,120	Partly cultivated, fine timber stands. Enclosed and wild animals. Fishing, duck - hunting, camping facilities, summer cottage sites, restaurant, store, dance pavilion, other recreational facilities.
Quetico	In northwestern Ontario in the Rainy River district. Southern boundary adjoins the International Boundary midway between Port Arthur and Fort Frances.	1913	1,190,400	Wilderness area, wildlife preserve. Camping facilities, canoe trips, fishing.
Ipperwash Beach	In southwestern Ontario in the County of Lambton, on Lake Huron, 100 miles north of Windsor, 50 miles north of Chatham.	1937	109	Sand beach, woodland area. Fishing, camping facilities, bathing.
Lake Superior	In northeastern Ontario in the District of Algoma, on Lake Superior, about 70 miles north of Sault Ste. Marie.	1944	345,600	Wilderness area, wildlife preserve. Fishing.
Sibley	In northwestern Ontario in the Thunder Bay district. On north shore of Lake Superior, 40 miles northeast of Port Arthur and Fort William.	1944	40,320	Wilderness area, wildlife preserve.
Saskatchewan—				
Cypress Hills	South of Maple Creek near International Boundary.	1932	10,880	Forest area. Bungalow, lodge and cabin accommodation, auto camp.
Duck Mountain	15 miles northeast of Kamsack.	1932	51,840	Forest and lake area. Beaches. Fish and wild life.
Good Spirit Lake	20 miles west of Canora	1932	3,827	Camp and picnic grounds. Fishing, swimming.
Greenwater Lake	North of Kelvington	1932	22,240	Forest and lake area. Swimming, fishing.
Lake Katepwa	In Qu'Appelle Valley, 14 miles north of Trans-Canada Highway from Indian Head.	1932	17	Lake area, camping, fishing, swimming, playground activities.
Little Manito	On Manitou Lake	1932	238	Medicinal waters. Chateau, cabin and tourist accommodation.
Moose Mountain	15 miles north of Carlyle	1932	98,560	Lake area. Poplar and white birch stands. Fishing.
Nipawin	35 miles northwest of Nipawin.	1934	161,280	Lodgepole pine stands. Camping, trout fishing.
Lac La Ronge	190 miles north of Prince Albert.	1939	729,600	Lake area. Spruce and poplar stands. Tourist accommodation, trout fishing.
Alberta—				
Aspen Beach	On shore of Gull Lake, west of Lacombe.	1930	70	Summer village, lake front. Recreational and picnic facilities.
Park Lake	North and west of Lethbridge.	1930	186	Recreational and picnic facilities.

5.—Location, Year Established, Area and Characteristics of Provincial Parks—con.

Province and Park	Location	Year Established	Area	Characteristics
			acres	
Alberta—concl.				
Saskatoon Mountain	In Grande Prairie district.	1930	2,240	Scenic view. Park closed at present.
Sylvan Lake	On shore of Sylvan Lake, 11 miles west of Red Deer.	1930	9	Picnic and parking facilities for transient trade to the summer resort of Sylvan Lake.
Writing-On-Stone	On Milk River east and north of Coutts.	1930	796	Natural obelisks and undeciphered hieroglyphics. Recreational and picnic facilities.
Gooseberry Lake	North of Consort	1931	1,395	Private summer cottages. Recreational and picnic facilities.
Rochon Sands	7 miles west, 9 miles north of Stettler on Buffalo Lake.	1931	77	Recreational and picnic facilities.
Lundbreck	West of Macleod on Crowsnest Pass Highway.	1932	14	Scenic area adjacent to Lundbreck Falls.
Saskatoon Island	West of Grande Prairie	1932	256	Summer cottages. Recreational and picnic facilities.
Dillberry Lake	On Alberta-Saskatchewan boundary near Chauvin.	1933	500	Private summer cottages. Recreational and picnic facilities.
Hommy	Near Albright	1935	160	Recreational and picnic facilities.
Wapiti River	10 miles south of Grande Prairie.	1936	22	Picnic facilities.
Taber	1 mile west, 1 mile north of Taber on south shore of Oldman River.	1938	83	Recreational and picnic facilities.
Crimson Lake	9 miles northwest of Rocky Mountain House.	1948	7,834	Private summer cottages. Recreational and picnic facilities.
Red Lodge	9 miles west of Bowden on Little Red Deer River.	1948	90	Recreational and picnic facilities.
Woolford	6 miles east of Cardston. Island in St. Mary's River.	1948	68	Recreational and picnic facilities.
Kinbrook	Island in Lake Newell, 9 miles south of Brooks, joined to mainland by a causeway.	1949	96	Surveyed for private summer cottages. Recreational and picnic facilities.
Beauvais Lake	12 miles southwest of Pincher Creek.	1952	530	Private summer cottages. Recreational and picnic facilities. Excellent fishing.
Cypress Hills	40 miles south of Medicine Hat.	1952	49,453	Scenic. Strange formation of terrain containing rare specimens of preglacial plant, insect and animal life, some species of which are found only in sub-tropical areas. Private summer cottages, tourist camp. Recreational and picnic facilities.
Drumheller Protected Area.	Near Munson Ferry	1952	5,517	Fossilized remains of pre-historic animals of the dinosaur type. A secondary road extends through the valley from Drumheller but the fossil beds can be reached only on foot. Interesting valley formations.
Garner Lake	6 miles north of Spedden	1952	2,278	Recreational and picnic facilities.
Vermilion	Near Vermilion	1952	1,600	Recreational and picnic facilities.
Gaetz Lake	Red Deer	1952	198	Sanctuary for game birds and animals. Ideal for nature study.

5.—Location, Year Established, Area and Characteristics of Provincial Parks—con.

Province and Park	Location	Year Established	Area	Characteristics
			acres	
British Columbia—[1]				
Strathcona	Campbell River, Vancouver Island.	1911	529,920	Oldest B.C. Provincial Park, situated in the rugged centre of Vancouver Island. Contains many glaciers, alpine meadows and lakes. Della Falls, one of the world's highest falls. Undeveloped and mostly inaccessible.
Mt. Robson	Mt. Robson, adjacent to Jasper Park.	1913	513,920	Rocky Mountain park featuring Mt. Robson, highest peak in the Canadian Rockies, Berg Lake and impressive glaciers. Access to Berg Lake Camp by horse trail.
John Dean	Sidney, near Victoria, Vancouver Island.	1921	98	Mountain viewpoint overlooking the Saanich Peninsula and Gulf Islands. Features primeval forests and wild flowers. Picnic grounds and hiking trails. Accessible by road.
Kokanee Glacier	Near Nelson	1922	64,000	High mountain park featuring Kokanee Glacier and several scenic lakes. Fishing, mountaineering and skiing. Poor road and trail access.
Mt. Assiniboine	South of Banff	1922	12,800	Outstanding area of Rocky Mountain scenery, features Mt. Assiniboine and small lakes. Hiking, riding, fishing, skiing. Access by horse trail.
Nakusp Hot Spring.	Nakusp, Arrow Lake, southeast B.C.	1925	127	Hot springs. Access by eight miles of trail.
Salt Lake	Prince Rupert	1925	87	Community swimming and picnic area. Access by ferry from Prince Rupert.
Garibaldi	Haney - Squamish, lower mainland, north of Vancouver.	1927	612,615	Outstanding scenic park with mountain lakes, peaks and glaciers, flower meadows and interesting geological features. Potential winter sports area. Access by trail from several points on the Pacific Great Eastern Railway.
Mt. Seymour	North Vancouver mainland.	1936	9,156	Mountain, winter-sport park with summer hiking, swimming and berry-picking. Highway under construction.
Crescent Beach	Crescent Beach, lower mainland near International Boundary.	1938	237	Ocean beach. Accessible by road.
Tweedsmuir	Bella Coola, Burns Lake	1938	3,456,000	One of the larger wilderness areas in North America. Scenic boat tours and trail rides. Fishing and hunting.
Peace Arch	White Rock, B.C., and Blaine, Washington, International Boundary.	1939	16	Landscaped international park featuring Peace Arch. Picnic grounds. King George VI Highway.
Wells Gray	North of Kamloops	1939	1,165,005	Undeveloped lake and mountain park. Fishing and hunting. Accessible by poor road and trail.

[1] Excludes 31 parks which are mainly of local interest (*see* pp. 27-30 of the 1950 Year Book).

5.—Location, Year Established, Area and Characteristics of Provincial Parks—concl.

Province and Park	Location	Year Established	Area	Characteristics
			acres	
British Columbia—concl.				
Chasm	Clinton, central B.C.	1940	315	Outstanding geological feature — a great chasm in the Interior Plateau adjacent to the Caribou Highway.
Elk Falls	Campbell River, east coast, Vancouver Island.	1940	2,558	Series of cascades and falls on Campbell River. Stand of giant firs.
Englishman River Falls.	Parksville	1940	240	Forest area, picturesque river containing falls and canyons. Picnicking, swimming, camping and hiking. Accessible by highway.
Little Qualicum Falls.	Qualicum Beach, adjacent to Parksville - Alberni highway.	1940	207	Forest area, picturesque river containing falls and canyons. Picnicking, swimming, camping and hiking. Accessible by highway.
Premier Lake	Cranbrook, Canal Flats, southeast B.C.	1940	165	Mostly local use. Fishing, picnicking, swimming. Poor road access.
Silver Star	Vernon, Okanagan, south central B.C.	1940	21,888	Interior mountain park, alpine scenery, berry-picking, skiing. Accessible by poor road.
Stamp Falls	Alberni, Vancouver Island.	1940	424	Popular forest park with river falls, fish ladder and swimming pool. Picnicking, camping. Road access.
Hamber	Big Bend Highway. Park adjoins Jasper and Banff.	1941	2,431,960	Undeveloped forest and mountain area bordering easterly portion of Big Bend Highway.
Manning	Hope-Princeton Highway, south central B.C. near International Boundary.	1941	179,313	Mountain park featuring alpine flower meadows and scenic fishing lakes. Wildlife sanctuary. Accessible by highway.
Darke Lake	Summerland, south Okanagan.	1943	5,472	Scenic group of interior mountain lakes. Fishing, hunting and boating.
McMillan	Cameron Lake, Vancouver Island.	1944	337	World-famous stand of virgin west-coast forest. Accessible by Alberni-Parksville highway.
Memory Island	Shawnigan Lake, south Vancouver Island.	1945	2	Small undeveloped island in recreational area. Swimming, fishing, adjacent to highway.
Petroglyph	Nanaimo, east coast, Vancouver Island.	1948	4	Site of ancient rock carvings of unknown origin. Accessible by road.
Cultus Lake	Chilliwack, Fraser Valley, lower mainland.	1948	950	Summer park. Swimming, picnicking, fishing.
Ivy Green	Ladysmith, Vancouver Island.	1949	51	Community park and picnic ground.
Cameron Lake	Cameron Lake	1950	733	Attractive lakeside area in an unspoiled rugged mountain valley adjacent to Parksville-Alberni highway.
Miracle Beach	Oyster River, north Vancouver Island.	1950	142	Ocean beach with outstanding vista over the Gulf Islands.

Subsection 4.—The National Capital Plan*

The Master Plan to guide the long-range development of Ottawa and the National Capital District, and to creat a Capital in keeping with Canada's achievements and status as a nation, was completed at the end of 1948. The final report on the Plan was forwarded to the Government by the National Capital Planning Committee and the Federal District Commission† and tabled in the House of Commons on May 22, 1951. Details of the Plan are given in the 1950 Year Book, pp. 18-20, and progress made is outlined in subsequent editions.

The most important new project undertaken during 1953 was the rebuilding of Sussex Street, a main artery on which are located several national institutions, including the National Archives, the Royal Canadian Mint, the National Research Council, the permanent residence for Canada's Prime Minister, and the residence of the Governor General. Plans call for the removal of the present street-car tracks (motor-buses will be used on the route in future) and overhead wiring is to be placed underground. The project is being carried out jointly by the City of Ottawa and the Federal District Commission.

A project for the improvement of the Hull approach to the Chaudière bridges was also decided upon by the FDC after consultation with the cities of Ottawa and Hull and the Federal Department of Public Works.

Good progress continued on the installation of new railway facilities in accordance with long-range plans to remove the present trackage from central Ottawa and Hull to the urban outskirts, and, subsequently, to use the rights-of-way thus released for arterial roads. Land was acquired along the new rail belt for the relocation of industries requiring rail services. The signal system is being installed in new yards for the use of the Canadian National Railways along the rail belt at the southern edge of Ottawa. When the installations are complete the CNR will transfer its operations from the crosstown tracks and yards that bisect the Capital along Catherine Street. The FDC is acquiring extra land to widen and link up this crosstown right-of-way to permit construction of an east-west traffic artery which will join with Highway 17 east and west of Ottawa. A new rail junction west of the Capital linking two CNR lines and diverting rail traffic to the new rail belt is now in operation, and seven miles of trackage has been lifted preparatory to construction of the western end of the new traffic artery.

The Commission continued its policy of using part of the National Capital Fund, which receives an annual parliamentary grant of $2,500,000, to share in the costs of extending municipal water and sewage services in conformity with the Master Plan. Progress also continues on the acquisition of land for the new eastern and western parkways, which will run in a broad arc south from the vicinity of Rockcliffe Airport, cross the Rideau River near Hog's Back, and continue west and north to the Ottawa River near Britannia.

Since the inception of the National Capital Plan, the Commission, on the advice of the National Capital Planning Committee, has approved plans of various Federal Government departments for 12 major site developments and 92 buildings. Several of the new buildings, including the head office for Central Mortgage and Housing Corporation on the Montreal Road and the Dominion Bureau of Statistics at Tunney's Pasture, have been completed and occupied. Others nearing completion are the Department of Veterans Affairs building on Wellington street and the Government Printing Bureau in Hull. Approval has been given for the con-

* Revised by the Federal District Commission, Ottawa.
† The Commission is the federal agency responsible for the implementation of the Plan. *See* also p. 84.

struction of a National Library of Canada building on the high ground overlooking the Ottawa River west of the Supreme Court. The site is at present partly occupied by No. 1 Temporary Building, which is to be removed. Plans for the restoration of the Library of Parliament, which was damaged by fire last year, have also been approved.

Work continued on a variety of other buildings and projects throughout the Capital area. Among these is an overpass on the Montreal Road designed and built by the Commission to provide a controlled entrance to the National Research Council establishment. Removal of the Aylmer building permitted completion of the western approach to the Mackenzie King Bridge. The bridge, which was the first completed project in the National Capital Plan, opens up an east-west traffic artery over the Rideau Canal in Confederation Park. Work was also begun by the Commission on the development of the Hog's Back-Mooney's Bay Park. When completed this area will provide a much-needed and very attractive addition to the Commission's park system in the National Capital.

Gatineau Park.—The development of Gatineau Park, located in the wooded hill-and-lake country of the Laurentians north of the city of Hull and about eight miles from the Capital, was begun by the FDC in 1939. It is the summer and winter playground of the National Capital, and is well-provided with hiking trails and picnic and camping spots. Swimming, boating and fishing are enjoyed in its many lakes and, in the winter, it is the skiing centre of the district.

"Kingsmere", the large country estate bequeathed to the nation by the late Rt. Hon. Wm. Lyon Mackenzie King and placed in the care of the Commission, is located on Kingsmere Lake at the south end of the Park. Land acquisitions by the Commission have increased the area of the Park to about 45,000 acres, and plans call for its ultimate development to about 80,000 acres. Access to the Park will be considerably improved with the completion of a new road running from Val Tetreau on the Ottawa River west of Hull to the Kingsmere area. About four miles of this road is under construction. Eventually, it will be extended to provide a 50-mile scenic route through the Park.

Section 3.—Wildlife Resources and Conservation*

The Canadian Wildlife Service.—The Canadian Wildlife Service of the National Parks Branch, Department of Resources and Development, is responsible for attending to wildlife matters coming within the jurisdiction of the Federal Government, except those within the purview of the National Museum and certain activities closely related to Indian affairs.

Its functions include acting in an advisory capacity with regard to conservation and management of wildlife in the Northwest Territories; advising and co-operating with the National Parks and Historic Sites Division regarding fish and wildlife problems in the National Parks; and administration of the Migratory Birds Convention Act, in conjunction with the Royal Canadian Mounted Police and in co-operation with the provincial game authorities. The Canadian Wildlife Service also handles national and international problems relating to Canada's wildlife resources, and co-operates with governmental and other agencies having similar interests and problems in Canada and elsewhere.

The Service issues permits for bird-banding in Canada and is the Canadian clearing-house for bird-banding information. It issues permits to qualified persons

* Prepared by the Canadian Wildlife Service, Department of Resources and Development, Ottawa.

to take migratory birds for scientific purposes; to take and possess migratory birds for propagating purposes; to collect eiderdown; to use firearms or other equipment for the control of migratory birds causing damage to agricultural, fishing or other interests; and to engage in the business of taxidermy.

The Canadian Wildlife Service plans and carries out scientific investigations concerning numbers, food, shelter, migration, reproduction, diseases, parasites, predators, competitors and uses of wild creatures in Canada. In certain of such investigations, e.g., the mid-winter waterfowl inventory, it works in close co-operation with United States authorities conducting parallel studies.

The Service is responsible for the establishment and administration of bird sanctuaries under the Migratory Birds Convention Act. On Dec. 31, 1952, there were 90 bird sanctuaries with a total area of more than 1,800 sq. miles.

The Limnology Section of the Service concerns itself with the maintenance and improvement of sport fishing, the control of aquatic and semi-aquatic insects, the control of algæ, and other biological problems that arise in regard to water areas in the National Parks. It also acts in an advisory capacity to the Northern Administration and Lands Branch in connection with aquatic biological matters.

A series of special articles with relation to the wildlife resources of Canada are being carried in the Year Book. Articles on "Migratory Bird Protection in Canada" and "Game Fish in Canada's National Parks" were carried in the 1951 and 1952-53 editions, respectively. The following article deals with the barren-ground caribou, the most important single natural resource in vast areas of northern Canada.

THE BARREN-GROUND CARIBOU

A subject receiving close study by administrators and game-management officers in the Northwest Territories is the management of the barren-ground caribou. Over a vast area, the scattered native and white population is dependent, to a large extent, on these animals for supplies of fresh meat and materials for Arctic clothing. Hunting restrictions and a vigorous educational program directed towards the white and the native hunters are among the control measures designed to preserve the barren-ground caribou so as to ensure their availability for use by this and future generations. In recent years, extensive investigations by the Canadian Wildlife Service, Department of Resources and Development, have added much to the knowledge of the status of these animals, and the investigations are continuing from year to year.

Barren-ground caribou inhabit an area of about 600,000 sq. miles in the Northwest Territories and in the northern parts of Alberta, Saskatchewan, Manitoba and Ontario. These large, rangy members of the deer family travel in loose herds of from several hundred to 100,000 or more. Their broad, concave hoofs enable them to travel over crusted snow and help them to keep their footing on ice surfaces. Their long coats of dense, light hair protect them from winter temperatures which, in some sections of their range, may fall as low as 60° below zero.

The summer coat of the caribou is a general rich clove-brown colour, with dark brown on the chest and legs and white markings around each foot, inside the hind legs, on the rump, and on the tail. A light grey strip extends down the neck and along the shoulder to the flank. During the winter months this coat wears down,

exposing the white bases of the hairs. Because of this, by late winter or early spring the animals appear greyish-white and are almost invisible against the snow. The hair is shed once a year, in July.

Barren-ground caribou are migratory animals. Their summer range is mainly in the unforested parts of Mackenzie and Keewatin Districts of the Northwest Territories, from the west side of Hudson Bay and Melville Peninsula west to the lower Mackenzie Valley and north to the southern fringe of the islands lying off the Arctic coast. In autumn there is a general migration southward to areas within the tree-line. Some small bands of caribou, however, remain all year on the Arctic tundra.

Caribou migrations occur at three distinct periods of the year—in spring, in mid-summer and in autumn. Studies have revealed that during the spring migration, in April and May, there is a movement of the large herds from the wooded areas, where they have wintered, to the tundra summer range. The mid-summer migration begins in mid-July or early August when there is a general retracing of routes towards the tree-line, followed in September, just before the breeding season, by a swing northward away from the forested areas. After the breeding season ends, usually in October or early November, the autumn migration towards the forested areas begins. If the weather is rigorous, the great columns of caribou generally move swiftly towards their winter ranges but if the weather is moderate the pace slows down.

During these migrations it is usual for caribou to follow well-beaten trails in single file. Sometimes there may be several files parallel to each other; at other times the caribou may bunch together. The parallel trails are usually from one to three feet apart and from six to twelve inches wide. Repeated use over a period of many years has worn these trails to a depth of as much as four inches below the level of the tundra surface. Investigators have reported counting as many as twelve parallel trails on one migration route.

Spring migration routes generally follow waterways, the caribou herds travelling upon the frozen lakes and rivers towards the tundra. During the summer and autumn migrations the animals tend to follow heights of land and to cross the waterways at their narrowest or easiest crossing points.

Calves are usually born in June, during the period known as "spring break-up" Within a few hours they are able to follow their mothers and keep up with the rest of the herd. An adult bull caribou weighs well over 200 pounds and carries an impressive set of antlers; the length of beam of the antlers is often greater than the shoulder height of the animal. An adult cow weighs approximately 150 pounds and has a much smaller antler development. Antlers are shed once a year.

Caribou rely almost entirely on their keen sense of smell to warn them of approaching danger. In comparison with other animals their eyesight is poor, and it is possible to approach within 150 yards of them in open country without being seen. As a rule they are docile and can rarely be goaded into an aggressive act.

The high degree of curiosity of the caribou is well known to white and native hunters, who can attract the animal within easy killing range by almost any kind of unusual behaviour.

As a result of studies made during 1948, 1949 and 1950, the Canadian Wildlife Service has estimated the barren-ground caribou population in Canada at 670,000.* There has been a great reduction in numbers since 1900, when the population was probably about 1,750,000. Indiscriminate slaughter of caribou by members of early whaling expeditions and the acquisition of modern weapons by the natives of the North have been major causes of rapid reduction of the caribou population. The following quotation† indicates the extent of the slaughter that took place about the turn of the century: "One winter fifteen vessels wintered at Herschel Island and I am reliably informed that these vessels each used from 10,000 pounds to 20,000 pounds of caribou meat an aggregate of over 300,000 pounds in one winter, principally the saddles; at the head of Franklin Bay, in the winter of 1897-98, four ships used of the same kind of meat about 90,000 pounds, and at Cape Bathurst, in 1898-99, one vessel used in the neighbourhood of 40,000 pounds."

Caribou are an important source of fresh, nutritious meat to the native and white populations of the remote areas of the North. Their hides, particularly the softer, finer-furred hides of calves and yearlings, are used as material for making a superior type of Arctic clothing; for this purpose many calves and yearlings are selectively killed during August and September, when the hides are considered to be prime.

It has been estimated that a complete clothing outfit for an Eskimo man (inner and outer parkas, inner and outer trousers, mittens, socks and moccasins) requires about 12 hides. About 25 hides would be required annually to provide satisfactory clothing for a family of two adults and two children. In modern times, however, some of the traditional items of Eskimo clothing have been replaced by imported textile garments—at least in the vicinity of trading posts. Caribou hides are also used for making sleeping robes and other types of covering, and for insulating log houses and tents. Strips of tanned hide serve as cords or ropes. The sinews from along the spine of the caribou are used by the natives for sewing.

With the aid of provincial and territorial game authorities, the Canadian Wildlife Service has, since 1947, carried out extensive studies of all phases of the environment, habits, life cycle, breeding and mortality of the barren-ground caribou. These studies are continuing. They involve aerial surveys and investigations on the ground, as well as the analysis of data supplied by hunters and trappers and obtained from the reports of field officers of the Provincial Governments of Alberta, Saskatchewan and Manitoba. From 1932 to 1949, by means of native game returns completed by the Royal Canadian Mounted Police after interviewing the native hunters,

* Banfield, Dr. A. W. F., Canadian Wildlife Service, Department of Resources and Development, *The Barren-Ground Caribou* (Ottawa, 1951).

† Stone, A. J., "Some results of a natural history journey to Northern British Columbia, Alaska, and the Northwest Territories in the interest of the American Museum of Natural History", *Bull. Am. Mus. Nat. Hist.* (1900) 13:31-62.

and since 1949 by means of returned licences, the Northwest Territories Administration has collected statistics of game and fur-bearing animals and birds taken. The returns, although by no means completely accurate, provide an important basis for determining relative numbers of caribou killed in different years.

At present, non-residents are forbidden to hunt caribou in the Northwest Territories, and residents, who may kill caribou if they hold a general hunting licence, are restricted both in the use they may make of the meat and in the period of the year in which they may hunt.

The development of mineral resources in the Northwest Territories, with the resultant influx of workers has, as yet, made no appreciable change in caribou range or movements. Forest fires have wiped out some sections of the winter range and are, at present, perhaps the most important factor influencing caribou habitat.

Wastage by humans is believed to have been the most serious cause of reduction in the numbers of caribou. Management measures are now aimed at controlling the number of animals killed annually and at educating the native population along conservation lines. There is reason to hope that the legislation passed in recent years will prevent avoidable wastage, reduce hunting pressure to a rational level, and eliminate the danger of serious depletion of the present herds of barren-ground caribou.

PART III.—CLIMATE AND TIME ZONES

Section 1.—Climate

A comprehensive discussion of the climatic regions of Canada is available in the 1948-49 Year Book, pp. 41-62, while detailed tabulations of climatic factors covering 36 meteorological stations located mostly at well-known or populous centres are given in the 1950 Year Book, pp. 35-70. Other articles appearing in previous editions are listed under "Climate and Meteorology" in Chapter XXVIII of this volume.

Table 1 gives long-term temperature and precipitation data for 35 representative Canadian stations; Tables 2 and 3 provide monthly temperature and precipitation data during 1952 for these same stations. These are mostly well-known or populous places with climates fairly representative of a considerable area. The figures given under "Temperatures" are, of course, averages obtained over the period of observation in each case. Under "Precipitation", in calculating the annual total, inches of rain is considered the total depth of water accumulated on a hypothetical horizontal impervious surface without evaporation. Similarly, the depth of snow given is that which falls on a horizontal surface, without settling, melting or sublimation. Since the depth of water obtained from melting newly fallen snow is roughly one-tenth of the depth of the snow, the total precipitation is obtained by adding together the total rainfall and one-tenth of the depth of the newly fallen snow. A day with rain is, for the purpose of these tables, one on which 1/100 of an inch or more falls and a day with snow is one with at least 1/10 of an inch of newly fallen snow. Whenever the temperature four feet above the ground falls to 32°F. or lower, the day is counted as a day with frost. The average date of the last spring frost and of the first frost in autumn marks the approximate period continuously free from frost.

1.—Long-Term Temperature and Precipitation Data for 35 Representative Stations

Station	Height Above Sea	Length of Record	TEMPERATURES (Fahrenheit)					Heating Factor	Killing Frost Average Dates		PRECIPITATION (inches)						Number of Days	
			Annual	Jan.	July	Highest On Record	Lowest On Record	Day-Degrees[1]	Last in Spring	First in Autumn	Annual Total	Annual Snow	Jan.	Apr.	July	Oct.	Rain	Total
	ft.	yrs.																
Gander, N'f'ld	482	11	39·3	19·2	62·3	96	−16	9,477	June 1	Oct. 3	38·24	121·0	2·81	2·32	3·65	3·87	129	199
St. John's, N'f'ld	296	67	40·9	23·5	59·6	93	−21	8,876	June 2	Oct. 10	53·78	101·1	5·31	4·16	3·54	5·27	147	208
Goose Bay, N'f'ld	144	10	31·7	0·0	61·3	100	−35	12,148	June 10	Sept. 14	29·05	144·1	2·27	1·91	3·24	2·44	88	166
Charlottetown, P.E.I.	186	65	41·7	17·8	65·6	98	−27	8,263	May 16	Oct. 14	39·47	113·0	3·76	2·78	2·98	4·07	119	162
Annapolis Royal, N.S.	10	25	44·4	24·4	64·4	89	−13	7,665	May 20	Oct. 6	41·41	74·8	4·20	2·77	3·40	4·19	115	140
Halifax, N.S.	83	75	44·0	23·6	64·7	99	−21	7,380	May 13	Oct. 12	55·74	70·8	5·40	4·54	3·79	5·42	130	156
Sydney, N.S.	48	69	42·3	22·1	63·6	98	−25	7,896	May 29	Oct. 13	50·24	97·9	5·16	4·03	3·37	4·70	127	165
Chatham, N.B.	98	50	40·2	12·2	66·6	102	−43	8,887	May 21	Sept. 28	40·74	107·3	3·38	3·02	3·91	3·97	107	151
Fredericton, N.B.	164	67	40·7	13·5	66·1	101	−35	8,663	May 20	Sept. 23	42·80	95·5	3·87	2·94	3·53	4·11	108	149
Saint John, N.B.	119	56	41·4	19·3	61·0	93	−21	8,081	May 4	Oct. 16	42·26	71·1	4·28	3·22	3·03	4·01	134	168
Arvida, Que.	335	10	36·4	3·6	65·0	95	−42	10,585	May 20	Sept. 19	38·93	116·1	2·90	2·53	4·81	3·53	112	176
Lennoxville, Que.	498	24	40·3	12·8	66·2	99	−48	8,996	May 31	Sept. 10	39·56	89·4	3·46	2·60	4·12	3·63	104	150
Montreal, Que.	187	55	42·8	13·8	69·8	97	−29	8,284	Apr. 28	Oct. 17	40·80	112·3	3·76	2·60	3·74	3·42	112	164
Fort William, Ont.	644	9	36·2	6·8	62·8	96	−42	10,094	June 4	Sept. 7	31·62	93·4	2·28	2·15	2·89	2·58	82	142
Kapuskasing, Ont.	752	19	32·4	−1·7	62·4	101	−53	11,374	June 14	Sept. 5	27·59	91·0	2·00	1·82	3·43	2·50	95	182
Ottawa, Ont.	260	65	41·5	11·9	69·6	102	−35	8,674	May 11	Sept. 29	34·23	82·0	2·93	2·70	3·39	2·93	98	139
St. Catharines, Ont.	347	21	47·8	26·0	71·1	104	−12	6,607	May 5	Oct. 21	27·03	37·7	2·30	2·39	2·39	2·18	99	132
Toronto, Ont.	379	105	45·1	22·6	68·9	105	−26	7,236	May 3	Oct. 15	32·18	61·9	2·71	2·48	2·95	2·43	109	145
Churchill, Man.	43	30	17·8	−19·0	53·7	96	−57	15,735	June 28	Aug. 30	15·96	56·9	0·48	0·89	2·19	1·43	52	101
The Pas, Man.	890	27	30·6	−8·7	64·6	100	−54	12,160	May 30	Sept. 9	15·44	44·9	0·61	0·81	2·22	1·16	59	102
Winnipeg, Man.	786	66	35·0	−3·1	66·9	108	−54	10,841	May 27	Sept. 15	21·19	53·6	0·92	1·37	3·08	1·49	67	118
Prince Albert, Sask.	1,414	54	32·9	−4·3	63·4	103	−70	11,337	May 30	Sept. 10	16·11	51·5	0·74	0·93	2·18	0·84	62	116
Regina, Sask.	1,884	55	34·5	−0·7	64·8	111	−56	10,891	June 5	Sept. 6	14·70	28·8	0·51	0·74	2·38	0·86	59	109
Beaverlodge, Alta.	2,484	31	35·3	5·6	59·8	98	−54	10,950	May 30	Sept. 1	17·19	70·1	1·27	0·78	2·21	1·11	76	127
Calgary, Alta.	3,540	55	38·4	13·1	61·5	97	−49	9,111	June 3	Sept. 3	16·65	50·0	0·51	0·99	2·51	0·69	57	101
Edmonton, Alta.	2,219	56	36·6	5·9	61·6	99	−57	9,826	May 29	Sept. 6	17·38	46·4	0·88	0·88	3·32	0·75	73	133
Medicine Hat, Alta.	2,365	55	41·9	12·0	69·3	108	−51	8,495	May 15	Sept. 18	12·81	35·6	0·63	0·77	1·68	0·62	56	100
Cranbrook, B.C.	3,014	35	40·7	16·7	63·2	102	−41	8,760	June 10	Aug. 27	14·41	56·7	1·80	0·68	1·14	0·89	69	106
Nelson, B.C.	2,235	39	45·2	24·4	66·4	103	−17	7,278	May 10	Oct. 2	27·77	89·3	3·47	1·57	1·62	2·35	102	131
Penticton, B.C.	1,121	32	47·8	26·8	68·3	105	−16	6,346	May 7	Oct. 3	10·85	24·0	0·98	0·68	0·79	0·83	83	102
Prince George, B.C.	2,218	27	38·5	12·9	59·6	102	−58	8,996	June 17	Aug. 24	19·98	62·7	1·81	0·84	1·63	1·99	123	162
Victoria, B.C.	228	54	49·5	38·7	60·0	95	−2	4,935	Feb. 28	Dec. 7	27·13	13·4	4·49	1·18	0·44	2·81	141	144
Dawson, Y.T.	1,062	41	22·8	−21·0	59·6	95	−73	14,620	June 4	Aug. 21	12·61	56·2	0·87	0·51	1·53	1·17	63	117
Coppermine, N.W.T.	13	13	11·3	−18·9	50·1	87	−54	19,710	June 28	Aug. 18	10·72	57·0	0·57	0·84	1·33	1·16	40	103
Fort Good Hope, N.W.T.	214	31	17·0	−23·6	59·3	95	−79	17,520	June 1	Aug. 11	10·63	50·0	0·53	0·49	1·55	1·09	46	106

[1] Day-degrees represent the difference in temperature between the mean temperature of the air and the temperature of 65°F. multiplied by the number of days during which the outside temperature was lower than that figure, computed for the period Sept. 1 to May 31. Fuel consumption for heating purposes will be proportional to these totals.

2.—Temperature Data for 35 Weather Stations, by Month, 1952

Station	Monthly Mean Temperatures (Fahrenheit)												Annual Mean Temperature	Temperature Difference from Normal for Year	Annual Temperature Extremes	
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.			Highest	Lowest
Gander, N'f'ld	22·8	23·2	28·2	34·5	43·6	55·0	65·4	65·0	53·6	43·0	34·8	27·4	41·4	2·1	95·5	−2·6
St. John's (Torbay), N'f'ld	27·7	27·6	29·7	36·3	41·8	54·2	61·2	63·8	53·4	44·2	38·2	30·7	42·4	1·5	83·8	5·0
Goose Bay, N'f'ld	2·0	9·2	22·0	31·8	43·6	52·6	64·7	60·0	50·3	36·4	25·9	16·0	34·5	2·8	99·3	−27·5
Charlottetown, P.E.I	20·7	22·7	27·0	38·3	46·2	57·8	68·3	66·8	58·4	46·4	35·8	27·2	43·0	1·3	87·6	−6·4
Annapolis Royal, N.S	27·9	28·4	32·5	44·0	49·8	60·3	69·5	65·6	58·2	49·6	40·8	32·4	46·6	2·2	87·0	0·0
Halifax, N.S	28·2	28·8	32·4	42·6	48·8	59·0	68·4	67·9	60·0	50·7	41·5	32·1	46·7	2·7	89·0	3·4
Sydney, N.S	25·9	26·4	29·8	38·0	44·5	57·6	67·0	66·6	59·0	47·6	38·5	30·4	44·3	2·0	91·8	−5·3
Chatham, N.B	15·6	19·6	28·0	40·4	48·0	59·6	70·8	67·2	57·8	43·6	33·4	24·4	42·4	2·2	95·7	−20·1
Fredericton, N.B	16·2	20·2	28·5	40·8	49·4	61·9	71·5	66·4	57·2	43·9	33·8	24·1	42·8	2·1	97·6	−22·0
Saint John, N.B	22·6	24·6	31·3	42·0	49·4	59·1	65·8	63·4	56·7	47·7	38·6	28·5	44·1	2·7	84·9	−8·8
Arvida, Que	2·3	15·1	25·4	38·6	49·9	60·3	69·0	63·8	54·4	39·3	30·9	20·6	39·1	2·7	94·5	−35·0
Lennoxville, Que	14·6	19·8	27·9	42·6	49·3	63·6	71·4	65·1	58·4	42·7	35·6	23·0	42·8	2·5	97·0	−28·0
Montreal, Que	18·0	22·6	30·2	46·4	54·2	67·2	73·5	69·3	60·8	45·6	38·6	26·2	46·0	3·2	90·7	−11·0
Fort William, Ont	5·5	16·4	19·8	40·8	48·8	58·7	63·2	60·4	53·8	37·2	28·7	22·2	38·0	1·8	86·7	−26·1
Kapuskasing, Ont	0·6	6·0	15·8	38·2	47·4	57·4	64·6	60·5	53·1	35·3	28·0	16·8	35·3	2·9	91·3	−33·1
Ottawa, Ont	14·0	20·3	26·8	45·5	52·4	65·4	71·8	67·0	60·3	43·2	36·6	24·6	44·0	2·5	91·0	−23·8
St. Catharines, Ont	29·0	28·6	32·9	47·6	53·8	67·4	74·8	69·0	64·0	47·8	43·5	34·5	49·4	1·6	94·0	5·0
Toronto, Ont	27·3	28·7	32·2	49·6	54·8	67·4	74·2	69·4	64·2	47·2	42·3	33·7	49·2	4·1	94·5	−4·9
Churchill, Man	−19·0	−16·2	−0·4	24·2	34·2	45·4	50·1	51·2	41·0	25·8	8·6	2·7	20·6	2·8	84·2	−41·0
The Pas, Man	−9·5	4·0	12·4	41·9	50·2	56·3	62·2	60·3	51·5	37·2	23·6	11·5	33·5	2·9	86·6	−33·2
Winnipeg, Man	−2·4	13·8	18·8	48·1	53·3	63·4	66·6	64·9	57·7	39·8	28·0	16·6	39·0	4·0	98·2	−27·1
Prince Albert, Sask	−9·5	7·8	12·8	45·6	51·6	57·8	62·2	59·9	52·1	39·4	25·8	10·0	34·6	1·7	89·6	−41·0
Regina, Sask	−4·3	10·0	13·2	47·0	52·6	58·2	62·0	62·5	54·7	39·7	26·6	15·5	36·5	2·0	97·9	−46·1
Beaverlodge, Alta	−4·2	18·2	21·0	39·7	51·4	54·6	59·8	57·3	51·4	45·4	30·8	18·6	37·0	1·7	86·0	−44·0
Calgary, Alta	4·9	19·9	18·9	44·4	50·4	54·4	59·4	58·2	53·2	45·4	31·8	26·2	38·9	0·5	85·5	−30·6
Edmonton, Alta	−2·0	16·6	18·6	46·7	53·8	57·4	60·9	60·2	54·4	45·1	31·5	21·0	38·7	2·1	86·9	−31·3
Medicine Hat, Alta	5·0	19·7	19·9	50·1	56·0	60·2	63·8	64·6	58·6	47·7	32·3	23·1	41·8	−0·1	94·7	−30·1
Cranbrook, B.C	13·4	25·5	31·1	45·6	51·0	57·5	62·6	63·3	55·6	45·4	27·2	23·8	41·8	1·1	94·5	−25·0
Nelson, B.C	25·4	32·0	37·6	48·3	56·5	61·7	68·5	69·8	61·5	52·2	35·2	33·6	48·5	3·3	99·0	−6·0
Penticton, B.C	22·6	31·8	38·8	48·6	55·8	60·6	67·2	66·8	60·6	50·0	36·6	36·2	48·0	0·2	95·4	−6·9
Prince George, B.C	7·8	20·2	27·0	39·6	49·3	52·3	58·0	57·2	51·9	44·0	29·9	22·8	38·3	−0·2	87·0	−27·8
Victoria, B.C	37·6	41·6	43·6	48·6	53·5	54·6	59·3	59·5	58·5	54·4	43·8	42·8	49·8	0·3	84·1	21·3
Dawson, Y.T	−34·8	0·0	6·5	28·2	43·0	57·6	60·2	54·0	41·8	31·9	19·4	−6·2	25·1	2·3	84·3	−65·9
Coppermine, N.W.T	−25·4	−31·6	−16·0	11·0	32·0	40·6	47·6	42·6	32·8	21·2	0·7	−6·8	12·4	1·1	74·3	−51·2
Fort Good Hope, N.W.T	−31·8	−22·1	−8·8	15·0	36·4	54·8	58·3	51·1	37·6	24·4	7·9	−10·8	17·7	0·7	85·0	−61·0

3.—Precipitation Data for 35 Weather Stations, by Month, 1952

Station	Monthly Precipitation (inches)												Annual Precipitation (inches)			Total Inches Precipitation Difference from Normal for Year
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Rainfall	Snowfall	Total Precipitation	
Gander, N'f'ld.	2·68	5·22	2·60	1·65	1·76	3·99	3·39	3·37	3·27	2·01	6·15	1·92	25·78	122·3	38·01	−0·23
St. John's (Torbay), N'f'ld.	8·24	9·21	5·64	1·91	4·59	3·50	0·73	6·34	5·61	3·74	7·71	4·51	50·52	112·1	61·73	7·95
Goose Bay, N'f'ld.	5·61	3·20	2·52	1·65	1·78	2·71	3·80	6·52	3·03	2·09	1·56	0·39	18·74	161·2	34·86	5·81
Charlottetown, P.E.I.	5·80	5·87	3·32	2·49	3·11	4·87	2·38	3·74	1·60	3·34	2·68	2·36	27·58	139·8	41·56	2·09
Annapolis Royal, N.S.	9·05	10·33	2·16	1·71	3·16	2·39	1·23	5·79	3·56	2·20	1·62	3·69	34·54	123·5	46·89	5·48
Halifax, N.S.	8·12	5·35	2·95	2·26	3·83	4·16	3·11	3·50	1·96	5·19	3·88	3·98	38·52	97·7	48·29	−7·45
Sydney, N.S.	8·49	8·53	3·44	2·06	6·35	2·98	1·25	5·72	1·49	2·35	5·01	4·11	39·90	118·8	51·78	1·54
Chatham, N.B.	2·81	4·02	2·98	3·09	3·85	5·08	1·04	4·37	2·31	2·39	1·68	1·57	26·23	89·6	35·19	−5·55
Fredericton, N.B.	4·78	6·00	2·14	3·22	2·71	5·02	1·36	3·00	2·36	4·39	2·18	2·59	29·77	99·8	39·75	−3·05
Saint John, N.B.	9·12	7·67	2·20	2·57	2·60	3·18	1·37	7·89	1·46	2·91	2·72	3·61	36·88	104·2	47·30	5·04
Arvida, Que.	3·34	2·29	1·05	1·79	3·37	5·16	4·73	4·28	2·60	4·48	1·28	2·65	26·27	107·5	37·02	−1·91
Lennoxville, Que.	3·57	2·32	3·05	2·61	4·14	5·94	1·36	3·41	3·38	4·33	1·83	4·13	31·14	89·3	40·07	0·51
Montreal, Que.	4·21	3·08	3·27	2·70	4·05	4·15	4·65	5·71	3·77	4·23	2·43	5·08	38·60	87·3	47·33	6·53
Fort William, Ont.	1·74	0·88	2·33	1·30	1·65	3·32	4·60	3·22	0·88	0·25	1·54	0·56	16·54	57·3	22·27	−9·35
Kapuskasing, Ont.	2·15	0·80	1·72	2·56	3·50	3·85	5·03	2·79	3·55	2·89	3·73	2·04	23·83	107·8	34·61	7·02
Ottawa, Ont.	2·24	1·93	2·70	1·86	5·59	3·49	4·54	7·31	2·27	2·04	2·15	3·53	33·58	60·7	39·65	5·42
St. Catharines, Ont.	3·16	1·20	2·31	2·24	4·25	0·99	2·82	3·33	2·64	0·75	2·70	1·60	25·88	21·1	27·99	0·96
Toronto, Ont.	2·87	1·67	2·92	2·12	3·25	1·09	3·06	1·85	1·55	0·68	3·48	1·66	22·87	33·3	26·20	−5·98
Churchill, Man.	0·34	0·45	0·13	0·50	1·30	1·85	1·51	4·09	2·34	3·12	1·23	0·91	11·49	62·8	17·77	1·81
The Pas, Man.	0·31	0·36	0·31	[1]	3·80	3·01	3·81	0·70	1·22	0·95	1·08	0·39	13·20	27·4	15·94	0·50
Winnipeg, Man.	0·79	0·29	0·60	0·30	0·37	6·71	1·73	1·44	0·52	0·62	0·53	0·36	11·41	28·5	14·26	−6·93
Prince Albert, Sask.	0·27	0·15	0·48	0·03	2·87	2·75	3·45	2·83	1·33	0·50	0·74	0·52	13·86	20·6	15·92	−0·19
Regina, Sask.	1·16	0·42	0·97	0·05	0·50	3·91	2·41	2·69	1·23	0·22	0·58	0·04	10·85	33·3	14·18	−0·52
Beaverlodge, Alta.	2·03	0·93	0·84	0·36	0·41	2·01	2·18	2·36	1·03	0·52	0·35	0·40	8·51	47·1	13·22	−3·97
Calgary, Alta.	0·49	1·22	1·39	0·84	1·80	5·79	3·07	1·43	0·81	0·34	0·27	0·03	13·85	36·3	17·48	0·83
Edmonton, Alta.	1·74	0·62	0·48	0·05	1·53	4·71	3·57	1·78	1·26	0·24	0·22	0·15	12·70	36·5	16·35	−1·03
Medicine Hat, Alta.	0·93	1·44	1·43	0·05	1·78	3·58	1·97	1·76	1·15	0·20	0·49	0·35	10·62	45·1	15·13	2·32
Cranbrook, B.C.	3·50	0·60	0·55	0·60	0·70	3·30	0·95	1·55	0·60	0·00	0·30	0·95	7·80	58·0	13·60	−0·81
Nelson, B.C.	3·92	2·13	1·24	1·37	2·02	3·55	0·53	0·50	0·70	0·36	0·52	3·73	13·79	67·8	20·57	−7·20
Penticton, B.C.	2·78	0·75	0·52	0·53	1·88	1·47	0·83	0·34	0·18	0·13	0·18	0·43	6·78	32·4	10·02	−0·83
Prince George, B.C.	4·06	1·68	1·59	1·26	0·70	2·84	1·47	1·67	2·09	1·07	1·09	0·43	11·29	86·6	19·95	−0·03
Victoria, B.C.	3·12	1·96	1·64	0·85	0·66	0·91	0·74	0·37	0·27	1·18	0·64	3·67	14·59	14·2	16·01	−11·12
Dawson, Y.T.	0·55	0·82	0·63	0·29	1·13	1·78	2·22	1·52	1·47	0·57	0·37	1·21	8·17	43·9	12·56	−0·05
Coppermine, N.W.T.	0·16	0·15	0·24	0·39	0·31	0·16	0·19	1·16	0·47	1·12	0·77	0·51	2·24	33·9	5·63	−5·09
Fort Good Hope, N.W.T.	0·08	0·28	0·98	1·13	1·90	0·48	2·87	1·52	1·83	1·25	0·97	0·23	7·57	59·5	13·52	2·89

[1] Less than 0.005 inches.

Section 2.—Standard Time and Time Zones

Standard time, which was adopted at a World Conference held at Washington, D.C., in 1884, sets the number of times in the world at 24, each time zone extending over one twenty-fourth of the surface of the earth and including all the territory between two meridians 15° longitude apart. Standard time is Greenwich time, all other time zones being a definite number of hours either in advance of or behind Greenwich.

Canada has seven time zones, the most easterly being Newfoundland standard time, three hours and thirty minutes behind Greenwich mean time. In the west, Pacific standard time, used throughout British Columbia and part of the Northwest Territories, is eight hours behind Greenwich, and Yukon standard time, used throughout the Yukon Territory, is nine hours behind Greenwich. Some municipalities adopt the time used by the local railways which, in certain cases, differs from the standard. There are also villages that adopt such time as seems best to suit their convenience, but, in general, the legal boundaries of the different time zones are actually in use. The boundaries of the time zones in Canada are shown in the following map.

Daylight Saving Time.—For some years before World War I there was active propaganda, particularly in the cities, for the use of an earlier time, usually referred to as 'daylight saving time', one hour ahead of standard time, during the summer months. It was considered, from the economic as well as from the health point of view, that people in industrial towns and cities would gain by having longer periods of sunlight at their disposal for recreation. Canada adopted daylight saving time in 1918, but the Canadian Act lapsed at the end of that year. Since that date, however, various towns and cities have adopted daylight-saving by-laws for varying periods in the summer months.

Legal Authority for the Time Zones.—Most of the regulations made in Canada concerning standard time have been passed by the provincial legislatures and the Northwest Territories Council. The exceptions include: the Daylight Saving Act of 1918; an Order in Council (P.C. 4994) issued in 1940 requiring the continuation, for an additional period, of daylight saving time in a number of places in Ontario and Quebec where it had already been in force for the summer; and an Order in Council in 1942 (P.C. 547) making daylight saving time nation-wide, and later revoked by Order in Council (P.C. 6102), ending the observance on Sept. 30, 1945. Legislation, besides determining the boundaries of zones, regulates such matters as the times of coming into effect or expiration of Acts, ordinances, contracts and agreements, times of opening and closing registration offices, law courts, post offices and other public offices, times of open or close seasons for game, and times of opening and closing business houses and places of amusement.

PART IV.—ASTROPHYSICS

The science of astrophysics is carried on by three Canadian institutions: the Dominion Observatory, Ottawa, Ont., the Dominion Astrophysical Observatory, Victoria, B.C. (operated by the Department of Mines and Technical Surveys), and the David Dunlap Observatory, associated with the University of Toronto. Of the two Government institutions, the Dominion Observatory at Ottawa has specialized mainly in the astronomy of position in solar physics and in various branches of geophysical work, while the major effort in astrophysics has been concentrated at the Dominion Astrophysical Observatory at Victoria, B.C. The David Dunlap Observatory was founded in 1935 and is equipped with very fine astrophysical equipment of a kind similar to that in use at Victoria. It performs not only the function of a privately financed and administrated research institution but is also the nucleus of a university department of astronomy. A special article dealing specifically with the work of the Dominion Astrophysical Observatory at Victoria, B.C., appears in the 1948-49 Year Book, pp. 63-71.

CHAPTER II.—CONSTITUTION AND GOVERNMENT

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—CONSTITUTION OF CANADA

The Canadian federal state was established by the British North America Act, 1867, which united the three British North American provinces of Canada, New Brunswick and Nova Scotia into one country, divided into four provinces, namely, Ontario, Quebec, New Brunswick and Nova Scotia. British Columbia entered the Union in 1871 and Prince Edward Island in 1873. The Provinces of Manitoba, Saskatchewan and Alberta were created out of portions of the territories formerly held by the Hudson's Bay Company and admitted to the Union in 1870, and Newfoundland entered the Union in 1949. At the present time, therefore, Canada consists of ten provinces and the remaining territories, not included in any province, now known as the Yukon Territory and the Northwest Territories.

The British North America Act of 1867 divided legislative and executive authority between Canada on the one hand and the provinces on the other. Judicial authority was not similarly divided, provincial and federal courts having jurisdiction with respect to both federal and provincial laws.

While the British North America Act of 1867 together with its subsequent amendments is popularly regarded as the Constitution of Canada, it is not an exhaustive statement of the laws and rules by which Canada is governed. The Constitution of Canada in its broadest sense includes other statutes of the United Kingdom Parliament (e.g., the Statute of Westminster, 1931), statutes of the Parliament of Canada relating to such matters as the succession to the Throne, the demise of the Crown, the Governor General, the Senate, the House of Commons, electoral

1.—Provinces and Territories of Canada, Dates of Admission to Confederation, Legislative Process by which Admission was Effected and Present Areas

Province, Territory or District	Date of Admission or Creation	Legislative Process	Present Area (sq. miles)		
			Land	Fresh Water	Total
Ontario[1]	July 1, 1867	Act of Imperial Parliament — The British North America Act, 1867 (30-31 Vict., c. 3), and Imperial Order in Council, May 22, 1867.	348,141	64,441	412,582
Quebec[2]	July 1, 1867		523,860	71,000	594,860
Nova Scotia	July 1, 1867		20,743	325	21,068
New Brunswick	July 1, 1867		27,473	512	27,985
Manitoba[3]	July 15, 1870	Manitoba Act, 1870 (33 Vict., c. 3) and Imperial Order in Council, June 23, 1870	219,723	26,789	246,512
British Columbia	July 20, 1871	Imperial Order in Council, May 16, 1871	359,279	6,976	366,255
Prince Edward Island	July 1, 1873	Imperial Order in Council, June 26, 1873	2,184	--	2,184
Saskatchewan[4]	Sept. 1, 1905	Saskatchewan Act, 1905 (4-5 Edw. VII, c. 42)	220,182	31,518	251,700
Alberta[4]	Sept. 1, 1905	Alberta Act, 1905 (4-5 Edw. VII, c. 3)	248,800	6,485	255,285
Newfoundland	Mar. 31, 1949	The British North America Act, 1949 (12-13 Geo. VI, c. 22)	147,994	7,370	155,364
Northwest Territories[5]	July 15, 1870	Act of Imperial Parliament—Rupert's Land Act, 1868 (31-32 Vict., c. 105), and Imperial Order in Council, June 23, 1870	1,253,438	51,465	1,304,903
Mackenzie[6]	Jan. 1, 1920	Order in Council, Mar. 16, 1918	*493,225*	*54,265*	*547,490*
Keewatin[6]	Jan. 1, 1920		*218,460*	*9,700*	*228,160*
Franklin[6]	Jan. 1, 1920		*541,753*	*7,500*	*549,253*
Yukon Territory[7]	June 13, 1898	Yukon Territory Act, 1898 (61 Vict., c. 6)	205,346	1,730	207,076
		Canada	**3,577,163**	**268,611**	**3,845,774**

[1] The area of Ontario was extended by the Ontario Boundaries Extension Act, 1912 (2 Geo. V, c. 40).

[2] Extended by Quebec Boundaries Extension Act, 1912 (2 Geo. V, c. 45), and diminished Mar. 1, 1927, in consequence of the Award of the Judicial Committee of the British Privy Council, whereby approximately 112,000 sq. miles of territory (formerly considered as part of Quebec) was assigned to Newfoundland.

[3] Extended by the Extension Boundaries Act of Manitoba, 1881, and the Manitoba Boundaries Extension Act, 1912 (2 Geo. V, c. 32).

[4] Saskatchewan and Alberta created as provinces in 1905 from the area formerly comprised in the provisional Districts of Assiniboia, Athabasca, Alberta and Saskatchewan, established May 17, 1882, by minute of Canadian Privy Council, concurred in by Dominion Parliament and Order in Council, Oct. 2, 1895.

[5] By an Imperial Order in Council passed on June 23, 1870, pursuant to the Rupert's Land Act, 1868 (31-32 Vict., c. 105), the former territories of the Hudson's Bay Company known as Rupert's Land and the North-Western Territory were transferred to Canada, effective July 15, 1870. These territories were designated as the North-West Territories by the Act of 32-33 Vict., c. 3, and as the Northwest Territories by R.S.C. 1906, c. 62. By Imperial Order in Council of July 31, 1880 (effective Sept. 1, 1880), all British territories and possessions in North America not already included within Canada and all islands adjacent thereto (with the exception of the Colony of Newfoundland and its dependencies) were annexed to Canada, and these additional territories were formally included in the North-West Territories by 4-5 Edw. VII, c. 27. The Province of Manitoba was formed out of a portion of the territories by the Manitoba Act, 1870 (33 Vict., c. 3), and a further portion was added to Manitoba in 1881 by 44 Vict., c. 14. The Provinces of Alberta and Saskatchewan were formed out of portions of the territories in 1905, and in 1912 other portions were added to Manitoba, Ontario and Quebec.

[6] By 39 Vict., c. 21, a separate district to be known as the District of Keewatin was established and provision was made for the local government thereof. The Act was expressed to come into force by proclamation. It provided that portions of the District might be re-annexed to the North-West Territories by proclamation; in 1886 a portion of the District of Keewatin was re-annexed, and in 1905 the entire Keewatin District was re-annexed. The Act of 39 Vict. was never proclaimed. By Order in Council of May 8, 1882, the provisional districts of Assiniboia, Saskatchewan, Alberta and Athabasca were created for the convenience of settlers and for postal purposes. By Order in Council of Oct. 2, 1895, the further provisional districts of Ungava, Franklin, Mackenzie and Yukon were created. The boundaries of these provisional districts were re-defined by Order in Council of Dec. 18, 1897. Subsequently the Yukon Territory was formed, the Provinces of Alberta and Saskatchewan were created and other portions of the territories were annexed to Quebec, Ontario and Manitoba. By Order in Council, dated Mar. 16, 1918 (effective Jan. 1, 1920), the remaining portions of the Northwest Territories were divided into three provisional districts known as Mackenzie, Keewatin and Franklin.

[7] The provisional district of Yukon, established in 1895, was created a judicial district of the North-West Territories by proclamation issued pursuant to section 51 of the North-West Territories Act (R.S.C. 1886, c. 50) on August 16, 1897, and by the Yukon Territory Act (61 Vict., c. 6) was declared to be a separate territory.

districts, elections, Royal Style and Titles, and also statutes of provincial legislatures relating to provincial government and provincial legislative assemblies. Other written instruments, such as the Royal Proclamation of 1763, early instructions to Governors, letters patent creating the offices of Governors and Governors General, and Orders in Council passed pursuant to the British North America Act, also form part of the Canadian constitutional system. In addition, the Constitution of Canada includes well-established usages and conventions. The preamble to the British North America Act states that it was the desire of the original provinces to be united "with a constitution similar in principle to that of the United Kingdom" and accordingly many of the usages and conventions of government that have been developed in the United Kingdom over the centuries are followed in Canada. For example, the Cabinet system of responsible government as developed in the United Kingdom obtains in Canada although no mention thereof is made in the British North America Act.

No provision was made in the British North America Act, 1867, for amendment thereof by any legislative authority in Canada, but both the Parliament of Canada and the provincial legislatures were given legislative jurisdiction with respect to some matters relating to government. Thus, for example, the Parliament of Canada was given jurisdiction with respect to the establishment of electoral districts and election laws, and the privileges and immunities of members of the House of Commons and the Senate, and each provincial legislature was empowered to amend the constitution of the province except as regards the office of Lieutenant-Governor. By an amendment to the British North America Act passed in 1949, the authority of the Parliament of Canada to legislate with respect to constitutional matters was considerably enlarged, and it may now amend the Constitution of Canada except as regards the legislative authority of the provinces, the rights and privileges of provincial legislatures or governments, schools, the use of the English or French language, and the duration of the House of Commons.

Canada's Status in the Commonwealth of Nations.*—The several stages in the development of the status of Canada have been authoritatively described in the reports of successive Imperial Conferences, including that held at London in 1926 which defined the group of self-governing communities consisting of the United Kingdom and the Dominions as "autonomous communities within the British Empire, equal in status, in no way subordinate one to another in any aspect of their domestic or external affairs, though united by a common allegiance to the Crown, and freely associated as members of the British Commonwealth of Nations". That Conference also recognized that, as a consequence of this equality of status, the Governor General of a Dominion "is the representative of the Crown, holding in all essential respects the same position in relation to the administration of public affairs in the Dominion as is held by His Majesty the King in Great Britain", and that "it is the right of the Government of each Dominion to advise the Crown in all matters relating to its own affairs" Simultaneously, with this change in the constitutional relationship between the several parts of the British Commonwealth of Nations, there developed, as a complementary aspect of nationhood, the assumption by the several Dominions of further responsibilities and rights of sovereign States in their relations with other members of the community of nations. Membership in the League of Nations and, more recently, in the United

* *See* also *Canada's Growth in International Status*, in the 1952-53 Year Book, pp. 101-104.

Nations, the exercise of treaty-making powers and the establishment of separate diplomatic representation in a number of foreign countries have characterized this phase in the growth of Canada. More explicit recognition of the implications of the principles of equality of status was accorded in the Statute of Westminster of 1931, which provided for the removal of the remaining limitations on the legislative autonomy of the Commonwealth nations.

Thus Canada, under the Crown, has equality of status with the United Kingdom and the other Commonwealth nations in both domestic and foreign affairs; its government advises the Crown in the person of the Governor General on all matters relating to Canada. Canada has membership in the United Nations; makes its own treaties; appoints its own ambassadors and other representatives abroad; levies its own taxes; makes its own laws which are executed by a government dependent on the will of a majority of the people; and maintains its own military, naval and air forces. In short, Canada has achieved the full status of democratic nationhood within the Commonwealth of Nations.

PART II.—MACHINERY OF GOVERNMENT

Section 1.—The Federal Government

Subsections 1 and 2 of this Section, dealing, respectively, with the Executive and the Legislative branches of the Federal Government, are being carried as Appendix I to this volume in order that data becoming available following the General Election of Aug. 10, 1953, may be included.

Subsection 3.—The Judiciary

The Federal Judiciary

The Parliament of Canada is empowered by Sect. 101 of the British North America Act to provide from time to time for the constitution, maintenance and organization of a general Court of Appeal for Canada and for the establishment of any additional courts for the better administration of the laws of Canada. Under this provision, Parliament has established the Supreme Court of Canada, the Exchequer Court of Canada and certain miscellaneous courts.

Supreme Court of Canada.—This Court, first established in 1875 and now governed by the Supreme Court Act (R.S.C. 1952, c. 259), consists of a chief justice, who is called the Chief Justice of Canada, and eight puisne judges. The chief justice and the puisne judges are appointed by the Governor in Council and they hold office during good behaviour but are removable by the Governor General on address of the Senate and House of Commons. They cease to hold office upon attaining the age of 75 years. The Court sits at Ottawa and exercises general appellate jurisdiction throughout Canada in civil and criminal cases. The Court is also required to consider and advise upon questions referred to it by the Governor in Council and it may also advise the Senate or House of Commons on Private Bills referred to the Court under any rules or orders of the Senate or the House of Commons.

Appeals may be brought from any final judgment of the highest court of final resort in a province in any case where the amount or value of the matter in controversy exceeds the sum of $2,000. An appeal may be brought from any other

final judgment with leave of the highest court of final resort in the province; if such court refuses to grant leave, the Supreme Court of Canada may grant leave to appeal. The Supreme Court may grant leave to appeal from any judgment, whether final or not. Appeals in respect of indictable offences are regulated by the Criminal Code. Appeals from federal courts are regulated by the statute establishing such courts.

The judgment of the Supreme Court of Canada in all cases is final and conclusive.

1. — Chief Justice and Judges of the Supreme Court of Canada, as at Mar. 31, 1953

(In order of seniority)

Name	Date of Appointment
The Rt. Hon. Chief Justice THIBAUDEAU RINFRET	Jan. 8, 1944
The Hon. Justice PATRICK KERWIN	July 20, 1935
The Hon. Justice ROBERT TASCHEREAU	Feb. 9, 1940
The Hon. Justice I. C. RAND	Apr. 22, 1943
The Hon. Justice ROY L. KELLOCK	Oct. 3, 1944
The Hon. Justice JAS. W. ESTEY	Oct. 6, 1944
The Hon. Justice CHARLES H. LOCKE	June 3, 1947
The Hon. Justice JOHN R. CARTWRIGHT	Dec. 23, 1949
The Hon. Justice J. H. GERALD FAUTEUX	Dec. 23, 1949

Exchequer Court.—The Exchequer Court of Canada was first established in 1875 as part of the Supreme Court of Canada but is now a separate court governed by the Exchequer Court Act (R.S.C. 1952, c. 98). The Court consists of a president and four puisne judges who are appointed by the Governor in Council. The president and the puisne judges hold office during good behaviour but may be removed by the Governor General on address of the Senate and the House of Commons. They cease to hold office upon attaining the age of 75 years. The Court sits at Ottawa and also at any other place in Canada for which sittings may be fixed by the Court. The jurisdiction of the Court extends to cases where claims are made by or against the Crown in right of Canada. Proceedings against the Crown are taken by petition of right pursuant to the Petition of Right Act (R.S.C. 1952, c. 210).

An appeal lies to the Supreme Court of Canada from any final judgment of the Exchequer Court in which the amount in controversy exceeds $500; an appeal also lies with leave of the Supreme Court in certain cases where the amount in controversy does not exceed $500 or where the judgment is not final.

The Exchequer Court also exercises admiralty jurisdiction in Canada. Admiralty jurisdiction was first conferred in 1891 by the Admiralty Act (54-55 Vict., c. 29) and the admiralty jurisdiction is now governed by the Admiralty Act (R.S.C. 1952, c. 1). Under this Statute the Exchequer Court is continued as a Court of Admiralty. The president and puisne judges of the Exchequer Court exercise

admiralty jurisdiction throughout the whole of Canada. In addition, Canada is divided into various admiralty districts; a district judge in admiralty is appointed for each district. Appeals to the Supreme Court of Canada from judgments of the president or the puisne judges are governed by the general appeal provisions in the Exchequer Court Act. Appeals may be taken from a final judgment of a district judge in admiralty either to the Exchequer Court or direct to the Supreme Court of Canada.

Miscellaneous Courts.—*Railway Act.*—The Railway Act (R.S.C. 1952, c. 234) established the Board of Railway Commissioners for Canada as a court of record; by the Transport Act, 1938 (R.S.C. 1952, c. 271), the name was changed to the Board of Transport Commissioners for Canada. This Court exercises jurisdiction with respect to railway matters. The Governor in Council is given jurisdiction to vary any order of the Board and an appeal lies from the Board to the Supreme Court of Canada upon a question of jurisdiction or a question of law.

Bankruptcy Act.—By virtue of para. 21 of Sect. 91 of the British North America Act, 1867, Parliament has exclusive legislative jurisdiction in relation to bankruptcy and insolvency. By the Bankruptcy Act (R.S.C. 1952, c. 14) the superior courts of the provinces are constituted bankruptcy courts; original jurisdiction is conferred upon the trial courts and appellate jurisdiction is conferred upon the appeal courts of the provinces.

Farmers' Creditors Arrangement Act.—Under the Farmers' Creditors Arrangement Act (R.S.C. 1952, c. 111), the county or district courts of the provinces are established as courts for the purposes of this Act and the appeal courts of the provinces are given appellate jurisdiction.

Income Tax Appeal Board.—By the Income Tax Act (R.S.C. 1952, c. 148) an Appeal Board is established, consisting of a chairman and not less than two or more than four members, with jurisdiction over appeals against income tax assessments. A further appeal may be taken to the Exchequer Court.

Provincial Judiciaries

Certain provisions of the British North America Act govern, to some extent, the provincial judiciaries. Under Sect. 92 (14) the legislature of each province may exclusively make laws in relation to the administration of justice in the province including the constitution, maintenance and organization of provincial courts, both of civil and of criminal jurisdiction. Sect. 96 provides that the Governor General in Council shall appoint the judges of the superior, district and county courts in each province, except those of the courts of probate in Nova Scotia and New Brunswick. Sect. 100 provides that the salaries, allowances and pensions of judges of the superior, district and county courts (except the courts of probate in Nova Scotia and New Brunswick) are to be fixed and provided by the Parliament of Canada and these are set out in the Judges Act (R.S.C. 1952, c. 157). Under Sect. 99 the judges of the superior courts hold office during good behaviour but are removable by the Governor General on address of the Senate and House of Commons. The tenure of office of district and county court judges is fixed by the Judges Act as being during good behaviour and their residence within the county or union of counties for which the court is established.

Newfoundland.—*Supreme Court* [*Consolidated Statutes (Third Series) c. 83*].—The Supreme Court of Newfoundland consists of a chief justice and two other judges, appointed by the Governor General in Council. The Court has original and appellate jurisdiction.

District Courts [*the District Courts Act, 1949 (the Act No. 96 of 1949, Statutes of Newfoundland)*].—Under the District Courts Act, 1949, district courts were set up. A district court judge has civil jurisdiction where the amount involved does not exceed $1,000 and on the criminal side he has the same jurisdiction as a county court judge.

Stipendiary Magistrates and Justices of the Peace [*the Summary Jurisdiction Act, 1950 (the Act No. 50 of 1950, Statutes of Newfoundland)*].—Stipendiary magistrates and justices of the peace are appointed for the Province and have limited criminal and civil jurisdiction.

Prince Edward Island.—*Supreme Court (R.S.P.E.I. 1951, c. 79).*—The Supreme Court of Prince Edward Island consists of a chief justice, who is known as the Chief Justice of Prince Edward Island, and two other judges, all appointed by the Governor General in Council. The Court has original and appellate jurisdiction.

Court of Chancery (R.S.P.E.I. 1951, c. 21).—The Court of Chancery consists of a chancellor, a vice-chancellor and the master of the rolls. The chancellor is the Lieutenant-Governor, the vice-chancellor is one of the judges of the Supreme Court and the master of the rolls is one of the other judges of the Supreme Court. The Court has original jurisdiction in chancery matters.

County Courts (R.S.P.E.I. 1951, c. 35).—There are three counties in the Province with a county court and judge for each county. Each court has criminal jurisdiction and also civil jurisdiction generally in actions up to $500, but has no jurisdiction in cases involving title to or possession of land.

Probate Court (R.S.P.E.I. 1951, c. 124).—The Probate Court has one judge, appointed by the Lieutenant-Governor in Council. The Court has jurisdiction in probate and guardianship matters.

Magistrates and Justices of the Peace (R.S.P.E.I. 1951, c. 89).—Magistrates and justices of the peace are appointed by the Lieutenant-Governor in Council. They have limited criminal and civil jurisdiction.

Nova Scotia.—*Supreme Court (S.N.S. 1919, c. 32).*—The Supreme Court of Nova Scotia consists of a chief justice and six other judges appointed by the Governor General in Council. The Court has original and appellate jurisdiction in civil and in criminal cases. Sitting individually, the judges act as trial division judges and sitting *en banc* they act as appeal judges.

Court of Divorce and Matrimonial Causes (R.S.N.S., Third Series, c. 126).—This Court was established by a pre-Confederation statute and has divorce jurisdiction only. The judges of the Supreme Court are also appointed judges of this Court.

County Courts (S.N.S. 1945, c. 5).—There are seven county court districts in Nova Scotia and a county court and judge for each district. The judges are appointed by the Governor General in Council. Each court has criminal jurisdiction and jurisdiction in civil cases up to $1,000, but no jurisdiction where any devise or bequest is disputed.

Probate Courts (R.S.N.S. 1923, c. 217).—By the Probate Act, the county court judges are ex officio judges in probate. Probate matters are decided in the first instance by a registrar of probate and appeals may be taken to the probate judges. A registrar of probate is appointed for each county.

Magistrates.—There are 48 stipendiary magistrates and nine provincial magistrates, all appointed by the Lieutenant-Governor in Council. They have limited criminal jurisdiction and civil jurisdiction up to $100.

Minor Courts of Civil Jurisdiction.—These consist of courts established pursuant to city charters, municipal courts and justices courts. The city and municipal courts have jurisdiction up to $100 and justices courts have jurisdiction up to $20 singly or up to $80 when two justices are sitting.

Juvenile Courts (S.N.S. 1950, c. 2).—The Child Welfare Act provides for the establishment of juvenile courts and the appointment of juvenile court judges. The courts exercise jurisdiction in juvenile matters under provincial statutes and are also juvenile courts under the federal Juvenile Delinquents Act. There are seven juvenile court judges.

New Brunswick.—*Supreme Court (R.S.N.B. 1952, c. 120).*—The Supreme Court of New Brunswick has three divisions, namely, an Appeal Division, a Chancery Division and a Queen's Bench Division. The Appeal Division consists of a chief justice, who is known as the Chief Justice of New Brunswick, and two other judges. The Chancery Division consists of three judges who are the judges of the Appeal Division. The Queen's Bench Division consists of a chief justice and three other judges. The Appeal Division has general appellate jurisdiction throughout the Province and the Queen's Bench Division has unlimited original jurisdiction, throughout the Province, in civil and criminal matters except in chancery. All judges are appointed by the Governor General in Council.

Court of Divorce and Matrimonial Causes (R.S.N.B. 1952, c. 63).—This Court was established by a pre-Confederation statute which has continued in force to date. It has divorce jurisdiction only. There is one judge who is appointed by the Governor General in Council.

County Courts (R.S.N.B. 1952, c. 45).—The Province is divided into counties with a county court for each county or group of counties. There are six county court judges, appointed by the Governor General in Council. These courts have criminal jurisdiction, jurisdiction in contracts up to $1,000 and jurisdiction in damage actions up to $500. They have no jurisdiction where title to land is brought in question or the validity of any devise or bequest is disputed.

Probate Courts (R.S.N.B. 1952, c. 175).—A Probate Court is established by provincial Act for each county and each such court is presided over by a judge appointed by the Lieutenant-Governor in Council. They have jurisdiction over estates.

Juvenile Courts (R.S.N.B. 1952, c. 123).—The Juvenile Courts Act provides for the establishment of a juvenile court for each place where the federal Juvenile Delinquents Act is in force. Five judges have been appointed, one for Saint John, one for Fredericton, one for the County of Westmorland, one for the County of Gloucester and one for the County of Restigouche. These courts have jurisdiction in juvenile matters under provincial statutes and are also juvenile courts under the federal Juvenile Delinquents Act.

Magistrates.—Magistrates appointed under the County Magistrates Act (R.S.N.B. 1952, c. 46) exercise their jurisdiction over the county for which they are appointed and may sit anywhere in the county. They have jurisdiction up to $200 in contract and $100 in tort. They have absolute criminal jurisdiction. Nine of the 15 counties have county magistrates.

Magistrates appointed under the Local Magistrates Act (R.S.N.B. 1952, c. 137) are appointed for a city, town, village or district, and their jurisdiction is limited to same. They have jurisdiction up to $80 in contract and $32 in tort. Only in cities do such magistrates have absolute criminal jurisdiction. In a few cases, magistrates are also appointed under city or town charters.

Quebec.—*Court of Queen's Bench.*—This Court, established under the Quebec Courts of Justice Act (*R.S.Q. 1941, c. 15*), has two appellate jurisdictions and one original jurisdiction. It is composed of 12 judges appointed by the Governor General in Council, including a chief justice called the Chief Justice of the Province of Quebec, and has appellate jurisdiction in the civil matters mentioned in Sect. 42 ff. of the Code of Civil Procedure, and appellate jurisdiction concerning convictions on indictments (Sect. 1012 ff. of the Criminal Code).

Presided over by a judge of the Superior Court, the Court of Queen's Bench has original jurisdiction in criminal matters when the accused is committed to stand a trial on an indictment, and appellate jurisdiction in accordance with the provisions of Sect. 749 ff. of the Criminal Code relating to the appeal against summary conviction or against the dismissal of a complaint.

Superior Court.—The Superior Court is a court of record and is composed of a chief justice, an associate chief justice and 40 puisne judges, all of whom are appointed by the Governor General in Council. This Court has general original jurisdiction in all suits or actions that are not exclusively within the jurisdiction of the Circuit Court, the Magistrate's Court or the Exchequer Court of Canada and it has exclusive original jurisdiction in cases of petition of right (Sect. 48 ff. of the Code of Civil Procedure).

Magistrate's Courts.—The Lieutenant-Governor in Council may, by proclamation, establish one or more magistrate's courts in and for each judicial district or electoral district or in and for any place in the Province. These courts are courts of record and, in civil matters, have jurisdiction determined by Sect. 61 ff. of the Code of Civil Procedure. To preside over the said courts, the Lieutenant-Governor in Council may appoint 33 magistrates including a Chief District Magistrate and an Associate Chief District Magistrate.

Social Welfare Courts.—Such courts are established for four districts including Montreal, Quebec, Three Rivers and St. Francis. Nine judges, one of whom is a Chief Justice and all of whom have been appointed by the Lieutenant-Governor in Council, preside over the courts. The courts are authorized to take cognizance

of cases of juvenile delinquents within the meaning of the federal Juvenile Delinquents Act, and their jurisdiction also extends to those portions of such provincial Acts as the Youth Protection Schools Act, the Quebec Public Charities Act, the Lunatic Asylums Act and the Adoption Act relating to the protection of children.

Court of the Sessions of the Peace.—This Court is a court of record and is composed of a number of judges, not exceeding 25, including one chief justice with residence at Montreal and one chief justice with residence at Quebec. These judges are appointed by the Lieutenant-Governor in Council and, besides presiding over the court of the sessions of the peace, they exercise, in criminal and penal matters, such powers as are conferred on them by federal Acts as well as by provincial Acts.

Recorder's Courts.—These courts are municipal courts and are established under the authority of by-laws adopted, as the case may be, by the city or town councils. The recorders are appointed by the Lieutenant-Governor in Council.

Commissioners' Courts.—These courts are established by provincial authority. Their original jurisdiction is limited to the matters mentioned in Sect. 59 of the Code of Civil Procedure.

Justices of the Peace.—The justices of the peace are appointed by the Lieutenant-Governor in Council and, as such, they have the powers conferred upon them by the Criminal Code and other federal laws and also by the Quebec Summary Conviction Act (R.S.Q. 1941, c. 29) and other provincial Acts.

Ontario.—*Supreme Court (R.S.O. 1950, c. 190).*—The Supreme Court of Ontario has two divisions, one of which is known as the Court of Appeal for Ontario and the other as the High Court of Justice for Ontario. The Court of Appeal consists of a chief justice, who is called the Chief Justice of Ontario, and nine other judges. The High Court of Justice consists of a chief justice, who is known as the Chief Justice of the High Court, and 16 other judges. All judges are appointed by the Governor General in Council. The Court of Appeal has general appellate jurisdiction throughout the Province and the High Court of Justice has unlimited original jurisdiction in civil and criminal matters.

County and District Courts (R.S.O. 1950, c. 75).—The Province is divided into 48 counties and districts with a county or district court for each county or district and one or more judges for each court. There are 62 judges in all, and they are appointed by the Governor General in Council. These courts have no criminal jurisdiction except on appeal from the decision of magistrates and justices of the peace in summary conviction cases. They have jurisdiction in contracts where the amount claimed does not exceed $1,200 and jurisdiction in personal property actions where the amount claimed does not exceed $1,000.

General Sessions of the Peace (R.S.O. 1950, c. 158).—There is a court of general sessions of the peace for each county and district in the Province. In the Counties of York and Wentworth the sittings are held quarterly and in the other counties and districts, semi-annually. The courts are presided over by the Judge of the County Court acting as chairman. They sit with a jury and have jurisdiction to try any indictable offence except those set out in Sect. 583 of the Criminal Code which are within the exclusive jurisdiction of the Superior Courts.

The County Court Judges Criminal Courts (*R.S.O. 1950, c. 74*).—These are criminal courts held in every county and district in the Province for the speedy trial of indictable offences under Part XVIII of the Criminal Code. They are presided over by the county or district court judge sitting without a jury. They have jurisdiction to try, on the election of the accused, any indictable offence except those set out in Sect. 583 of the Criminal Code.

Surrogate Courts (*R.S.O. 1950, c. 380*).—There is a surrogate court for each county or district. The court has jurisdiction to deal with probate and administration matters and is presided over by the county or district court judge.

Division Courts (*R.S.O. 1950, c. 106*).—There are 248 division courts throughout the Province. These are presided over by the county or district court judge who sits in the jurisdiction where the particular division court is located. Jurisdiction is limited to cases up to $200 except where there is a written contract or a promise in which case jurisdiction extends to $400.

Juvenile Courts (*R.S.O. 1950, c. 193*).—The juvenile courts for Ontario have jurisdiction in juvenile cases under provincial legislation; in addition they are juvenile courts for the purposes of the federal Juvenile Delinquents Act. The judges are appointed by the Lieutenant-Governor in Council; sometimes the county or district judge is appointed, sometimes the local magistrate and sometimes a person is appointed specially for the purpose of acting as a juvenile court judge.

Magistrates (*R.S.O. 1950, c. 219*).—Magistrates are appointed by the Lieutenant-Governor in Council. They have limited civil and criminal jurisdiction and are ex officio justices of the peace.

Justices of the Peace (*R.S.O. 1950, c. 192*).—Justices of the peace are appointed by the Lieutenant-Governor in Council. They have limited civil and criminal jurisdiction.

Manitoba.—*Court of Appeal* (*R.S.M. 1940, c. 40*).—The Court of Appeal consists of a chief justice, who is called the Chief Justice of Manitoba, and four other judges. All judges are appointed by the Governor General in Council. The Court has general appellate jurisdiction throughout the Province.

Court of Queen's Bench (*R.S.M. 1940, c. 34*).—The Court consists of a chief justice, who is known as the Chief Justice of the Queen's Bench, and five other judges. All judges are appointed by the Governor General in Council. The Court has unlimited original jurisdiction in civil and criminal cases throughout the Province.

County Courts (*R.S.M. 1940, c. 42*).—The Province is divided into six judicial districts and a number of county courts are established for each district. There are five judges for the Eastern Judicial District and each of the other districts has one judge. A judge has jurisdiction over all county courts within the judicial district to which he is appointed. These courts have criminal jurisdiction and also jurisdiction, generally, in claims not exceeding $800 but have no jurisdiction in certain types of actions such as recovery of land.

Surrogate Courts (*R.S.M. 1940, c. 45*).—There is a surrogate court for each judicial district and the Surrogate Courts Act provides that the county court judge in each judicial district is to be the judge of the surrogate court of that district. These courts have jurisdiction and authority in relation to testamentary matters.

Juvenile Courts (*R.S.M. 1940, c. 32*).—The juvenile courts are established under the Child Welfare Act and the territorial jurisdiction of each court is set out in the Order in Council establishing the court and appointing the judges. There are a number of judges appointed in each district one of whom is designated the senior judge. The courts have power to deal with cases involving children under the Child Welfare Act and other provincial statutes and are also juvenile courts for the purposes of the federal Juvenile Delinquents Act.

Police Magistrates (*R.S.M. 1940, c. 125*).—Police magistrates are appointed by the Lieutenant-Governor in Council and, in addition to criminal jurisdiction, they have jurisdiction to try actions for debt where the amount does not exceed $100. An appeal lies to a county court judge. There are 41 police magistrates in the Province.

Justices of the Peace (*R.S.M. 1940, c. 125*).—Justices of the peace are appointed by the Lieutenant-Governor in Council. They have limited criminal jurisdiction and also small-debt jurisdiction up to $100.

Saskatchewan.—*Court of Appeal* (*R.S.S. 1953, c. 66*).—The Court of Appeal consists of a chief justice, who is called the Chief Justice of Saskatchewan, and four other judges. All judges are appointed by the Governor General in Council. The Court has general appellate jurisdiction throughout the Province.

Court of Queen's Bench (*R.S.S. 1953, c. 67*).—The Court of Queen's Bench consists of a chief justice, who is called the Chief Justice of the Queen's Bench, and six other judges. All judges are appointed by the Governor General in Council. The Court has unlimited original jurisdiction in civil and criminal matters throughout the Province.

District Courts (*R.S.S. 1953, c. 68*).—The Province is divided into 21 judicial districts and there is a district court for each judicial district. The judges are appointed by the Governor General in Council. Each court has jurisdiction generally in all cases where the claim does not exceed $1,200, but jurisdiction does not include cases where title to land is brought in question or where the validity of any devise or bequest is disputed. Jurisdiction is also excluded in certain personal actions such as malicious prosecution, malicious arrest, false imprisonment, libel, slander and breach of promise of marriage. The courts also have criminal jurisdiction.

Surrogate Courts (*R.S.S. 1953, c. 69*).—There is a surrogate court for each judicial district and the Surrogate Courts Act provides that the judge of the district court shall be the judge of the surrogate court. The court has jurisdiction in probate matters.

Juvenile Courts (*R.S.S. 1953, c. 241*).—Under the Corrections Act, a juvenile court for the Province is established within the meaning of the federal Juvenile Delinquents Act for the purpose of dealing with juvenile delinquents and all causes and matters arising under part of the Corrections Act.

The chief probation officer for boys and the chief probation officer for girls are ex officio judges of the juvenile court and, on the recommendation of the Minister, the Lieutenant-Governor may appoint additional judges of the juvenile court.

Magistrates' Courts (R.S.S. 1953, c. 104).—Magistrates are appointed by the Lieutenant-Governor in Council. There are eight full-time and eight part-time magistrates. The magistrates exercise criminal jurisdiction and are ex officio justices of the peace and accordingly have the jurisdiction of a justice of the peace in civil cases.

Justices of the Peace (R.S.S. 1953, c. 105).—Justices of the peace are appointed by the Lieutenant-Governor in Council and, in addition to limited criminal jurisdiction, have jurisdiction in civil cases up to $100.

Alberta.—*Supreme Court (R.S.A. 1942, c. 129).*—The Supreme Court of Alberta consists of two branches or divisions; one is designated the Appellate Division of the Supreme Court of Alberta and the other is designated the Trial Division of the Supreme Court of Alberta. The Appellate Division consists of a chief justice, who is called the Chief Justice of Alberta, and four other judges. The Trial Division consists of a chief justice, who is called the Chief Justice of the Trial Division, and five other judges. All judges of the Supreme Court are appointed by the Governor General in Council. The Appellate Division exercises general appellate jurisdiction throughout the Province and the Trial Division has unlimited original jurisdiction in civil and criminal matters.

District Courts (R.S.A. 1942, c. 121).—There are two district court districts in Alberta, namely, the District of Northern Alberta and the District of Southern Alberta, each with a district court. The Court of the District of Northern Alberta consists of a chief judge and five other judges and the Court of the District of Southern Alberta consists of a chief judge and four other judges. All judges are appointed by the Governor General in Council. The district courts, generally, have jurisdiction in all cases where the claim does not exceed $1,000 and in criminal, probate and guardianship matters.

Juvenile Courts (S.A. 1944, c. 8).—The Child Welfare Act provides for the establishment of a Juvenile Court and every judge of the Supreme Court, every judge of a district court and every police magistrate is ex officio a judge thereof. In addition, the Lieutenant-Governor in Council may appoint other persons to be judges of the juvenile courts; 11 such judges have been appointed. A juvenile court has jurisdiction to hear and determine offences charged against children under any statute of the Province and, in addition, is a juvenile court for the purposes of the federal Juvenile Delinquents Act.

Family Courts (S.A. 1952, c. 32).—The Lieutenant-Governor in Council, by order, may establish a Family Court in any municipality or area within the Province and may appoint, under the provisions of the Magistrates and Justices Act, one or more police magistrates as judges of such court.

Police Magistrates (R.S.A. 1942, c. 134).—Police magistrates have criminal jurisdiction and also jurisdiction in actions for debt not exceeding $100 and wage claims not exceeding six months wages. One hundred and eighteen police magistrates have been appointed.

Justices of the Peace (R.S.A. 1942, c. 134).—Justices of the peace are appointed by the Lieutenant-Governor in Council. They have limited civil and criminal jurisdiction. Two hundred and sixty-one justices of the peace have been appointed.

British Columbia.—*Court of Appeal* (*R.S.B.C. 1948, c. 74*).—The Court of Appeal consists of a chief justice, who is called the Chief Justice of British Columbia, and four other judges who are called Justices of Appeal. All are appointed by the Governor General in Council. The Court exercises general appellate jurisdiction.

Supreme Court (*R.S.B.C. 1948, c. 73*).—This Court consists of a chief justice, who is called the Chief Justice of the Supreme Court, and seven other judges who are called Judges of the Supreme Court. All are appointed by the Governor General in Council. The Court has unlimited original jurisdiction in civil and criminal matters throughout the Province.

County Courts (*R.S.B.C. 1948, c. 75*).—There are eight counties in the Province with a county court for each county and one or more judges for each county court. All judges are appointed by the Governor General in Council. Each county court has jurisdiction up to $1,000 generally and in some cases up to $2,500 and has jurisdiction in criminal and probate matters. The courts have no jurisdiction in certain types of personal actions such as libel, slander or breach of promise of marriage.

Small Debts Courts (*R.S.B.C. 1948, c. 79*).—The Small Debts Court Act provides that the Lieutenant-Governor in Council may appoint any stipendiary magistrate, police magistrate or any two justices of the peace to exercise small-debt jurisdiction within the territorial limits for which he or they have been appointed. There are 97 small debts court magistrates. Jurisdiction is limited to $100 and an appeal lies to the nearest county court judge or Supreme Court judge.

Magistrates and Justices of the Peace (*R.S.B.C. 1948, c. 195*).—Magistrates and justices of the peace are appointed by the Lieutenant-Governor in Council. They have limited civil and criminal jurisdiction.

Juvenile Courts (*R.S.B.C. 1948, c. 77*).—Judges of the Juvenile Court are appointed by the Lieutenant-Governor in Council. They have jurisdiction for the purposes of the federal Juvenile Delinquents Act, and also under the following provincial statutes: Protection of Children Act, the Industrial School for Girls Act and the Industrial School for Boys Act.

Section 2.—Provincial and Territorial Governments*

In each of the provinces, the Queen is represented by a Lieutenant-Governor appointed by the Governor General in Council. The Lieutenant-Governor acts on the advice and with the assistance of his Ministry or Executive Council, which is responsible to the Legislature and resigns office when it ceases to enjoy the confidence of that body.

The Legislature of each province is unicameral, consisting of the Lieutenant-Governor and a Legislative Assembly, except for the Province of Quebec where there is a Legislative Council as well as a Legislative Assembly.

The Legislative Assembly is elected by the people for a statutory term of five years but may be dissolved within that period by the Lieutenant-Governor on the advice of the Premier of the province.

* The information on the governments of the different provinces given in Subsections 1 to 10 of this Section is brought up to Mar. 31, 1953. Provincial elections held between that date and the date of going to press are covered in Appendix II of this volume.

The source of legislative authority of the Provincial Legislatures is the British North America Act, 1867 (30-31 Vict., c. 3 and amendments). Under Sect. 92 of the Act, the Legislature of each province may make laws exclusively in relation to the following matters: amendment of the constitution of the province except as regards the Lieutenant-Governor; direct taxation within the province; borrowing of money on the credit of the province; establishment and tenure of provincial offices and appointment and payment of provincial officers; the management and sale of public lands belonging to the province and of the timber and wood thereon; the establishment, maintenance and management of public and reformatory prisons in and for the province; the establishment, maintenance and management of hospitals, asylums, charities and eleemosynary institutions in and for the province, other than marine hospitals; municipal institutions in the province; shop, saloon, tavern, auctioneer and other licences issued for the raising of provincial or municipal revenue; local works and undertakings, other than interprovincial or international lines of ships, railways, canals, telegraphs, etc., or works which, though wholly situated within one province, are declared by the Federal Parliament to be for the general advantage either of Canada or of two or more provinces; the incorporation of companies with provincial objects; the solemnization of marriage in the province; property and civil rights in the province; the administration of justice in the province, including the constitution, maintenance and organization of provincial courts both of civil and criminal jurisdiction, and including procedure in civil matters in these courts; the imposition of punishment by fine, penalty or imprisonment for enforcing any law of the province relating to any of the aforesaid subjects; generally, all matters of a merely local or private nature in the province.

Further, in and for each province the Legislature may, under Sect. 93, make laws exclusively in relation to education, subject to certain restrictions relating to the establishment of schools by religious minorities. These powers, with similar restrictions, were conferred on the more recently admitted provinces on their inclusion as units in the federation.

The Provincial Legislatures may also make laws, under Sect. 95, in relation to agriculture and immigration, subject to any laws of the Parliament of Canada in relation to these subjects.

Provincial Franchise.—The main qualifications for persons entitled to be registered as voters in provincial elections are given below and apply, with modifications, to voters in all provinces:—

> Every person, male or female, at the age of 21 years, who is a Canadian citizen and was resident in the province of registration 12 months prior to the election date and with two months residence in the electoral district of polling, and who does not fall under any statutory disqualifications, is entitled to be registered as a voter.

The principal exception to the above gives voting privileges to persons in Saskatchewan and Alberta at the age of 18 and 19 years, respectively.

Residence required in the Province of Quebec for provincial elections is two years and in British Columbia six months. In Manitoba a residence period of three months in the electoral district is necessary for registration. Further details connected with disqualifications, etc., may be found in the Election Act of each of the provinces.

Subsection 1.—Newfoundland

The Government of Newfoundland consists of a Lieutenant-Governor, an Executive Council and a Legislative Assembly. Colonel the Honourable Sir Leonard Outerbridge is the present Lieutenant-Governor of the Province; he was commissioned on Aug. 17, 1949.

The Legislative Assembly has 28 members elected for a term of five years.

The Premier and each Cabinet Minister receives a salary of $7,000 per annum plus a sessional indemnity of $3,000. Each Member of the House of Assembly receives a sessional indemnity of $3,000. An additional allowance of $2,000 is made to the Leader of the Opposition.

2.—Legislatures of Newfoundland since Confederation and Ministry as at Mar. 31, 1953

Legislatures, 1949-53

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
May 27, 1949	1st General Assembly	4	July 13, 1949	Nov. 3, 1951
Nov. 26, 1951	2nd General Assembly	[1]	Mar. 12, 1952	[1]

[1] Life of Legislature not expired at Mar. 31, 1953.

First Ministry

(Party standing at latest General Election, Nov. 26, 1951: 22 Liberals; 4 Progressive Conservatives; 2 vacant.)

NOTE.—Date of appointment does not necessarily mean that the Minister was sworn in on date given.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and Minister of Economic Development	Hon. J. R. SMALLWOOD	Apr. 1, 1949	Apr. 1, 1949
Attorney General	Hon. L. R. CURTIS	Apr. 1, 1949	Apr. 1, 1949
Minister of Public Welfare	Hon. H. L. POTTLE	Apr. 4, 1949	Apr. 4, 1949
Minister of Fisheries and Co-operatives	Hon. W. J. KEOUGH	July 29, 1949	July 29, 1949
Minister of Public Works	Hon. E. S. SPENCER	July 29, 1949	July 29, 1949
Minister of Education	Hon. J. R. CHALKER	Apr. 4, 1950	Dec. 23, 1952
Minister of Labour	Hon. C. H. BALLAM	Apr. 4, 1950	Apr. 4, 1950
Minister of Health	Hon. P. S. FORSEY	July 29, 1950	Dec. 23, 1952
Minister of Municipal Affairs and Supply	Hon. S. J. HEFFERTON	July 29, 1949	Dec. 23, 1952
Minister of Finance	Hon. GREGORY J. POWER	Dec. 15, 1951	Dec. 15, 1951
Minister of Provincial Affairs	Hon. MYLES P. MURRAY	Dec. 15, 1951	Dec. 15, 1951
Minister of Natural Resources	Hon. F. W. ROWE	May 21, 1952	May 21, 1952
Minister without portfolio	Hon. P. J. LEWIS	Dec. 15, 1951	Dec. 15, 1951

Subsection 2.—Prince Edward Island

The Government of Prince Edward Island consists of a Lieutenant-Governor, an Executive Council and a Legislative Assembly.

The Honourable T. W. L. Prowse, the present Lieutenant-Governor of the Province, was commissioned to office on Oct. 4, 1950. Lieutenant-Governors since Confederation are cited in the Year Book 1951, p. 86.

The General Assembly elected Apr. 26, 1951, is the 47th in the history of Prince Edward Island Legislatures and the 22nd since Confederation. It has 30 members who serve for a statutory term of five years, 15 of whom are elected on a basis of adult suffrage and the other 15 elected by property holders only.

The annual salary of the Premier is $6,000 and the salaries of the Cabinet Ministers are as follows: Attorney and Advocate General and Provincial Treasurer, $4,500; Minister of Health and Welfare, Minister of Public Works and Highways, Minister of Industry and Natural Resources, Minister of Agriculture, $4,000 each; Minister of Education and Provincial Secretary, $3,000 each. Each Member of the Assembly is paid the sum of $1,000 for each session attended by him and an additional amount of $500, tax free, as indemnity for expenses incurred. The Speaker is paid an additional sum of $400 and a further additional amount of $200, tax free, as an indemnity and the Leader of the Opposition is paid an additional sum of $800 and a further additional amount of $200, tax free, for indemnity incurred by him in relation to his official duties.

3.—Legislatures and Premiers of Prince Edward Island, 1935-53, and Ministry as at Mar. 31, 1953

Legislatures, 1935-53[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
July 23, 1935	18th General Assembly	5	Sept. 25, 1935	Apr. 21, 1939
May 18, 1939	19th General Assembly	4	Mar. 20, 1940	Aug. 20, 1943
Sept. 15, 1943	20th General Assembly	4	Feb. 15, 1944	Oct. 27, 1947
Dec. 11, 1947	21st General Assembly	5	Feb. 24, 1948	Mar. 30, 1951
Apr. 26, 1951	22nd General Assembly	[2]	Oct. 23, 1951	[2]

[1] The Ministries from 1935-53 were: 19th Ministry, sworn in Oct. 14, 1933, under the leadership of Hon W. J. P. MacMillan; 20th Ministry, sworn in Aug. 15, 1935, under the leadership of Hon. W. M. Lea; 21st Ministry, sworn in Jan. 14, 1936, under the leadership of Hon. T. A. Campbell; 22nd Ministry, sworn in May 11, 1943, under the leadership of Hon. J. Walter Jones. [2] Life of Legislature not expired at Mar. 31, 1953.

Twenty-Second Ministry

(Party standing at latest General Election, Apr. 26, 1951: 24 Liberals and 6 Progressive Conservatives.)

NOTE.—Ministers who have held office continuously are shown at the date of original appointment, despite the formation of a new Ministry consequent upon the appointment of a new Premier. Date of appointment does not necessarily mean that the Minister was sworn in on date given.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of the Executive Council and Minister of Education	Hon. J. WALTER JONES	May 11, 1943	Feb. 9, 1944
Minister of Health and Welfare	Hon. ALEXANDER W. MATHESON	May 11, 1943	Mar. 12, 1948
Attorney and Advocate General and Provincial Treasurer	Hon. WALTER E. DARBY	Oct. 13, 1949	Oct. 13, 1949
Minister of Agriculture	Hon. C. CLEVELAND BAKER	Apr. 16, 1949	Oct. 13, 1949
Minister of Industry and Natural Resources	Hon. EUGENE CULLEN	Apr. 16, 1949	Oct. 13, 1949
Minister of Public Works and Highways	Hon. DOUGALD MACKINNON	Sept. 16, 1939	June 16, 1951
Provincial Secretary	Hon. J. WILFRID ARSENAULT	Feb. 12, 1948	Oct. 13, 1949
Minister without portfolio	Hon. KEIR CLARK	June 16, 1951	June 16, 1951
Minister without portfolio	Hon. J. BRENTON ST. JOHN	June 16, 1951	June 16, 1951

Subsection 3.—Nova Scotia

The Government of the Province of Nova Scotia has a Lieutenant-Governor, an Executive Council and a House of Assembly.

The Honourable Alistair Fraser, the present Lieutenant-Governor, was commissioned to office Sept. 1, 1952. Lieutenant-Governors since Confederation are cited in the Year Book 1951, p. 87.

The General Assembly has 37 members elected for five years, the maximum duration of its existence. The Assembly elected June 9, 1949, was the 44th in Nova Scotia's history and the 21st since Confederation.

The Premier of the Province receives a salary of $9,000 per annum and each Cabinet Minister a salary of $8,000 per annum. Each Member of the House of Assembly receives a sessional indemnity of $1,600 and an allowance of $800 for expenses incidental to the discharge of his duties. The Leader of the Opposition receives an allowance of $1,000 in addition to his sessional indemnity.

4.—Legislatures and Premiers of Nova Scotia, 1933-53, and Ministry as at Mar. 31, 1953

Legislatures, 1933-53[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Aug. 22, 1933	17th General Assembly	4	Mar. 1, 1934	May 20, 1937
June 29, 1937	18th General Assembly	4	Mar. 1, 1938	Sept. 19, 1941
Oct. 28, 1941	19th General Assembly	4	Feb. 19, 1942	Sept. 12, 1945
Oct. 23, 1945	20th General Assembly	4	Mar. 14, 1946	Apr. 27, 1949
June 9, 1949	21st General Assembly	4	Mar. 21, 1950	[2]

[1] The Ministries from 1933-53 were: 12th Ministry, sworn in Sept. 5, 1933, under the leadership of Hon. Angus L. Macdonald; 13th Ministry, sworn in July 10, 1940, under the leadership of Hon. A. S. MacMillan; 14th Ministry, sworn in Sept. 8, 1945, under the leadership of Hon. Angus L. Macdonald. [2] Life of Legislature not expired at Mar. 31, 1953.

Fourteenth Ministry

(Party standing at latest General Election, June 9, 1949: 27 Liberals, 8 Progressive Conservatives and 2 Co-operative Commonwealth Federation.)

NOTE.—See headnote to Table 3.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of Council and Provincial Treasurer.	Hon. ANGUS L. MACDONALD.	Sept. 3, 1933	Premier—Sept. 8, 1945 Provincial Treasurer—June 10, 1947
Attorney General	Hon. MALCOLM A. PATTERSON.	June 10, 1947	Nov. 22, 1949
Minister of Highways and Public Works	Hon. M. D. RAWDING	July 31, 1947	July 31, 1947
Minister of Agriculture and Marketing and Minister of Lands and Forests.	Hon. A. W. MACKENZIE	Sept. 8, 1945	Agriculture and Marketing—Sept. 8, 1945 Lands and Forests—Oct. 3, 1947
Minister of Public Health and Minister of Public Welfare	Hon. HAROLD CONNOLLY	Feb. 24, 1941	Aug. 31, 1950
Minister of Mines and Minister of Labour	Hon. A. H. MCKINNON	Sept. 29, 1949	Dec. 30, 1949
Minister of Education	Hon. HENRY D. HICKS	Sept. 29, 1949	Sept. 29, 1949
Minister of Municipal Affairs	Hon. RONALD M. FIELDING	Dec. 7, 1949	Dec. 7, 1949
Minister without portfolio (in charge of administration of Nova Scotia Liquor Control Act)	Hon. GEOFFREY STEVENS	Apr. 4, 1946	Apr. 4, 1946
Minister of Trade and Industry	Hon. W. T. DAUPHINEE	Aug. 31, 1950	Aug. 31, 1950
Provincial Secretary	Hon. A. B. DEWOLFE	Aug. 31, 1950	July 21, 1951

Subsection 4.—New Brunswick

The Government of New Brunswick has a Lieutenant-Governor, an Executive Council and a House of Assembly.

The Honourable David Laurence MacLaren, the present Lieutenant-Governor, was commissioned to office Nov. 1, 1945. Lieutenant-Governors since Confederation are cited in the Year Book 1951, p. 89.

The General Assembly elected Sept. 22, 1952, is the 42nd in New Brunswick's history and the 15th since Confederation. It has 52 members who are elected for a statutory term of five years.

The Premier receives $5,000 per annum in addition to the salary for any other portfolio he may hold. The salary of each Cabinet Minister is $5,000, the amount paid as indemnity to each Member of the House of Assembly is $1,500, and the Leader of the Opposition receives an additional $2,000. An allowance of $1,000, in addition to the regular indemnity, is made to the Speaker.

5.—Legislatures and Premiers of New Brunswick, 1935-53, and Ministry as at Mar. 31, 1953

Legislatures, 1935-53[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 27, 1935	11th General Assembly	4	Mar. 5, 1936	Oct. 26, 1939
Nov. 20, 1939	12th General Assembly	5	Apr. 4, 1940	July 10, 1944
Aug. 28, 1944	13th General Assembly	4	Feb. 20, 1945	May 18, 1948
June 28, 1948	14th General Assembly	4	Mar. 8, 1949	July 16, 1952
Sept. 22, 1952	15th General Assembly	[2]	Feb. 12, 1953	[2]

[1] The Ministries from 1935-53 were: 20th Ministry, sworn in July 16, 1935, under the leadership of Hon. A. A. Dysart; 21st Ministry, sworn in Mar. 13, 1940, under the leadership of Hon. J. B. McNair; 22nd Ministry, sworn in Oct. 8, 1952, under the leadership of Hon. H. J. Flemming. [2] Life of Legislature not expired at Mar. 31, 1953.

Twenty-Second Ministry

(Party standing at latest General Election, Sept. 22, 1952: 36 Conservatives, 16 Liberals.)

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and Minister of Public Works	Hon. HUGH JOHN FLEMMING	Oct. 8, 1952	Oct. 8, 1952
Attorney General	Hon. WILLIAM J. WEST	Oct. 8, 1952	Oct. 8, 1952
Provincial Secretary-Treasurer	Hon. D. D. PATTERSON	Oct. 8, 1952	Oct. 8, 1952
Minister of Agriculture	Hon. C. B. SHERWOOD	Oct. 8, 1952	Oct. 8, 1952
Minister of Health and Social Services	Hon. J. F. MCINERNEY	Oct. 8, 1952	Oct. 8, 1952
Minister of Lands and Mines	Hon. N. B. BUCHANAN	Oct. 8, 1952	Oct. 8, 1952
Minister of Education and Municipal Affairs	Hon. CLAUDE D. TAYLOR	Oct. 8, 1952	Oct. 8, 1952
Minister of Labour	Hon. ARTHUR E. SKALING	Oct. 8, 1952	Oct. 8, 1952
Minister of Industry and Development	Hon. J. ROGER PICHETTE	Oct. 8, 1952	Oct. 8, 1952
Minister without portfolio and President of the Executive Council	Hon. T. BABBITT PARLEE	Oct. 8, 1952	Oct. 8, 1952
Minister without portfolio and Chairman of the New Brunswick Electric Power Commission	Hon. EDGAR FOURNIER	Oct. 8, 1952	Oct. 8, 1952

Subsection 5.—Quebec

The Government of Quebec consists of the Lieutenant-Governor, an Executive Council, and a bicameral legislature—the Legislative Council and the Legislative Assembly.

The Honourable Gaspard Fauteux, the present Lieutenant-Governor, was commissioned to office Oct. 3, 1950. Lieutenant-Governors since Confederation are cited in the Year Book 1951, p. 90.

The Legislative Council has 24 members nominated for life by the Lieutenant-Governor in Council. The Legislative Assembly has 92 elected members and, like the Legislative Council, has the power to bring forward Bills relating to civil and administrative matters and to the amendment or repeal of laws that already exist. A Bill, to be approved by the Lieutenant-Governor, must have received the assent of both Houses. Only the Legislative Assembly can bring forward a Bill requiring the expenditure of public money. The maximum life of a Legislature is five years.

Salaries and allowances of the Premier, Members of the Executive Council, Legislative Council and Legislative Assembly are fixed according to R.S.Q. 1941, c. 4, as amended by 1-2 Eliz. II, as follows: all Members of the Legislative Assembly and Legislative Council receive $4,000 per annum as salary and $2,000 by way of allowances; in addition, the Premier receives $10,000 as salary, $4,000 allowances and $2,000 for lodging allowance; Ministers with portfolio an additional $8,000 as salary and $2,000 allowances; Ministers without portfolio an additional $3,000 salary and $2,000 allowances; the Leader of the Opposition in the Legislative Assembly an additional $6,000 salary, $2,000 allowances and $2,000 for lodging allowance; and the Leader of the Opposition in the Legislative Council an additional $5,000 salary and $2,000 allowances.

6.—Legislatures and Premiers of Quebec, 1935-53, the Ministry and Members of the Legislative Council as at Mar. 31, 1953

Legislatures, 1935-53[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Nov. 25, 1935	19th General Assembly	1	Mar. 24, 1936	June 11, 1936
Aug. 17, 1936	20th General Assembly	4	Oct. 7, 1936	Sept. 23, 1939
Oct. 25, 1939	21st General Assembly	5	Feb. 20, 1940	June 29, 1944
Aug. 8, 1944	22nd General Assembly	4	Feb. 7, 1945	June 9, 1948
July 28, 1948	23rd General Assembly	4	Jan. 19, 1949	May 28, 1952
July 16, 1952	24th General Assembly	[2]	Nov. 12, 1952	[2]

[1] The Ministries from 1935-53 were: 16th Ministry, sworn in July 8, 1920, under the leadership of Hon. L. A. Taschereau; 17th Ministry, sworn in June 11, 1936, under the leadership of Hon. A. Godbout; 18th Ministry, sworn in Aug. 24, 1936, under the leadership of Hon. Maurice L. Duplessis; 19th Ministry, sworn in Nov. 10, 1939, under the leadership of Hon. A. Godbout; 20th Ministry, sworn in Aug. 30, 1944, under the leadership of Hon. Maurice L. Duplessis. [2] Life of Legislature not expired at Mar. 31, 1953.

6.—Legislatures and Premiers of Quebec, 1935-53, the Ministry and Members of the Legislative Council as at Mar. 31, 1953—concluded

Twentieth Ministry

(Party standing at latest General Election, July 16, 1952: 67 Union Nationale, 22 Liberals, 1 Independent and 2 vacancies.)

NOTE.—See headnote to Table 3.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and President of the Executive Council	Hon. MAURICE L. DUPLESSIS	Aug. 24, 1936	Aug. 30, 1944
Minister of Finance	Hon. ONÉSIME GAGNON	Oct. 6, 1936	Aug. 30, 1944
Minister of Lands and Forests and of Hydraulic Resources	Hon. JOHN S. BOURQUE	Aug. 24, 1936	Aug. 30, 1944
Minister of Health	Hon. J. H. ALBINY PAQUETTE	Aug. 24, 1936	Aug. 30, 1944
Minister of Municipal Affairs	Hon. BONA DUSSAULT	Aug. 24, 1936	Aug. 30, 1944
Minister of Colonization	Hon. J. D. BÉGIN	Aug. 30, 1944	Aug. 30, 1944
Minister without portfolio	Hon. ANTONIO ELIE	Aug. 24, 1936	Aug. 30, 1944
Minister of Agriculture	Hon. LAURENT BARRÉ	Aug. 30, 1944	Aug. 30, 1944
Minister of Roads	Hon. ANTONIO TALBOT	Aug. 30, 1944	Aug. 30, 1944
Minister of Labour	Hon. ANTONIO BARRETTE	Aug. 30, 1944	Aug. 30, 1944
Minister of Game and Fisheries	Hon. CAMILLE POULIOT	Aug. 30, 1944	Aug. 30, 1944
Minister of Public Works	Hon. ROMÉO LORRAIN	Aug. 30, 1944	Aug. 30, 1944
Minister of Social Welfare and of Youth	Hon. JEAN-PAUL SAUVÉ	Sept. 18, 1946	Sept. 18, 1946
Minister of Trade and Commerce	Hon. PAUL BEAULIEU	Aug. 30, 1944	Aug. 30, 1944
Provincial Secretary	Hon. OMER CÔTÉ	Aug. 30, 1944	Aug. 30, 1944
Minister of Mines	Hon. C. DANIEL FRENCH	Dec. 15, 1948	Dec. 15, 1948
Solicitor General	Hon. ANTOINE RIVARD	Dec. 15, 1948	Apr. 12, 1950
Minister without portfolio	Hon. TANCRÈDE LABBÉ	Aug. 30, 1944	Aug. 30, 1944
Minister without portfolio	Hon. ARTHUR LECLERC	July 23, 1952	July 23, 1952
Minister without portfolio	Hon. JACQUES MIQUELON	July 23, 1952	July 23, 1952
Minister without portfolio	Hon. WILFRED LABBÉ	July 23, 1952	July 23, 1952

Legislative Council

(According to seniority)

Name	Division	Date of Appointment
P. R. DU TREMBLAY	Sorel	Jan. 3, 1925
R. O. GROTHÉ	De Salaberry	Dec. 23, 1927
ELISÉE THÉRIAULT	Kennebec	Apr. 23, 1929
JACOB NICOL	Bedford	Sept. 16, 1929
VICTOR MARCHAND	Rigaud	Apr. 15, 1932
GUSTAVE LEMIEUX	Montarville	Dec. 2, 1932
HECTOR LAFERTÉ	Stadacona	July 23, 1934
EMILE MOREAU	Lauzon	June 6, 1935
ALPHONSE RAYMOND	De Lorimier	Aug. 28, 1936
J. L. BARIBEAU (Speaker)	Shawinigan	Jan. 14, 1938
PHILIPPE BRAIS	Grandville	Feb. 16, 1940
JULES BRILLANT	Golfe	Jan. 14, 1942
FRANK L. CONNORS	Mille Isles	Jan. 14, 1942
ROBERT R. NESS	Inkerman	Jan. 14, 1942
WILFRID BOVEY	Rougemont	Feb. 12, 1942
FÉLIX MESSIER	De Lanaudière	Feb. 12, 1942
EDOUARD ASSELIN	Wellington	Jan. 23, 1946
GEO. B. FOSTER	Victoria	Aug. 22, 1946
GÉRALD MARTINEAU	Les Laurentides	Aug. 22, 1946
J. OLIER RENAUD	Alma	Aug. 22, 1946
J. T. LAROCHELLE	La Salle	Dec. 29, 1948
PATRICE TARDIF	De la Vallière	July 20, 1952
JOSEPH BOULANGER	De la Durantaye	Oct. 8, 1952
EDOUARD MASSON	Repentigny	Mar. 12, 1953

Subsection 6.—Ontario

The Government of Ontario consists of the Lieutenant-Governor, the Executive Council and the House of Assembly. The Honourable Louis O. Breithaupt, LL.D., the present Lieutenant-Governor of the Province, was commissioned to office Jan. 24, 1952. Lieutenant-Governors since Confederation are cited in the Year Book 1951, p. 92.

The House of Assembly, the single-chamber Legislature of the Province, is composed of 90 members elected for a statutory term of five years on an adult-suffrage basis.

Besides the regular departments of government, the Niagara Parks Commission, the Ontario Municipal Board, the Hydro-Electric Power Commission of Ontario, the Ontario Northland Transportation Commission, the Liquor Control Board and the Liquor Licence Board have been created.

Under the provisions of the Legislative Assembly Act (R.S.O. 1950, c. 202, as amended 1952, c. 51), each Member of the Assembly is paid an annual indemnity of $2,600 and an allowance for expenses of $1,300. In addition, the Speaker receives a special indemnity at the annual rate of $3,000 and an expense allowance of $2,000; the Chairman of the Committee of the Whole a special indemnity at the annual rate of $1,000 and the Leader of the Opposition a special indemnity of $3,000 and an annual allowance of $2,000 for expenses. Each Member of the Cabinet receives the ordinary indemnity as a Member of the Legislature of $2,600 plus the $1,300 expense allowance in addition to his salary as a Minister of the Crown. The salary provided in the Executive Council Act for the Premier is $14,000 and for a Cabinet Minister $10,000.

7.—Legislatures and Premiers of Ontario, 1934-53, and Ministry as at Mar. 31, 1953

Legislatures, 1934-53[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 19, 1934	19th General Assembly	3	Feb. 20, 1935	Apr. 9, 1936
Oct. 6, 1937	20th General Assembly	8	Dec. 1, 1937	June 30, 1943
Aug. 4, 1943	21st General Assembly	2	Feb. 22, 1944	Mar. 24, 1945
June 4, 1945	22nd General Assembly	4	July 16, 1945	Apr. 27, 1948
June 7, 1948	23rd General Assembly	4	Feb. 10, 1949	Oct. 6, 1951
Nov. 22, 1951	24th General Assembly	[2]	Feb. 21, 1952	[2]

[1] The Ministries from 1934-53 were: 11th Ministry, sworn in July 10, 1934, under the leadership of Hon. M. F. Hepburn; 12th Ministry, sworn in Oct. 21, 1942, under the leadership of Hon. G. D. Conant; 13th Ministry, sworn in May 18, 1943, under the leadership of Hon. H. C. Nixon; 14th Ministry, sworn in Aug. 17, 1943, under the leadership of Hon. George A. Drew; 15th Ministry, sworn in Oct. 10, 1948, under the leadership of Hon. Thomas L. Kennedy; 16th Ministry, sworn in May 4, 1949, under the leadership of Hon. Leslie M. Frost. [2] Life of Legislature not expired at Mar. 31, 1953.

Sixteenth Ministry

(Party standing at latest General Election, Nov. 22, 1951: 79 Progressive Conservatives, 8 Liberals, 2 Co-operative Commonwealth Federation and 1 Labour-Progressive.)

NOTE.—See headnote to Table 3.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of the Council and Provincial Treasurer	Hon. LESLIE M. FROST	Aug. 17, 1943	May 4, 1949
Minister of Highways	Hon. GEORGE H. DOUCETT	Aug. 17, 1943	Aug. 17, 1943
Attorney General	Hon. DANA H. PORTER	May 8, 1944	May 4, 1949
Minister without portfolio	Hon. GEORGE H. CHALLIES	July 31, 1931	Aug. 17, 1943
Minister of Municipal Affairs	Hon. GEORGE H. DUNBAR	Aug. 17, 1943	Aug. 17, 1943
Minister of Labour	Hon. CHARLES DALEY	Aug. 17, 1943	Aug. 17, 1943
Provincial Secretary and Registrar	Hon. G. ARTHUR WELSH	Jan. 7, 1945	May 4, 1949
Minister of Public Welfare	Hon. WILLIAM A. GOODFELLOW	Jan. 7, 1945	Jan. 7, 1945
Minister of Public Works	Hon. WILLIAM GRIESINGER	Apr. 15, 1946	Jan. 20, 1953
Minister without portfolio	Hon. HAROLD R. SCOTT	Nov. 28, 1946	June 3, 1952
Minister of Travel and Publicity	Hon. LOUIS P. CECILE	Oct. 19, 1948	Oct. 19, 1948
Minister of Lands and Forests	Hon. WELLAND S. GEMMELL	May 4, 1949	June 3, 1952
Minister without portfolio	Hon. WILLIAM E. HAMILTON	July 15, 1949	Nov. 16, 1950
Minister of Health	Hon. MACKINNON PHILLIPS	Aug. 8, 1950	Aug. 8, 1950
Minister of Reform Institutions	Hon. JOHN W. FOOTE	Nov. 16, 1950	Nov. 16, 1950
Minister of Education	Hon. WILLIAM J. DUNLOP	Oct. 2, 1951	Oct. 2, 1951
Minister of Agriculture	Hon. FLETCHER S. THOMAS	Oct. 2, 1951	Jan. 20, 1953
Minister of Mines	Hon. PHILIP T. KELLY	June 3, 1952	June 3, 1952
Minister of Planning and Development	Hon. WILLIAM K. WARRENDER	Jan. 20, 1953	Jan. 20, 1953

Subsection 7.—Manitoba

Besides its Lieutenant-Governor, Manitoba has a Provincial Executive composed of 10 members and a Legislative Assembly of 57 members, elected for a statutory term of five years. The Honourable Roland Fairbairn McWilliams, the present Lieutenant-Governor of the Province, was commissioned to office Nov. 1, 1940. Lieutenant-Governors since Confederation are cited in the Year Book 1951, p. 94.

The Premier of the Province is paid a salary of $8,000 per annum and each of the other Members of the Cabinet $6,000. Members of the Legislature are each paid an indemnity of $1,670 and an expense allowance of $830. The Leader of the Opposition is paid an additional amount of $2,000 and the Speaker of the Legislature an additional amount of $2,500.

8.—Legislatures and Premiers of Manitoba, 1932-53, and Ministry as at Mar. 31, 1953

Legislatures, 1932-53[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 16, 1932	19th General Assembly	4	Feb. 14, 1933	June 12, 1936
July 27, 1936	20th General Assembly	5	Feb. 18, 1937	Mar. 13, 1941
Apr. 22, 1941	21st General Assembly	5	Dec. 9, 1941	Sept. 8, 1945
Oct. 15, 1945	22nd General Assembly	4	Feb. 19, 1946	Sept. 29, 1949
Nov. 10, 1949	23rd General Assembly	7	Feb. 14, 1950	[2]

[1] The Ministries from 1932-53 were: 12th Ministry, sworn in Aug. 8, 1922, under the leadership of Hon. J. Bracken; 13th Ministry, sworn in Jan. 14, 1943, under the leadership of Hon. Stuart S. Garson; 14th Ministry, sworn in Nov. 13, 1948, under the leadership of Hon. D. L. Campbell. [2] Life of Legislature not expired at Mar. 31, 1953.

Fourteenth Ministry

(Party standing at latest General Election, Nov. 10, 1949: 43 Coalition [30 Liberal-Progressive, 9 Progressive Conservative, 4 Independent], 14 Anti-Coalition [7 Co-operative Commonwealth Federation, 6 Independent, 1 Labour-Progressive].)

NOTE.—See headnote to Table 3.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of the Council, Minister of Dominion - Provincial Relations	Hon. DOUGLAS L. CAMPBELL	Sept. 21, 1936	Nov. 13, 1948
Minister of Agriculture and Immigration	Hon. RONALD D. ROBERTSON	Nov. 7, 1952	Nov. 7, 1952
Minister of Labour and Provincial Secretary	Hon. CHAS. E. GREENLAY	Feb. 15, 1946	Dec. 14, 1948
Minister of Municipal Affairs	Hon. EDMOND PREFONTAINE	Dec. 1, 1951	Apr. 20, 1953
Minister of Mines and Natural Resources	Hon. JOHN S. MCDIARMID	May 27, 1932	May 27, 1932
Attorney General	Hon. IVAN SCHULTZ	Sept. 21, 1936	Nov. 7, 1952
Minister of Public Utilities	Hon. WILLIAM MORTON	Nov. 22, 1939	Dec. 14, 1948
Minister of Public Works	Hon. WILLIAM MORTON	Nov. 22, 1939	Aug. 19, 1950
Minister of Health and Public Welfare	Hon. FRANCIS C. BELL	Dec. 14, 1948	Nov. 7, 1952
Minister of Education	Hon. WALLACE C. MILLER	Feb. 15, 1946	Aug. 16, 1950
Provincial Treasurer	Hon. RONALD DAVID TURNER	Dec. 1, 1951	Dec. 1, 1951

Subsection 8.—Saskatchewan

The Government of the Province of Saskatchewan consists of a Lieutenant-Governor, an Executive Council and a Legislative Assembly.

The Honourable W. J. Patterson, the present Lieutenant-Governor, was commissioned to office July 4, 1951. Lieutenant-Governors since Confederation are cited in the Year Book 1951, p. 95.

The statutory number of members of the Legislative Assembly is 53, elected for a maximum term of five years.

As of Apr. 1, 1953, the Premier receives $8,500 and each Cabinet Minister $7,000 annually in addition to the sessional indemnity, while the Leader of the Opposition, the Speaker and the Deputy Speaker receive $4,000, $2,000 and $1,000, respectively. The annual salary of a Member of the Legislature is $2,000 together with an expense allowance of $1,000.

9.—Legislatures and Premiers of Saskatchewan, 1934-53, and Ministry as at Mar. 31, 1953

Legislatures, 1934-53[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 19, 1934	8th General Assembly	4	Nov. 15, 1934	May 14, 1938
June 8, 1938	9th General Assembly	6	Jan. 19, 1939	May 10, 1944
June 15, 1944	10th General Assembly	5	Oct. 19, 1944	May 19, 1948
June 24, 1948	11th General Assembly	[2]	Feb. 10, 1949	[2]

[1] The Ministries from 1934-53 were: 6th Ministry, sworn in July 19, 1934, under the leadership of Hon. J. G. Gardiner; 7th Ministry, sworn in Nov. 1, 1935, under the leadership of Hon. W. J. Patterson: 8th Ministry, sworn in July 10, 1944, under the leadership of Hon. T. C. Douglas. [2] Life of Legislature not expired at Mar. 31, 1953.

Eighth Ministry

(Party standing at latest General Election, June 11, 1952: 42 Co-operative Commonwealth Federation, 11 Liberal.)

NOTE.—See headnote to Table 3.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of the Council and Minister of Co-operation and Co-operative Development.	Hon. T. C. DOUGLAS	July 10, 1944	Premier and President—July 10, 1944 Co-operation—Nov. 14, 1949
Provincial Treasurer	Hon. C. M. FINES	July 10, 1944	July 10, 1944
Attorney General	Hon. J. W. CORMAN	July 10, 1944	July 10, 1944
Minister of Natural Resources, and Minister of Mineral Resources.	Hon. J. H. BROCKELBANK	July 10, 1944	Natural Resources—Aug. 4, 1948 Mineral Resources—Apr. 1, 1953
Minister of Highways and Transportation	Hon. J. T. DOUGLAS	July 10, 1944	July 10, 1944
Minister of Education	Hon. W. S. LLOYD	July 10, 1944	July 10, 1944
Minister of Social Welfare and Rehabilitation	Hon. J. H. STUDRY	July 10, 1944	Aug. 4, 1948
Minister of Municipal Affairs	Hon. L. F. MCINTOSH	July 10, 1944	Aug. 4, 1948
Minister of Labour	Hon. C. C. WILLIAMS	July 10, 1944	Aug. 4, 1948
Minister of Agriculture	Hon. I. C. NOLLET	Feb. 26, 1945	Feb. 26, 1945
Minister of Public Works	Hon. J. A. DARLING	Aug. 4, 1948	Aug. 4, 1948
Minister of Public Health	Hon. T. J. BENTLEY	Nov. 14, 1949	Nov. 14, 1949
Minister of Telephones	Hon. A. G. KUZIAK	Oct. 24, 1952	Oct. 24, 1952
Provincial Secretary	Hon. J. W. BURTON	Oct. 24, 1952	Oct. 24, 1952

Subsection 9.—Alberta

The Government of the Province of Alberta is composed of the Lieutenant-Governor, the Executive Council and the Legislative Assembly.

The Honourable John J. Bowlen, the present Lieutenant-Governor, was commissioned to office Feb. 1, 1950. Lieutenant-Governors since Confederation are cited in the Year Book 1951, p. 96.

There are 61 members of the Legislative Assembly who are elected for a maximum period of five years.

The salary of the President of the Executive Council is $11,000 and of a Cabinet Minister $8,500. A special allowance of $1,500 is paid to the Leader of the Opposition. The sessional indemnity for each Member of the Legislative Assembly is $2,000 plus an expense allowance of $1,000.

10.—Legislatures and Premiers of Alberta, 1935-53, and Ministry as at Mar. 31, 1953

Legislatures, 1935-53[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Aug. 22, 1935	8th General Assembly	9	Feb. 6, 1936	Feb. 16, 1940
Mar. 21, 1940	9th General Assembly	4	Feb. 20, 1941	July 7, 1944
Aug. 8, 1944	10th General Assembly	5	Feb. 22, 1945	July 16, 1948
Aug. 17, 1948	11th General Assembly	5	Feb. 17, 1949	June 28, 1952
Aug. 5, 1952	12th General Assembly	[2]	Feb. 19, 1953	[2]

[1] The Ministries from 1935-53 were: 6th Ministry, sworn in July 10, 1934, under the leadership of Hon. R. G. Reid; 7th Ministry, sworn in Sept. 3, 1935, under the leadership of Hon. Wm. Aberhart; 8th Ministry, sworn in May 31, 1943, under the leadership of Hon. Ernest C. Manning. [2] Life of Legislature not expired at Mar. 31, 1953.

Eighth Ministry

(Party standing at latest General Election, Aug. 5, 1952: 52 Social Credit, 4 Liberal, 2 Progressive Conservatives, 2 Co-operative Commonwealth Federation, 1 Independent Social Credit.)

NOTE.—See headnote to Table 3.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and Provincial Treasurer	Hon. ERNEST C. MANNING	Sept. 3, 1935	May 31, 1943
Attorney General	Hon. LUCIEN MAYNARD	May 12, 1936	June 1, 1943
Minister of Education	Hon. ANDERS O. AALBORG	Sept. 9, 1952	Sept. 9, 1952
Minister of Mines and Minerals	Hon. ERNEST C. MANNING	Sept. 16, 1952	Sept. 16, 1952
Minister of Lands and Forests	Hon. IVAN CASEY	Sept. 9, 1952	Sept. 9, 1952
Minister of Public Works	Hon. ALFRED J. HOOKE	Sept. 9, 1952	Sept. 9, 1952
Minister of Health	Hon. W. W. CROSS	Sept. 3, 1935	Sept. 3, 1935
Minister of Public Welfare	Hon. LEONARD C. HOLMRAST	Jan. 3, 1953	Jan. 3, 1953
Minister of Economic Affairs	Hon. ALFRED J. HOOKE	Apr. 20, 1945	Apr. 20, 1945
Minister of Municipal Affairs and Provincial Secretary	Hon. C. E. GERHART	June 1, 1943	May 8, 1948
Minister of Agriculture	Hon. D. A. URE	May 8, 1948	May 8, 1948
Minister of Industries and Labour	Hon. J. L. ROBINSON	May 8, 1948	May 8, 1948
Minister of Railways and Telephones	Hon. GORDON E. TAYLOR	Dec. 27, 1950	Dec. 27, 1950
Minister of Highways	Hon. GORDON E. TAYLOR	May 1, 1951	May 1, 1951

Subsection 10.—British Columbia

The Government of British Columbia has a Lieutenant-Governor, an Executive Council and a Legislative Assembly.

Colonel the Honourable Clarence Wallace, the present Lieutenant-Governor of the Province, was commissioned to office Oct. 1, 1950. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 98.

The Legislative Assembly, elected for a statutory term of five years, has 48 members.

Members of the Executive Council and the Legislative Assembly each receive sessional allowances of $2,000 and $1,000 for expenses. In addition, the Premier receives a salary of $9,000 and each Member of the Executive Council $7,500. The Leader of the Opposition has a special allowance of $2,000 and the Speaker and Deputy Speaker receive allowances of $1,800 and $500, respectively.

11.—Legislatures and Premiers of British Columbia, 1933-53, and Ministry as at Mar. 31, 1953

Legislatures, 1933-53[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Nov. 2, 1933[2]	18th General Assembly	4	Feb. 20, 1934	Apr. 15, 1937
June 1, 1937	19th General Assembly	5	Oct. 26, 1937	July 22, 1941
Oct. 21, 1941	20th General Assembly	4	Dec. 4, 1941	Aug. 31, 1945
Oct. 25 1945	21st General Assembly	5	Feb. 21, 1946	Apr. 16, 1949
June 15, 1949	22nd General Assembly	4	Feb. 14, 1950	Apr. 10, 1952
June 12, 1952	23rd General Assembly	1	Feb. 3, 1953	Mar. 27, 1953

[1] The Ministries from 1933-53 were: 22nd Ministry, sworn in Nov. 15, 1933, under the leadership of Hon. T. D. Pattullo; 23rd Ministry, sworn in Dec. 10, 1941, under the leadership of Hon. John Hart; 24th Ministry, sworn in Dec. 29, 1947, under the leadership of Hon. B. I. Johnson; 25th Ministry, sworn in Aug. 1, 1952, under the leadership of Hon. W. A. C. Bennett. [2] Owing to the death of a candidate, polling day was delayed in the Electoral Districts of Vancouver Centre and Victoria City until Nov. 27, 1933.

Twenty-Fifth Ministry

(Party standing at latest General Election, June 12, 1952: 19 Social Credit, 18 Co-operative Commonwealth Federation, 6 Liberal, 4[1] Progressive Conservative, 1 Labour.)

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and President of the Council	Hon. William Andrew Cecil Bennett	Aug. 1, 1952	Aug. 1, 1952
Provincial Secretary and Minister of Municipal Affairs	Hon. Wesley Drewett Black	Aug. 1, 1952	Aug. 1, 1952
Attorney-General	Hon. Robert William Bonner	Aug. 1, 1952	Aug. 1, 1952
Minister of Lands and Forests and Minister of Mines	Hon. Robert Edward Sommers	Aug. 1, 1952	Aug. 1, 1952
Minister of Finance	Hon. Einar Maynard Gunderson	Aug. 1, 1952	Aug. 1, 1952
Minister of Agriculture	Hon. William Kenneth Kiernan	Aug. 1, 1952	Aug. 1, 1952
Minister of Public Works	Hon. Philip Arthur Gaglardi	Aug. 1, 1952	Aug. 1, 1952
Minister of Railways, Minister of Trade and Industry and Minister of Fisheries	Hon. William Ralph Talbot Chetwynd	Aug. 1, 1952	Aug. 1, 1952
Minister of Labour	Hon. Lyle Wicks	Aug. 1, 1952	Aug. 1, 1952
Minister of Education	Hon. Tilly Jean Rolston	Aug. 1, 1952	Aug. 1, 1952
Minister of Health and Welfare	Hon. Eric Charles Fitzgerald Martin	Aug. 1, 1952	Aug. 1, 1952

[1] Since the General Election, 2 Progressive Conservative Members have died, leaving two vacant seats in the Legislative Assembly as at Mar. 31, 1953.

Subsection 11.—Yukon and Northwest Territories

Yukon Territory.—The Yukon was created a separate Territory in June 1898. Provision is made for a local Government composed of a Chief Executive, styled Commissioner, and an elective Legislative Council of five members with a three-year tenure of office. The Commissioner administers the Government under instructions from the Governor in Council or the Minister of Resources and Development. The Commissioner in Council has power to make ordinances dealing with the imposition of local taxes, sale of liquor, preservation of game, establishment of territorial offices, maintenance of prisons and municipal institutions, issue of licences, incorporation of companies, solemnization of marriage, property and civil rights, administration of justice, and generally all matters of a local nature in the Territory. The seat of local government is at Whitehorse, Yukon Territory.

TERRITORIAL COUNCIL

(Five members elected 1952, for three years)

Dawson	V. C. Meller	Whitehorse East	J. L. Phelps
Mayo	A. F. Berry	Whitehorse West	F. D. Locke
	Carmacks	A. R. Hayes	

TERRITORIAL OFFICIALS

Commissioner (Whitehorse)	W. G. Brown
Superintendent of Works and Buildings	B. G. Harvey
Registrar of Vital Statistics	M. Munroe
Legal Adviser	F. G. Smith

The Director of the Northern Administration and Lands Branch, Department of Resources and Development, is directly responsible for the general administration of the Territory under the Yukon Act (R.S.C. 1952, c. 298), and that Department has five lands and mining officials stationed in the Territory. Other Departments of the Federal Government, including Justice, National Revenue, Transport, Post Office, etc., also maintain officials in the Yukon Territory.*

Northwest Territories.—The Northwest Territories as reconstituted on Sept. 1, 1905, comprise:

(1) all that part of Canada north of the Sixtieth Parallel of North Latitude, except the portions thereof within the Yukon Territory and the Provinces of Quebec and Newfoundland, and

(2) the islands in Hudson Bay, James Bay and Ungava Bay, except those islands within the Provinces of Manitoba, Ontario and Quebec.

For administrative purposes, the Territories were divided into the provisional districts of Mackenzie, Keewatin and Franklin by Order in Council of Mar. 16, 1918. The Northwest Territories Act, 1905, as amended, provides for the Government of the Territories by a Commissioner (who is Deputy Minister of the Department of Resources and Development) under instructions given from time to time by the Governor in Council or the Minister of Resources and Development. There is a council of eight members, three of whom are elected, and five appointed by the Governor in Council. The Commissioner in Council has power to make ordinances for the Government of the Territories relating to subjects designated by the Governor

* Further information on officials of various Federal Government Departments serving the Yukon Territory may be obtained from the Director, Northern Administration and Lands Branch, Department of Resources and Development, Ottawa.

in Council, subject to any Act of the Parliament of Canada applying to the Territories, respecting such matters as direct taxation within the Territories to raise revenue, establishment and tenure of territorial offices, maintenance of municipal institutions, licences, administration of civil justice, education, public health and generally all matters of a local nature. The administration of the Territories under the Northwest Territories Act and the ordinances passed by the Commissioner in Council is carried on by the Northern Administration and Lands Branch of the Department of Resources and Development. A federal Administrative Officer serves at each of the following Territorial centres: Fort Smith, Aklavik, Hay River and Yellowknife. The seat of government is at Ottawa.

COUNCIL OF THE NORTHWEST TERRITORIES
(AS AT MAR. 31, 1953)

Commissioner	MAJOR-GENERAL HUGH A. YOUNG, C.B., C.B.E., D.S.O.
Deputy Commissioner	F. J. G. CUNNINGHAM
Members of the Council—	
Appointed	LOUIS DE LA C. AUDETTE, W. I. CLEMENTS, D. M. MACKAY, F. J. G. CUNNINGHAM, L. H. NICHOLSON
Elected	JAMES BRODIE, FRANK CARMICHAEL, MERVYN HARDIE
Officers of the Council—	
Secretary	R. BOUCHARD
Legal Adviser	WM. NASON

Section 3.—Municipal Government*

The earliest local government in Canada was carried out by the seigneurs of New France who bore, along with military command and the administration of justice, the responsibilities of appointing justices of the peace and clerks of roads. Some of these officers were soon replaced by a 'syndic' elected by the people, the first in 1644, though a mayor and two aldermen had held office briefly in the city of Quebec in 1643. When the syndics fell into disuse, such powers were delegated by the Governor to officials. The City of Quebec was incorporated in 1832, and the system of local government for the province decreed in 1840 was later remodelled by Acts of 1845, 1847, 1850 and 1860.

In the Atlantic Provinces, Saint John, N.B., had attained the distinction of becoming Canada's first incorporated city in 1785. Incorporation of Halifax, N.S., came in 1841 and Charlottetown, P.E.I., in 1855. In Newfoundland, St. John's was created a town in 1888.

The Ontario Parish and Town Officers Act of 1793 provided for an annual meeting in a parish or township to appoint local officers responsible to Parliament and the courts, but the meetings had no law-making powers. Brockville, in 1832, gained from the Governor in Council some local powers that had previously been exercised through the courts. In 1834, York was incorporated as the self-governing city of Toronto. The Municipal Act of 1849 became the foundation of the local government in Ontario and later provided a model for the western provinces. Subsequently, Acts have been passed in all provinces governing aspects of municipal incorporation, powers and duties. Constitutional provision that jurisdiction over municipal affairs would rest with the provinces has resulted, quite naturally, in dissimilarity in the organization of local government across the country. This

* Prepared in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

stems not only from the difference in beginnings and subsequent independent growth in each province, but also from variations in requirements arising out of geographical and population differences.

The situation remains in a state of flux, with constant amendment of provincial Acts and charters in an attempt to solve old problems and to meet new ones. Just as the call for new and additional services has enlarged the scope of federal and provincial activities, the municipalities have had to assume responsibilities unheard of a few decades ago, or considered beyond their sphere of activity. As a result, amendments to Acts have varied from those enlarging the powers and the boundaries of municipalities, to those establishing closer provincial control and greater financial aid.

An outline of municipal organization at the end of 1952 in each of the provinces of Canada is given in the following paragraphs.*

Newfoundland.—Newfoundland has only one city, St. John's. The remainder of the population is mostly dispersed in small settlements along the coast, and only since 1937 have a few of the larger of these been set up individually with local councils as towns or, where two or three are close together, as rural districts (36 in 1953). These latter are not rural municipalities but merely towns consisting of two or more settlements. Local affairs in the remainder of the Province are administered by the Provincial Government. In 1949, the Local Government Act was passed to facilitate incorporations. Thirty of the towns and two of the rural districts are now incorporated under the Act. There are two local government communities with lesser powers of government.

Prince Edward Island.—The Province has one city, Charlottetown, and seven towns all incorporated by special Acts. They include less than one-half of one percent of the area of the Island and only about a quarter of its population. The Village Service Act, 1951, provides for the incorporation of villages. The remaining area of the Province is not organized municipally, the three counties being provincial administrative units only.

Nova Scotia.—Municipal organization in Nova Scotia covers the whole of the Province. Halifax and Sydney are the only cities and they operate under special charters; the latter is also governed by certain special legislation. Towns, which number 40, operate under the Town Incorporation Act. There are no municipalities incorporated as villages. Cities and towns are independent of counties. The rural area is divided into 18 counties which, in themselves, do not represent units of local government. However, 12 of these counties each comprise one municipality, and the other six comprise two municipalities each, making a total of 24 rural municipalities.

New Brunswick.—The Province is divided into 15 counties which are incorporated municipalities and have direct powers of local self-government in the rural areas. In effect, therefore, they are rural municipalities. In most cases certain of their powers apply in both rural and urban municipalities. The four cities of Saint John, Fredericton, Moncton and Edmundston have special charters, and the 19 towns operate under the Towns Incorporation Act. There are also three villages and 37 local improvement district areas within the counties but outside the cities, towns and villages that have been incorporated for the provision of limited municipal services.

* Municipalities are summarized by type of organization on p. 72.

Quebec.—Municipal divisions in Quebec embrace the more thickly settled areas comprising about one-third of the Province, the remainder being governed by the Province as 'territories'. The organized area is divided into 76 county municipalities, which are divided again into local municipalities under the Municipal Code and designated as village, township or parish municipalities or simply as municipalities. The counties, as such, have no direct powers of taxation. Funds to finance the services falling within their jurisdiction are provided by the municipalities forming part thereof. Parts of some counties are not yet organized into incorporated units of local government, being in outlying districts with little or no population. There are 331 villages and 1,109 townships and parishes. A small number of these are independent of the counties in which they are located. Of the 35 cities, a few have special charters. The remainder, along with the 131 towns, are governed by the Cities and Towns Act and numerous special Acts.

Ontario.—Slightly more than one-tenth of the area of Ontario is municipally organized, the remainder being governed entirely by the Provincial Government. The older section of the Province is divided into 43 counties, five of which are united with others for administrative purposes. Although an incorporated municipality, each county is comprised of the towns, villages and townships situated within its borders, which provide its revenue. There are 29 cities, 151 towns, 156 villages, 572 townships and 16 improvement districts. Some of each are located in the northern districts of the Province, which are not organized into counties.

Manitoba.—Only the southern and settled section of Manitoba, comprising less than one-eighth of the area, is organized for local self-government. As in the other three western provinces, there is no county organization and all municipalities are independent, except of provincial control. There are four cities, three with special charters and one governed by a number of special Acts. General Acts govern the 33 towns, 39 villages, 109 rural municipalities and five suburban municipalities. An Act of 1944 (amended January 1945) authorizes organization of local government districts in unorganized or disorganized territory, and 12 such districts have been set up.

Saskatchewan.—All municipalities in Saskatchewan derive their powers from general Acts that are designated with the name of the type of municipality. There are eight cities, 91 towns, 388 villages and 298 rural municipalities. The area so organized consists of most of the southern two-fifths of the Province. The remainder of this portion is administered for local purposes by the Province in unincorporated local improvement districts. The northern three-fifths is sparsely populated and without local government, though some municipal services are provided by the Province through operation of the Northern Administrative Area.

Alberta.—In Alberta there are cities, towns, villages and rural municipalities known as municipal districts. The latter three classes come under general Acts. Until 1951 each of the seven cities had its own charter, but these have been superseded by the City Act of 1951. There are 72 towns, 137 villages and 57 municipal districts, but less than one-fifth of the Province is so organized. There are also some unincorporated improvement districts administered by the Province in less densely settled areas. Three county municipalities have been set up. These are not counties as they exist in Ontario but municipalities in which the council administers education and municipal hospitals. They are included with the municipal districts mentioned above and in Table 12 on p. 72.

British Columbia.—Less than 0·5 p.c. of the area of British Columbia is organized into municipalities. Additional small areas have sufficient population to require administration of local activities by the Provincial Government. There are 35 cities, 49 villages and 28 districts. The latter are chiefly rural municipalities, except for those adjacent to the principal cities of Victoria and Vancouver, which are largely urban in character. It should be emphasized, however, that the application of the name "city" is somewhat different from the commonly accepted meaning in that several of them have populations of less than 1,000 and perhaps one-half or more would not normally be incorporated as cities in another province.

Yukon and Northwest Territories.—There are two cities and one town in the Yukon Territory and two local administrative districts in the Northwest Territories, all of which provide some municipal services to their local areas. These are not shown in Table **12**.

12.—Municipalities, by Official Designation,[1] and by Statistical Classification,[2] by Province, 1952

(Number in existence as at Mar. 31, 1953, for Newfoundland; Dec. 31, 1952, for remainder)

Item	N'fld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Official Designation[1]	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Cities	1	1	2	4	35	29	4	8	7	35	126
Towns	32[3]	7	40	19	131	151	33	91	72	—	576
Villages	—	[4]	—	3	331	156	39	388	137	49	1,103
Totals, Urban	33	8	42	26	497	336	76	487	216	84	1,805
Rural[5]	4	—	24	15	1,109	588[6]	114[7]	298[8]	57[9]	28	2,237
Totals, Local Municipalities	37	8	66	41[10]	1,606	924	190	785	273	112	4,042
Quebec and Ontario counties	...	...	...	...	76	38	...	...	...	...	114
Totals, Incorporated Municipalities	**37**	**8**	**66**	**41**	**1,682**	**962**	**190**	**785**	**273**	**112**	**4,156**
Statistical Classification[2]											
Municipalities in Metropolitan Areas—[11]											
Urban	1	—	2	2	54	24	5	—	6	6	100
Rural	—	—	1	2	25	17	9	—	4	11	69
Totals, Metropolitan Areas	1	—	3	4	79	41	14	—	10	17	169
Other Urban	32	8	40	24	440	313	71	487	210	78	1,703
Other Rural—											
Semi-urban	—	—	—	—	—	11	—	—	—	—	11
Other	4	—	23	13	1,087	559	105	298	53	17	2,159
Totals, Other Rural	4	—	23	13	1,087	570	105	298	53	17	2,170
Totals, Urban and Rural	37	8	66	41	1,606	924	190	785	273	112	4,042
Quebec and Ontario counties	...	...	...	...	76	38	...	...	...	...	114
Totals, Incorporated Municipalities	**37**	**8**	**66**	**41**	**1,682**	**962**	**190**	**785**	**273**	**112**	**4,156**

[1] This section of the table groups the municipalities according to their official nomenclature which is roughly indicative of size and nature. *See* footnote 5. [2] This section of the table groups the municipalities under the classification devised by the Dominion-Provincial Conferences on Municipal Statistics, the Classification being designed to bring municipalities into comparable groups for statistical presentation. [3] Includes two local government communities. [4] *See* text on p. 70. [5] Rural municipalities are designated by different names in the different provinces. [6] Includes 16 local improvement districts. [7] Includes 5 units of self-government known as "Suburban Municipalities". Does not include local government districts. [8] Excludes 20 improvement districts. [9] Includes 3 county municipalities. Excludes 55 improvement districts. [10] Excludes 37 local improvement districts. [11] Municipalities shown wholly or partly in metropolitan areas by the 1951 Census of Canada.

Section 4.—Federal and Provincial Royal Commissions

Federal Royal Commissions.*—There were no Federal Royal Commissions established in the fiscal year ended Mar. 31, 1953. Commissions appointed back to 1870 are listed in previous Year Books beginning with the 1940 edition, pp. 1108-1110.

Provincial Royal Commissions.—Only those Royal Commissions established in 1952-53 are reported here, this list being in continuance of those in previous Year Books beginning with the 1948-49 edition, pp. 1222-1223:—

Newfoundland.—Royal Commission appointed to inquire into the operation of the Hospital for Mental and Nervous Diseases. Aug. 16, 1952. *Commissioner*: C. E. Hunt, Q.C.

Nova Scotia.—Royal Commission appointed to examine into and concerning matters relating to the financial support of education in the Province. Mar. 2, 1953. *Commissioner*: Mr. Justice V. J. Pottier.

Royal Commission appointed to examine into the affairs of certain security companies in the Province, being the National Thrift Corporation and allied companies, and generally to examine into the administration of the Capital Securities Act. Mar. 9, 1953. *Commissioner*: Judge J. G. A. Robertson.

New Brunswick.—Royal Commission appointed to inquire into and report upon certain irregularities relating to the Engineering Service Branch of the Department of Agriculture with reference to improper use of facilities of that Branch by David M. Gilchrist, Dept. of Agriculture. June 4, 1952. *Commissioner*: Hon. Reginald D. Kierstead.

Royal Commission appointed to inquire into and submit a report concerning Public Works Contract on the Broad Road *re* A. W. Mason Limited. June 7, 1952. *Commissioner*: Hon. G. F. Gregory Bridges.

Quebec.—Royal Commission appointed to submit findings, advice and recommendations as to the safeguarding of the rights of the Province, municipalities and the school corporations. Feb. 19, 1953. *Chairman*: Justice Thomas Tremblay. *Commissioners*: Esdras Minville, Honore Parent, Q.C., Rev. Father Richard Ares, S.J., John P. Rowat and Paul-Henri Guimont.

Saskatchewan.—Royal Commission on Agriculture and Rural Life, appointed Oct. 3, 1952, to investigate and make recommendations regarding the requirements for the maintenance of a sound farm economy and the improvement of social conditions and amenities in rural Saskatchewan. *Chairman*: Prof. W. B. Baker. *Commissioners*: Mrs. Nancy Adams, T. H. Bourassa, H. L. Fowler, C. W. Gibbings, and J. L. Phelps.

British Columbia.—Royal Commission appointed to inquire into the facts relating to the distribution, sale and consumption of spirituous, vinous and malt liquors within the Province. Sept. 12, 1952. *Chairman*: Hon. H. H. Stevens. *Commissioners*: Very Rev. Dean Cecil Swanson and George Home. Report printed, 31 pp.

* Commissions constituted under Part I of the Federal Inquiries Act.

PART III.—ADMINISTRATIVE FUNCTIONS OF THE FEDERAL GOVERNMENT

Section 1.—Departments, Boards, Commissions, etc.

The following paragraphs indicate the functions of the various departments of government and the special boards and commissions in connection with the work of government.

While it is not possible, owing to the limitations of space, to enumerate in this Section the details of each service or the divisions or sections of all the departments, the main branches are given along with those services that differ in some quality from the larger class of subjects handled by a department. The work of many of these departments is given in detail in later Chapters of this volume. The Index will be useful in locating required information.

Department of Agriculture.—This Department was established in 1867 (30 Vict., c. 53) and conducts the concerns of all phases of agriculture. Research and experimentation are carried out by the Science Service and the Experimental Farms Service; the maintenance of standards and protection of products by the Production Service and Marketing Service; reclamation and development by the Prairie Farm Rehabilitation Administration and the Maritime Marshland Rehabilitation Administration; while security and price stability policies are administered under the Prairie Farm Assistance Administration and the Agricultural Prices Support Board. The results of work in these various fields and information on the policies of the Department in general are made available to the public through the Information Service.

The Department of Citizenship and Immigration.—This Department came into existence on Jan. 18, 1950, under the Minister of Citizenship and Immigration. It comprises the Canadian Citizenship Branch, the Canadian Citizenship Registration Branch, the Immigration Branch and the Indian Affairs Branch.

The Canadian Citizenship Branch assists governmental and non-governmental agencies engaged or interested in facilitating the adjustment and integration of newcomers and in making Canadians conscious of their privileges and responsibilities as citizens.

The Canadian Citizenship Registration Branch administers the Canadian Citizenship Act and is the custodian of all records under that Act and all Naturalization Acts previously in force.

The Immigration Branch administers the Immigration Act and Regulations and is responsible for the selection, examination and transportation of immigrants, the exclusion or deportation of undesirables and the settlement or establishment of immigrants in Canada.

The activities of the Indian Affairs Branch include management of all Indian affairs. Its organization consists of a headquarters office at Ottawa, a regional supervisory staff, and 87 local agencies in the field.

The Minister of Citizenship and Immigration is responsible to Parliament for the National Film Board and for the National Gallery of Canada which is governed by a Board of Trustees.

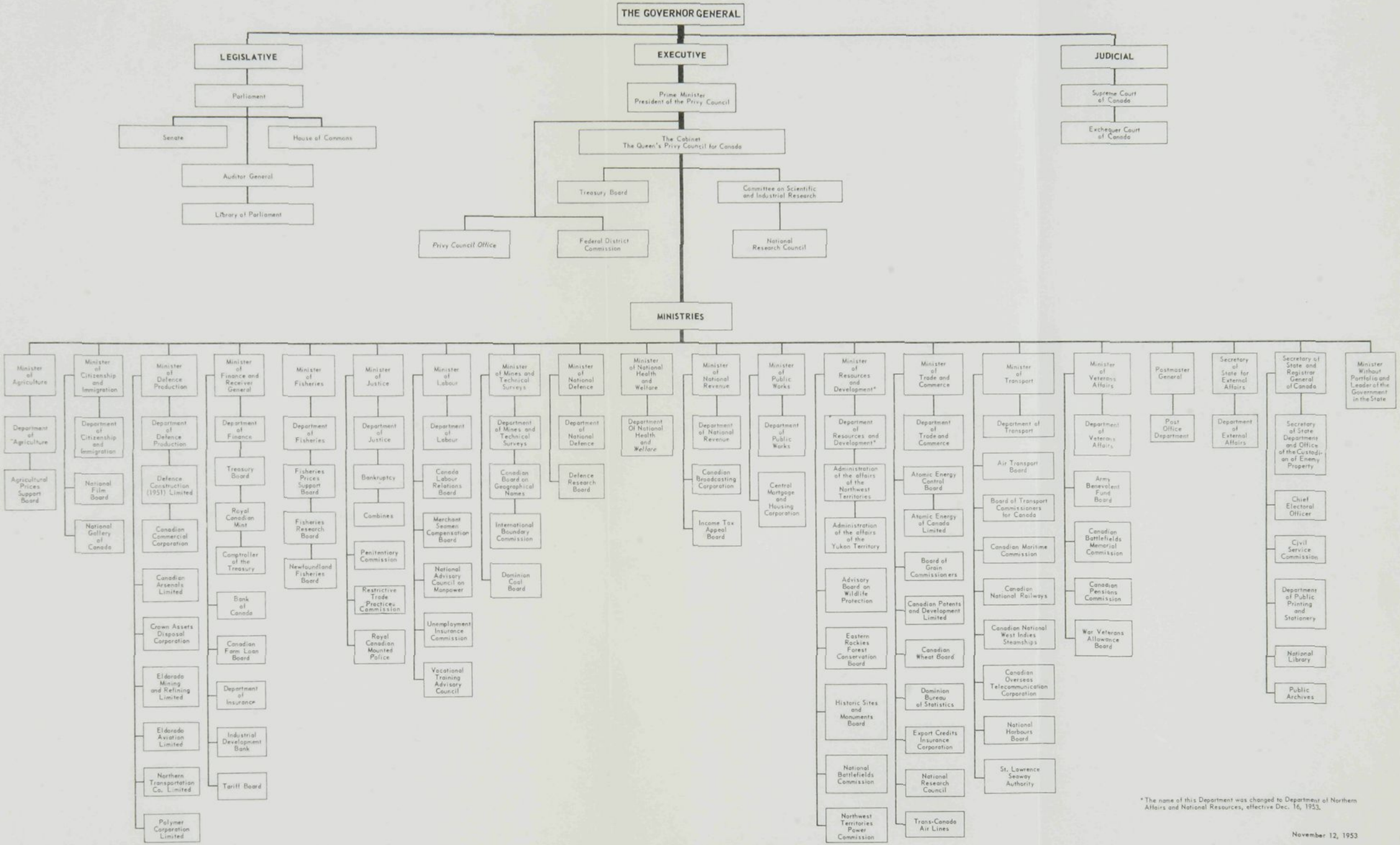
The Civil Service Commission.—The Civil Service Commission of Canada dates from the Civil Service Act of 1908. Under this Act the Commission was given the responsibility of applying, as far as possible, the principle of appointment by merit in filling permanent positions within departmental headquarters positions at Ottawa, termed the "inside service"

The Civil Service Act of 1918 extended the competitive system of appointments to cover the outside as well as the inside service and temporary as well as permanent appointments. It made the Commission responsible for establishing a system of organization and classification that would secure uniformity in the staffing of the various departments and in the salaries paid for work of equal levels of difficulty and responsibility.

The jurisdiction of the Commission now extends to all departments of the Government and to a large number of boards and commissions, exclusive of Crown corporations.

The Civil Service Commission consists of three members, one of whom serves as Chairman. Each member of the Commission is appointed by the Governor in Council for a term of 10 years, and each has the rank and standing of a Deputy Minister. The Commission has a staff of approximately 580 persons working under its direction and located in the headquarters office at Ottawa and in district offices at St. John's, N'f'ld., Halifax, N.S., Saint John, N.B., Montreal, Que., Toronto, Ont., Winnipeg, Man., Regina, Sask., Edmonton, Alta., and Vancouver, B.C.

GOVERNMENT OF CANADA



* The name of this Department was changed to Department of Northern Affairs and National Resources, effective Dec. 16, 1953.

November 12, 1953

The Department of Defence Production.—The Department of Defence Production was established on Apr. 1, 1951, under the provisions of the Defence Production Act, 1951, which gave the Department a statutory life of five years. Under the Defence Production Act the powers, duties and functions that were vested in the Minister of Trade and Commerce pursuant to the Department of Munitions and Supply Act, 1939, and the Defence Supplies Act, 1950, were transferred to the Minister of Defence Production. The Defence Production Act repealed the Essential Materials (Defence) Act, 1950-51.

Briefly, its task is to co-ordinate the effort required of the Canadian economy in producing armaments necessary to implement the terms of the North Atlantic Treaty and to co-ordinate the production and purchasing of the requirements of the Armed Forces. The four main units are the Production Branch, the General Purchasing Branch, the Materials Branch and the Aircraft Division. Supporting them are various administrative and service units such as the Economic and Statistics, Legal, Administration, and Comptroller's Branches, the Financial Adviser's Office and Small Industries Division.

The following Crown companies report to Parliament through the Minister of Defence Production: Canadian Arsenals Limited, Crown Assets Disposal Corporation, Defence Construction (1951) Limited, Polymer Corporation Limited, Eldorado Mining and Refining Limited, Northern Transportation Company Limited, and Canadian Commercial Corporation.

The Department of External Affairs.—The main function of this Department is the protection and advancement of Canadian interests abroad.

The Department is headed by the Secretary of State for External Affairs. At the head of the staff is the Under-Secretary of State for External Affairs, with a Deputy Under-Secretary and three Assistant Under-Secretaries. They are assisted by Foreign Service Officers, formally designated Counsellors, and First, Second and Third Secretaries.

The work of the Department at Ottawa is carried on through the following Divisions: the geographical Divisions are the Commonwealth, European, American and Far Eastern; the functional Divisions are the Consular, Defence Liaison, Economic, Information, Legal, Protocol, and United Nations; the "housekeeping" Divisions are Establishments and Organization, Finance, and Personnel. There are two related special sections, Supplies and Properties, and International Conferences. The archives and departmental library are incorporated in a Historical Research and Reports Section and a Press Office arranges press conferences and issues press releases.

The Department of Finance.—The Department of Finance, created in June 1868, is under the authority of the Minister of Finance. The Department is responsible for the financial administration of Canada. It is responsible for the raising of the money required for the various governmental activities by way of taxation or borrowing. The Comptroller of the Treasury, an officer of the Department, is responsible for all Government disbursements.

The work of the Department is organized in six principal Divisions: Administration, Accounting, Treasury Board, Taxation, Economic Policy, and the Comptroller of the Treasury. The Royal Canadian Mint is a branch of the Department and the Inspector General of Banks is an officer of the Department.

The Tariff Board and the Canadian Farm Loan Board are responsible to Parliament through the Minister of Finance.

The Department of Fisheries.—The Department of Fisheries was first organized under a Minister of Fisheries in 1930. Prior to that date the federal fisheries services were maintained by the former Department of Marine and Fisheries, established in 1868. The provinces, under various arrangements, have certain administrative responsibilities in the fisheries but the legislative authority for the regulations of coastal and fresh-water fisheries is with the Federal Department of Fisheries.

The work of the Department includes: conservation and development of the fisheries through the enforcement of fishing regulations, the operation of fish-culture establishments, management and improvement of spawning streams and control of predators; inspection of fish products for quality control and the encouragement of industrial development; promotion of the greatest utilization of fishery products and a proper public understanding of the resource and the industry.

Agencies connected with the Department are the Fisheries Prices Support Board and the Fisheries Research Board of Canada. The Department is also represented on the International Pacific Salmon Fisheries Commission, the International Fisheries Commission (Halibut), the International Commission for the Northwest Atlantic Fisheries and the International North Pacific Fisheries Commission.

The Department of Insurance.—The Minister of Finance is responsible for the Department of Insurance which originated in 1875. Under the Superintendent of Insurance, the Department administers the statutes of Canada applicable to: insurance, trust and loan companies incorporated by the Parliament of Canada; provincially incorporated

insurance companies registered with the Department; British and foreign insurance companies operating in Canada; small loans companies and money-lenders; and Civil Service insurance.

Under the relevant provincial statutes the Department examines provincial trust companies in the Provinces of Manitoba and New Brunswick and loan and trust companies in the Province of Nova Scotia.

A Fire Prevention Branch was organized in 1919 with responsibility for the administration of Sect. 515 of the Criminal Code. It maintains fire-loss records, makes inspections, reports on fire-prevention legislation and protection methods and endeavours to extend and co-ordinate fire-prevention work in Canada.

The Department of Justice.—This Department provides legal services to the Government and the various government departments, including preparing and settling government legislation, settling instruments issued under the Great Seal, regulating and conducting litigation for or against the Crown, superintending the acquisition of property and prosecutions under federal legislation other than the Criminal Code, administers federal statutes dealing with legal matters and provides administration services for the Supreme Court of Canada and the Exchequer Court.

The Department also superintends the penitentiaries and administers the prison system of Canada.

The Department of Labour.—The Department of Labour was established in 1900 by Act of Parliament (63-64 Vict., c. 24). The Department administers, under the Minister of Labour, legislation dealing with: industrial relations, investigation of disputes, etc.; fair employment practices; the regulation of fair wages and hours of labour; government annuities; government employee compensation; merchant seamen compensation; vocational training; publication of the *Labour Gazette*, as well as bulletins giving information on industrial and related subjects.

The Unemployment Insurance Commission and National Employment Service is also under the direction of the Minister of Labour. The Canada Labour Relations Board and the National Advisory Council on Manpower also act on behalf of the Minister of Labour. The Department is also the official liaison agency between the Canadian Government and the International Labour Organization.

The Department of Mines and Technical Surveys.—This Department was created by an Act of Parliament (13 Geo. VI, c. 17) which received Royal Assent on Dec. 10, 1949. Its establishment resulted from the reorganization of certain former departments into an integrated organization whose primary function is to provide technological assistance in the development of Canada's mineral resources through investigations, studies and research in the fields of geology, mineral dressing and metallurgy, and topographic, geodetic and other surveys. The Department is under the Minister of Mines and Technical Surveys and is divided into five branches, namely: the Surveys and Mapping Branch, the Geological Survey of Canada, the Mines Branch, the Dominion Observatories and the Geographical Branch.

The Department also administers the Explosives Act which regulates manufacture, testing, sale, storage and importation of explosives, and the Emergency Gold Mining Assistance Act which provides cost-aid to the gold industry.

Boards and Commissions are: Canadian Board on Geographical Names; Dominion Coal Board; Board of Examiners for Dominion Land Surveyors; International Boundary Commission and Interprovincial Boundary Commissions.

The Department of National Defence.—Created on Jan. 1, 1923, by the National Defence Act, 1922, the Department of National Defence was originally an amalgamation of the Department of Militia and Defence, the Naval Service and the Air Board.

In 1940, the Department of National Defence was separated into three departments, one for each of the Armed Services, and continued under this organization until the cessation of hostilities. In order to afford the maximum possible degree of co-ordination, the three Services were again brought into one departmental organization in 1946.

In 1947, the Defence Research Board was formed to carry out research projects for defence. It is responsible to the Minister of National Defence for this function and for advising him on the effect of scientific, technical and other research on national defence.

Department of National Health and Welfare.—The Department of National Health and Welfare was established in October 1944. Under the Minister of National Health and Welfare, the Department, which is composed of three branches (Health, Welfare and Administration), is administered through the Deputy Ministers of National Health and National Welfare.

The Health Branch is divided into three directorates: Health Insurance Studies, Food and Drugs, and Indian Health Services. In the Health Branch are 14 Divisions active in a number of public health fields. Administratively they fall into three groups: advisory medical, environmental sanitation and research development. The Welfare Branch is made up of the Divisions of Family Allowances, Old Age Security, Old Age Assistance and Physical Fitness. The Department is also responsible for federal civil defence planning, with the Civil Defence Co-ordinator reporting to both Deputy Ministers. The Administration Branch includes divisions where activities cover both health and welfare fields such as research, information, legal and library services as well as administrative personnel and purchasing and supply services.

National Museum of Canada.—The National Museum illustrates the natural history of Canada — its geology, biology and anthropology. It was formerly part of the Geological Survey which was founded in 1842 but was separated in 1920, and is now part of the Department of Resources and Development. The Museum carries out field investigations in botany, zoology, vertebrate palæontology, archæology and ethnology including studies of folk-lore and folk-songs, publishes the results of its research and carries out an extensive educational program.

The Department of National Revenue.—From Confederation until May 1918, customs and inland revenue Acts were administered by separate departments; after that date they were amalgamated under one Minister as the Departments of Customs and Inland Revenue. In 1921, the name was changed to the Department of Customs and Excise. In April 1924, collection of income taxes was placed under the Minister of National Revenue and under the Department of National Revenue Act, 1927, the Department became known as the Department of National Revenue.

Besides the assessment and collection of customs and excise duty, taxes and revenues and other services by ports and outports, the Department is responsible for the assessment and collection of income taxes and succession duties.

The Minister of National Revenue is responsible to Parliament for the Income Tax Appeal Board and the Canadian Broadcasting Corporation.

Post Office Department.—Operations of the Post Office Department under a Postmaster General include: air, land, steamboat and railway mail services; international and domestic mail; postage stamps, money orders and parcel post business. The Department is responsible for the Post Office Savings Bank.

Public Archives.—The Public Archives was founded in 1872 and is administered by the Dominion Archivist who has the rank of a Deputy Minister and is responsible to the Secretary of State. Its purpose is to assemble and make available to the public a comprehensive collection of historical source material relating to the history of Canada. Major emphasis is placed upon official records of the Government, and the personal papers of political leaders and other prominent figures. These are supplemented by copies of many records in the British and French archives that relate to Canada, a fine map collection, a historical library, and many prints, paintings and photographs.

Department of Public Printing and Stationery.—This Department was established in 1886 and is in the charge of the Queen's Printer and Controller of Stationery.

The Department is responsible for supplying all requirements of printing and stationery to and the audit of all accounts for advertising of Parliament and Departments of the Canadian Government; the free distribution and sale of all public documents or papers to the public; the publication of the *Statutes of Canada*, the *Canada Gazette*, and all departmental reports, papers, etc., required to be published by authority of the Governor General in Council.

The Department of Public Printing and Stationery is under the jurisdiction of the Secretary of State.

Department of Public Works.—This Department was constituted in 1867 and is responsible for the management, charge and direction of the public works of Canada and, except as specifically provided in other Acts, attends to the construction and maintenance of public buildings, wharves, piers, roads and bridges and the undertaking of dredging. The Department maintains architectural and engineering staffs in each province in addition to the Administrative, Architectural, Engineering and Purchasing and Stores Branches at Ottawa.

The Minister of Public Works is responsible to Parliament for the Central Mortgage and Housing Corporation and for federal interests in the Trans-Canada Highway.

Department of Resources and Development.—The Department of Resources and Development was established in January 1950, and comprises sections of the former Departments of Mines and Resources and Reconstruction and Supply. The Department is divided into five branches besides Administration Services: the National Parks Branch administers the National Parks of Canada, historic sites and federal interests in the conservation and protection of wildlife and has charge of the National Museum of Canada; the Engineering

and Water Resources Branch has charge of construction works for all other branches, the measure and record of stream flow, and the investigation of water-power resources; the Northern Administration and Lands Branch deals with business concerning the local government of the Northwest Territories and of Yukon Territory and administers lands, timber, minerals and other resources of the Territories; the Forestry Branch conducts investigations in the protection and utilization of the forest resources of Canada, maintains forest experiment stations and forest products laboratories and administers federal assistance to the provinces under the Canada Forestry Act; the Canadian Government Travel Bureau promotes the tourist industry by encouraging tourist travel from abroad and interprovincial travel in Canada.

The Minister of Resources and Development is also responsible to Parliament for the Eastern Rockies Forest Conservation Board, the Northwest Territories Power Commission, the National Battlefields Commission, the Historic Sites and Monuments Board, and the Advisory Board on Wildlife Protection.

Department of the Secretary of State.—The Department of the Secretary of State was constituted in its present form in 1873. The Secretary of State is the official spokesman of the Federal Government as well as the medium of communication between the Federal and Provincial Governments, all correspondence between the Governments being conducted through his Department with the Lieutenant-Governors. He is the custodian of the Great Seal of Canada and the Privy Seal of the Governor General as well as being the channel through which the general public may approach the Crown.

The Secretary of State is the Registrar General of Canada, registering all proclamations, commissions, licences, warrants, writs and other instruments issued under the Great Seal and certain instruments issued under the Privy Seal. He is responsible for the collection and tabling of parliamentary returns.

The Secretary of State also deals with the organization and administration of the Office of the Custodian of Enemy Property. The Civil Service Commission, the Department of Public Printing and Stationery, the Public Archives, and the Chief Electoral Office are under the jurisdiction of the Secretary of State, but each of the three Civil Service Commissioners, the Queen's Printer, the Public Archivist and the Chief Electoral Officer has the rank of a Deputy Minister.

The Department of the Secretary of State deals with correspondence concerning the Copyright Appeal Board, the Awards Co-ordination Committee, the Public Records Committee and the Inter-departmental Committee on the use of Parliament Hill. The Special Division deals with domestic protocol, government hospitality and related matters.

Department of Trade and Commerce.—The Department of Trade and Commerce was established by Act of Parliament on June 23, 1887, but did not function until Dec. 5, 1892, when an Order in Council to this effect was passed. Prior to its creation, assistance in the development of Canada's foreign trade was provided by five Canadian Commercial Agents, who served on a part-time basis and were responsible to the Minister of Finance. On Jan. 1, 1895, a Canadian Commercial Agent was appointed at Sydney, Australia, on a full-time basis. He thus became the first Canadian Government Trade Commissioner, in the present meaning of the term.

The Canadian Commercial Agency Service was renamed the Canadian Trade Commissioner Service in 1907, as the term agent created the impression that an officer so designated had something to buy or sell. Officers devoting all their time to the promotion of Canadian trade, and on salary, were thus termed Canadian Trade Commissioners, while those receiving an honorarium were still known as Commercial Agents. The following year, the position of Superintendent of Commercial Agencies was abolished, and a Deputy Minister of Trade and Commerce was appointed on Aug. 1, 1908. Forty-nine offices in 39 countries were maintained in 1953. In addition to trade commissioners and assistant trade commissioners, the foreign service officers included eight agricultural specialists, three fisheries specialists and one timber specialist. Where trade commissioners are members of a mission maintained by the Department of External Affairs, they are given diplomatic status and are known as Commercial Counsellors or Commercial Secretaries.

The Department of Trade and Commerce was expanded in 1945 to provide a wide range of additional services to Canadian businessmen, and now comprises the following Branches and Divisions: Canadian Trade Commissioner Service, Commodities Branch, Agriculture and Fisheries Branch, International Trade Relations Branch, Canadian Government Exhibition Commission, International Economic and Technical Co-operation Division (responsible for administration of the Colombo Plan), Information Branch, Industrial Development Division, Standards Branch, Capital Cost Allowance Division and Economics Division.

The following boards, commissions, Crown companies and agencies report to Parliament through the Minister of Trade and Commerce: Atomic Energy Control Board, Atomic Energy of Canada Limited, Board of Grain Commissioners, Canadian Patents and Development Limited, Canadian Wheat Board, Export Credits Insurance Corporation, National Research Council and Trans-Canada Air Lines.

Dominion Bureau of Statistics.—The Dominion Bureau of Statistics was set up by statute in 1918 as a central statistical department for Canada (8-9 Geo. V, c. 43). In 1948, this statute, which had been consolidated as the Statistics Act (R.S.C. 1927, c. 190), was repealed and replaced by the Statistics Act (R.S.C. 1952, c. 257).

The function of the Dominion Bureau of Statistics is to compile, analyse and publish statistical information relative to the commercial, industrial, financial, social and general condition of the people and to conduct a census of population and agriculture of Canada at ten-year intervals.

The Bureau is the principal publication agency of the Federal Government; the subjects of the reports cover all aspects of the national economy. The Bureau reports to Parliament through the Minister of Trade and Commerce.

The Department of Transport.—The Department of Transport was created on Nov. 2, 1936, from the former Departments of Marine, Railways and Canals and the Civil Aviation Branch of Department of National Defence.

The work of the Department consists of four main Services: Marine, Air, Canals and Railways. The work of the Marine Service includes aids to navigation, nautical and pilotage services, marine agencies, steamship inspection and floating equipment and direct supervision over 300 public harbours; seven other harbours come under supervision of the Department but are administered by Commissions. Air Services cover the operation of civil aviation, meteorological and telecommunication divisions. The latter includes the administration and regulation of radar, radio marine and radio aeronautical aids to navigation and communication by wire and by government telegraph and telephone. The Canal Service has jurisdiction over the canals and canalized waterways of Canada. These include the main or primary canals on the St. Lawrence River and Great Lakes and a number of subsidiary or secondary canals.

Other services of the Department are in connection with the Government-owned companies: the Canadian National Railways, Hudson Bay Railway, Canadian Government Railway, Canadian National (West Indies) Steamship Service and the Prince Edward Island Ferry and Terminals.

The Minister of Transport is responsible to Parliament for the following boards and commissions: the Air Transport Board; Board of Transport Commissioners; Canadian Maritime Commission; Steamship Inspection Board; National Harbours Board; Park Steamship Company Limited; and Canadian National Railway Securities Trust. The Minister is also responsible to Parliament for the Canadian Overseas Telecommunication Corporation.

Department of Veterans Affairs.—This Department, established in 1944, is concerned exclusively with the welfare of veterans and includes medical, dental and welfare services, land settlement and prosthetic services and insurance. The Veterans' Bureau assists veterans in the preparation and presentation of pension claims.

The Minister of Veterans Affairs is also responsible for the Canadian Pension Commission and the War Veterans Allowance Board. The Department has administrative offices in all the larger cities across Canada and at London, England.

Section 2.—Crown Corporations

The Crown corporation form of public enterprise is not a new type of organization in Canada but, in recent years, as the work of government has become more complex, greater reliance has been placed on it as the appropriate instrument for administering and managing many public services in which business enterprise and public accountability must be combined.

The use of the corporate device to harmonize public responsibility in the development of economic resources and the provision of public services with the pursuit of commercial and industrial objectives has led to the adoption of many different forms and formulæ of management. The most usual practice has been to set up a corporation under the provisions of a special Act of Parliament which defines its purpose and sets forth its powers and responsibilities. However, during World War II, the Minister of Munitions and Supply was authorized to procure the incorporation of companies under the federal Companies Act, 1934, or under any provincial companies Act, to which he might delegate any of the powers

conferred on him under the Department of Munitions and Supply Act or any Order in Council. Under this legislation, some 28 companies were created to serve a wide variety of purposes; most of these companies have since been wound up.

Following the successful experience during the war years in relying on the Companies Act for the establishment of Crown companies, similar incorporating powers were granted by an amendment to the Research Council Act and have been incorporated in the Atomic Energy Control and the Defence Production Acts.

In 1946, the Government Companies Operation Act was passed to regulate the operation of companies formed under the Companies Act. However, it was applicable only to a relatively small number of companies and, in order to establish a more uniform system of financial and budgetary control and of accounting, auditing and reporting for Crown corporations generally, Part VIII of the Financial Administration Act was enacted in 1951 and brought into operation by proclamation on Oct. 1, 1952. Upon its enactment, the financial provisions of the Government Companies Operation Act, which were covered by similar provisions in the new Act, were repealed.

One of the more interesting features of the new legislation is the attempt that has been made to define and classify Crown corporations.* The Act defines a Crown corporation as a corporation that is ultimately accountable through a Minister to Parliament for the conduct of its affairs and establishes three classes of corporation: departmental, agency, and proprietary.

Departmental Corporations.—A departmental corporation is defined as a Crown corporation that is a servant or agent of Her Majesty in right of Canada and is responsible for administrative, supervisory or regulatory services of a governmental nature. Ten departmental corporations are listed in Schedule B to the Act:—

Agricultural Prices Support Board
Atomic Energy Control Board
Canadian Maritime Commission
Director of Soldier Settlement
The Director, The Veterans' Land Act
Dominion Coal Board
Fisheries Prices Support Board
National Gallery of Canada
National Research Council
Unemployment Insurance Commission.

Agency Corporations.—An agency corporation is defined as a Crown corporation that is an agent of Her Majesty in right of Canada and is responsible for the management of trading or service operations on a quasi-commercial basis, or for the management of procurement, construction or disposal activities on behalf of Her Majesty in right of Canada. Schedule C to the Financial Administration Act lists the following as agency corporations:—

Canadian Arsenals Limited
Canadian Commercial Corporation
Canadian Patents and Development Limited
Canadian Sugar Stabilization Corporation Limited
Commodity Prices Stabilization Corporation Limited
Crown Assets Disposal Corporation
Defence Construction (1951) Limited
Federal District Commission
National Battlefields Commission
National Harbours Board
Park Steamship Company Limited.

* Not all Crown corporations are subject to the provisions of the Financial Administration Act. For example, the Canadian Wheat Board, the Bank of Canada and its subsidiary, the Industrial Development Bank, because of the special nature of their functions, are excluded from the operations of the Crown corporations Part of the Act and are governed by their own Acts of incorporation, as are such joint enterprises of the Federal and Provincial Governments as the Eastern Rockies Forest Conservation Board and the Halifax Relief Commission.

Since the proclamation of the Financial Administration Act, Atomic Energy of Canada Limited has been added to the agency grouping, and two corporations, Canadian Sugar Stabilization Corporation Limited and Commodity Prices Stabilization Corporation Limited, have discontinued operations and have surrendered their charters.

Proprietary Corporations.—A proprietary corporation is defined as a Crown corporation that (1) is responsible for the management of lending or financial operations, or for the management of commercial or industrial operations involving the production of or dealing in goods and the supplying of services to the public, and (2) is ordinarily required to conduct its operations without Parliamentary appropriations. Twelve such corporations are listed in Schedule D to the Act:—

Canadian Broadcasting Corporation
Canadian Farm Loan Board
Canadian National (West Indies) Steamships Limited
Canadian Overseas Telecommunication Corporation
Central Mortgage and Housing Corporation
Eldorado Mining and Refining Limited
Export Credits Insurance Corporation
National Railways, as defined in the Canadian National-Canadian Pacific Act, 1933
Northern Transportation Company Limited
Northwest Territories Power Commission
Polymer Corporation Limited
Trans-Canada Air Lines.

Departmental corporations are governed by the provisions of the Financial Administration Act that are applicable to departments generally. Agency and proprietary corporations, however, are subject to the provisions of the Crown corporations Part of the Act, although, if there is any inconsistency between the provisions of that Part and those of any other Act applicable to a corporation, the Act provides that the latter prevail. There is provision in the Part for the control and regulation of such matters as corporation budgets and bank accounts, the turning over to the Receiver General of surplus money, limited loans for working-capital purposes, the awarding of contracts and the establishment of reserves, the keeping and auditing of accounts, and the preparation of financial statements and reports and their submission through the appropriate Minister to Parliament.

A further form of control is exercised by Parliament through the power to vote financial assistance. This may take different forms. For some corporations, capital may be provided by parliamentary grants, loans or advances that may subsequently be converted into capital stock or bonds; for others it may be by the issue of capital stock to be subscribed and paid for by the Government; or by the sale of bonds either to the Government or the public. In a few instances, corporations have financed all or a portion of their requirements from their own resources or earnings. A special financing arrangement recently adopted has been the allocation of the 15-p.c. excise tax charged on radio and television sets and their parts and accessories to the revenue of the Canadian Broadcasting Corporation.

Prior to 1952, Crown corporations did not pay corporate income taxes. However, the Minister of Finance announced in the 1952 Budget that the Income Tax Act would be amended so that proprietary Crown corporations would pay such taxes on income earned in respect of financial years commencing after Jan. 1, 1952, in the same manner as any privately owned corporation. One desirable result of this amendment will be to make the financial statements of these Crown

companies more comparable with those of private industry with which, in some instances, they are in competition and thus make it easier to assess the relative efficiency of their operations.

The functions of the various Crown corporations are given briefly in the following paragraphs. In a number of cases, further details are included in the Chapters dealing with the subjects concerned; locations are available in the Index.

Agricultural Prices Support Board.—The Board was established in 1944 to assist in stabilizing the prices of agricultural products. The Board reports to Parliament through the Minister of Agriculture.

Atomic Energy Control Board.—In December 1946, by Act of Parliament, all matters concerning atomic energy in Canada were placed under the Atomic Energy Control Board. From Feb. 1, 1947, to Apr. 1, 1952, the National Research Council operated the Chalk River project as an agent of the Board. The Board reports to Parliament through the Minister of Trade and Commerce.

Atomic Energy of Canada Limited.—This Crown Company was incorporated in February 1952 under the Atomic Energy Control Act, 1946, to take over from the National Research Council on Apr. 1, 1952, the operation of the Chalk River project on behalf of the Atomic Energy Control Board. The main functions of the Company are the operation of atomic reactors, research into many aspects of atomic energy and the extraction, processing and marketing of the by-products of the reactors. The Board reports to Parliament through the Minister of Trade and Commerce.

Bank of Canada.—C. 43 of the Statutes of 1934 provides for the establishment of a central bank in Canada, the function of which is to regulate credit and currency, to control and protect the external value of the Canadian dollar and to stabilize the level of production, trade, prices and employment so far as may be possible within the scope of monetary action. The Bank acts as the fiscal agent of the Government of Canada, manages the public debt and has the sole right to issue notes for circulation in Canada. The Bank is managed by a Board of Directors appointed by the Government and composed of a Governor, a Deputy Governor and 12 Directors, the Deputy Minister of Finance being a member of the Board. The Bank is governed by its own Act of incorporation.

Board of Grain Commissioners.—Under the Canada Grain Act 1930 and its amendments, the Board of Grain Commissioners, comprising a Chief Commissioner, two Commissioners and four Assistant Grain Commissioners, has authority to inquire into any matter relating to the grading and weighing of grain, deductions for dockage or shrinkage, deterioration of any grain during storage or treatment, unfair or discriminatory operation of a grain elevator, etc. The Board publishes its regulations in the *Canada Gazette* and reports to Parliament through the Minister of Trade and Commerce.

Canadian Arsenals Limited.—This Company was set up in September 1945 to take over Crown-owned plant and equipment. Among the items it now manufactures are propellants and explosives, small arms, radars and a wide range of ammunition and components. Its Divisions are as follows, together with the location of their plants: Dominion Arsenals Division (Quebec, Que., Valcartier, Que., Riviere-du-Loup, Que.); Explosives Division (Valleyfield, Que., Shawinigan Falls, Que., and storage depot at St. Dominique, Que.); Filling Division (St. Paul l'Ermite, Que.); Gun Ammunition Division (Lindsay, Ont.); Small Arms Division (Long Branch, Ont.); Instrument and Radar Division (Leaside, Ont.); Gun Division (facilities at Longueuil, Que., leased to another company). The Company is responsible to Parliament through the Minister of Defence Production.

Canadian Broadcasting Corporation.—The Canadian Broadcasting Act, 1936, provides that there shall be a corporation, to be known as the Canadian Broadcasting Corporation, which shall consist of a board of nine governors appointed by the Governor in Council and chosen to give representation to the principal geographic divisions of Canada. An amendment to the Act (Dec. 13, 1951) provided for the appointment of two more governors to give further representation in the Prairie Provinces and in Newfoundland. These appointments have since been made. The Board of Governors determines CBC policy, and the Chairman of the Board is required to devote the whole of his time to the performance of his duties under the Act.

The General Manager is the Chief Executive of the Corporation and directs the operations and activities of the Corporation as well as the application of CBC policy as determined by the Board of Governors. Under the General Manager the organization of the CBC consists of the following principal Divisions: Program, International Service, Engineering,

Commercial, Press and Information, Broadcast Regulations, Station Relations, Personnel and Administration, and Treasury. Regional Representatives are appointed for Newfoundland, the Maritimes, Quebec, Ontario, the Prairies, and British Columbia.

The Corporation reports to a Minister of the Crown (at present the Minister of National Revenue) who is responsible for dealing with CBC operations when under consideration in Parliament.

Canadian Commercial Corporation.—This Corporation was set up in 1946 to assist in the development of trade. Its functions were expanded in 1947 to cover the purchase of munitions and supplies for the Department of National Defence. In 1951, under the terms of the Defence Production Act, the Company was made responsible to the Minister of Defence Production. The Corporation operates very closely with the Department, all its directors being departmental officials.

The Corporation's main function now is to handle defence orders placed in Canada by other governments. It has ordered civilian types of commodities on behalf of certain international organizations, and also civilian goods and services required by the Canadian Government for supply to under-developed countries under the Colombo Plan.

Canadian Farm Loan Board.—The Board was organized in 1929 to make loans to farmers secured by mortgage. Later operations extended loans to fishermen secured by mortgage on real estate. The Board is responsible to Parliament through the Minister of Finance.

Canadian Maritime Commission.—The Commission was created in 1947 (R.S.C. 1952, c. 38) to consider and recommend policies and measures necessary for the operation, maintenance, manning and development of a merchant marine and a ship-building and ship-repairing industry. The Commission is responsible to Parliament through the Minister of Transport.

Canadian National Railways.—Operating under an Act to incorporate the Canadian National Railway Company (1919), brought into effect by Order in Council of Jan. 30, 1923, the Canadian National Railways comprised at that time the old Intercolonial Railway and various eastern branch lines (all embraced in the Canadian Government Railways which were turned over to the Canadian National board for management and operation), the Canadian Northern Railway (1918) and the Grand Trunk Pacific (1923). The Hudson Bay Railway has been operated by the Canadian National Railways for the Canadian Government since 1935 and a separate accounting is made. Additional lines have been built or acquired and are operated by the Canadian National Railways. The C.N.R. is controlled by a Chairman and Board of Directors and is responsible to Parliament through the Minister of Transport.

Canadian National (West Indies) Steamships Limited.—Through the medium of this Crown Company, the Federal Government provides direct steamship services to the West Indies in conformity with the Canada-West Indies Trade Agreement of 1926. The Company is responsible to Parliament through the Minister of Transport.

Canadian Overseas Telecommunication Corporation.—This Crown Company was created by Act of Parliament (Dec. 10, 1949) to acquire for public operation all external telecommunication assets in Canada, in keeping with the Commonwealth Telegraph Agreement, signed May 11, 1948. This Agreement was designed to bring about the consolidation and strengthening of the radio and cable communication systems of the Commonwealth. The Corporation is responsible to Parliament through the Minister of Transport.

Canadian Patents and Development Limited.—Incorporated under an amendment to the Research Council Act, passed in 1946, the primary purpose of Canadian Patents and Development Limited is to make available to industry, through licensing arrangements, the inventions and new processes developed by the scientific workers of the National Research Council. The Board of Directors is composed of representatives from industry, from the universities, and from the National Research Council.

Canadian Wheat Board.—Incorporated under the Canadian Wheat Board Act, 1935, to market, in interprovincial and export trade, grain grown in Canada, the Board is empowered to purchase, store, transfer, sell, ship or otherwise dispose of wheat, oats and barley. Established to liquidate accumulated surpluses of wheat and to stabilize the market, it remains the controlling marketing instrument for these grains. The Board reports to Parliament through the Minister of Trade and Commerce.

Central Mortgage and Housing Corporation.—This Corporation was incorporated by Act of Parliament in 1945 to administer the National Housing Act, 1944, and earlier housing Acts, to provide facilities for the rediscounting of mortgages for lending institutions and to co-ordinate activities of the Federal Government in the housing field. Since 1948, the Corporation has administered the functions of Wartime Housing Limited and since

1950 has provided management and supervisory services to Defence Construction Limited which is entrusted with carrying out the construction of defence projects required by the Department of National Defence. The Corporation is responsible to Parliament through the Minister of Public Works.

Crown Assets Disposal Corporation.—This Corporation was set up in June 1944 under the name of War Assets Corporation; the name was changed by statute in December 1949. It succeeded War Assets Corporation Limited, which was set up in December 1943. The Corporation's function is to dispose of surplus Crown assets. It is responsible to Parliament through the Minister of Defence Production.

Defence Construction (1951) Limited.—This Company was set up in 1951 to carry out all defence construction, with the exception of married quarters and runways, replacing the former Crown company, Defence Construction Limited, which was set up in November 1950. The Company reports to Parliament through the Minister of Defence Production.

Director of Soldier Settlement and Director of the Veterans' Land Act.—The Director of Soldier Settlement (under the Act of 1919) is also the Director of the Veterans' Land Act, 1942, and in either capacity is legally a corporate soul. For administrative purposes, however, the programs carried on under both Acts constitute integral parts of the services provided by the Department of Veterans Affairs.

Dominion Coal Board.—The Board was created in October 1947 for the purpose of implementing the recommendations of the Royal Commission on Coal. Its duties include research and investigation regarding problems and techniques of production, marketing and distribution and other related matters. The Board reports to Parliament through the Minister of Mines and Technical Surveys.

Eastern Rockies Forest Conservation Board.—The Board was appointed in 1947 under the Eastern Rocky Mountain Forest Conservation Act, which authorized an agreement between the Government of Canada and the Province of Alberta relating to the protection and conservation of the forests of that area of the eastern slope of the Rocky Mountains which forms part of the watershed of the Saskatchewan River. The function of the Board is to plan, supervise and undertake construction, operation and maintenance of projects and facilities that are necessary for the proper protection of the forests of the area with a view to obtaining the greatest possible flow of water in the Saskatchewan River and its tributaries. The Board is composed of a Chairman and one member appointed by the Federal Government and one member appointed by the Government of the Province of Alberta.

Eldorado Mining and Refining Limited.—The Company was set up in 1944 under the name of Eldorado Mining and Refining (1944) Limited. The name was changed in June 1952. The Company's business is that of prospecting for, mining and refining uranium ores in Canada. It reports to Parliament through the Minister of Defence Production.

Export Credits Insurance Corporation.—Commencing operations in 1945, under the Export Credits Insurance Act, 1944, and comprised of a Board of Directors (including the Deputy Minister of Trade and Commerce, the Deputy Minister of Finance and the Governor of the Bank of Canada) and an Advisory Council, this Crown Company insures Canadian exporters against non-payment by foreign buyers arising out of credit and political risks involved in foreign trade. The Corporation reports to Parliament through the Minister of Trade and Commerce.

Federal District Commission.—This Commission had its genesis in the Ottawa Improvement Commission, established by Parliament in 1899 to improve and beautify the National Capital by the development and construction of parks and driveways and to co-operate with the City of Ottawa in local improvement and conservation. Its membership is honorary in character and appointed by the Governor in Council, and it reports to the Prime Minister. In 1927, the organization's name was changed to the Federal District Commission, its scope of operations widened to include adjacent areas, and its membership increased to ten. Under the F.D.C. Act, the mayors of Ottawa and Hull are included in its membership.

The Commission maintains the grounds of all federal buildings in the National Capital area and landscapes the grounds of new government buildings. In the Ottawa-Hull area (exclusive of Gatineau Park), where it administers 1,878 acres, it has developed 18 parks and 22 miles of scenic driveways.

In 1946 the Commission became the federal agency responsible for carrying out the National Capital Plan. The membership was further increased to permit the appointment of a commissioner resident in each of the provinces and a separate honorary committee was established by the Commission to advise on the development of Gatineau Park. The National Capital Fund, to which Parliament has made annual grants of $2,500,000 since its inception in 1948, was made available to the Commission to execute the work of the National Capital Plan, and a National Capital Planning Committee was appointed to act as a permanent honorary advisory body to the Commission on the implementation of the Plan

Fisheries Prices Support Board.—The Board was set up in July 1947 to recommend to the Government price support measures when severe price declines occur. The Board functions under the direction of the Minister of Fisheries and consists of an Acting Chairman, who is a senior officer of the Department of Fisheries, and five members chosen from private and co-operative firms in the industry. The Board has authority to buy fishery products and to sell or otherwise dispose of them, or to pay producers the difference between a price prescribed by the Board and the average price the product actually commands.

Halifax Relief Commission.—The Commission, a joint enterprise of the Legislature of Nova Scotia (Statutes of N.S., 1918, c. 61) and the Parliament of Canada (Statutes of Canada, 1918, c. 24), was incorporated to administer relief funds contributed for the assistance of sufferers in consequence of the disastrous explosion at Halifax, Dec. 17, 1917.

Industrial Development Bank.—The Bank, a subsidiary of the Bank of Canada, was incorporated in 1944 to provide loans to industrial enterprises where financing is not available through recognized lending organizations.

National Battlefields Commission.—This Commission was established by Act of Parliament in 1908 to preserve the historic battlefields at Quebec City. The Commission is composed of nine members, seven being appointed by the Federal Government and one each by the Provinces of Ontario and Quebec. The Commission is supported by an annual statutory grant from the Federal Government and is responsible to Parliament through the Minister of Resources and Development.

National Film Board.—The National Film Board was established in 1939 and the National Film Act, 1950, provides for a Board of Governors of nine members—a Government Film Commissioner, appointed by the Governor in Council, who is Chairman of the Board, three members from the public service of Canada and five members from outside the public service. The Board reports to Parliament through a designated Minister of the Crown (at present the Minister of Citizenship and Immigration). The Board is responsible for advising the Governor in Council on film activities and is authorized to produce and distribute films in the national interest and, in particular, films "designed to interpret Canada to Canadians and to other nations".

National Gallery.—The National Gallery was founded in 1880. By Act of Parliament in 1951 it was placed under the management of a Board of Trustees appointed by the Governor General in Council, and is responsible to Parliament through a Minister of the Crown (at present the Minister of Citizenship and Immigration).

The first charge of the National Gallery is the development and care of national art collections. Other important services are the arrangement of loans and exhibitions from abroad and from its own holdings for showing in Canada and abroad, the promotion of good industrial design, and general extension work consisting of the distribution of reproductions for educational purposes, lectures, educational tours, publications, school broadcasts and art films.

National Harbours Board.—The Board was established by Act of Parliament in 1936. It is responsible for the administration of port facilities at the harbours of Halifax, Saint John, Chicoutimi, Quebec, Three Rivers, Montreal, Vancouver and Churchill. The Board is responsible to Parliament through the Minister of Transport.

National Research Council.—In 1917, the Research Council Act was passed and in 1928, laboratories for scientific research were established at Ottawa. The National Research Council now has laboratories for divisions of pure and applied chemistry, building research, mechanical engineering, radio and electrical engineering, physics, applied biology and medical research, and also has workshop services. Regional laboratories have been established at Saskatoon, Sask., and Halifax, N.S.

Processes and improvements developed by the Council are made available under licence to industry through a Crown company, Canadian Patents and Development Limited, and any profits derived from the licensing arrangements are used for further research and development.

The Minister of Trade and Commerce, as Chairman of the Privy Council Committee on Scientific and Industrial Research, is responsible to Parliament for the National Research Council.

Northern Transportation Company Limited.—This Company was incorporated in 1947 under the title of Northern Transportation Company (1947) Limited, the name being changed in 1952. It was previously a company chartered under an Alberta Statute. It has been a wholly owned subsidiary of Eldorado Mining and Refining Limited since that Crown company was established, and it carries out the business of a common carrier in the Mackenzie River watershed. The Company is responsible to Parliament through the Minister of Defence Production.

Northwest Territories Power Commission.—The Commission was established by Act of Parliament in 1948 to bring electric power to points in the Northwest Territories where a need developed and where power could be provided on a self-sustaining basis. The Act was amended in 1950 to give authority to the Commission to provide similar services in the Yukon Territory. The Commission is composed of a Chairman and two members appointed by the Governor in Council; it operates hydro-electric plants on the Snare River in the Northwest Territories and on the Mayo River in Yukon Territory and a diesel electric plant at Fort Smith, N.W.T. The Minister of Resources and Development reports to Parliament for the Commission.

Park Steamship Company Limited.—After World War II, this Company acted as an agent for Crown Assets Disposal Corporation in the sale and delivery to purchasers of Government war-built ships. This work is completed but the Company remains available to carry out any appropriate duties. It has no staff of its own, any necessary work being done by the staff of the Canadian Maritime Commission. The Company reports to Parliament through the Minister of Transport.

Polymer Corporation Limited.—The Corporation was established in 1942 for the purpose of constructing and operating a synthetic rubber plant, which now turns out a variety of synthetic rubber products. The Corporation reports to Parliament through the Minister of Defence Production.

Trans-Canada Air Lines.—TCA came into being by Act of Parliament in 1937 to provide for the development of a government-controlled scheduled transcontinental air service. Transatlantic air services, which were inaugurated by the Department of Transport during World War II, were later turned over to TCA. TCA now provides service for passenger, mail and commodity traffic over nation-wide routes and also service to the United States and over overseas routes touching at England, Scotland, Ireland, France, Bermuda, the Bahamas, Jamaica, Barbados and Trinidad. TCA is responsible to Parliament through the Minister of Trade and Commerce.

Unemployment Insurance Commission.—The Commission was appointed on Sept. 24, 1940, under the provisions of the Unemployment Insurance Act, 1940, for the purpose of administering the Act. It is composed of three Commissioners: a Chief Commissioner, a Commissioner appointed after consultation with organizations representative of workers, and another after consultation with organizations representative of employers. The Chief Commissioner holds office for ten years and each of the other Commissioners for five years. The Board is responsible to Parliament through the Minister of Labour.

Section 3.—Acts Administered by Federal Departments*

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada

NOTE.—*Copies of individual Acts of Parliament and amendments may be obtained from the Queen's Printer, Ottawa, at prices of from 10 cents to $1·50 per copy according to number of pages. Where duplications of certain Acts appear in the list, parts of these Acts are administered under the Departments given.*

Department, Year and Chapter	Name of Act
Agriculture—	
R.S.C. 1927 36	Criminal Code, Sect. 235, Race-Track Betting.
R.S.C. 1952 3	Agricultural Prices Support.
5	Agricultural Products Co-operative Marketing.
9	Animal Contagious Diseases.
22, 305	Canada Dairy Products.
47	Cheese and Cheese Factory Improvement.
52, 313	Cold Storage.
66	Department of Agriculture.
81	Destructive Insect and Pest.
101	Experimental Farm Stations.
113	Feeding Stuffs.
115	Fertilizers.
126	Fruit, Vegetables and Honey.
141	Hay and Straw Inspection.
Agriculture—concl.	
R.S.C. 1952 155	Inspection and Sale.
167	Live Stock and Live Stock Products.
168	Live Stock Pedigree.
172	Maple Products Industry.
175	Maritime Marshland Rehabilitation.
177	Meat and Canned Foods.
209	Pest Control Products.
213	Prairie Farm Assistance.
214	Prairie Farm Rehabilitation.
248	Seeds.
294	Wheat Co-operative Marketing.
Auditor General—	
R.S.C. 1952 116	Financial Administration.

* Compiled from information supplied by the respective Departments.

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada—continued

Department, Year and Chapter	Name of Act
Citizenship and Immigration—	
1927 37	St. Regis Indian Reservation.
1934 29	Caughnawaga Indian Reserve.
1943 19	British Columbia Indian Reserves Mineral Resources.
R.S.C. 1952 33	Canadian Citizenship.
67	Department of Citizenship and Immigration.
146	Immigration Aid Societies.
149	Indian.
186	National Gallery.
325	Immigration.
External Affairs—	
R.S.C. 1952 68	Department of External Affairs.
Finance—	
	Canadian National Railways Financing and Guarantee (Annual).
	Appropriation (Annual).
1947 58	Dominion – Provincial Tax Rental Agreements.
1951 20	Prairie Grain Producers Interim Financing.
46	Canadian National Railways Refunding.
R.S.C. 1952 12	Bank.
13	Bank of Canada.
15	Bills of Exchange.
36, 309	Canadian Farm Loan.
37	Canadian Fisherman's Loan.
110	Farm Improvement Loans.
111	Farmers' Creditors Arrangement.
116	Financial Administration.
131	Gold Export.
151, 326	Industrial Development Bank.
156	Interest.
182	Municipal Grants.
183	Municipal Improvements Assistance.
204	Pawnbrokers.
221	Provincial Subsidies.
232	Quebec Savings Banks.
245	Satisfied Securities.
246	Savings Deposits Returns.
261, 336	Tariff Board.
296	Winding-up.
315	Currency, Mint and Exchange Fund.
1952-53 47	Public Service Superannuation.
Fisheries—	
1938 39	Pelagic Sealing (Convention).
R.S.C. 1952 61	Deep Sea Fisheries.
69	Department of Fisheries.
118	Fish Inspection.
119	Fisheries.
120	Fisheries Prices Support.
121	Fisheries Research Board.
177	Meat and Canned Foods.
193	Navigable Waters' Protection
194	Northern Pacific Halibut Fishery (Convention).
205	Pelagic Sealing (Provisional Agreement).

Department, Year and Chapter	Name of Act
Fisheries—concl.	
R.S.C. 1952 244	Salt Fish Board.
252	Sockeye Salmon Fisheries (Convention).
293	Whaling Convention.
1952-53 15	Coastal Fisheries Protection.
44	North Pacific Fisheries Convention.
Insurance—	
R.S.C. 1952 31	Canadian and British Insurance Companies.
49	Civil Service Insurance.
70	Department of Insurance.
100, 320	Excise Tax.
125	Foreign Insurance Companies.
170	Loan Companies.
181	Money Lenders.
251	Small Loans.
272	Trust Companies.
296	Winding-up.
Justice—	
R.S.C. 1927 36	Criminal Code.
1940 43	Treachery.
R.S.C. 1952 14	Bankruptcy.
71	Department of Justice.
98	Exchequer Court.
106	Expropriation.
116	Financial Administration.
127	Fugitive Offenders.
144	Identification of Criminals.
154	Inquiries.
158	Interpretation.
159	Judges.
160	Juvenile Delinquents.
198	Official Secrets.
206	Penitentiary.
210	Petition of Right.
217, 333	Prisons and Reformatories.
241	Royal Canadian Mounted Police.
253	Solicitor General.
259, 335	Supreme Court.
264	Ticket of Leave.
299	Yukon Administration of Justice.
307	Canada Evidence.
314	Combines Investigation.
322	Extradition.
1952-53 30	Crown Liability.
Labour—	
	Unemployment and Agricultural Assistance (Annual).
R.S.C. 1927 110	Conciliation and Labour.
193	Technical Education Extension.
1931 59	Vocational Education.
1935 14	Weekly Rest in Industrial Undertakings.
44	Minimum Wages.
63	Limitation of Hours of Work.
1936 7	National Employment Commission.
15, 46	Unemployment Relief and Assistance.
1939 35	Youth Training.

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada—continued

Department, Year and Chapter	Name of Act
Labour—concl.	
R.S.C. 1952 72	Department of Labour.
108	Fair Wages and Hours of Labour.
132	Government Annuities.
134	Government Employees Compensation.
152	Industrial Relations and Disputes Investigation.
178	Merchant Seamen Compensation.
236	Reinstatement in Civil Employment.
273, 337	Unemployment Insurance.
286	Vocational Training Co-ordination.
295	White Phosphorous Matches.
Mines and Technical Surveys—	
R.S.C. 1952 26	Canada Lands Surveys.
73	Department of Mines and Technical Surveys.
95, 318	Emergency Gold Mining Assistance.
102	Explosives.
National Defence—	
1950 2	Canadian Forces.
R.S.C. 1952 63	Defence Services Pension.
184	National Defence.
283	Visiting Forces (British Commonwealth).
284	Visiting Forces (North Atlantic Treaty).
285	Visiting Forces (United States of America).
National Health and Welfare—	
R.S.C. 1952 74	Department of National Health and Welfare.
National Health—	
R.S.C. 1952 29	Canada Shipping (Part V, Sick Mariners and Marine Hospitals).
123	Food and Drugs (in part).
165	Leprosy.
201	Opium and Narcotic Drug.
220	Proprietary or Patent Medicine.
229	Public Works Health.
231	Quarantine.
Welfare—	
R.S.C. 1927 156	Old Age Pensions.
R.S.C. 1952 17	Blind Persons.
109	Family Allowances.
190	National Physical Fitness.
199	Old Age Assistance.
200	Old Age Security.
National Revenue—	
1940 2	War Exchange Conservation.
32	Excess Profits Tax.
1943 21	United States Tax Convention.
1946 38	Canada - United Kingdom Income Tax Agreement.

Department, Year and Chapter	Name of Act
National Revenue— concl.	
1946 39	Succession Duty Agreement.
1948 34	Canada-New Zealand Income Tax Agreement.
1951 42	Canada-Sweden Income Tax Agreement.
R.S.C. 1952 58	Customs.
59	Customs and Fisheries Protection.
60, 316	Customs Tariff.
75	Department of National Revenue.
89	Dominion Succession Duty.
99, 319	Excise.
100, 320	Excise Tax.
102	Explosives.
103	Export.
104, 321	Export and Import Permits.
114	Ferries.
123	Food and Drugs.
131	Gold Export.
147	Importation of Intoxicating Liquors.
148	Income Tax.
215	Precious Metals Marking.
Post Office—	
R.S.C. 1952 100, 320	Excise Tax.
212	Post Office.
Public Archives—	
R.S.C. 1952 222	Public Archives.
Public Printing and Stationery—	
R.S.C. 1952 226	Public Printing and Stationery.
230	Publication of Statutes.
Public Works—	
1934 59	Public Works Construction.
R.S.C. 1952 91	Dry Docks Subsidies.
106	Expropriation.
114	Ferries.
135	Government Harbours and Piers.
138	Government Works Tolls.
193	Navigable Waters Protection, Part I.
228	Public Works.
234	Railway.
216	Prime Minister's Residence.
324	Government Property Traffic.
Resources and Development—	
R.S.C. 1908 57, 58	National Battlefields at Quebec.
R.S.C. 1927 87	Seed Grain.
88	Seed Grain Sureties.
116	Railway Belt.
124	Manitoba Supplementary Provisions.
180	Saskatchewan and Alberta Roads.
211	Railway Belt Water.
1927 51	Respecting certain debts due the Crown.

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada—continued

Department, Year and Chapter	Name of Act
Resources and Development—concl.	
1928 32	Lac Seul Conservation.
1930 3	Alberta Natural Resources.
29	Manitoba Natural Resources.
37	Railway Belt and Peace River Block.
41	Saskatchewan Natural Resources.
1932 35	Refunds (Natural Resources).
55	Waterton Glacier International Peace Park.
1937 11	Home Improvement Loans Guarantee.
1939 33	Rainy Lake Watershed Emergency Control.
1947 59	Eastern Rocky Mountain Forest Conservation.
R.S.C. 1952 24	Canada Forestry.
46	Central Mortgage and Housing.
76	Department of Resources and Development.
90	Dominion Water Power.
128	Game Export.
162	Land Titles.
179	Migratory Birds Convention.
185	National Film Board.
188	National Housing.
189	National Parks.
192	National Wild Life Week.
195	Northwest Territories.
196	Northwest Territories Power Commission.
224	Public Lands Grants.
263	Territorial Lands.
269	Trans-Canada Highway.
298	Yukon.
299	Yukon Administration of Justice.
300	Yukon Placer Mining.
301	Yukon Quartz Mining.
Secretary of State—	
R.S.C. 1927 36	Criminal Code.
1929 55	Reparation Payment.
1947 24	Trading with the Enemy (Transitional Powers).
1918 71	Italy, Rumania, Hungary and Finland Treaties of Peace.
R.S.C. 1952 18	Boards of Trade.
23, 306	Canada Elections.
27	Canada Medical.
30	Canada Temperance.
53	Companies.
54	Companies Creditors Arrangement.
55	Copyright.
62	Defence Production.
77	Department of State.
83	Disfranchising.
87	Dominion Controverted Elections.
149	Indian.
195	Northwest Territories.
203	Patent.
208	Pension Fund Societies.
223	Public Documents.
225	Public Officers.
234	Railway.

Department, Year and Chapter	Name of Act
Secretary of State—concl.	
R.S.C. 1952 235	Regulations.
247	Seals.
250	Shop Cards Registration.
263	Territorial Lands.
264	Ticket of Leave.
265	Timber Marking.
267	Trade Unions.
270	Translation Bureau.
274	Unfair Competition.
295	White Phosphorous Matches.
298	Yukon.
307	Canada Evidence.
Trade and Commerce—	
R.S.C. 1952 25,308	Canada Grain.
44	Canadian Wheat Board.
78	Department of Trade and Commerce.
92	Electrical and Photometric Units.
93	Electricity and Fluid Exportation.
94	Electricity Inspection.
104, 321	Export and Import Permits.
105	Export Credits Insurance.
129	Gas Inspection.
140	Grain Futures.
153	Inland Water Freight Rates.
164	Length and Mass Units.
191	National Trade Mark and True Labelling.
215	Precious Metals Marking.
239	Research Council.
257	Statistics.
292	Weights and Measures.
Transport—	
	Canadian National Railways Financing and Guarantee (Annual).
	Auditors for National Railways (Annual).
R.S.C. 1927 29	Canadian National (West Indies) Steamship Company.
70	Three Rivers Harbours Commissioners.
211	Railway Belt Water.
1929 4	Canadian National Railways Pensions.
11	Canadian National Refunding.
12	Canadian National Montreal Terminals.
48	Northern Alberta Railways.
1931 19, 20	Beauharnois Light, Heat and Power.
40	New Westminster Harbour Loan.
1937 28	Department of Transport Stores.
1940 20	Beauharnois Light, Heat and Power.
1945 25	National Emergency Transitional Powers.
1947 26	Beauharnois Light, Heat and Power.
1947 42	Port Alberni Harbour Commissioners.

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada—concluded

Department, Year and Chapter	Name of Act
Transport—con.	
1948 10	New Westminister Harbour Commissioners Refunding.
1950 1	Maintenance of Railway Operation.
R.S.C. 1952 2, 302	Aeronautics.
16	Bills of Lading.
20	Bridges.
29	Canada Shipping.
32	Canadian Broadcasting.
38	Canadian Maritime Commission.
39	Canadian National—Canadian Pacific.
40	Canadian National Railways.
42	Canadian Overseas Telecommunication Corporation.
45	Carriage by Air.
79	Department of Transport.
135	Government Harbours and Piers.
136	Government Railways.
137	Government Vessels Discipline.
153	Inland Water Freight Rates.
168	Live Stock Shipping.
174	Maritime Freight Rates.
187	National Harbours Board.
193	Navigable Waters Protection.
202	Passenger Tickets.
211	Pipe Lines.
233	Radio.
234	Railway.
262	Telegraphs.
268	Trans-Canada Air Lines.
Transport—concl.	
R.S.C. 1952 271	Transport (Board of Transport Commissioners).
276	United States Wreckers.
291	Water Carriage of Goods.
311	Canadian National Railways Capital Revision.
Veterans Affairs—	
R.S.C. 1927 188	Soldier Settlement.
1936 47	Veterans' Assistance Commission.
1951 59	Returned Soldiers' Insurance.
62	Veterans Benefit.
R.S.C. 1952 8	Allied Veterans Benefits.
51	Civilian War Pensions and Allowances.
80	Department of Veterans Affairs.
117	Fire Fighters War Service Benefits.
207, 332	Pension.
256	Special Operators War Service Benefits.
258	Supervisors War Service Benefits.
279, 338	Veterans Insurance.
280	Veterans' Land.
281	Veterans Rehabilitation.
289	War Service Grants.
297	Women's Royal Naval Services and the South African Military Nursing Service (Benefits).
340	War Veterans Allowances.

PART IV.—THE CIVIL SERVICE OF CANADA*

The Federal Civil Service comprises, in the widest sense, all servants of the Crown—other than those holding political or judicial office—who are employed in a civil capacity and whose remuneration is paid wholly and directly from moneys voted by Parliament. Collectively, they form the staffs of the various departments, commissions, boards, bureaux and other agencies of the Federal Government. Nearly every category of occupation is represented in the Civil Service. A few civil servants are appointed by either or both Houses of Parliament directly, a number by departments and other agencies in accordance with the provisions of certain statutes, generally with executive approval of the Governor in Council, and the remainder—by far the majority—are selected and appointed by the Civil Service Commission of Canada.

The Civil Service Commission, as the central personnel agency of the Federal Government, is the custodian of the "merit principle" in respect of both initial appointments and promotions. The steps by which the Commission, in its present form, came to be constituted is the record of Civil Service reform in Canada which began a year after Confederation and culminated in the passing of the Civil Service Act of 1918.

* Text revised by M. M. Maclean, Secretary of the Civil Service Commission of Canada, and statistics prepared in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

Recruitment.—The recruitment of civil servants is conducted by means of open competitive examination through which every citizen has the right to compete for positions in the service of his country.

Examinations are held periodically as the staff requirements of the public service dictate. Any Canadian citizen may apply for headquarters positions open at Ottawa, but applicants for local positions must be residents of the locality in which the vacancy occurs. Competitive examinations are announced through the press and through posters displayed on the public notice boards of post offices, offices of the National Employment Service, offices of the Civil Service Commission, public libraries and elsewhere. The examinations may be written, oral, a demonstration of skill, or any combination of these.

The names of persons successful in Civil Service examinations, arranged in order of rank, are recorded on eligible lists. Examination results are formally announced by publication in the *Canada Gazette* and each candidate—successful or unsuccessful—is advised of his standing. As required, appointments are made from the eligible lists, which usually remain valid for one year.

Statutory preference applicable to veterans of World War I and World War II has been extended to persons who have served in the Korean theatre of operations. Since 1918, upwards of 110,000 veterans have been appointed to the public service, of whom approximately 75,000 have been appointed within the past seven years. The 110,000 figure includes 11,000 disabled veterans who were accorded an additional preference in appointment.

In recent years, the Civil Service Commission has decentralized its operations and now has ten district offices and four sub-offices across the country. The Commission is granting an increasing measure of autonomy and responsibility to these offices to permit more efficient service to field agencies. They now conduct certain examinations that qualify for permanent as well as temporary employment.

Staff Training.—In 1947, the Commission set up a Staff Training Division to promote and guide a systematic service-wide training scheme. The training scheme, sponsored by the Commission, is a joint venture undertaken in co-operation with Federal Government departments, most of which have parallel training divisions. The Commission's Training Division is primarily a co-ordinating agent. It promotes and organizes activities, trains departmental instructors in the presentation of courses, prepares and, in some cases, gives courses of general application to all departments, publishes booklets and other training aids, assists departments in developing training to meet specialized needs, and acts as a general clearing-house for the exchange of information on training matters.

Promotion.—It is a prime objective of the Civil Service Act to create a career service. The result is that promotion, like entrance to the Service, is based on merit and a sound promotion system is developing. The present procedure involves the consideration of three factors: seniority or length of service; efficiency of candidates in their present positions; and fitness for the vacant positions. An automatic rating on seniority is given by the Commission and ratings on efficiency and fitness are provided by the department concerned. Appeal machinery, under Commission jurisdiction, has been set up for those employees who feel that their qualifications have not been properly assessed.

Position Classification and Compensation.—Provision is made in the Civil Service Act for the classifying of positions in the public service. A system of position-classification was instituted in 1919 and positions with like duties and responsibilities were classified alike and remunerated equally. Each position has a title, a set of tasks or duties which are proper to it in the organization in which it occurs and, arising out of these duties, a set of qualifications appropriate for their performance. Positions with duties of similar kind are grouped together under a common title to form a class, and grades within the class reflect the level of responsibility.

The determination of rates of compensation for each class is a continuing responsibility of the Commission and salary and wage surveys are conducted constantly. Position classification is a mainspring in the Commission's primary function of recruitment, involving the fixing of standards of qualification for each class of position.

Organization and Methods.—In recent years there has been an increasing awareness of the extent to which economical administration depends on the adoption of modern management techniques and devices. In 1948, the Commission set up an Organization and Methods Service to study problems of management in collaboration with officials directly responsible for major areas of administration. Briefly, this Service affords practical assistance to departments and other agencies of the Government through the systematic examination of structure, operations, procedures and work methods. Its growing facilities are offered, free of charge, to all departments.

Civil Service Statistics.—Monthly returns of personnel and salaries are made by each department of the Federal Government to the Dominion Bureau of Statistics, according to a plan that ensures comparability between departments and continuity in point of time.

From 1914 to 1920, the number of employees increased very rapidly as a result of the extension of the functions of government and of the imposition of new taxes which necessitated additional officials as collectors. New services, such as the Department of Pensions and National Health and the Soldier Settlement Board, were also created during this period. In January 1920, 47,133 persons were employed; this number was the highest reached prior to January 1940, when employees numbered 49,739.

Between March 1939 and March 1952, there was an increase of 85,540 in the total number of permanent and temporary employees.

The departmental distribution accounting for 79·5 p.c. of the total increase is: National Defence 26·6, Veterans Affairs 13·4, Post Office 8·2, National Revenue 7·9, Labour (Unemployment Insurance Commission) 7·9, Agriculture 4·4, Transport 3·9, Public Works 3·6 and Finance (Comptroller of the Treasury) 3·6.

The proportion of permanent employees to total classified employees for March 1952 was 40·6 p.c., unchanged from March 1951.

1.—Numbers and Percentages of Permanent and Temporary Civil Service Employees, Month of March, 1939-52

NOTE.—Figures for the years 1925-38 are given in the 1946 Year Book, p. 1141.

Month of March—	Permanent		Temporary		Grand Total	Month of March—	Permanent		Temporary		Grand Total
	Total	P.C. of Total	Total	P.C. of Total			Total	P.C. of Total	Total	P.C. of Total	
	No.		No.		No.		No.		No.		No.
1939.....	32,132	69·7	13,974	30·3	46,106	1946....	31,088	25·8	89,469	74·2	120,557
1940.....	30,948	62·2	18,791	37·8	49,739	1947....	29,787	23·8	95,550	76·2	125,337
1941.....	30,149	45·0	36,777	55·0	66,926	1948....	33,662	28·4	84,708	71·6	118,370
1942.....	29,524	35·2	54,257	64·8	83,781	1949....	37,909	30·6	86,015	69·4	123,924
1943.....	28,708	27·6	75,347	72·4	104,055	1950....	45,259	35·6	81,937	64·4	127,196
1944.....	29,343	26·0	83,315	74·0	112,658	1951....	50,551	40·6	74,029	59·4	124,580
1945.....	30,240	26·1	85,668	73·9	115,908	1952....	53,514	40·6	78,132	59·4	131,646

2.—Salaries and Wages and Percentages Paid to Permanent and Temporary Civil Service Employees, Years Ended Mar. 31, 1939-52

NOTE.—Figures for the years 1925-38 are given in the 1946 Year Book, p. 1141.

Year Ended Mar. 31—	Permanent		Temporary		Grand Total	Year Ended Mar. 31—	Permanent		Temporary		Grand Total
	Total	P.C. of Total	Total	P.C. of Total			Total	P.C. of Total	Total	P.C. of Total	
	$'000		$'000		$'000		$'000		$'000		$'000
1939.....	56,264	80·8	13,357	19·2	69,621	1946....	66,440	34·8	124,388	65·2	190,828
1940.....	57,154	78·1	16,044	21·9	73,198	1947....	70,985	31·7	152,792	68·3	223,777
1941.....	56,108	66·0	28,857	34·0	84,965	1948....	78,495	34·6	148,295	65·4	226,790
1942.....	57,609	53·1	50,815	46·9	108,424	1949....	99,671	37·9	163,309	62·1	262,980
1943.....	58,747	41·5	82,955	58·5	141,702	1950....	119,840	42·2	163,816	57·8	283,656
1944.....	60,358	35·9	107,614	64·1	167,972	1951....	141,069	47·2	157,908	52·8	298,977
1945.....	64,189	35·6	115,959	64·4	180,148	1952....	168,135	49·4	171,910	50·6	340,045

3.—Numbers and Percentages of Permanent and Temporary Civil Service Employees at Departmental Headquarters, Ottawa, Month of March, 1939-52

NOTE.—Figures for the years 1925-38 are given in the 1946 Year Book, p. 1142.

Month of March—	Permanent				Temporary				Grand Total
	Total	P.C. of Total H.Q.	P.C. of Total Perm.	P.C. of Total Perm. and Temp.	Total	P.C. of Total H.Q.	P.C. of Total Temp.	P.C. of Total Perm. and Temp.	
	No.				No.				No.
1939.....	7,564	63·8	23·5	16·4	4,284	36·2	30·7	9·3	11,848
1940.....	7,507	53·5	24·3	15·1	6,513	46·5	34·7	13·1	14,020
1941.....	7,419	37·9	24·6	11·1	12,174	62·1	33·1	18·2	19,593
1942.....	7,221	26·9	24·5	8·6	19,614	73·1	36·2	23·4	26,835
1943.....	6,829	21·4	23·8	6·6	25,108	78·6	33·3	24·1	31,937
1944.....	6,765	20·3	23·1	6·0	26,564	79·7	31·9	23·6	33,329
1945.....	6,777	19·5	22·4	5·8	27,963	80·5	32·6	24·1	34,740
1946.....	6,772	20·2	21·8	5·6	26,835	79·8	30·0	22·3	33,607
1947.....	6,582	22·0	22·1	5·3	23,276	78·0	24·4	18·6	29,858
1948.....	6,835	24·8	20·3	5·8	20,772	75·2	24·5	17·5	27,607
1949.....	7,738	26·5	20·4	6·2	21,434	73·5	24·9	17·3	29,172
1950.....	8,935	30·0	19·7	7·0	20,836	70·0	25·4	16·4	29,771
1951.....	10,799	35·9	21·4	8·7	19,270	64·1	26·0	15·5	30,069
1952.....	12,027	36·8	22·5	9·1	20,662	63·2	26·4	15·7	32,689

4.—Salaries and Wages and Percentages Paid to Permanent and Temporary Civil Service Employees at Departmental Headquarters, Ottawa, Years Ended Mar. 31, 1939-52.

NOTE.—Figures for the years 1925-38 are given in the 1946 Year Book, p. 1142.

Year Ended Mar. 31—	Permanent				Temporary				Grand Total
	Total	P.C. of Total H.Q.	P.C. of Total Perm.	P.C. of Total Perm. and Temp.	Total	P.C. of Total H.Q.	P.C. of Total Temp.	P.C. of Total Perm. and Temp.	
	$'000				$'000				$'000
1939	15,175	77·7	27·0	21·8	4,347	22·3	32·5	6·2	19,522
1940	15,227	73·5	26·6	20·8	5,492	26·5	34·2	7·5	20,719
1941	15,318	58·6	27·3	18·0	10,843	41·4	37·6	12·8	26,161
1942	15,589	46·6	27·1	14·4	17,882	53·4	35·2	16·5	33,471
1943	15,724	34·9	26·8	11·1	29,292	65·1	35·3	20·7	45,016
1944	15,910	31·0	26·4	9·5	35,368	69·0	32·9	21·1	51,278
1945	16,036	29·5	25·0	8·9	38,320	70·5	33·0	21·3	54,356
1946	16,333	29·3	24·6	8·6	39,366	70·7	31·6	20·6	55,699
1947	17,180	30·2	24·2	7·7	39,703	69·8	26·0	17·8	56,883
1948	18,893	34·5	24·1	8·3	35,814	65·5	24·2	15·8	54,707
1949	22,699	36·1	22·8	8·6	40,202	63·9	24·6	15·3	62,901
1950	26,850	39·1	22·4	9·5	41,748	60·9	25·5	14·7	68,598
1951	31,832	43·7	22·6	10·7	41,068	56·3	26·0	13·7	72,900
1952	40,104	46·3	23·9	11·8	46,580	53·7	27·1	13·7	86,684

5.—Index Numbers of Permanent and Temporary Civil Service Employees, Month of March, 1939-52

NOTE.—Figures for the years 1925-38 are given in the 1946 Year Book, p. 1143.

(March 1925=100)

Month of March—	Employed at Departmental Headquarters			Employed other than at Departmental Headquarters			Total Employed		
	Total	Perm.	Temp.	Total	Perm.	Temp.	Total	Perm.	Temp.
1939	117	117	119	119	129	99	118	126	104
1940	139	116	180	124	123	125	128	121	140
1941	194	115	337	164	119	251	172	118	274
1942	266	111	543	197	117	353	215	116	404
1943	316	105	695	250	115	512	267	112	561
1944	330	104	735	275	119	579	289	115	621
1945	344	105	774	281	123	588	298	118	638
1946	333	105	743	301	128	639	310	122	667
1947	296	102	644	331	122	737	322	117	712
1948	274	106	575	315	141	652	304	132	631
1949	289	119	593	328	158	658	318	149	641
1950	295	138	577	338	191	623	327	177	610
1951	298	167	533	328	209	558	320	198	552
1952	324	186	572	343	218	586	338	210	582

6.—Index Numbers of Salaries and Wages Paid to Permanent and Temporary Civil Service Employees, Years Ended Mar. 31, 1939-52

NOTE.—Figures for the years 1925-38 are given in the 1946 Year Book, p. 1143.

(Year ended Mar. 31, 1925=100)

Year Ended Mar. 31—	Employed at Departmental Headquarters			Employed other than at Departmental Headquarters			Total Employed		
	Total	Perm.	Temp.	Total	Perm.	Temp.	Total	Perm.	Temp.
1939	123	127	112	122	142	75	123	138	84
1940	131	128	141	128	145	87	129	140	101
1941	165	128	279	143	141	149	150	137	181
1942	212	131	460	183	145	273	191	141	318
1943	285	132	754	236	149	444	249	144	520
1944	324	133	910	285	154	598	296	148	674
1945	343	134	986	307	166	643	317	157	726
1946	352	137	1,013	330	173	704	336	163	779
1947	360	144	1,022	407	186	936	394	174	957
1948	346	158	922	420	206	931	399	192	929
1949	398	190	1,035	488	266	1,019	463	244	1,023
1950	434	225	1,075	525	321	1,011	499	293	1,026
1951	461	267	1,057	551	378	967	526	345	989
1952	548	336	1,199	618	443	1,038	599	412	1,077

7.—Civil Service Employees and Salaries and Wages Paid, by Department and Principal Branch, March 1951 and March 1952

NOTE.—The number of persons in the "non-enumerated classes" is not included under "Employees", but their compensation is included under "Salaries and Wages".

Department and Branch	March 1951		March 1952	
	Employees	Salaries and Wages	Employees	Salaries and Wages
	No.	$	No.	$
Agriculture—				
Departmental Administration	164	48,636	156	42,669
Marketing Service	912	308,506	888	243,326
Production Service	1,531	559,648	1,656	465,334
Experimental Farms	1,722	423,124	1,583	432,423
Science Service	1,376	434,724	1,434	396,541
Prairie Farm Rehabilitation	1,204	198,107	998	202,533
Prairie Farm Assistance Act	88	19,283	86	16,070
Agricultural Prices Support Act	14	5,086	12	3,841
Maritime Marshlands Act	67	14,956	75	17,680
Totals, Agriculture	7,078	2,012,070	6,888	1,820,417[1]
Atomic Energy Control Board	7	2,917	6	2,183
Auditor General	163	58,676	158	48,346
Chief Electoral Officer	14	4,621	21	5,308
Citizenship and Immigration—				
Administrative Branch	39	13,182	62	16,641
Canadian Citizenship Branch	29	9,583	29	8,692
Canadian Citizenship Registration Branch	81	19,063	78	15,554
Immigration	1,659	464,799	1,783	391,900
Indian Affairs	1,109	273,499	1,143	290,741
Totals, Citizenship and Immigration	2,917	780,126	3,095	723,528[2]
Civil Service Commission	536	154,342	544	132,379
Commissioner of Penitentiaries	1,509	457,503	1,508	461,203
Defence Production	—	—	1,488	368,661

[1] Includes salary adjustments of $31,686 for December and January.

[2] Includes salary adjustments of $4,031 for December and January.

7.—Civil Service Employees and Salaries and Wages Paid, by Department and Principal Branch, March 1951 and March 1952—continued

Department and Branch	March 1951		March 1952	
	Employees	Salaries and Wages	Employees	Salaries and Wages
	No.	$	No.	$
External Affairs—				
Administration	542	164,195	530	135,167
Passport Offices	57	13,493	66	11,797
High Commissioner's Office, London, England	91	26,475[1]	95	27,453[1]
High Commissioner's Office, Canberra, Australia	14	3,886[1]	14	5,922[1]
High Commissioner's Office, Wellington, N.Z.	14	4,035[1]	14	3,800[1]
High Commissioner's Office, Pretoria, South Africa	9	2,659[1]	10	2,735[1]
High Commissioner's Office, Delhi, India	24	6,900[1]	26	7,304[1]
High Commissioner's Office, Karachi, Pakistan	15	3,596[1]	15	4,032[1]
Canadian Embassy, Rio de Janeiro, Brazil	18	7,310[1]	15	8,775[1]
Canadian Embassy, Washington, U.S.A.	68	29,135[1]	72	30,138[1]
Canadian Embassy, Mexico City, Mexico	18	6,085[1]	18	5,370[1]
Canadian Embassy, Moscow, U.S.S.R.	17	7,122[1]	17	6,950[1]
Canadian Embassy, Santiago, Chile	11	5,443[1]	11	4,114[1]
Canadian Embassy, Paris, France	52	21,323[1]	55	23,193[1]
Canadian Embassy, Nanking, China	8	1,281[1]	1	143
Canadian Embassy, Lima, Peru	8	4,725[1]	11	3,675[1]
Canadian Embassy, Brussels, Belgium	19	7,407[1]	20	8,401[1]
Canadian Embassy, Buenos Aires, Argentina	16	7,887[1]	15	3,949[1]
Canadian Embassy, Athens, Greece	21	5,923[1]	17	4,745[1]
Canadian Embassy, Ankara, Turkey	15	4,696[1]	15	4,303[1]
Canadian Embassy, The Hague, The Netherlands	17	6,405[1]	17	6,797[1]
Canadian Embassy, Rome, Italy	24	8,155[1]	20	6,317[1]
Canadian Embassy, Dublin, Ireland	13	3,242[1]	12	3,227[1]
Canadian Embassy, Havana, Cuba	11	4,317[1]	11	4,336[1]
Canadian Embassy, Belgrade, Yugoslavia	—	—	14	4,231[1]
Canadian Embassy, Tokyo, Japan	—	—	30	4,516[1]
Canadian Embassy, Bonn, Germany	—	—	20	8,418[1]
Canadian Legation, Oslo, Norway	13	3,949[1]	12	3,853[1]
Canadian Legation, Prague, Czechoslovakia	14	4,260[1]	12	4,568[1]
Canadian Legation, Stockholm, Sweden	11	4,145[1]	11	4,301[1]
Canadian Legation, Berne, Switzerland	11	4,637[1]	10	4,285[1]
Canadian Legation, Belgrade, Yugoslavia	12	4,634[1]	—	—
Canadian Legation, Copenhagen, Denmark	10	2,184[1]	10	2,696[1]
Canadian Legation, Warsaw, Poland	8	3,800[1]	11	6,347[1]
Canadian Delegation to the United Nations, New York, U.S.A.	12	8,242[1]	12	6,322[1]
Canadian Delegation to the United Nations, Geneva, Switzerland	5	2,171[1]	7	3,810[1]
Consular Services, New York, U.S.A.	28	13,708[1]	26	12,591[1]
Consular Services, Portland, U.S.A.	1	209	1	375
Consular Services, Boston, U.S.A.	7	3,844[1]	8	4,567[1]
Consular Services, Chicago, U.S.A.	10	5,341[1]	10	4,851[1]
Consular Services, Detroit, U.S.A.	6	2,911[1]	4	1,282[1]
Consular Services, San Francisco, U.S.A.	11	5,235[1]	10	3,551[1]
Consular Services, Frankfurt, Germany	12	3,872[1]	3	1,170[1]
Consular Services, Shanghai, China	6	2,184[1]	2	1,085[1]
Consular Services, Caracas, Venezuela	5	4,382[1]	6	4,545[1]
Consular Services, São Paulo, Brazil	—	—	1	609[1]
Canadian Military Mission, Berlin, Germany	2	575	2	711[1]
Canadian Liaison Mission, Japan	24	5,176[1]	—	—
Canadian Mission, Bonn, Germany	18	6,571[1]	—	—
Organization to the European Economic Co-operation, Paris, France	8	6,325	7	4,116[1]
Canada-United States Permanent Joint Board on Defence	—	—	1	625
Special Messengers	6	1,210[1]	—	—
Totals, External Affairs	1,342	455,260	1,327	416,068
Finance—				
Main Department	602	172,393	606	148,250
Comptroller of Treasury	4,034	1,098,326	4,111	922,826
Royal Canadian Mint	222	71,000	224	59,483
Tariff Board	17	6,896	18	7,536
Wartime Prices and Trade Board	260	108,308	—	—
Totals, Finance	5,135	1,456,923	4,959	1,138,095
Fisheries	962	420,553	1,031	394,694
Governor General's Secretary[2]	10	4,380	13	4,258
House of Commons	662	138,138	663	137,931
Insurance	82	30,001	83	27,789
International Joint Commission	11	4,694	12	4,317

[1] Includes living allowances. [2] Salaries of aides-de-camp are included but not their number.

7.—Civil Service Employees and Salaries and Wages Paid, by Department and Principal Branch, March 1951 and March 1952—continued

Department and Branch	March 1951		March 1952	
	Employees	Salaries and Wages	Employees	Salaries and Wages
	No.	$	No.	$
Justice—				
Main Department	74	25,730	78	25,619
Remission Service	24	7,945	24	7,264
Supreme Court	33	10,715	33	10,171
Exchequer Court	17	5,662	18	5,863
Combines Investigation	31	11,491	32	10,867
Bankruptcy	10	3,600	10	3,263
Commission under Revision of Criminal Code	4	1,808	2	642
Commission under Revision of Public Statutes	9	3,039	8	2,567
Yukon Territorial Court	2	759	1	272
Totals, Justice	204	70,749	206	66,528
Labour—				
Main Department	635	240,187	601	213,453
Unemployment Insurance	7,051	1,994,388[1]	6,885	1,698,070[1]
Totals, Labour	7,686	2,234,575	7,486	1,911,523
Library of Parliament	36	12,760	36	12,452
Mines and Technical Surveys	1,720	570,521	1,746	537,874
National Defence—				
General Defence Administration	1,057	265,531	1,966	464,717
Army Services	7,119	2,510,652	9,841	3,429,371
Naval Services	4,119	1,702,645	4,738	2,067,945
Air Services	4,121	1,197,907	5,948	1,781,333
Defence Research Board	1,341	440,514	1,682	540,828
Totals, National Defence	17,757	6,117,249	24,175	8,284,194
National Film Board	565	180,166	579	193,778
National Health and Welfare—				
Departmental Administration	257	68,751	265	62,278
Health	880	290,794	922	298,930
Welfare	733	189,034	923	217,357
Indian Health Services	1,084	205,004	1,129	236,667
Totals, National Health and Welfare	2,954	753,583	3,239	815,232
National Research Council	1,891	624,563	2,046	577,408
National Revenue—				
Customs and Excise Division	6,194	2,087,859	6,275	1,751,764
Income Tax Division	7,011	2,229,992	6,265	1,595,375
Totals, National Revenue	13,205	4,317,851	12,540	3,347,139
Post Office—[2]				
Civil Government	1,003	291,047	983	241,289
Operating Service	18,475	12,008,285	18,527	12,049,003
Totals, Post Office	19,478	12,299,332	19,510	12,290,292
Prime Minister's Office	37	12,502	37	10,619
Prime Minister's Residence	—	—	7	825
Privy Council	48	16,532	46	18,199
Public Archives	59	19,456	59	17,476[3]
Bibliographic Centre (National library)	6	1,679	8	1,852
Public Printing and Stationery	1,041	335,186	1,132	370,828

[1] Includes living allowances. [2] Statistics do not include the number of revenue postmasters earning less than $3,000 a year. It should also be noted that Post Office expenditures are balanced by receipts from the public. [3] Includes salary adjustments of $390.

7.—Civil Service Employees and Salaries and Wages Paid, by Department and Principal Branch, March 1951 and March 1952—concluded

Department and Branch	March 1951		March 1952	
	Employees	Salaries and Wages	Employees	Salaries and Wages
	No.	$	No.	$
Public Works—				
Civil Government	413	128,507	381	105,128
Outside Service	6,818	1,157,355	6,802	1,146,404
Totals, Public Works	7,231	1,285,862	7,183	1,251,532
Resources and Development—				
Main Department	1,296	417,553	1,310	400,541
Engineering and Water Resources Branch	65	26,440	80	29,479
Water Resources Division and Engineering and Architectural Division	328	98,216	281	80,728
Totals, Resources and Development	1,689	542,209	1,671	510,748
Royal Canadian Mounted Police	622	2,332,058	828	1,390,603
Secretary of State	491	160,256	498	135,624
Office of the Custodian[1]	97	25,711	81	30,403
Senate	159	45,099	156	34,415
Trade and Commerce—				
Headquarters and Miscellaneous Branches	1,374	433,728	1,195	343,213
Board of Grain Commissioners	779	167,963	880	217,254
Dominion Bureau of Statistics	1,398	381,822	1,320	413,613
Canadian Government Elevators	169	46,475	291	57,201
Totals, Trade and Commerce	3,720	1,029,988	3,686	1,031,281
Transport—				
Main Department	9,056	2,861,531	8,839	2,554,161
Transport Commissioners	158	59,781	154	53,520
Air Transport Board	54	19,056	52	18,288
Canadian Maritime Commission	32	12,979	28	10,689
Royal Commission on Transportation	1	654	—	—
Totals, Transport	9,301	2,954,001	9,073	2,636,658
Veterans Affairs—				
Main Department	12,931	3,336,615	12,672	2,788,725
Soldier Settlement and Veterans' Land Act	1,224	409,778	1,150	316,006
Totals, Veterans Affairs	14,155	3,746,393	13,822	3,104,731
Grand Totals	**124,580**	**45,668,485[2]**	**131,646**	**44,267,391[3]**

[1] Salaries for this office are paid out of its administration funds and not out of parliamentary funds. [2] Includes $8,469,000 salary adjustments retroactive to Dec. 1, 1950. [3] Includes $36,107 salary adjustments retroactive to Dec. 1, 1951.

The above data pertaining to Federal Government employment for the fiscal year ended Mar. 31, 1952, are the last to be published from the series "Federal Civil Service Employment and Payrolls". Data from the new series "Government of Canada Employment and Payrolls" are to be presented in the 1955 Year Book and subsequent editions.

The new series has been designed to comprehend all classes of employees (numbers and gross earnings) for all governmental services including employees of boards and commissions. Data for Crown companies are also included.

The basic data for this series of statistics are supplied to the Dominion Bureau of Statistics on a monthly basis by the Treasury Board from individual records and special returns. Information for Crown companies and other government enterprises is available from reports made to the Bureau.

The statistics published monthly* commencing April 1952, include numbers and earnings for five categories of government employees, e.g., permanent, temporary, prevailing rate, ship crews and casuals, classified according to departments and principal branches of the government service.

* *See* DBS Special Compilation, *Government of Canada Employment and Payrolls*, with an "Explanatory Memorandum".

PART V.—CANADA'S EXTERNAL RELATIONS

The growth of Canada's international status is reflected in the development of the Department of External Affairs. A review of the organization and development of that Department is given in the 1952-53 Year Book, pp. 101-104.

Section 1.—Diplomatic Representation as at Apr. 30, 1953

1.—Canadian Representation Abroad

Country and Year Representation Established	Present Status of Representative	Address	Present Representative	Date Letter of Credence Presented
Argentina.....1941	Ambassador.....	Bartolome Mitre, 478, Buenos Aires.	MAJOR - GENERAL THE HON. L. R. LAFLÈCHE, D.S.O.	Aug. 19, 1952
Australia.....1939	High Commissioner	State Circle, Canberra..	MR. W. A. IRWIN.....	(nominated)
Austria.....1952	Minister.....	Strauchgasse 1, Vienna.	MR. VICTOR DORÉ, C.M.G.	Sept. 9, 1952
Belgium.....1939	Ambassador.....	35, rue de la Science, Brussels.	LIEUTENANT - GENERAL MAURICE POPE, C.B., M.C.	Aug. 3, 1950
Brazil.....1941	Ambassador.....	Avenida President Wilson, 165, 7th Floor, Rio de Janeiro.	DR. E. H. COLEMAN, C.M.G., Q.C.	Dec. 4, 1951
Ceylon.....1953	High Commissioner	Colombo.....	MR. J. J. HURLEY, O.B.E., E.D.	(nominated)
Chile.....1942	Ambassador.....	Avenida General Bulnes 129, Santiago.	MR. LEON MAYRAND....	May 17, 1951
Colombia.....1953	Ambassador.....	Bogota.....	MR. E. TURCOTTE.....	Apr. 7, 1953
Cuba.....1945	Ambassador.....	No. 16 Avenida de Menocal Esquina a 23, Edificio Amber - Motor Vedado, Havana.	MR. H. A. SCOTT.....	Jan. 15, 1952
Czechoslovakia..1942	Chargé d'Affaires *ad interim.*	Krakowska 22, Prague, 2	MR. J. M. TEAKLES.....	Aug. 10, 1952[1]
Denmark.....1946	Minister.....	Osterbrogade 26, Copenhagen.	MR. E. D. MCGREER...	Apr. 7, 1952
Finland.....1949	Minister.....	Borgmästarbrinken 3-C.32, Helsinki.	MR. W. D. MATTHEWS..	Oct. 29, 1952
France.....1928	Ambassador.....	72 avenue Foch, Paris XVI.	MAJOR-GENERAL GEORGE P. VANIER, D.S.O., M.C.	Dec. 20, 1944
Germany.....1951	Ambassador.....	Zittelmann Strasse 22, Bonn.	HON. T. C. DAVIS, Q.C.	Aug. 16, 1951

[1] Date of assumption of duties.

1.—Canadian Representation Abroad—continued

Country and Year Representation Established	Present Status of Representative	Address	Present Representative	Date Letter of Credence Presented
Greece.....1943	Ambassador.....	31 Queen Sofia Boulevard, Athens.	MR. GEORGE L. MAGANN	Nov. 23, 1949
Iceland.....1949	Minister.....	c/o Canadian Legation, Fridtjof Nansens Plass 5, Oslo, Norway.	MR. J. B. C. WATKINS...	..
India.....1946	High Commissioner	4 Aurangzeb Road, New Delhi.	MR. E. REID.....	Nov. 14, 1952[1]
Indonesia.....1953	Ambassador.....	Djakarta.....	MR. G. R. C. HEASMAN, O.B.E.	(nominated)
Ireland.....1940	Ambassador.....	92 Merrian Square West, Dublin.	HON. W. F. A. TURGEON, Q.C.	July 17, 1950
Italy.....1947	Ambassador.....	Via Saverio Mercadante 15, Rome.	MR. P. DUPUY, C.M.G..	June 13, 1952
Japan.....1952	Ambassador.....	16 Omote - Machi, 3 Chrome, Minato - Ku, Tokyo.	THE HON. R. W. MAYHEW, P.C.	Jan. 15, 1953
Luxembourg.....1945	Minister.....	c/o Canadian Embassy, 35, rue de la Science, Brussels, Belgium.	LIEUTENANT - GENERAL MAURICE POPE, C.B., M.C.	July 28, 1950
Mexico.....1944	Ambassador.....	Edificio Internacional, Paseo de la Reforma, No 1, Mexico City.	MR. C. P. HÉBERT.....	Feb. 24, 1949
Netherlands, The 1939	Ambassador.....	Sophialaan 1A, The Hague.	MR. T. A. STONE	Sept. 15, 1952
New Zealand....1940	High Commissioner	Government Life Insurance Bldg., Customs Quay, Wellington.	MR. E. H. NORMAN	(nominated)
Norway.....1943	Minister.....	Fridtjof Nansens Plass 5, Oslo.	MR. J. B. C. WATKINS...	Oct. 16, 1952
Pakistan.....1949	High Commissioner	Metropole Hotel, Victoria Road, Karachi.	MR. K. P. KIRKWOOD..	Jan. 10, 1952[1]
Peru.....1944	Ambassador.....	Edificio Boza, Plaza San Martin, Lima.	MR. E. VAILLANCOURT...	Sept. 27, 1950
Poland.....1942	Chargé d'Affairs *ad interim*.	31 Ulica Katowicka, Saska Kepa, Warsaw.	Mr. T. LeM. CARTER...	Apr. 17, 1952[1]
Portugal.....1952	Minister.....	Avenida da Praia da Vitoria No. 48 - 1°, D°, Lisbon.	HON. W. F. A. TURGEON, Q.C.	Feb. 6, 1952
Sweden.....1947	Minister.....	Strandvagen 7-C, Stockholm.	MR. W. D. MATTHEWS..	Nov. 8, 1952
Switzerland.....1947	Minister.....	Thunstrasse 95, Berne...	MR. V. DORE, C.M.G...	June 20, 1950
Turkey.....1947	Ambassador.....	Müdafaayi Milliye Caddesi, No. 19, Cankaya, Ankara.	MR. H. O. MORAN.....	Dec. 30, 1952
Union of South Africa. 1940	High Commissioner	24 Barclays Bank Bldg., Church Square, Pretoria.	MR. T. W. L. MACDERMOT.	Oct. 6, 1950[1]
Union of Soviet Socialist Republics. 1942	Chargé d'Affairs *ad interim*.	23 Starokonyushny Pereulok, Moscow.	MR. R. A. D. FORD.....	..

[1] Date of assumption of duties.

1.—Canadian Representation Abroad—concluded

Country and Year Representation Established	Present Status of Representative	Address	Present Representative	Date Letter of Credence Presented
United Kingdom. 1880	High Commissioner	Canada House, Trafalgar Square, London, S.W.1.	MR. N. A. ROBERTSON..	June 1, 1952[1]
United States of America. 1927	Ambassador.....	1746 Massachusetts Avenue, Washington, D.C.	MR. H. H. WRONG.....	Nov. 8 1946
Uruguay.....1952	Ambassador.....	Montevideo.....	MAJOR - GENERAL THE HON. L. R. LAFLÈCHE, D.S.O.	Jan. 9, 1953
Venezuela.....1952	Ambassador.....	Edificio Pan-American, Puente Urapal, Candelaria, Caracas.	MR. H. G. NORMAN....	Jan. 15, 1953
Yugoslavia.....1943	Ambassador.....	Proliterskin brigada 69, Belgrade.	MR. J. S. MACDONALD....	Oct. 23, 1951

MILITARY AND LIAISON MISSIONS

Germany.....1945	Head of Mission....	Lancaster House, Fehrbellinen Platz, Wilmersdorf, Berlin.	HON. T. C. DAVIS, Q.C.	June 22, 1950

CONSULATES

Brazil.....1947	Consul.....	Rua 7 de Abril 252, Saõ Paulo.	MR. J. C. VAN TIGHEM.	
United States of America. 1948	Consul General.....	532 Little Bldg., 80 Boylston St., Boston 16, Mass.	MR. G. S. PATTERSON.	
" 1947	Consul General.....	Suite 800, Daily News Bldg., 400 W. Madison St., Chicago 6, Ill.	MR. D. S. COLE.	
" 1948	Consul.....	1035 Penobscot Bldg., Detroit 26, Mich.	MR. B. C. BUTLER.	
" 1953	Vice-Consul in Charge of Consulate General.	Associated Realty Bldg. Los Angeles.	MR. W. K. WARDROPER.	
" 1952	Consul.....	201 International Trade Mart Bldg., New Orleans, La.	MR. G. A. NEWMAN.	
" 1943	Consul General.....	620 Fifth Ave., New York, N.Y.	HON. RAY LAWSON, O.B.E.	
" 1945	Honorary Vice Consul.	443 Congress St., Portland, Maine.	MR. A. LAFLEUR.	
" 1948	Consul General.....	400 Montgomery Street, San Francisco 4, Cal.	MR. C. C. EBERTS.	
Republic of the Philippines. 1949	Consul General.....	Ayala Bldg., Juan Luna St., Manila.	MR. F. H. PALMER, M.C.	

2.—Representation of Other Countries in Canada

Country and Year Representation Established	Present Status of Representative	Address	Present Representative
Argentina.....1941	Ambassador.....	193 Sparks Street, Ottawa ...	His Excellency Dr. Lucas Mario Galigniana.
Australia.....1940	High Commissioner	100 Sparks Street, Ottawa ...	His Excellency The Rt. Hon. Francis M. Forde, P.C.
Austria.....1952	Minister	136 Queen Street, Ottawa.....	His Excellency Dr. Max Loewenthal-Chlumecky.
Belgium.....1937	Ambassador.....	170 Laurier Avenue East, Ottawa.	His Excellency Fernand Muûls (nominated).
Brazil.....1941	Ambassador.....	111 Sparks Street, Ottawa...	His Excellency Heitor Lyra.
Chile.....1942	Ambassador.....	Suite 215, 56 Sparks Street, Ottawa.	His Excellency Teodoro Ruiz Diez.
China.....1942	Ambassador.....	201 Wurtemburg Street, Ottawa.	His Excellency Liu Chieh.
Cuba.....1945	Ambassador.....	Chateau Laurier Hotel, Ottawa.	His Excellency Delfin H. Pupo Y Proenza.
Czechoslovakia...1942	Chargé d'Affaires *ad interim*.	171 Clemow Avenue, Ottawa .	Mr. Zdeněk Roškot.
Denmark.....1946	Minister.....	451 Daly Avenue, Ottawa	His Excellency O. Sehested.
Finland.....1948	Chargé d'Affaires...	140 Wellington Street, Ottawa	Mr. H. R. Martola.
France.....1928	Ambassador.....	42 Sussex Street, Ottawa.....	His Excellency Hubert Guerin.
Germany.....1951	Ambassador.....	580-582 Chapel Street, Ottawa.	His Excellency Dr. Werner Dankwort.
Greece.....1942	Ambassador.....	Chateau Laurier Hotel, Ottawa.	His Excellency Raoul Bibica-Rosetti.
Iceland.....1948	Minister.....	Chateau Laurier Hotel, Ottawa.	His Excellency Thor Thors.
India.....1947	High Commissioner	200 McLaren Street, Ottawa...	His Excellency R. R. Saksena.
Indonesia.....1953	Ambassador.....	..	His Excellency Dr. Ali Sastroamidjojo (nominated).
Ireland.....1939	Ambassador.....	140 Wellington Street, Ottawa.	His Excellency Sean Murphy
Italy.....1947	Ambassador.....	384 Laurier Avenue East, Ottawa.	His Excellency Corrado Baldoni.
Japan.....1952	Ambassador.....	88 Metcalfe Street, Ottawa....	His Excellency Sadao Iguchi.
Luxembourg.....1949	Minister.....	Chateau Laurier Hotel, Ottawa.	His Excellency Hugues Le Gallais.
Mexico.....1944	Ambassador.....	88 Metcalfe Street, Ottawa....	His Excellency Dr. Juan Manuel Alvarez Del Castillo.
Netherlands, The.1939	Ambassador.....	168 Laurier Avenue East, Ottawa.	His Excellency A. H. J. Lovink.
New Zealand.....1943	High Commissioner	107 Wurtemburg Street, Ottawa.	His Excellency T. C. A. Hislop, C.M.G.
Norway.....1942	Minister.....	140 Wellington Street, Ottawa.	His Excellency Daniel Steen.
Pakistan.....1949	High Commissioner	499 Wilbrod Street, Ottawa...	His Excellency Mohammed Ikramullah.
Peru.....1944	Ambassador.....	539 Island Park Drive. Ottawa	His Excellency German Fernandez-Concha.

2.—Representation of Other Countries in Canada—concluded

Country and Year Representation Established	Present Status of Representative	Address	Present Representative
Poland.....1942	Chargé d'Affaires ..	183 Carling Avenue, Ottawa...	Mr. E. Markowski.
Portugal.....1952	Minister.....	285 Harmer Avenue, Ottawa..	His Excellency Dr. Luis Esteves Fernandes.
Spain.....1953	Ambassador.....	..	His Excellency Mariano de Yturralde y Orbegoso (nominated).
Sweden.....1943	Minister.....	720 Manor Road, Rockcliffe Park.	His Excellency Dr. Klas Böök.
Switzerland.....1946	Minister.....	5 Marlborough Avenue, Ottawa.	His Excellency Dr. Victor Nef.
Turkey.....1944	Ambassador.....	Chateau Laurier Hotel, Ottawa.	His Excellency Ahmet Cavat Ustün.
Union of South Africa. 1938	High Commissioner	9 Rideau Gate, Ottawa.....	His Excellency Alfred Adrian Roberts, Q.C.
Union of Soviet Socialist Republics. 1942	Chargé d'Affaires *ad interim.*	285 Charlotte Street, Ottawa..	Mr. Leonid F. Teplov.
United Kingdom. 1928	High Commissioner	Earnscliffe, Ottawa.....	His Excellency Lieut.-General Sir Archibald Nye, G.C.S.I., G.C.M.G., G.C.I.E., K.C.B., K.B.E., M.C.
United States of America. 1927	Chargé d'Affaires *ad interim.*	100 Wellington Street, Ottawa.	Mr. D. C. Bliss.
Uruguay.....1948	Chargé d'Affaires *ad interim.*	36 Marlborough Avenue, Ottawa.	Mr. Luis A. Soto.
Venezuela.....1953	Ambassador.....	..	His Excellency Fernando Paz Castillo (nominated).
Yugoslavia.....1942	Ambassador.....	17 Blackburn Avenue, Ottawa	His Excellency Dr. Rajko Djermanovic.

Section 2.—International Activities*

Subsection 1.—Canada and Commonwealth Relations, 1950-53†

Developments in Commonwealth relations from the end of the year 1950 to mid-1953 were unspectacular in comparison with the period immediately preceding, which saw such remarkable events as the acceptance of the Republic of India as a continuing member of the Commonwealth, the withdrawal of the Republic of Ireland from the measure of association with the Commonwealth that it had maintained up to that time, and the union of Newfoundland with Canada. During the period 1950-53 the members of the Commonwealth maintained their existing system of consultation and co-operation and were chiefly concerned with developments in the outside world.

The tense international situation resulting from the attitude taken by the Soviet Union and its satellites and from the behaviour of the communist régime in China during the past three years was one of the principal subjects of discussion both by correspondence and at formal or informal meetings, among the Commonwealth group of nations. Both the Commonwealth Meeting on Foreign Affairs held at Colombo, Ceylon, in January 1950 and the Meeting of Commonwealth

* Prepared by the Department of External Affairs, Ottawa.
† Brought up to May 31, 1953.

Prime Ministers held at London, England, in January 1951, devoted much time and attention to the above situation and the problems arising from it. In particular, developments in Asia, where the smaller non-communist countries have been exposed to communist infiltration or open invasion, called for the most careful consideration not only by the Commonwealth countries in that area but also by all members of the Commonwealth, whose ideals of freedom and democracy might be endangered by successful aggression.

It was clear that the backward agricultural and industrial condition of many countries of south and southeast Asia, along with the destruction and impoverishment in that area which had resulted from operations during World War II, would, if ignored, undermine any hope that these countries would have a healthy and continuous development along democratic lines. The 1950 Colombo Conference was greatly concerned with this situation and for that reason, among others, urged the necessity of assistance to the nations of south and southeast Asia from the more industrially advanced countries in the Commonwealth and elsewhere. The Colombo Plan (*see* pp. 116-117), which was fashioned at this meeting and in which Canada is participating, is one of the most promising contributions towards building up the free world and enabling it to stand against totalitarianism.

Another subject that engaged the attention of both the 1950 Commonwealth Meeting of Foreign Ministers and the 1951 Commonwealth Meeting of Prime Ministers was the question of peace settlements, particularly with Japan, and the allied question of security in the Pacific area. While the discussions were helpful in smoothing over some differences of opinion on the Japanese settlement, they did not result in all Commonwealth members reaching a common decision in this matter. The Government of India eventually decided to negotiate a separate treaty with Japan, while the other Commonwealth governments, including Canada, joined the United States and other interested countries in signing a Japanese Peace Treaty at San Francisco, on Sept. 8, 1951. At the same time the position of the more exposed Commonwealth countries in the Pacific area was safeguarded by the signature of a Security Treaty by the United States, Australia and New Zealand.

Developments in China also were among the matters discussed at both meetings. In regard to recognition of the Chinese Communist Government, as in all matters of concern to Commonwealth nations, it was understood that each government must take the responsibility of making its own decision. Until mid-1952, the Chinese Communist Government had been recognized by the three Asian members of the Commonwealth and by the United Kingdom, while the other members of the Commonwealth, including Canada, continued to refrain from recognition.

A new and very serious problem in northeast Asia was created by the invasion of South Korea on June 25, 1950, by North Korean communists. Canada and the other countries of the Commonwealth that were also members of the United Nations supported the action taken by the Security Council to assist South Korean resistance. Most of them, including Canada, contributed armed forces for this purpose. A Commonwealth Division, consisting of United Kingdom, Canadian, Australian and New Zealand combat forces and a medical unit from India, was organized as part of the United Nations forces, and has acquitted itself with distinction. The nations of the Commonwealth, like many other members of the United Nations, have been gravely concerned over the destruction to life and property in Korea, and are contributing to relief and rehabilitation.

Canada gave its full support to a resolution for resolving the prisoner-of-war question, introduced by India and adopted by the United Nations General Assembly, in December 1952.

The 1951 Meeting of Prime Ministers gave careful attention to the discussions on the Korean problem in particular, and on a Far East settlement in general, which were simultaneously being carried on at the General Assembly of the United Nations at New York, and exchanged views on the means by which their representatives at New York could best assist in these discussions. Close liaison was maintained with the United Nations Assembly.

In a declaration issued at the close of the 1951 Meeting, the Prime Ministers, in addition to urging speedy settlements with Germany and Japan, stated they would welcome any feasible arrangement for a frank exchange of views with Stalin or with Mao Tse-tung, and insisted that they did not seek to interfere in the affairs of the Soviet Union, China or any other country. The Commonwealth countries, it was declared, did not regard themselves as an exclusive body, but welcomed co-operation with other nations. It was recognized, however, that so long as the fear of aggression existed the Commonwealth countries would have to strengthen their defences. Continued support of the United Nations and of the Colombo Plan was affirmed.

Both the 1950 Meeting of Foreign Ministers and the 1951 Meeting of Prime Ministers recognized the influence of economic problems upon the international situation, and gave consideration to these important questions.

One economic problem that was becoming acute in 1951 was the shortage of raw materials, and the consequent maldistribution of manufactured and semi-manufactured goods. The Meeting of Prime Ministers felt that, in these circumstances, it would be desirable to have closer and more regular consultation among Commonwealth countries on all questions of supply and production. One result of their examination of this problem was the calling of a meeting of Commonwealth Ministers concerned with supply matters. The meeting opened at London, on Sept. 24, 1951, and made arrangements to increase the exchange of information both on raw materials and on finished goods, and to facilitate deliveries of manufactured articles to countries of the Commonwealth that might require them.

The deterioration in the United Kingdom's financial situation that took place in the autumn of 1951, and the continuing difficulties of the Sterling Area in general, raised urgent problems for all members of the Commonwealth, not excepting Canada, the only non-sterling member. A meeting of Commonwealth Finance Ministers accordingly took place at London in January 1952 at which measures that might be taken to meet the situation were discussed; important steps were later taken by the countries concerned to arrest further deterioration in their own positions. It was felt that further exchanges of news might be useful and the Prime Ministers of the Commonwealth countries met at London in November 1952 to review the position and outlook and consider what further measures might be taken to strengthen the economic position of the Sterling Area Commonwealth countries and what could be done to achieve an effective multilateral system of trade and payments. A plan for a collective approach to freer trade and payments was formulated and this plan has since been discussed with the United States and Western European Governments.

International tension, besides adversely affecting the world's economic development during the past three years, also made it necessary to devote to strengthening the defences of Commonwealth countries resources that would normally have

been used to increase trade and prosperity. In general, the distribution of the Commonwealth countries through all parts of the world has made it essential to organize their defences on a regional basis providing for full co-operation with friendly foreign countries. As regards North Atlantic defence, for example, Canada and the United Kingdom, as members of the North Atlantic Treaty Organization, have worked together in co-operation with the other members of NATO, while the United Kingdom, the Union of South Africa, and Southern Rhodesia have consulted with other countries interested in the defence of Africa. A Conference of the Defence Ministers of the United Kingdom, Australia, New Zealand, the Union of South Africa and Southern Rhodesia, at which Canada was represented by observers, was held at London in June 1951 to consider defence problems arising in the Middle East and other regions of common concern.

A number of conferences were held to discuss special problems of an economic, scientific or technical character. These included a conference to review the work of the Commonwealth Agricultural Bureaux; meetings on air transport and aeronautical research; gatherings of survey officers, statisticians, auditors-general, and scientists in various special fields; a British Commonwealth Scientific Conference; a British Commonwealth Forestry Conference; and a Conference of the Commonwealth Parliamentary Association. The last two conferences were held at Ottawa.

In addition, Canada is represented on such standing bodies as the Executive Council of the Commonwealth Agricultural Bureaux; the Commonwealth Economic Committee; the Commonwealth Shipping Committee; the Commonwealth Telecommunications Board; the Commonwealth Air Transport Council; the Commonwealth Advisory Aeronautical Research Council; the Commonwealth Liaison Committee; the Commonwealth Committee on Mineral Resources and Geology; the Imperial Institute; and the Imperial War Graves Commission.

All but one of the Commonwealth Agricultural Bureaux are bodies that collect and distribute information on agricultural research and are located in the United Kingdom. The work of the one in Canada, known as the Commonwealth Bureau of Biological Control is of a somewhat different nature; it undertakes to control the spread of noxious insects and plants by such means as the collection and distribution of parasites. The work of these Bureaux was reviewed by the Commonwealth Agricultural Bureaux Review Conference held at London in June 1950, which made various recommendations for increasing the usefulness of the Bureaux and ensuring co-operation with United Nations organizations and with interested foreign governments. The Canadian Government is represented on the Executive Council of the Commonwealth Agricultural Bureaux by Mr. J. G. Robertson of the Office of the High Commissioner for Canada in the United Kingdom.

The Commonwealth Economic Committee issues annual statistics on world production and trade in certain commodities, including dairy produce, meat, fruit and grain crops, and monthly intelligence bulletins on some of these. It has also, from time to time, undertaken special studies on economic questions of interest to Commonwealth governments. The Canadian representative is Mr. F. Hudd of the High Commissioner's Office at London, England.

The Commonwealth Shipping Committee was established in 1920 for the purpose of making special investigations relating to the co-ordination and improvement of ocean-shipping facilities. It includes representatives of industry as well as of governments. The High Commissioner for Canada in the United Kingdom represents the Canadian Government.

The Commonwealth Telecommunications Board, which operates under the Commonwealth Telegraphs Agreement of 1948, is charged with the duty of making recommendations to Commonwealth governments on joint telecommunications policy, co-ordination of cable and wireless systems, and other telecommunications questions. Canada is represented by Mr. J. H. Tudhope of the High Commissioner's Office at London.

The Commonwealth Air Transport Council is a consultative body for the discussion of civil aviation questions. It issues a quarterly news-letter and holds occasional meetings as required, the latest of which took place at London, England, in June 1953. Mr. J. H. Tudhope is the Canadian member. Canada also participates in an auxiliary regional association, the South Pacific Air Transport Council, which includes the United Kingdom, Australia, New Zealand and Fiji. A meeting of this body was held at Nadi, Fiji Islands, in May 1953. Canada was represented by Mr. L. Glass of the High Commissioner's office in New Zealand.

The Commonwealth Advisory Aeronautical Research Council is an organization for the promotion of aeronautical research and for discussion and exchange of information on questions of aeronautics. Canadian representatives are Air Vice-Marshal D. M. Smith of the Department of National Defence and Mr. R. J. Brearley of the High Commissioner's Office, London. A meeting of this body took place at Ottawa in September 1950.

The Commonwealth Liaison Committee originated very informally as a means by which United Kingdom government departments could keep the London missions of other Commonwealth countries in touch with developments under the European Recovery Program. Its scope has since been extended to cover other economic matters of mutual interest.

The Commonwealth Committee on Mineral Resources and Geology was set up as a result of a recommendation by the Royal Society Empire Scientific Conference of 1946, which was endorsed by the British Commonwealth Scientific Official Conference of that year and further developed by the Specialist Conference on Geology and Mineral Resources held in 1948. Its purpose is to promote collaboration and exchange of information on the investigation of geology and mineral resources throughout the Commonwealth. Dr. G. S. Hume of the Department of Mines and Technical Surveys represents the Canadian Government.

The Imperial War Graves Commission was founded in 1917 for the purpose of permanently commemorating those members of His Majesty's Forces who lost their lives in World War I. Its powers were later extended to cover World War II. Its chief duty is the establishment and maintenance of cemeteries and memorials. There is a Canadian Agency of the Commission at Ottawa; Mr. N. A. Robertson, the High Commissioner for Canada at London is the Canadian representative on the Commission.

Bodies such as these form a useful means of exchanging information and views on special economic, scientific or technical questions and of working out recommendations for the consideration of the governments concerned.

Two controversies between Commonwealth governments, both of which arose before 1950, have continued unsolved: the dispute between India and Pakistan over Kashmir and other matters, and the dispute between India and Pakistan on the one hand and the Union of South Africa on the other respecting the treatment in South Africa of persons of Indian origin. Both disputes are before the United

Nations, and the Canadian Government and other Commonwealth governments which are members of the United Nations have continued to endeavour, in co-operation with other members of that body, to bring about some solution. In addition, an opportunity was taken during the Meeting of Prime Ministers in 1951 to have informal talks on the Kashmir question by the Prime Ministers of Pakistan and India along with some of the other Prime Ministers, including the Prime Minister of Canada. While these talks had no decisive effect, they did assist in clarifying the position and suggesting possible lines that might be explored in working towards a settlement.

A question considered by the Prime Ministers, at London in November 1952, was the revision of the Royal Style and Titles. It was agreed that the Queen's title might vary according to the country concerned, though retaining a common element. The title adopted for Canada is "Elizabeth II, by the Grace of God of the United Kingdom, Canada and Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith"

Canada sent an official delegation, headed by the Prime Minister, to attend the Queen's Coronation on June 2, 1953. A meeting of Prime Ministers took place immediately after the Coronation.

Despite difficulties and problems, the Commonwealth association has, during the period covered by this survey, continued to serve as one of the most effective means of international discussion and co-operation, based in large measure on common traditions, similar political institutions and common ideals.

Subsection 2.—Canada and the United Nations

The early history of the United Nations and of Canada's part therein is given in the 1946 Year Book, pp. 82-86. Additional material appeared in the 1948-49 edition, pp. 122-125, the 1950 edition, pp. 134-139, and the 1952-53 edition, pp. 113-118. The following material brings the record of Canada and the United Nations up to Apr. 23, 1953, the date of the adjournment of the seventh session of the General Assembly.

The Interim Committee of the General Assembly did not meet during the period under review. The seventh regular session of the General Assembly opened at New York on Oct. 14, 1952, and recessed from Dec. 22, 1952, to Feb. 23, 1953. It dealt with the remaining items on its agenda in a resumed session which lasted from Feb. 24 to Apr. 23 and then adjourned subject to call if an armistice should be concluded in Korea, or if, in the opinion of a majority of members, other developments in Korea should require it.

The Secretary of State for External Affairs of Canada, the Hon. L. B. Pearson, who was chairman of the Canadian Delegation to the seventh regular session, was elected President of the General Assembly and the vice-chairman, the Hon. Paul Martin, Canada's Minister of National Health and Welfare, consequently acted as chairman of the delegation during the seventh session.

Canada has not been a member of the Security Council since Dec. 31, 1949, and completed a three-year term on the Economic and Social Council on Dec. 31, 1952. Canada is a member of all the Specialized Agencies and of the following functional commissions of the Economic and Social Council: the Commission on Narcotic Drugs (indefinite term); the Social Commission to Dec. 21, 1953; the Fiscal Commission to Dec. 31, 1955; and the Statistical Commission to Dec. 31, 1955.

Admission of New Members.—No new members have been admitted to the United Nations since 1950, when the Republic of Indonesia became a member. There are, at present, twenty-one applications outstanding but the Security Council, which held a number of meetings during June, July and September 1952 for the purpose of considering this question, was unable to make any recommendations. In accordance with a resolution adopted at the seventh session, a Special Committee of representatives from nineteen member states, including Canada, was set up to examine the proposals and suggestions that have been made in the General Assembly and its committees, or that may be submitted to the Special Committee by any member of the United Nations. The Committee will report to the eighth regular session of the General Assembly.

The Korean Conflict.—The cease-fire negotiations, which began between representatives of the opposing forces in Korea on July 10, 1951, continued until Oct. 8, 1952, on which date, having reached a state of deadlock on the issue of repatriation of prisoners of war, they were recessed. After long and difficult debate, the seventh session of the General Assembly on Dec. 3, 1952, adopted a resolution on the prisoner-of-war question which was sponsored by India and received fifty-four favourable votes, including Canada, out of sixty. It provided that, at the end of a period of ninety days after the armistice agreement had been signed, the question of disposition of the prisoners who did not wish to return home would be referred to the political conference provided for in the Draft Armistice Agreement. If the political conference could not reach a decision within thirty days, it was provided that the responsibility for the care and maintenance and for the subsequent disposition of the remaining prisoners should be transferred to the United Nations. Both Communist China and North Korea rejected the Assembly's proposals and there was no further progress until, in a letter of Feb. 22, 1953, the United Nations Command in Korea proposed an exchange of sick and wounded prisoners. This proposal was accepted by the Communist command on Mar. 28 and the exchange began on Apr. 20. Meanwhile, on Mar. 30, the Foreign Minister of the Chinese Communist Government issued the following public statement: "The Government of the People's Republic of China and the Government of the Democratic People's Republic of Korea propose that both parties to the negotiations should undertake to repatriate immediately after the cessation of hostilities all those prisoners of war in their custody who insist upon repatriation and to hand over the remaining prisoners of war to a neutral state so as to insure a just solution to the question of their repatriation". Full-scale negotiations for the purpose of considering this proposal were resumed on Apr. 26.

The military situation in Korea has remained comparatively stable with the opposing forces at approximately the 38th parallel. The United Nations Korean Reconstruction Agency (UNKRA) was established in 1950 for the relief of suffering in Korea caused by the conflict, and for the reconstruction of the country when circumstances might permit. The continuation of military activity prevented the Agency from engaging in large-scale operations until recently, when the stabilization of the front has permitted it to inaugurate its first long-term rehabilitation projects. Up to the present time (May 31, 1953), Canada has been the second largest paid-up contributor to UNKRA.

Collective Measures and Disarmament.—The Collective Measures Committee, which consists of fourteen members, including Canada, was set up by a General Assembly resolution of Nov. 3, 1950 (the "Uniting for Peace" resolution)

and was instructed "to study and report on the measures, including political, economic and military measures, which the United Nations might use to maintain and strengthen international peace and security" During the period under review the Committee studied the problems involved in implementing the clauses of the Uniting for Peace resolution which recommended that member and non-member states determine how they might appropriately carry out the economic and financial measures and the military measures that might be required for participation in United Nations collective action. The General Assembly noted this second report, expressed appreciation of the constructive work done by the Committee, requested it to continue its work for the maintenance and strengthening of the United Nations security system, and instructed it to report to the ninth session.

The Disarmament Commission, of which Canada is a member, was established on Jan. 11, 1952, to replace the Atomic Energy Commission and the Conventional Armaments Commission, and to prepare proposals to be embodied in a universal agreement for the regulation and balanced reduction of all armaments, for the prohibition of all major weapons adaptable to mass destruction, including atomic weapons, and for the effective control of atomic energy. Neither of the two reports submitted by the Commission in 1952 contained any recommendations or conclusions, as it had not been possible to reconcile the differences of view between the Western powers and the Soviet Union.

Palestine.—At the seventh session of the General Assembly, the Arab States requested a review of the work of the Palestine Conciliation Commission on the grounds that it had not fulfilled its mandate to bring about agreement between Israel and its neighbours. By virtue of the temporary territorial arrangements made under the 1949 armistice agreements, Israel controls roughly three-fourths of the former mandated territory of Palestine while, in 1947, the General Assembly recommended that it be shared on a fifty-fifty basis with the Arab States. The Arab States were anxious that any future discussions between the parties should be on the basis of the relevant Assembly resolutions, while Israel wished that negotiations should be without reference to previous decisions taken by the United Nations. It proved impossible to reconcile these opposing points of view and no resolution on Palestine was adopted at the seventh session.

The United Nations Relief and Works Agency for Palestine Refugees (UNRWAPR) continued its work, which so far has primarily been that of relief for some 850,000 Palestinian Arabs who fled from their homes following the setting up of the State of Israel. The rehabilitation program has gone more slowly but negotiations regarding agreements on long-term projects are now proceeding with the Arab governments concerned. Canada made a substantial contribution to UNRWAPR in the autumn of 1952.

Tunisia and Morocco.—National unrest and agitation against French rule in Tunisia and Morocco led to several attempts by Arab and African States during 1951 and 1952 to have one or the other question considered by the Security Council or the General Assembly. Both matters were on the agenda of the seventh session and both were fully debated. Substantially similar resolutions were adopted urging the parties to continue negotiations and to refrain from acts likely to aggravate the present tension. There was a sharp division at the Assembly between those who wished to have these questions examined and those who maintained that the United Nations was not competent to do so. On the grounds that the United Nations was incompetent, the representative of France did not participate in the discussion.

Race Conflict in South Africa.—Upon the initiative of a group of Arab and Asian States, "the question of race conflict in South Africa resulting from the policies of *apartheid* of the Government of the Union of South Africa" was placed on the agenda of the seventh session of the General Assembly. Though the representative of South Africa argued that the United Nations was not competent to examine the question, which he claimed was a matter of domestic jurisdiction solely, the Assembly proceeded to discuss it and adopted a resolution setting up a three-man commission to study the racial situation in the Union of South Africa and report thereon to the eighth session. Another resolution called upon all member states to bring their policies into conformity with their obligations under the Charter to promote the observance of human rights and fundamental freedoms.

Secretariat Problems.—During the first part of the seventh session of the General Assembly in the autumn of 1952, personnel policy in the United Nations Secretariat became a matter of major public interest and discussion. The Secretary-General had announced on Oct. 20, 1952, the appointment of a Commission of Jurists to advise him on some issues arising out of hearings of the United States Senate Sub-Committee on Internal Security. It was asked to advise on certain issues of law and policy regarding the conduct required of international civil servants and the position of the United Nations with respect to official inquiries by member governments. There was no time to debate this matter at the first part of the session but, at the request of the Secretary-General, an item was placed on the agenda of the resumed session. After a debate in which representatives of member states, including Canada, emphasized the necessity of reconciling the rights and freedoms of United Nations employees and the security of the State in which they serve, the Assembly on Apr. 1, 1953, adopted a resolution citing Articles 100 and 101 of the Charter, expressing confidence that the Secretary-General would conduct personnel policy with these Articles in mind, and requesting him to make a progress report to the next session.

Appointment of a New Secretary-General.—The original term of office of the first Secretary-General, Mr. Trygve Lie, expired on Feb. 1, 1951. At the fifth session in 1950, the Security Council was unable to make a nomination and the Assembly, accordingly, extended Mr. Lie's term for a further three years (until Feb. 1, 1954). On Nov. 10, 1952, Mr. Lie announced his wish to resign, provided a successor could be found, giving as his reason a hope that a new Secretary-General who was the unanimous choice of the five great powers, the Security Council and the General Assembly might be more helpful than he could be. At a number of meetings during February and March, 1953, the Security Council considered and rejected four candidates. Of these, the Secretary of State for External Affairs of Canada, the Hon. L. B. Pearson, received nine favourable votes but was not nominated owing to the negative vote of a permanent member, the Soviet Union. On Mar. 31, 1953, however, the concurring votes of all five permanent members made possible the nomination of Mr. Dag Hammarskjold of Sweden. On Apr. 7, 1953, he was elected by the General Assembly by a vote of fifty-seven in favour, one against and one abstention, and took up office on Apr. 10.

The Economic and Social Council.—During 1952, the Economic and Social Council and its functional commissions were engaged chiefly in further work on projects already initiated. The question of helping the economically underdeveloped countries of the world to help themselves continued to engage a large share of attention. The General Assembly confirmed the Council's proposal

that, for 1953, the goal of the expanded program of technical assistance should be $25,000,000. A total of about $2,000,000 has so far been pledged, considerably more than for any previous program. The Canadian contribution was $800,000. The group of experts who studied the possibility of establishing a United Nations development fund for the purpose of making long-term low-interest loans for development projects issued a report in March and the International Bank for Reconstruction and Development is giving further study to the suggestion of establishing an international finance corporation to increase the flow of private capital to under-developed areas. Both these questions received some discussion at the seventh session of the General Assembly and will be on the agenda of the eighth session.

In the social field, a Convention on the Political Rights of Women, prepared by the Commission on the Status of Women, was opened for signature at the seventh session. Twenty-one countries so far have signed. At its sixth session, the General Assembly asked the Commission on Human Rights to draft two Covenants on Human Rights, one to include the traditional civil liberties, the other economic, social and cultural rights. The Commission drafted the substantive articles of both Covenants at its session in 1952 and commenced working on measures of application, that is, on the procedural articles relating to implementation, reservations, a federal state clause, etc. The Social Commission is holding a session in 1953 specially for the purpose of preparing recommendations on a program of concerted action in the social field designed to co-ordinate the activities of the Specialized Agencies and other authorities concerned in social welfare and related matters.

Specialized Agencies.—An eleventh specialized agency of the United Nations, the World Meteorological Organization, started functioning in 1951. The International Refugee Organization came to an end early in 1952. Continuing problems in connection with refugees will be the concern of the Office of the United Nations High Commissioner for Refugees, which was established by the General Assembly in December 1950. The proposed International Trade Organization and the Inter-Governmental Maritime Consultative Organization have not yet come into existence.

Subsection 3.—Canada and the North Atlantic Treaty

Within less than two years of the signing at San Francisco, U.S.A., of the Charter of the United Nations in 1945, the hopes of people everywhere for universal peace had given place to growing anxiety. The Security Council, which had been given primary responsibility for the maintenance of security, was already hamstrung by the deliberate tactics of the Soviet representatives. The encouragement of communist régimes in countries under control of the Red Army, and activities in other countries, particularly in Western Europe, provided ample evidence of the imperialistic designs of the Soviet Union. Under these circumstances, nations that found themselves in common danger of aggression were driven to seek security by special co-operation in defensive measures.

A major step in the search for security by Western nations was taken in the spring of 1948 when the United Kingdom, France, The Netherlands, Belgium and Luxembourg signed a treaty, at Brussels, providing for their collective self-defence. In the months that followed there were many signs that determined efforts by Western European nations to co-operate for defence would find a ready response

in North America. Beginning with the summer of 1948, the Ambassadors of the Brussels Treaty Powers and Canada began holding informatory and exploratory talks at Washington with representatives of the United States. Representatives of other North Atlantic countries were invited to the discussions at a later stage and, on Apr. 4, 1949, the North Atlantic Treaty was signed by twelve nations—Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, Norway, Portugal, The Netherlands, the United Kingdom and the United States. The Treaty was accepted by all major groups of opinion in Canada, and it was passed without a single dissenting vote in Parliament.

In 1952, two important steps were taken to extend the coverage of the Treaty. Greece and Turkey were admitted to membership and their territories were thereby included in the area guaranteed by the Treaty. A plan was also approved for the association of German forces with Western defence through membership of the German Federal Republic in a European Defence Community and by the exchange of mutual guarantees between that Community and the North Atlantic Treaty Organization. In May 1952, the European Defence Community Treaty was signed at Paris by Belgium, France, Germany, Italy, Luxembourg and The Netherlands. At the same time, contractual agreements between Germany and the three Occupying Powers were signed at Bonn. When these interdependent agreements are ratified, a European Army is to be established which will include German forces and which will be under NATO command. An Interim Committee has been set up at Paris to study the technical problems connected with the establishment of the European Army.

The Treaty.—The North Atlantic Treaty in its preamble reaffirms the faith of the Parties in the purposes and principles of the Charter of the United Nations and declares that the Parties "are determined to safeguard the freedom, common heritage and civilization of their people, founded on the principle of democracy individual liberty and the rule of law". Article I makes clear that the Treaty does not conflict with the United Nations Charter but rather supplements it.

The primary objective of the Treaty is the preservation of peace and security in the North Atlantic area. The defence measures required for this are defined in Articles 3, 4 and 5. Article 3 provides that "the Parties, separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack" Article 4 provides that "the Parties will consult together whenever, in the opinion of any of them, the territorial integrity, political independence or security of any of the Parties is threatened". By Article 5, the Parties agree that an armed attack against any of them shall be deemed an attack against all, and that, in the event of such an attack, each will assist the Party or Parties so attacked by taking, individually and in concert with the others, "such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area".

The Parties have also recognized that both the support of military forces and the maintenance of the will to resist depend, in the long run, on promoting the stability and well-being of the North Atlantic area. This objective is embodied in Article 2, the inclusion of which in the Treaty was strongly urged by Canada. This Article declares:

"The Parties will contribute toward the further development of peaceful and friendly international relations by strengthening their free institutions, by bringing about a better understanding of the principles upon which these institutions are founded, and by promoting conditions of stability and well-being. They will seek to eliminate conflict in their international economic policies and will encourage economic collaboration between any or all of them."

The Treaty Organization (NATO).—Unlike the United Nations Charter, the North Atlantic Treaty has little to say about organization. Article 9 of the Treaty provides merely for the establishment of a Council "to consider matters concerning the implementation of this Treaty", and empowers the Council to set up such subsidiary bodies as may be necessary to achieve the purposes of the Treaty. Under this very general provision the Council has been free to adapt the organization to meet the needs as they arise.

The Council is the supreme governing body. The chairmanship rotates annually in alphabetical order of member countries, the Hon. L. B. Pearson, Canadian Secretary of State for External Affairs, having been Chairman during 1951-52. Originally, the Council consisted of the Foreign Ministers of the Parties to the Treaty. There were also a committee of Defence Ministers, a committee of Finance Ministers and a number of subordinate civilian and military bodies. The Council and the ministerial committees met as occasion required in various national capitals. This rather unwieldy structure has since undergone a number of changes. In 1950, the Council Deputies were established at London to provide supervision and direction of the Organization between sessions of the Council itself. In 1951, as a result of a Canadian proposal, the ministerial committees were amalgamated to form a single Council of governments.

At the Lisbon meeting of the Council in February 1952 a further re-organization was adopted in order to ensure more continuous and effective consultation between member governments on all aspects of the alliance. The Council now meets in permanent session, with headquarters at Paris, where member governments are represented by Permanent Representatives. Mr. A. D. P. Heeney is Permanent Representative of Canada. The Council is assisted by an International Secretariat under Lord Ismay, the Secretary General, who is, at the same time, Vice-Chairman of the Council and presides over meetings of the Permanent Representatives. Periodically, ministerial sessions of the Council are held at which Foreign, Defence and Finance Ministers have an opportunity to review the work of the Organization and approve future plans. Ministerial sessions were held at Paris in December 1952 and in April 1953.

Subordinate to the Council are both civilian and military bodies. On the civilian side there are committees and working groups to deal with such aspects of the Organization's work as the annual review of member countries' defence plans, the construction of fixed military installations for the common use of the NATO forces (called "infrastructure"), budgetary control, emergency planning and Article 2 matters.

On the military side, the senior organ is the Military Committee, which is responsible for providing the Council with military advice and which receives from the Council political guidance. Member countries are represented on the Military Committee by their Chiefs of Staff. The Chairmanship, as in the case of the Council, rotates annually in alphabetical order of the NATO countries. The Standing Group is the permanent executive body of the Military Committee, responsible

for passing strategic and political guidance to the NATO Supreme Commanders. It is located at Washington, D.C., and is composed of the Chiefs of Staff (or their representatives) of the three major contributors to NATO, the United States, the United Kingdom and France. The other members of NATO are in continuous association with the work of the Standing Group by means of the Military Representatives Committee, which consists of representatives of the national military authorities. Direct military command of the NATO forces has been delegated to the Supreme Commanders. The Supreme Allied Commander, Europe (SACEUR), is General Alfred M. Gruenther, U.S.A., who succeeded General Matthew B. Ridgway in 1953. He is responsible for the defence of Western Europe which, for this purpose, is divided into a number of subordinate naval, army and air commands. His headquarters (SHAPE) is located near Paris. Admiral L. D. McCormick, U.S.N., is Supreme Allied Commander, Atlantic (SACLANT), responsible for the defence of the lines of communication across the Atlantic Ocean, with headquarters at Norfolk, Va. Each of these commands has an integrated staff to which Canadian officers have been appointed.

Annual Review.—An important feature of NATO since the Lisbon meeting of the Council has been the development of procedures for reconciling military requirements with national economic and political capabilities. Useful groundwork for this task was provided by the review of defence plans carried out for the Lisbon meeting by the Temporary Council Committee set up at Ottawa in September 1951. It was, therefore, decided at Lisbon that, in future, the build-up of NATO forces should be approved after annual reviews of member countries' defence programs which would take account of the various economic and financial factors affecting each country's defence effort. The review for 1952 was undertaken by the Council of Permanent Representatives, with the assistance of the International Secretariat and the NATO military agencies, and was completed at the Ministerial session of the Council in April 1953.

Canada's Contributions to NATO.—The NATO countries have taken the almost unprecedented step of establishing, in peacetime, combined forces and military commands. Canada's contribution to these NATO forces include units of all three services. During 1953, 42 ships of the Royal Canadian Navy will become fighting units committed to NATO or required for the defence of coastal waters. The 27th Canadian Infantry Brigade Group, which had gone to Europe before the end of 1951, is stationed in Germany under SACEUR's command. By 1954, the Canadian air contribution will be complete with an air division of four wings, comprising twelve squadrons of Sabre jet aircraft. By the end of April 1953, two of these wings had been assigned to SACEUR at the airfields constructed for them at Grostenquin in France and Zweibruecken in Germany.

Canada's prime responsibility is, of course, the immediate defence of Canada and North America from direct attack. The Canadian forces allocated for this purpose have not been assigned to a NATO command because there is, for the North American region, a NATO planning body, called the Canada-United States Regional Planning Group, but no NATO command. Since Canada is expressly included in the territory of the North Atlantic Treaty, however, all Canadian forces and all expenditures on defence by Canada, with the exception of those involved in Canada's part in the United Nations action in Korea, are in support of NATO. The bulk of Canada's three-year defence program of over $5,000,000,000 for 1951-54 can, consequently, be regarded as representing Canada's contribution to NATO.

In addition to actual forces, Canada has contributed—as has the United States—considerable assistance to the defence efforts of other NATO countries in the form of Mutual Aid programs, under which substantial quantities of arms and ancillary equipment have been supplied. In 1950 and 1951, a total of $361,000,000 was appropriated for the Mutual Aid program. In 1952, the Canadian Parliament approved an appropriation of $324,000,000 for this purpose and a further appropriation of the same amount in 1953. This aid has taken the form of the training of airmen from other NATO countries in Canada, the transfer of new equipment from Canadian defence production and transfers of equipment from stocks held by the Canadian forces. Arrangements have been made to train up to 1,400 aircrew each year in Canada. The equipment and training facilities have been allocated to other NATO countries in accordance with recommendations from the appropriate NATO bodies.

Canada has also made contributions to the NATO infrastructure programs of fixed military installations, to the military budgets of the Supreme Commanders and to the civilian budget of the International Secretariat, paying portions of these out of the Mutual Aid appropriations. Up to April 1953, the total Canadian share of approved infrastructure programs was $53,000,000. At the Ministerial meeting of the Council held in April, a further three-year infrastructure program was approved; Canada's share of this was to be $63,000,000. The Canadian contribution to the military budget in 1953 was approximately $1,750,000 and to the civilian budget approximately $370,000.

Subsection 4.—Canada and the Colombo Plan

The Colombo Plan for Co-operative Economic Development in South and Southeast Asia was conceived at the Commonwealth Meeting on Foreign Affairs held at Colombo, Ceylon, Jan. 9-14, 1950. Further meetings were held during the same year and in October a report on the Colombo Plan was published which gave a comprehensive picture of the economic requirements and potential resources of the region and the need for external assistance.

Although the Colombo Plan was initiated by Commonwealth governments, it is not exclusively a Commonwealth program. It is designed to assist in the economic development of all countries and territories in the general area of south and southeast Asia.

The Consultative Committee, an intergovernmental body which meets from time to time to review the progress of the Colombo Plan and to consider policy matters in connection with its implementation, now counts as members Australia, Burma, Cambodia, Canada, Ceylon, India, Laos, Nepal, New Zealand, Pakistan, the United Kingdom (and its territories in the area, such as Malaya, Singapore and Sarawak) and Viet-Nam, as well as the United States which is also engaged in a substantial program of economic aid in the same region.

The Canadian Parliament approved a contribution of $25,000,000 for capital assistance to governments in south and southeast Asia during 1951-52 and a similar amount for 1952-53. Until Mar. 31, 1953, expenditures had been made, or commitments had been given, to the Asian governments against these capital assistance votes for the following purposes and in the amounts indicated:—

India.—For 1951-52, $10,000,000 for wheat; $4,500,000 for trucks and buses for the improvement and extension of the Bombay state transport system; and $500,000 for capital equipment for an irrigation and hydro-electric project.

Pakistan.—For 1951-52, $5,000,000 for a cement plant in the Thal area where the Pakistan Government is carrying out a large-scale refugee colonization scheme; $2,800,000 for railway ties; $2,000,000 for an aerial and geological survey of Pakistan's resources; and $200,000 for agricultural machinery and related equipment for a model live-stock farm in the Thal area. (This is a joint Canadian-Australian-New Zealand project.)

India.—For 1952-53, $5,000,000 for wheat; $3,000,000 for equipment for a hydro-electric project; and $2,200,000 for locomotive boilers.

Pakistan.—For 1952-53, $5,000,000 for wheat; $3,400,000 for equipment for a hydro-electric project; $170,000 for three aircraft fitted with special equipment for use in the locust control program; and $500,000 to cover remaining costs of the cement-plant project undertaken during the previous year.

Ceylon.—For 1952-53, $1,000,000 for fishing vessels, cold storage plant and technical personnel for a fisheries research and development project.

Several of these projects will yield revenue in local currency (counterpart funds) which will, in turn, be used by the government concerned, in consultation with the Canadian Government, to finance further economic development in those countries.

Another important aspect of the Colombo Plan is the provision of technical assistance to governments in the area. To develop this side of the program, a Council for Technical Co-operation has been set up at Colombo to which Canada has appointed a permanent representative. The Technical Co-operation Program, though an integral part of the Colombo Plan, is designed to supplement the technical assistance activities of the United Nations and the specialized agencies in the area.

For each of the years ended Mar. 31, 1951, 1952 and 1953, Parliament authorized appropriations of $400,000 for technical co-operation under the Colombo Plan. Because of the inevitable delays in the early stages of a program of this kind, the amounts available for the first years were not fully used.

Up to Mar. 31, 1953, about 100 persons had been received for training in Canada in a great variety of technical fields and experts had been supplied by Canada to the Asian countries in such fields as fisheries, refrigeration, marine biology, agriculture, soil erosion, and the maintenance of tractors and agricultural machinery.

The Consultative Committee on the Colombo Plan held its fourth meeting at Karachi, Pakistan, in March 1952, which was attended by a Canadian delegation led by the Hon. George J. McIlraith, M.P. The Committee's main task was to prepare a report on the achievements of the Plan during 1951-52. This Report* outlines the progress made and the plans for 1952-53, and it contains separate sections describing the activities of each member of the Colombo Plan, whether a contributing or a receiving country.

The annual Policy Session of the Council for Technical Co-operation was held at Colombo during February 1953. The Canadian delegation was headed by Mr. P. Sykes, the Canadian Government Trade Commissioner in Ceylon. The Council reviewed progress and issued a report on technical assistance activities during 1952.

For the year 1953-54, the Canadian Parliament has approved a combined appropriation of $25,400,000 for both capital and technical assistance. It also established a Colombo Plan Fund to which the current and any subsequent appropriations, together with the unexpended portions of the appropriations for the previous year, will be credited. In this way, unspent funds will not lapse at the end of each fiscal year but will remain available until required.

* Obtainable from the Queen's Printer, Ottawa.

CHAPTER III.—POPULATION*

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

The records accumulated at the decennial censuses of Canada since Confederation in 1867 to the latest census, 1951, make a valuable contribution to the demographic history of the nation. Each successive decade has added to the vast scope of the material; the detailed statistical analyses and the numerous monographs and studies available under the several aspects of demography and agriculture have made the census a most important statistical measure of accomplishment and progress. An outline of the history of the census is given in the Year Book 1947, pp. 96-97.

The main legal reason for a periodic census under the constitution of Canada is to determine representation in the House of Commons; this, according to the British North America Act, is based on population (*see* Appendix I). The payment of provincial subsidies on a per capita basis is adjusted annually on population estimated from census data. In view of this, each person is counted as belonging to the locality of his regular domicile rather than to the place where he may be at the date of enumeration.

The modern nation-wide census, however important this redistribution purpose, has a much wider sphere of usefulness. It constitutes, through the data collected directly from the people, a true measure of the social and economic progress of the country and can, therefore, be used in the regulation and general administration of public affairs, social security and rehabilitation programs, etc.

Basic figures from the 1951 Census have been summarized under the respective headings of this Chapter. More detailed information and extended analyses may be obtained from Census publications.

Section 1.—Growth of the Population

The population history of Canada, from the first census in 1666 when 3,215 persons were enumerated to the Census of 1951 when the figure was 14,009,429, reveals an outstanding rate of population growth. Each decade, of course, contributed to this growth but the ten-year periods 1901-11, 1911-21 and 1941-51 merit particular mention. In the decade 1901-11, Canada's population increased by 34·2 p.c., the largest growth in the nation's history. Immigration was the main factor in this gain, 1,900,000 persons having entered the country during the period.

* This Chapter has been revised in the Census (Demography) Division, Dominion Bureau of Statistics.

Despite World War I with its accompanying population losses through casualties, emigration and the wartime influenza epidemic, Canada's population increased by 21·9 p.c. in the 1911-21 decade. This was the largest gain shown by any modern country in the period with the exception of Australia where an increase of 22.0 p.c. was recorded.

The Census of 1951 showed the population of Canada to be 14,009,429, representing an increase of 2,502,774 or 21·8 p.c. over the 1941 figure of 11,506,655. Newfoundland's entry into Confederation accounted for 361,416 of this increase. Excluding Newfoundland, the population in 1951 totalled 13,648,013, an increase of 2,141,358 or 18·6 p.c. over the 1941 population of the nine provinces and the territories. This numerical increase was the largest on record and the percentage increase was exceeded only in the 1901-11 and 1911-21 decades. The population increase in the 1941-51 decade is all the more remarkable when consideration is given to the fact that immigration was greatly restricted during the war years. With the resumption of immigration in the post-war years, however, Canada gained about 424,000 in population through immigrant arrivals over the decade. The period was characterized also by high birth rates, and the natural increase was just under 2,000,000 for the ten-year period.

1.—Numerical and Percentage Distribution of Population, by Province, Decennial Census Years 1871-1951

NOTE.—The populations of the Prairie Provinces in 1906, 1916, 1926, 1936 and 1946 are shown in the 1951 Year Book, p. 131. Intercensal estimated populations from 1867-1904 will be found in the 1936 Year Book, p. 141; from 1905-30 in the 1946 edition, p. 127; from 1932-40 in the 1952-53 edition, p. 143; and from 1942-53 in Table 9, p. 129, of the present edition.

Province or Territory	1871	1881	1891	1901	1911	1921	1931	1941	1951
	NUMERICAL DISTRIBUTION								
N'f'ld.[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	361,416
P.E.I.	94,021	108,891	109,078	103,259	93,728	88,615	88,038	95,047	98,429
N.S.	387,800	440,572	450,396	459,574	492,338	523,837	512,846	577,962	642,584
N.B.	285,594	321,233	321,263	331,120	351,889	387,876	408,219	457,401	515,697
Que.	1,191,516	1,359,027	1,488,535	1,648,898	2,005,776	2,360,510	2,874,662	3,331,882	4,055,681
Ont.	1,620,851	1,926,922	2,114,321	2,182,947	2,527,292	2,933,662	3,431,683	3,787,655	4,597,542
Man.	25,228	62,260	152,506	255,211	461,394	610,118	700,139	729,744	776,541
Sask.	...	...	...	91,279	492,432	757,510	921,785	895,992	831,728
Alta.	...	...	...	73,022	374,295	588,454	731,605	796,169	939,501
B.C.	36,247	49,459	98,173	178,657	392,480	524,582	694,263	817,861	1,165,210
Yukon	...	...	...	27,219	8,512	4,157	4,230	4,914	9,096
N.W.T.	48,000	56,446	98,967	20,129	6,507	8,143	9,316	12,028	16,004
Canada	**3,689,257**	**4,324,810**	**4,833,239**	**5,371,315**	**7,206,643**	**8,787,949**[2]	**10,376,786**	**11,506,655**	**14,009,429**
	PERCENTAGE DISTRIBUTION								
N'f'ld.	...	...	...	...	...	...	...	...	2·58
P.E.I.	2·55	2·52	2·25	1·92	1·30	1·01	0·85	0·83	0·70
N.S.	10·51	10·19	9·32	8·56	6·83	5·96	4·94	5·02	4·59
N.B.	7·74	7·43	6·65	6·16	4·88	4·41	3·94	3·97	3·68
Que.	32·30	31·42	30·80	30·70	27·83	26·86	27·70	28·96	28·95
Ont.	43·94	44·56	43·74	40·64	35·07	33·39	33·07	32·92	32·82
Man.	0·68	1·44	3·16	4·75	6·40	6·94	6·75	6·34	5·54
Sask.	...	...	...	1·70	6·84	8·62	8·88	7·79	5·94
Alta.	...	...	...	1·36	5·19	6·70	7·05	6·92	6·71
B.C.	0·98	1·14	2·03	3·33	5·45	5·97	6·69	7·11	8·32
Yukon	...	...	...	0·51	0·12	0·05	0·04	0·04	0·06
N.W.T.	1·30	1·30	2·05	0·37	0·09	0·09	0·09	0·10	0·11
Canada	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**

[1] Populations of Newfoundland (which was not part of Canada until 1949) were: 1871, 152,500 (estimated); 1881, 186,500 (estimated); 1891, 202,040; 1901, 222,984; 1911, 242,619; 1921, 263,033; 1931, 281,500 (estimated); 1941, 303,300 (estimated); and 1945, 321,819. [2] Includes 485 members of the Royal Canadian Navy recorded separately in 1921.

2.—Numerical and Percentage Increase of Population, by Province, Decennial Census Years 1871-1951

Province or Territory	1871	1881	1891	1901	1911	1921	1931	1941	1951
	Numerical Increase over Preceding Census								
N'f'ld	...	...	...	...	...	...	...	...	361,416
P.E.I.	...	14,870	187	−5,819	−9,531	−5,113	−577	7,009	3,382
N.S.	...	52,772	9,824	9,178	32,764	31,499	−10,991	65,116	64,622
N.B.	...	35,639	30	9,857	20,769	35,987	20,343	49,182	58,296
Que.	...	167,511	129,508	160,363	356,878	354,734	514,152	457,220	723,799
Ont.	...	306,071	187,399	68,626	344,345	406,370	498,021	355,972	809,887
Man.	...	37,032	90,246	102,705	206,183	148,724	90,021	29,605	46,797
Sask.	...	...	...	91,279	401,153	265,078	164,275	−25,793	−64,264
Alta.	...	...	...	73,022	301,273	214,159	143,151	64,564	143,332
B.C.	...	13,212	48,714	80,484	213,823	132,102	169,681	123,598	347,349
Yukon	...	...	...	27,219	−18,707	−4,355	73	684	4,182
N.W.T.	...	8,446	42,521	−78,838	−13,622	1,636	1,173	2,712	3,976
Canada	...	**635,553**	**508,429**	**538,076**	**1,835,328**	**1,581,306**[1]	**1,588,837**	**1,129,869**	**2,502,774**
	Percentage Increase over Preceding Census								
N'f'ld	...	...	...	...	...	...	...	...	...
P.E.I.	...	15·82	0·17	−5·33	−9·23	−5·46	−0·65	7·96	3·56
N.S.	...	13·61	2·23	2·04	7·13	6·40	−2·10	12·70	11·18
N.B.	...	12·48	0·01	3·07	6·27	10·23	5·24	12·05	12·75
Que.	...	14·06	9·53	10·77	21·64	17·69	21·78	15·91	21·72
Ont.	...	18·88	9·73	3·25	15·77	16·08	16·98	10·37	21·38
Man.	...	146·79	144·95	67·34	80·79	32·23	14·75	4·23	6·41
Sask.	...	...	...	...	439·48	53·83	21·69	−2·80	−7·17
Alta.	...	...	...	...	412·58	57·22	24·33	8·82	18·00
B.C.	...	36·45	98·49	81·98	119·68	33·66	32·35	17·80	42·47
Yukon	...	...	...	...	−68·73	−51·16	1·76	16·17	85·10
N.W.T.	...	17·60	75·33	−79·66	−67·67	25·14	14·41	29·11	33·06
Canada	...	**17·23**	**11·76**	**11·13**	**34·17**	**21·94**	**18·08**	**10·89**	**21·75**

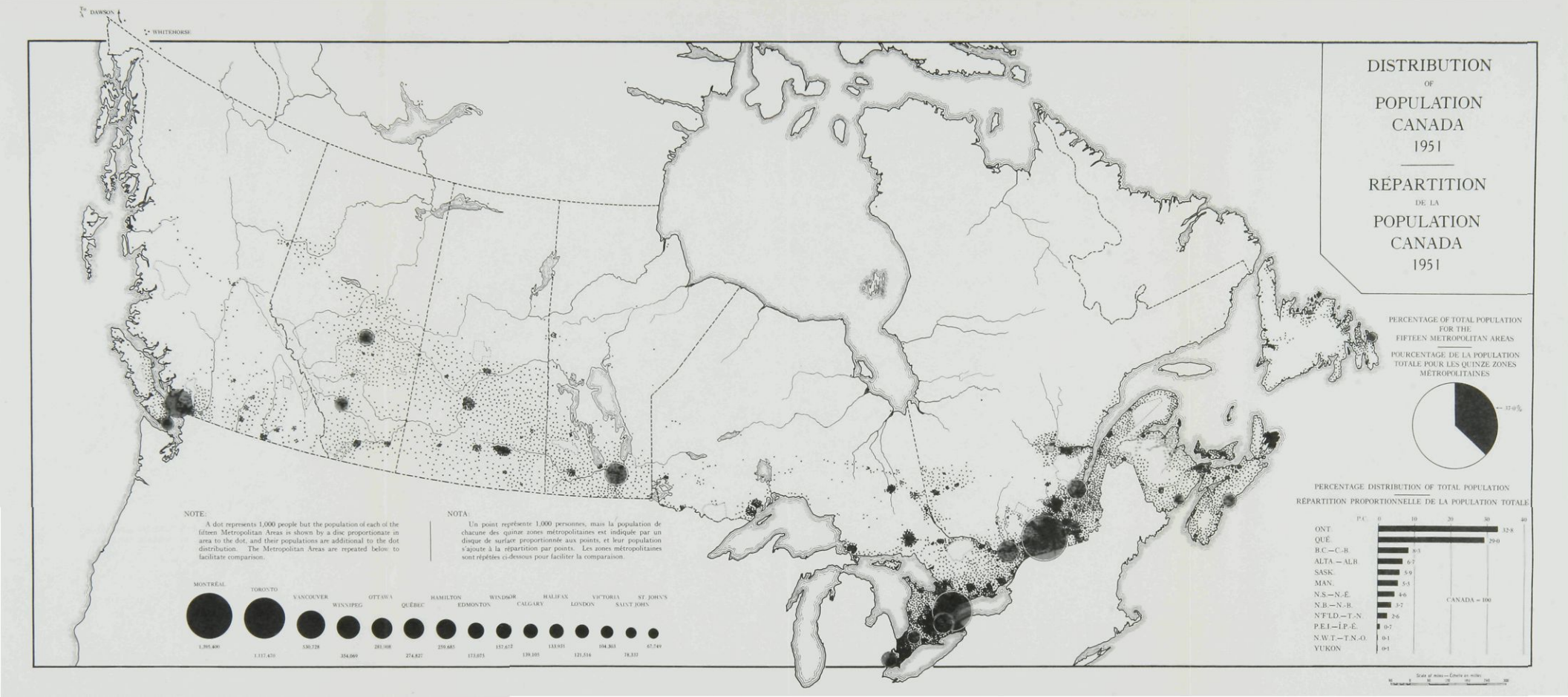
[1] Includes 485 members of the Royal Canadian Navy recorded separately in 1921.

The land area and density of the population per square mile is given by provinces in Table 3 for the census years 1921-51. It will be noted that the figures for 1951 include the Province of Newfoundland, and this fact should be kept in mind in comparisons with earlier censuses.

3.—Land Area and Density of Population, by Province, Census Years 1921-51

Province or Territory	Land Area in Sq. Miles	Population, 1921		Population, 1931		Population, 1941		Population, 1951	
		Total	Per Sq. Mile	Total	Per Sq. Mile	Total	Per Sq. Mile	Total	Per Sq. Mile
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland[1]	147,994	...	...	...	...	...	...	361,416	2·44
Prince Edward Island	2,184	88,615	40·57	88,038	40·31	95,047	43·52	98,429	45·07
Nova Scotia	20,743	523,837	25·25	512,846	24·72	577,962	27·86	642,584	30·98
New Brunswick	27,473	387,876	14·12	408,219	14·86	457,401	16·65	515,697	18·77
Quebec	523,860	2,360,510	4·51	2,874,662	5·49	3,331,882	6·36	4,055,681	7·74
Ontario	348,141	2,933,662	8·43	3,431,683	9·86	3,787,655	10·88	4,597,542	13·21
Manitoba	219,723	610,118	2·78	700,139	3·19	729,744	3·32	776,541	3·53
Saskatchewan	220,182	757,510	3·44	921,785	4·19	895,992	4·07	831,728	3·78
Alberta	248,800	588,454	2·37	731,605	2·94	796,169	3·20	939,501	3·78
British Columbia	359,279	524,582	1·46	694,263	1·93	817,861	2·28	1,165,210	3·24
Canada (Exclusive of the Territories)	**2,118,379**	**8,775,164**	**4·14**[2]	**10,363,240**	**4·89**[2]	**11,489,713**	**5·42**[2]	**13,984,329**	**6·60**[3]
Yukon Territory	205,346	4,157	0·02	4,230	0·02	4,914	0·02	9,096	0·04
Northwest Territories	1,253,438	8,143	0·01	9,316	0·01	12,028	0·01	16,004	0·01
Canada	**3,577,163**	**8,787,949**[4]	**2·46**[5]	**10,376,786**	**2·90**[5]	**11,506,655**	**3·22**[5]	**14,009,429**	**3·92**[5]

[1] Includes Labrador.
[2] Calculated on the basis of 2,003,319 sq. miles which excludes the land area of Newfoundland.
[3] Includes Newfoundland.
[4] Total includes 485 members of the Royal Canadian Navy recorded separately in 1921.
[5] Calculated on the basis of 3,462,103 sq. miles which excludes the land area of Newfoundland.


DAWSON
WHITEHORSE
DISTRIBUTION
OF
POPULATION
CANADA
1951
RÉPARTITION
DE LA
POPULATION
CANADA
1951
PERCENTAGE OF TOTAL POPULATION FOR THE FIFTEEN METROPOLITAN AREAS
POURCENTAGE DE LA POPULATION TOTALE POUR LES QUINZE ZONES MÉTROPOLITAINES
37·0%
PERCENTAGE DISTRIBUTION OF TOTAL POPULATION
RÉPARTITION PROPORTIONNELLE DE LA POPULATION TOTALE
P.C.
0
10
20
30
40
ONT.
32·8
QUÉ.
29·0
B.C.—C.-B.
8·3
ALTA.—ALB.
6·7
SASK.
5·9
MAN.
5·5
N.S.—N.-É.
4·6
N.B.—N.-B.
3·7
NFLD.—T.-N.
2·6
P.E.I.—Î.P.-É.
0·7
N.W.T.—T.N.-O.
0·1
YUKON
0·1
CANADA = 100
NOTE:
A dot represents 1,000 people but the population of each of the fifteen Metropolitan Areas is shown by a disc proportionate in area to the dot, and their populations are additional to the dot distribution. The Metropolitan Areas are repeated below, to facilitate comparison.
NOTA:
Un point représente 1,000 personnes, mais la population de chacune des quinze zones métropolitaines est indiquée par un disque de surface proportionnée aux points, et leur population s'ajoute à la répartition par points. Les zones métropolitaines sont répétées ci-dessous pour faciliter la comparaison.
MONTRÉAL
1,395,400
TORONTO
1,117,470
VANCOUVER
530,728
WINNIPEG
354,069
OTTAWA
281,308
QUÉBEC
274,827
HAMILTON
259,685
EDMONTON
173,075
WINDSOR
157,672
CALGARY
139,105
HALIFAX
133,931
LONDON
121,516
VICTORIA
104,303
SAINT JOHN
78,337
ST. JOHN'S
67,749
Scale of miles — Échelle en milles
0
50
100
200
300

Population totals for counties and census divisions for census years 1901-51 are given in the 1952-53 Year Book, pp. 137-141.

The growth of Canadian cities with populations of over 30,000 from 1941 to 1951, together with the years of their incorporation as cities, is shown in Table 4. All incorporated cities, towns and villages having populations of 1,000 or over in 1951 are listed in Table 7.

4.—Incorporated Cities with Populations of over 30,000 at the 1951 Census and Comparable Data for 1941

Note.—Incorporated cities in which a Board of Trade exists are indicated by an asterisk (*). and those in which there is a Chamber of Commerce by a dagger (†).

City and Province	Year of Incorporation as City	Population		City and Province	Year of Incorporation as City	Population	
		1941	1951			1941	1951
		No.	No.			No.	No.
*Brantford, Ont.	1877	31,948	36,727	*Regina, Sask.	1903	58,245	71,319
*Calgary, Alta.	1893	88,904	129,060	†St. Catharines, Ont.	1876	30,275	37,984
†Edmonton, Alta.	1904	93,817	159,631	*Saint John, N.B.	1785	51,741	50,779
†Fort William, Ont.	1907	30,585	34,947	*St. John's, N'f'ld.	1888	44,603[1]	52,873
*Halifax, N.S.	1841	70,488	85,589	Sarnia, Ont.	1914	18,734	34,697
†Hamilton, Ont.	1846	166,337	208,321	*Saskatoon, Sask.	1906	43,027	53,268
†Hull, Que.	1875	32,947	43,483	†Sault Ste. Marie, Ont.	1912	25,794	32,452
†Kingston, Ont.	1846	30,126	33,459	†Sherbrooke, Que.	1875	35,965	50,543
*Kitchener, Ont.	1912	35,657	44,867	*Sudbury, Ont.	1930	32,203	42,410
†London, Ont.	1855	78,134	95,343	*Sydney, N.S.	1904	28,305	31,317
*†Montreal, Que.	1832	903,007	1,021,520	†Three Rivers, Que.	1857	42,007	46,074
†Oshawa, Ont.	1924	26,813	41,545	*Toronto, Ont.	1834	667,457	675,754
*Ottawa, Ont.	1854	154,951	202,045	*Vancouver, B.C.	1886	275,353	344,833
Outremont, Que.	1915	30,751	30,057	†Verdun, Que.	1912	67,349	77,391
†Peterborough, Ont.	1905	25,350	38,272	†Victoria, B.C.	1862	44,068	51,331
†Port Arthur, Ont.	1907	24,426	31,161	†Windsor, Ont.	1892	105,311	120,049
*Quebec, Que.	1832	150,757	164,016	*Winnipeg, Man.	1873	221,960	235,710

[1] Census taken by Newfoundland Government in 1945; 1941 figure not available.

For census purposes, metropolitan areas have been established for groups of urban communities that are in close economic, geographic and social relationship. The total population of each of the census metropolitan areas in 1951, with the comparable figure from the 1941 Census covering the same area as 1951, is shown in Table 5. In this table the metropolitan area has been named after the largest city of each urban group.

5.—Populations of Census Metropolitan Areas, 1951, compared with Populations of Same Areas in 1941

Metropolitan Area	Population		Metropolitan Area	Population	
	1941	1951		1941	1951
	No.	No.		No.	No.
Calgary, Alta.	93,021	139,105	Saint John, N.B.	70,927	78,337
Edmonton, Alta.	97,842	173,075	St. John's, N'f'ld.	..	67,749
Halifax, N.S.	98,636	133,931	Toronto, Ont.	909,928	1,117,470
Hamilton, Ont.	197,732	259,685	Vancouver, B.C.	377,447	530,728
London, Ont.	91,024	121,516	Victoria, B.C.	75,560	104,303
Montreal, Que.	1,145,282	1,395,400	Windsor, Ont.	123,973	157,672
Ottawa, Ont.	226,290	281,908	Winnipeg, Man.	299,937	354,069
Quebec, Que.	224,756	274,827			

The distribution of the population of incorporated urban centres in Canada by size groups is given in Table 6 for the census years 1931, 1941 and 1951.

6.—Populations of Incorporated Cities, Towns and Villages, by Size, Census Years 1931-51

Group	1931[1]			1941[1]			1951		
	Places	Population	P.C. of Total Pop.	Places	Population	P.C. of Total Pop.	Places	Population	P.C. of Total Pop.
	No.	No.		No.	No.		No.	No.	
Over 500,000	2	1,449,784	13·97	2	1,570,464	13·65	2	1,697,274	12·11
Between—									
400,000 and 500,000	—	—	—	—	—	—	—	—	—
300,000 and 400,000	—	—	—	—	—	—	1	344,833	2·46
200,000 and 300,000	2	465,378	4·48	2	497,313	4·32	3	646,076	4·61
100,000 and 200,000	3	413,013	3·98	4	577,356	5·02	4	572,756	4·09
50,000 and 100,000	7	470,443	4·53	7	508,808	4·42	9	588,436	4·20
25,000 and 50,000	10	339,521	3·27	19	605,805	5·26	24	802,380	5·73
15,000 and 25,000	23	457,292	4·41	20	377,505	3·28	34	636,713	4·54
10,000 and 15,000	23	275,944	2·66	24	296,195	2·57	29	347,410	2·48
5,000 and 10,000	68	458,784	4·42	74	510,429	4·44	100	720,077	5·14
3,000 and 5,000	71	273,276	2·63	91	348,709	3·03	119	457,492	3·27
1,000 and 3,000	324	557,466	5·37	337	561,019	4·88	409	698,092	4·98
Under 1,000	1,072	411,157	3·96	1,060	398,813	3·47	1,049	429,683	3·07
Totals	**1,605**	**5,572,058**	**53·70**	**1,640**	**6,252,416**	**54·34**	**1,783**	**7,941,222**	**56·68**

[1] Newfoundland not included.

Of the 1,783 incorporated urban centres in Canada at the date of the latest Census, June 1, 1951, 734 had a population of 1,000 or over. These are listed alphabetically by province in Table 7, with their 1951 populations and comparative figures for 1941.

7.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941

Province and Incorporated Centre	1945[1]	1951
	No.	No.
Newfoundland—		
Bay Roberts	..	1,222
Carbonear		3,351
Channel-Port aux Basques	..	2,634
Corner Brook East	..	3,445
Corner Brook West	5,464	6,831
Curling	..	3,559
Deer Lake	..	2,655
Fogo		1,078
Grand Bank	2,329	2,148
Harbour Grace	2,065	2,331
Lewisporte	..	1,218
St. Anthony	1,109	1,380
St. John's	44,603	52,873
St. Lawrence	..	1,451
Wabana	..	6,460
Wesleyville	968	1,304
Windsor	2,772	3,674
	1941	1951
Prince Edward Island—		
Charlottetown	14,821	15,887
Montague	769	1,068
Souris	1,114	1,183
Summerside	5,034	6,547

Province and Incorporated Centre	1941	1951
	No.	No.
Nova Scotia—		
Amherst	8,620	9,870
Antigonish	2,157	3,196
Berwick	962	1,045
Bridgetown	1,020	1,038
Bridgewater	3,445	4,010
Canso	1,418	1,313
Clark's Harbour	887	1,020
Dartmouth	10,847	15,037
Digby	1,657	2,047
Dominion	3,279	3,143
Glace Bay	25,147	25,586
Halifax	70,488	85,589
Hantsport	907	1,131
Inverness	2,975	2,360
Kentville	3,928	4,240
Liverpool	3,170	3,535
Lockeport	1,084	1,225
Louisburg	1,012	1,120
Lunenburg	2,856	2,816
Mahone Bay	1,025	1,019
Middleton	1,172	1,506
Mulgrave	1,057	1,212
New Glasgow	9,210	9,933
New Waterford	9,302	10,423
North Sydney	6,836	7,354

[1] Census taken by the Newfoundland Government in 1945; 1941 figures not available.

7.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941—continued

Province and Incorporated Centre	1941	1951
	No.	No.
Nova Scotia—concluded		
Oxford	1,297	1,466
Parrsboro	1,971	1,906
Pictou	3,069	4,259
Port Hawkesbury	1,031	1,034
Shelburne	1,605	2,040
Springhill	7,170	7,138
Stellarton	5,351	5,575
Stewiacke	961	1,018
Sydney	28,305	31,317
Sydney Mines	8,198	8,410
Trenton	2,699	3,089
Truro	10,272	10,756
Westville	4,115	4,301
Windsor	3,436	3,439
Wolfville	1,944	2,313
Yarmouth	7,790	8,106
New Brunswick—		
Bathurst	3,554	4,453
Campbellton	6,748	7,754
Chatham	4,082	5,223
Dalhousie	4,508	4,939
Dieppe	[1]	3,402
Edmundston	7,096	10,753
Fredericton	10,062	16,018
Grand Falls	1,806	2,365
Hartland	847	1,000
Marysville	1,651	2,152
Milltown	1,876	2,267
Moncton	22,763	27,334
Newcastle	3,781	4,248
St. Andrews	1,167	1,458
St. George	1,169	1,263
St. Leonard	1,095	1,419
St. Stephen	3,306	3,769
Sackville	2,489	2,873
Saint John	51,741	50,779
Shediac	2,147	2,010
Shippegan	[1]	1,181
Sunny Brae	1,368	2,048
Sussex	3,027	3,224
Woodstock	3,593	3,996
Quebec—		
Acton Vale	2,366	3,367
Amos	2,862	4,265
Amqui[2]	1,593	2,599
Arthabaska	1,883	2,321
Arvida	4,581	11,078[3]
Asbestos	5,711	8,190
Aylmer	3,115	4,375
Bagotville	3,248	4,136
Baie Comeau	1,548	3,972
Baie de Shawinigan	1,255	1,223
Baie St. Paul	3,500	3,716
Beaconsfield	706	1,888
Beauceville	899	1,149
Beauceville E.	1,251	1,573
Beauharnois	3,550	5,694
Beauport	3,725	5,390
Beauport E.	587	1,096
Bedford	1,697	2,073
Beebe Plain	1,024	1,352
Belleterre	[1]	1,011
Belœil	2,008	2,992
Bernierville	1,638	1,959
Berthierville[4]	2,634	3,325
Bic	1,117	1,086
Black Lake	2,276	2,800
Boucherville	1,047	1,583
Bourlamaque	1,545	2,460
Bromptonville	1,672	2,025
Brownsburg	3,105	3,238
Buckingham	4,516	6,129
Cabano	2,031	2,594
Cadillac	989	1,514
Cap Chat	1,329	1,642
Cap de la Madeleine	11,961	18,667
Causapscal	1,545	2,609
Chambly Bassin	1,423	2,160
Chambly Canton	1,185	1,636
Chambord	1,029	1,070
Chandler	1,858	2,326
Charlemagne	1,150	1,856
Charlesbourg	2,789	5,734
Charny	2,831	3,300
Châteauguay	1,425	2,240
Chicoutimi	16,040	23,111[r]
Clermont	1,318	2,027
Coaticook	4,414	6,341
Contrecœur	1,043	1,435
Cookshire	877	1,209
Côte-St-Luc	776	1,083
Courville	2,011	3,138
Cowansville	3,486	4,431
Danville	1,332	2,092
DeLéry	816	1,194
Deschaillons-sur-St. Laurent	1,078	1,185
Deschênes	284	1,169
Disraëli	1,338	2,145
Dolbeau	2,847	4,307
Donnacona	3,064	3,663
Dorion	1,292	2,413
Dorval	2,048	5,293
Drummondville	10,555	14,341
Drummondville W.	[1]	1,275
Duparquet	1,384	1,485
East Angus	3,501	3,714
Farnham	4,055	4,926
Ferme-Neuve	811	1,660
Fort Coulonge	1,072	1,431
Gaspe	924	1,692
Gatineau	2,822	5,771
Giffard	4,909	8,097
Granby	14,197	21,989
Grand'Mère	8,608	11,089
Greenfield Park	1,819	3,379
Grenville	737	1,069
Hampstead	1,974	3,260
Hébertville Station	950	1,038
Hudson	731	1,283
Hull	32,947	43,483
Huntingdon	1,952	2,806
Iberville	3,454	5,185
Jacques-Cartier	[1]	22,450
Joliette	12,749	16,064
Jonquière	13,769	21,618
Kénogami	6,579	9,895
Knowlton	972	1,094
Labelle	709	1,003
L'Abord-à-Plouffe	1,773	4,604
Lac-au-Saumon	1,703	1,622
Lachine	20,051	27,773
Lachute	5,310	6,179
Lacolle	874	1,055
Lac St. Louis	819	1,300
La Guadeloupe[5]	627	1,321
La Malbaie	2,324	2,466
La Pérade	1,014	1,111
Laprairie	2,936	4,058

[1] Not incorporated in 1941. [2] St. Benoît-Joseph-Labre in 1941. [3] Racine annexed to town of Arvida. [4] Berthier in 1941. [5] St. Evariste Station in 1941.

7.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941—continued

Province and Incorporated Centre	1941	1951
	No.	No.
Quebec—continued		
La Providence	1,924	2,693
Lasalle	4,651	11,633
La Sarre	2,167	2,744
L'Assomption	1,829	2,688
La Tuque	7,919	9,538
Laurentides	1,342	1,465
Lauzon	7,877	9,643
Laval-des-Rapides	3,242	4,998
Laval W.	542	1,935
Le Moyne	[1]	4,078
Lennoxville	2,150	2,895
L'Epiphanie	1,941	2,462
Lévis	11,991	13,162
Longueuil	7,087	11,103
Loretteville	2,564	4,382
Louiseville	3,542	4,088
Luceville	701	1,059
Macamic	645	1,123
Mackayville	[1]	6,494
Magog	9,034	12,423
Malartic	2,895	5,983
Maniwaki	2,320	3,835
Marieville	2,394	3,117
Masson	1,226	1,475
Matane	4,633	6,345
McMasterville	1,097	1,509
Mégantic	4,560	6,164
Mistassini	1,294	2,298
Montebello	1,266	1,397
Mont Joli	3,533	4,938
Mont Laurier	2,661	4,701
Montmagny	4,585	5,844
Montmorency	5,393	5,817
Montreal	903,007	1,021,520
Montreal E.	2,355	4,513
Montreal N.	6,152	14,081
Montreal S.	1,441	4,214
Montreal W.	3,474	3,721
Mount Royal	4,888	11,352
Napierville	990	1,356
Naudville	[1]	1,430
Nicolet	3,751	4,084
Noranda	4,576	9,672
Normandin	1,029	1,678
Notre-Dame-d'Hébertville	1,025	1,285
Notre-Dame-de-Lorette	[1]	2,516
Notre-Dame-de-Portneuf	1,015	1,144
Notre-Dame-du-Lac	[1]	1,364
Ormstown	887	1,233
Outremont	30,751	30,057
Papineauville	1,023	1,024
Parent	[1]	1,255
Pierreville	1,302	1,448
Plessisville	3,522	5,094
Pointe-à-Gatineau	2,230	3,874
Pointe-au-Pic	1,083	1,105
Pointe-aux-Trembles	4,314	8,241
Pointe Claire	4,536	8,753
Pont Rouge	1,865	2,413
Pont Viau	1,342	5,129
Port Alfred	3,243	3,937
Price	2,321	2,810
Princeville	1,145	1,967
Quebec	150,757	164,016
Quebec W.	3,619	7,295
Rawdon	1,236	1,912
Richelieu	773	1,129
Richmond	3,082	3,471
Rigaud	1,222	1,579
Rimouski	7,009	11,565
Rivière-du-Loup	8,713	9,425
Rivière-du-Moulin	1,561	2,685[5]
Roberval	3,220	4,897
Rock Island	1,395	1,646
Rouyn	8,808	14,633
Ste. Agathe-des-Monts	3,308	5,169
St. Alexis-de-la-Grande-Baie	2,230	2,974
St. Ambroise	458	1,032
Ste. Anne-de-Beaupré	1,783	1,827
Ste. Anne-de-Bellevue	3,006	3,342
Ste. Anne-de-Chicoutimi	1,540	3,966
St. Basile South	[1]	1,347
St. Casimir	1,307	1,334
St. Césaire	1,209	1,658
St. Cœur-de-Marie	661	1,061
Ste. Croix	841	1,080
St. Cyrille	723	1,189
St. Emilien	1,018	1,651
St. Eustache	1,564	2,615
St. Eustache-sur-le-Lac	1,472	3,211
St. Félicien	1,603	2,656
St. Felix-de-Valois	1,130	1,201
Ste. Foy	[2]	5,236
St. Gabriel-de-Brandon	1,632	2,661
Ste. Geneviève-de-Pierrefonds	489	1,322
St. Georges (Champlain Co.)	753	1,143
St. Georges (Beauce Co.)	1,945	2,657
St. Georges W. (Beauce Co.)[3]	1,945	2,691
St. Hilaire	686	1,436
St. Hyacinthe	17,798	20,236
St. Jacques	1,634	1,729
St. Jean	13,646	19,305
St. Jean-de-Boischatel	882	1,297
St. Jérôme (Lac St. Jean Co.)	1,469	1,480
St. Jérôme (Terrebonne Co.)	11,329	17,685
St. Joseph (Beauce Co.)	1,892	2,417
St. Joseph (Drummond Co.)	5,556	6,576
St. Joseph (St. Hyacinthe Co.)	1,021	2,122
St. Joseph-d'Alma	6,449	7,975
St. Joseph-de-la-Rivière-Bleue	1,082	1,334
St. Joseph-de-Sorel[4]	2,207	3,349
St. Jovite	1,059	1,453
St. Lambert	6,417	8,615
St. Laurent	6,242	20,426
St. Marc-des-Carrières	2,118	2,351
Ste. Marie	1,736	2,431
St. Michel (Montreal Island)	2,956	10,539
St. Pacôme	1,254	1,197
St. Pascal	1,265	1,736
St. Pie	1,009	1,182
St. Pierre (Montreal Island)	4,061	4,976
St. Raymond	2,157	3,139
St. Remi	1,431	1,845
Ste. Rosalie	[1]	1,038
Ste. Rose	2,292	3,660
St. Sauveur-des-Monts	595	1,066
St. Siméon	858	1,103
Ste. Thècle	904	1,468
Ste. Thérèse	4,659	7,038
St. Tite	2,385	2,856
Sayabec	2,115	2,220
Scotstown	1,273	1,350
Senneterre	[1]	1,686
Sept-Iles	[1]	1,866
Shawinigan Falls	20,325	26,903
Shawinigan-South	[1]	6,637
Shawville	892	1,159
Sherbrooke	35,965	50,543

[1] Not incorporated in 1941. [2] Ste. Foy Rural Municipality in 1941. [3] St. Georges E. in 1941. [4] St. Joseph in 1941.

7.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941—continued

Province and Incorporated Centre	1941	1951
	No.	No.
Quebec—concluded		
Sillery	[1]	10,376
Sorel	12,251	14,961
Sutton	1,118	1,389
Tadoussac	766	1,064
Témiscaming	2,168	2,787
Templeton	949	1,717
Terrebonne	2,209	3,200
Thetford Mines	12,716	15,095
Three Rivers	42,007	46,074
Thurso	1,295	1,973
Trois Pistoles	2,176	3,537
Val-d'Or	4,385	8,685
Vallée Jonction[2]	1,175	1,279
Valleyfield (Salaberry-de-)	17,052	22,414
Varennes	781	1,104
Verchères	906	1,201
Verdun	67,349	77,391
Victoriaville	8,516	13,124
Ville-Marie	1,001	1,316
Warwick	1,504	2,094
Waterloo	3,173	4,054
Waterville	844	1,205
Weedon Centre	599	1,066
Westmount	26,047	25,222
Windsor	3,368	4,714
Ontario—		
Acton	2,063	2,880
Alexandria	2,175	2,204
Alliston	1,733	1,987
Almonte	2,543	2,672
Amherstburg	2,853	3,638
Arnprior	3,895	4,381
Arthur	937	1,088
Aurora	2,726	3,358
Aylmer	2,478	3,483
Bancroft	1,094	1,334
Barrie	9,725	12,514
Barry's Bay	1,198	1,218
Beamsville	1,309	1,712
Beaverton	934	1,048
Belle River	999	1,431
Belleville	15,710	19,519
Blenheim	1,952	2,459
Blind River	2,619	2,512
Bobcaygeon	1,002	1,207
Bowmanville	4,113	5,430
Bracebridge	2,341	2,684
Bradford	1,033	1,483
Brampton	6,020	8,389
Brantford	31,948	36,727
Bridgeport	[3]	1,137
Brighton	1,651	1,967
Brockville	11,342	12,301
Burlington	3,815	6,017
Burlington Beach[4]	..	2,827
Caledonia	1,401	1,681
Campbellford	3,018	3,235
Capreol	1,641	2,002
Cardinal	1,645	1,782
Carleton Place	4,305	4,725
Casselman	1,021	1,158
Chatham	17,369	21,218
Chelmsford	905	1,210
Chesley	1,701	1,672
Chesterville	1,067	1,094
Chippewa	1,385	1,762
Clinton	1,896	2,547
Cobalt	2,376	2,230
Cobourg	5,973	7,470
Cochrane	2,844	3,401
Colborne	994	1,108
Collingwood	6,270	7,413
Coniston	2,245	2,292
Copper Cliff	3,732	3,974
Cornwall	14,117	16,899
Crystal Beach	618	1,204
Delhi	2,062	2,517
Deseronto	1,261	1,522
Dresden	1,662	2,052
Dryden	1,641	2,627
Dundas	5,276	6,846
Dunnville	4,028	4,478
Durham	1,700	1,839
Eastview	7,966	13,799
Eganville	1,088	1,326
Elmira	2,012	2,589
Elora	1,247	1,348
Englehart	1,262	1,585
Essex	1,935	2,741
Exeter	1,589	2,547
Fenelon Falls	1,158	1,304
Fergus	2,832	3,387
Fonthill	1,000	1,412
Forest	1,570	1,790
Forest Hill	11,757	15,305
Fort Erie	6,595	7,572
Fort Frances	5,897	8,038
Fort William	30,585	34,947
Frankford	1,144	1,393
Galt	15,346	19,207
Gananoque	4,044	4,572
Georgetown	2,562	3,452
Geraldton	2,979	3,227
Goderich	4,557	4,934
Gravenhurst	2,122	3,005
Grimsby	2,331	2,773
Guelph	23,273	27,386
Hagersville	1,455	1,746
Haileybury	2,268	2,346
Hamilton	166,337	208,321
Hanover	3,290	3,533
Harriston	1,305	1,494
Harrow	1,166	1,519
Havelock	1,113	1,132
Hawkesbury	6,263	7,194
Hearst	995	1,723
Hespeler	3,058	3,862
Humberstone	2,963	3,895
Huntsville	2,800	3,286
Ingersoll	5,782	6,524
Iroquois	956	1,086
Iroquois Falls	1,302	1,342
Kapuskasing	3,431	4,687
Keewatin	1,481	1,634
Kemptville	1,232	1,488
Kenora	7,745	8,695
Kincardine	2,507	2,672
Kingston	30,126	33,459
Kingsville	2,317	2,631
Kitchener	35,657	44,867
Lakefield	1,349	1,710
La Salle	951	1,854
Leamington	5,858	6,950
Leaside	6,183	16,233
Levack	895	1,833
Lindsay	8,403	9,603
Listowel	3,013	3,469
Little Current	1,088	1,397
London	78,134	95,343

[1] Sillery Rural Municipality in 1941. [2] L'Enfant Jesus in 1941. [3] Not incorporated in 1941. [4] Park Commission.

7.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941—continued

Province and Incorporated Centre	1941	1951
	No.	No.
Ontario—continued		
Long Branch	5,172	8,727
Madoc	1,188	1,240
Markdale	870	1,007
Markham	1,204	1,606
Marmora	1,106	1,117
Mattawa	1,971	3,097
Meaford	2,662	3,178
Merritton	2,993	4,714
Midland	6,800	7,206
Milton	1,964	2,451
Milverton	1,015	1,055
Mimico	8,070	11,342
Mitchell	1,777	1,979
Morrisburg	1,575	1,858
Mount Forest	1,892	2,291
Napanee	3,405	3,897
New Hamburg	1,402	1,738
New Liskeard	3,019	4,215
Newmarket	4,026	5,356
New Toronto	9,504	11,194
Niagara	1,541	2,108
Niagara Falls	20,589	22,874
North Bay	15,599	17,944
Norwich	1,268	1,439
Oakville	4,115	6,910
Orangeville	2,718	3,249
Orillia	9,798	12,110
Oshawa	26,813	41,545
Ottawa	154,951	202,045
Owen Sound	14,002	16,423
Palmerston	1,418	1,573
Paris	4,637	5,249
Parry Sound	5,765	5,183
Pembroke	11,159	12,704
Penetanguishene	4,521	4,949
Perth	4,458	5,034
Peterborough	25,350	38,272
Petrolia	2,801	3,105
Picton	3,901	4,287
Point Edward	1,363	1,838
Port Arthur	24,426	31,161
Port Colborne	6,993	8,275
Port Credit	2,160	3,643
Port Dalhousie	1,723	2,616
Port Dover	1,968	2,440
Port Elgin	1,395	1,558
Port Hope	5,055	6,548
Port Perry	1,245	1,721
Portsmouth	3,135	3,411
Port Stanley	1,177	1,491
Prescott	3,223	3,518
Preston	6,704	7,619
Rainy River	1,205	1,348
Renfrew	5,511	7,360
Richmond Hill	1,345	2,164
Ridgetown	1,944	2,365
Riverside	4,878	9,214
Rockcliffe Park	1,480	1,595
Rockland	2,040	2,348
St. Catharines	30,275	37,984
St. Mary's	3,635	3,995
St. Thomas	17,132	18,173
Sarnia	18,734	34,697
Sault Ste. Marie	25,794	32,452
Seaforth	1,668	2,118
Shelburne	1,005	1,184
Simcoe	6,037	7,269
Sioux Lookout	1,756	2,364
Smith's Falls	7,159	8,441
Smooth Rock Falls	953	1,102
Southampton	1,600	1,700
Stayner	1,085	1,280
Stirling	990	1,100
Stoney Creek	1,007	1,922
Stouffville	1,253	1,695
Stratford	17,038	18,785
Strathroy	3,016	3,708
Streetsville	709	1,139
Sturgeon Falls	4,576	4,962
Sudbury	32,203	42,410
Sutton	1,051	1,168
Swansea	6,988	8,072
Tavistock	1,066	1,094
Tecumseh	2,412	3,543
Thessalon	1,316	1,595
Thorold	5,305	6,397
Tilbury	2,155	2,682
Tillsonburg	4,002	5,330
Timmins	28,790	27,743
Toronto	667,457	675,754
Trenton	8,323	10,085
Tweed	1,343	1,562
Uxbridge	1,406	1,785
Vankleek Hill	1,435	1,480
Walkerton	2,679	3,264
Wallaceburg	4,986	7,688
Waterdown	910	1,347
Waterford	1,342	1,745
Waterloo	9,025	11,991
Watford	1,076	1,201
Welland	12,500	15,382
West Lorne	728	1,031
Weston	5,740	8,677
Wheatley	785	1,021
Whitby	5,904	7,267
Wiarton	1,749	1,955
Winchester	1,049	1,201
Windsor	105,311	120,049
Wingham	2,030	2,642
Woodbridge	1,044	1,699
Woodstock	12,461	15,544
Manitoba—		
Altona	[1]	1,438
Beauséjour	1,161	1,376
Boissevain	817	1,015
Brandon	17,383	20,598
Brooklands	2,240	2,915
Carman	1,455	1,867
Dauphin	4,662	6,007
Flin Flon	[1]	9,899
Gimli	853	1,324
Killarney	1,051	1,262
Minnedosa	1,636	2,085
Morden	1,427	1,862
Morris	953	1,193
Neepawa	2,292	2,895
Portage la Prairie	7,187	8,511
Powerview	[1]	1,075
Rivers	802	1,209
Roblin	765	1,055
Russell	783	1,100
St. Boniface	18,157	26,342
Selkirk	4,915	6,218
Souris	1,346	1,584
Steinbach	[1]	2,155
Stonewall	1,020	1,040
Swan River	1,129	2,290
The Pas	3,181	3,376
Transcona	5,495	6,752
Tuxedo	735	1,627
Virden	1,619	1,746
Winkler	957	1,331
Winnipeg	221,960	235,710

[1] Not incorporated in 1941.

7.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941—concluded

Province and Incorporated Centre	1941	1951
	No.	No.
Saskatchewan—		
Assiniboia	1,349	1,938
Battleford	1,317	1,319
Biggar	1,930	2,214
Canora	1,200	1,568
Estevan	2,774	3,935
Eston	726	1,301
Gravelbourg	1,130	1,197
Grenfell	857	1,007
Hudson Bay	547	1,115
Humboldt	1,767	2,435
Indian Head	1,349	1,569
Kamsack	1,792	2,327
Kindersley	990	1,755
Lloydminster[1]	1,624	3,938
Maple Creek	1,085	1,638
Meadow Lake	971	1,956
Melfort	2,005	2,919
Melville	4,011	4,458
Moose Jaw	20,753	24,355
Moosomin	1,096	1,235
Nipawin	1,344	3,050
North Battleford	4,745	7,473
Prince Albert	12,508	17,149
Regina	58,245	71,319
Rosetown	1,470	1,865
Rosthern	1,149	1,183
Saskatoon	43,027	53,268
Shaunavon	1,603	1,625
Sutherland	888	1,329
Swift Current	5,594	7,458
Tisdale	1,237	2,141
Unity	682	1,248
Wadena	679	1,081
Watrous	1,138	1,228
Weyburn	6,179	7,148
Wilkie	1,232	1,580
Wynyard	1,080	1,326
Yorkton	5,577	7,074
Alberta—		
Athabasca	578	1,068
Barrhead	399	1,243
Beverly	981	2,159
Black Diamond	890	1,154
Blairmore	1,731	1,933
Bonnyville	603	1,139
Bowness	[2]	2,922
Brooks	888	1,648
Calgary	88,904	129,060
Camrose	2,598	4,131
Cardston	1,864	2,487
Claresholm	1,265	1,608
Coleman	1,870	1,961
Didsbury	892	1,180
Drumheller	2,748	2,601
Edmonton	93,817	159,631
Edson	1,499	1,956
Forest Lawn	899	1,079
Fort Saskatchewan	903	1,076
Grande Prairie	1,724	2,664
Hanna	1,622	2,027
High Prairie	[2]	1,141
High River	1,430	1,888
Innisfail	1,223	1,417
Jasper Place	[2]	9,139
Lacombe	1,603	2,277
Leduc	871	1,842
Lethbridge	14,612	22,947
Macleod	1,912	1,860
Magrath	1,207	1,320
McLennan	[2]	1,074
Medicine Hat	10,571	16,364
Olds	1,337	1,617
Peace River	873	1,672
Pincher Creek	994	1,456
Ponoka	1,306	2,574
Raymond	2,089	2,279
Redcliff	1,111	1,538
Red Deer	2,924	7,575
Redwater	[2]	1,306
Rocky Mountain House	800	1,147
St. Albert	697	1,129
St. Paul	1,018	1,407
Stettler	1,295	2,442
Taber	1,331	3,042
Three Hills	706	1,026
Vegreville	1,696	2,223
Vermilion	1,408	1,982
Vulcan	732	1,040
Wainwright	980	1,996
Westlock	590	1,111
Wetaskiwin	2,318	3,824
British Columbia—		
Alberni	1,807	3,323
Armstrong	977	1,126
Campbell River	[2]	1,986
Castlegar	[2]	1,329
Chilliwack	3,675	5,663
Courtenay	1,737	2,553
Cranberry Lake	[2]	1,350
Cranbrook	2,568	3,621
Creston	1,153	1,626
Dawson Creek	518	3,589
Duncan	2,189	2,784
Fernie	2,545	2,551
Grand Forks	1,259	1,646
Hope	515	1,668
Kamloops	5,959	8,099
Kelowna	5,118	8,517
Kimberley	[2]	5,933
Ladysmith	1,706	2,094
Lake Cowichan	[2]	1,628
Merritt	940	1,251
Mission City	1,957	2,668
Nanaimo	6,635	7,196
Nelson	5,912	6,772
New Westminster	21,967	28,639
North Kamloops	[2]	1,979
North Vancouver	8,914	15,687
Oliver	[2]	1,000
Penticton	[2]	10,548
Port Alberni	4,584	7,845
Port Coquitlam	1,539	3,232
Port Moody	1,512	2,246
Prince George	2,027	4,703
Prince Rupert	6,714	8,546
Quesnel	[2]	1,587
Revelstoke	2,106	2,917
Rossland	3,657	4,604
Salmon Arm	836	1,201
Smithers	759	1,204
Trail	9,392	11,430
Vancouver	275,353	344,833
Vernon	5,209	7,822
Victoria	44,068	51,331
Westview	[2]	3,507
Yukon Territory—		
Whitehorse	754	2,594

[1] Located partly in Alberta.

[2] Not incorporated in 1941.

Section 2.—Movement of Population

The traditional movement of population on the North American Continent from east to west has not been apparent in Canadian statistics for recent years. The most spectacular changes are shown in the Prairie Provinces and in British Columbia. The three Prairie Provinces lost by migration about 250,000 people between 1931 and 1941 and somewhat more from 1941 to 1951. British Columbia gained at the rate of about 8,000 a year during the 1930's and at about 23,000 a year during the 1940's. On an absolute basis, Ontario received more people than British Columbia but in relation to its larger population this growth was only one-third as important. Quebec's net change was negligible relative to its population. Nova Scotia gained during the 1930's but lost in the 1940's, the Maritime Provinces as a whole losing considerably over the two decades.

8.—Numerical Changes in the Populations of the Provinces, 1931 to 1941 and 1941 to 1951

Province	1931 to 1941	1941 to 1951
	No.	No.
Prince Edward Island	−3,000	−12,000
Nova Scotia	+8,000	−39,000
New Brunswick	−10,000	−42,000
Quebec	−3,000	−4,000
Ontario	+78,000	+305,000
Manitoba	−48,000	−60,000
Saskatchewan	−158,000	−200,000
Alberta	−42,000	−7,000
British Columbia	+82,000	+231,000

Section 3.—Intercensal Estimates of Population

Intercensal estimates of the population have many uses. They constitute a base for vital statistics rates, per capita figures of production and trade, and other analyses. More recently, they have proved useful for estimates of labour force and other population characteristics of data collected in sample surveys.

Estimates are constructed in the first place for the total population of Canada and for each province. It is a requirement that these be made available about the date to which they apply, June 1 of each year. As final figures on the components of population changes are not ready at that date, the numbers of births, deaths and immigrants are partly filled in by extrapolation so that a preliminary figure is secured for the June to May interval. To avoid a cumulative error the calculation, in effect, starts anew with the latest preceding census for each year's estimates and uses the most up-to-date figures then available. To the census figures are added the births of the intervening years and the deaths are subtracted. Immigrants are added and emigrants are subtracted. On the last item of this calculation there is least information; it is possible to ascertain from United States immigration figures the number of Canadians entering the United States and sometimes the number of those going to the United Kingdom but data are not available for other countries.

The program of population estimates calls for two figures to be given in respect of each year: one based on preliminary materials, as described above, necessarily involving an extrapolation of birth, death and immigration returns, and the other on final figures subject to no further change. The latter can be made available only when the last item of information has been secured and this last item is the succeeding decennial census. With the release of the 1951 Census totals, the estimates were revised for the decade 1941-51.

Since estimates for successive years are independently calculated back to the latest census, the best estimate of the balance of population change is not obtained by subtracting the figure for one year from that for the year following. Much interest attaches to the year-to-year balance and the following statement is included, which gives all available data on that point.

Year	Calendar-Year Data[1]				Estimated Population as at June 1[1]
	Births	Deaths	Natural Increase	Immigration	
1941	**255,224**	**114,500**	**140,724**	**9,325**	**11,490,000**
1942	272,184	112,848	159,336	7,576	11,637,000
1943	283,423	118,531	164,892	8,502	11,778,000
1944	284,220	116,052	168,168	12,793	11,929,000
1945	288,730	113,414	175,316	22,711	12,055,000
1946	330,732	114,931	215,801	71,691	12,268,000
1947	359,094	117,725	241,369	64,127	12,527,000
1948	347,307	119,384	227,923	125,414	12,799,000
1949[2]	366,139	124,047	242,092	95,217	13,423,000
1950[2]	371,071	123,789	247,282	73,912	13,688,000
1951[2]	**380,101**	**125,454**	**254,647**	**194,391**	**13,984,000**
1952[2]	395,024[3]	124,456[3]	270,568[3]	164,498	14,405,000[3]

[1] Exclusive of the Yukon and Northwest Territories. [2] Includes Newfoundland.
[3] These estimates are subject to adjustment as later data are made available.

9.—Estimates of Population, by Province, Intercensal Years 1941-53

NOTE.—At every census the previous post-censal estimates, made at June 1 each year, are adjusted to the newly recorded population figures. Figures for 1867-1904 will be found in the 1936 Year Book, p. 141, for 1905-30 in the 1946 edition, p. 127, and for 1931-40 in the 1952-53 edition, p. 143. Figures for all provinces for 1941 and 1951 and for the Prairie Provinces for 1946 are census figures.

Year	N'f'ld	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada[1]
	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000
1941	...	**95**	**578**	**457**	**3,332**	**3,788**	**730**	**896**	**796**	**818**	**5**	**12**	**11,507**
1942	...	90	591	464	3,390	3,884	724	848	776	870	5	12	11,654
1943	...	91	606	463	3,457	3,915	723	838	785	900	5	12	11,795
1944	...	91	611	461	3,500	3,963	727	836	808	932	5	12	11,946
1945	...	92	619	467	3,560	4,000	727	833	808	949	5	12	12,072
1946	...	94	608	478	3,629	4,093	727	833	803	1,003	8	16	12,292
1947	...	94	615	488	3,710	4,176	739	836	825	1,044	8	16	12,551
1948	...	93	625	498	3,788	4,275	746	838	854	1,082	8	16	12,823
1949	345	94	629	508	3,882	4,378	757	832	885	1,113	8	16	13,447
1950	351	96	638	512	3,969	4,471	768	833	913	1,137	8	16	13,712
1951	**361**	**98**	**643**	**516**	**4,056**	**4,598**	**776**	**832**	**939**	**1,165**	**9**	**16**	**14,009**
1952	374	103	653	526	4,174	4,766	798	843	970	1,198	9	16	14,430
1953	383	106	663	536	4,269	4,897	809	861	1,002	1,230	9	16	14,781

[1] Estimates for Newfoundland prior to union with Canada, which took place on Mar. 31, 1949, are not included in Canada totals.

Section 4.—Rural and Urban Population

Prior to 1951, the population residing within the boundaries of all incorporated cities, towns and villages of a province was classified as urban and the remainder as rural. Since the laws governing incorporation vary among provinces there was no uniform line of demarcation between the rural and urban population throughout Canada. In the 1951 Census, the aggregate size of population within a given area rather than provincial legal status was the main criterion for the rural-urban classification. The population residing in cities, towns and villages of 1,000 or over, whether incorporated or unincorporated, as well as the population of all parts of census metropolitan areas was defined as urban and that outside such localities as rural.

Table **10** presents the rural and urban population, by province or territory, for the years 1941 and 1951. For comparative purposes the rural and urban population has been tabulated by both the 1941 and 1951 rural-urban definitions. The rural is further classified by farm and non-farm residence and the urban by size of locality in Table **11**.

10.—Rural and Urban Population, by Province, 1941 and 1951

Province or Territory	1941 Definition[1]				1951 Definition[1]			
	Rural		Urban		Rural		Urban	
	1941	1951	1941	1951	1941	1951	1941	1951
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland	262,509	257,039	59,310	104,377	202,820	206,621	118,999	154,795
P. E. Island	70,707	70,807	24,340	27,622	74,078	73,744	20,969	24,685
Nova Scotia	310,422	344,865	267,540	297,719	288,900	297,753	289,062	344,831
New Brunswick	313,978	348,185	143,423	167,512	282,290	300,686	175,111	215,011
Quebec	1,222,198	1,326,883	2,109,684	2,728,798	1,274,935	1,358,363	2,056,947	2,697,318
Ontario	1,449,022	1,844,316	2,338,633	2,753,226	1,196,161	1,346,443	2,591,494	3,251,099
Manitoba	407,871	392,112	321,873	384,429	370,066	336,961	359,678	439,580
Saskatchewan	600,846	461,047	295,146	370,681	703,710	579,258	192,282	252,470
Alberta	489,583	451,313	306,586	488,188	530,640	489,826	265,529	449,675
British Columbia	374,467	550,158	443,394	615,052	268,607	371,739	549,254	793,471
Yukon Territory	3,117	5,478	1,797	3,618	3,871	6,502	1,043	2,594
N.W.T.	12,028	16,004	—	—	10,618	13,280	1,410	2,724
Canada	**5,254,239[2]**	**6,068,207**	**6,252,416[2]**	**7,941,222**	**5,003,876[2]**	**5,381,176**	**6,502,779[2]**	**8,628,253**

[1] For differences in the definition of "rural" and "urban" as used in the 1941 and 1951 Censuses, *see* text above. [2] Totals for Canada do not include Newfoundland; figures shown for that Province are from the 1945 Census of Newfoundland.

11.—Rural Population classified by Farm and Non-Farm, and Urban Population classified by Size Group, by Province, 1951

Province or Territory	Rural			Urban				
	Farm[1]	Non-Farm	Total	1,000 to 9,999	10,000 to 29,999	30,000 to 99,999	100,000 or Over	Total[2]
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland	15,456	191,165	206,621	100,375	—	52,873	—	154,795
P. E. Island	46,757	26,987	73,744	8,798	15,887	—	—	24,685
Nova Scotia	112,135	185,618	297,753	166,121	61,802	116,906	—	344,831
New Brunswick	145,771	154,915	300,686	86,906	76,430	50,779	—	215,011
Quebec	766,910	591,453	1,358,363	750,436	504,523	247,548	1,185,536	2,697,318
Ontario	678,043	668,400	1,346,443	714,343	463,404	764,448	1,307,751	3,251,099
Manitoba	214,435	122,526	336,961	93,965	109,036	—	235,710	439,580
Saskatchewan	398,279	180,979	579,258	86,379	41,504	124,587	—	252,470
Alberta	339,955	149,871	489,826	120,700	39,311	—	288,691	449,675
British Columbia	109,919	261,820	371,739	157,333	180,240	109,707	344,833	793,471
Yukon Territory	44	6,458	6,502	2,594	—	—	—	2,594
N.W.T.	28	13,252	13,280	2,724	—	—	—	2,724
Canada	**2,827,732**	**2,553,444**	**5,381,176**	**2,290,674**	**1,492,137**	**1,466,848**	**3,362,521**	**8,628,253**

[1] Exclusive of 84,264 persons living on farms in localities classed as urban. [2] Includes a few metropolitan area parts with fewer than 1,000 population.

Section 5.—Sex and Age Distribution

Sex.—The sex distribution of the Canadian people has been characterized since early colonial times by a preponderance of males, although this condition has been greatly modified in more recent years. In 1666, during the early years of settlement by French immigrants, 63·3 p.c. of the population were males. In 1784, when British immigration to Canada was commencing, there were 54,064 males and 50,759 females and by the middle of the nineteenth century there were 449,967 males to 440,294 females in Lower Canada and 499,067 males to 452,937 females in the more newly settled Upper Canada. Since Confederation, the newer sections of Canada—the west and the northwest—have shown the greatest excess of males.

From 1871 to 1941, for Canada as a whole, the proportion of males never dropped below 51 p.c. of the total population, whereas, for Western Canada it varied between 53 p.c. and 59 p.c. By 1951, however, the proportion of males to the total population had dropped to 50·6 p.c. for Canada as a whole.

12.—Sex Distribution of the Population, by Province, Census Years 1921-51

NOTE.—Figures for the Censuses of 1871, 1881, 1891, 1901 and 1911 are given in the 1948-49 Year Book, p. 150.

Province or Territory	1921		1931		1941		1951	
	Male	Female	Male	Female	Male	Female	Male	Female
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland	...	...	...	...	...	...	185,143	176,273
P.E. Island	44,887	43,728	45,392	42,646	49,228	45,819	50,218	48,211
Nova Scotia	266,472	257,365	263,104	249,742	296,044	281,918	324,955	317,629
New Brunswick	197,351	190,525	208,620	199,599	234,097	223,304	259,211	256,486
Quebec	1,179,651	1,180,859	1,447,326	1,427,336	1,672,982	1,658,900	2,022,127	2,033,554
Ontario	1,481,890	1,451,772	1,748,844	1,682,839	1,921,201	1,866,454	2,314,170	2,283,372
Manitoba	320,567	289,551	368,065	332,074	378,079	351,665	394,818	381,723
Saskatchewan	413,700	343,810	499,935	421,850	477,563	418,429	434,568	397,160
Alberta	324,208	264,246	400 199	331,406	426,458	369,711	492,192	447,309
British Columbia	293,409	231,173	385,219	309,044	435,031	382,830	596,961	568,249
Yukon	2,819	1,338	2,825	1,405	3,153	1,761	5,457	3,639
N.W.T.	4,204	3,939	5,012	4,304	6,700	5,328	9,053	6,951
Canada	**4,529,643**[1]	**4,258,306**	**5,374,541**	**5,002,245**	**5,900,536**	**5,606,119**	**7,088,873**	**6,920,556**

[1] Includes 485 members of the Royal Canadian Navy recorded separately in 1921.

Age.—The age distribution of a population is fundamental to most, if not all, other analyses, for the age factor influences employment, marriage, birth rates and death rates, education, immigration, criminology and a multitude of events and activities that are of great importance in the national life.

Immigration has a strong influence on age distribution: it does not directly affect the very young sections of the population except to a small degree, but it immediately affects the age groups between the 'teens' and the 'twenties' and its effects are carried to the older groups as time goes by. Thus, the influence of the

very heavy immigration of the early years of the century (1900-11) is indicated by the fact that, in 1901, 175·9 persons per 1,000 of the total population were in the age group 20-29 years and 131·3 persons per 1,000 in the group 30-39 years; a decade later, 190·7 per 1,000 were in the former group and 142·8 in the latter. Since immigration slowed down very decidedly after the outbreak of war in 1914, the influence of these earlier accretions to the population has crept through the upper age groups year by year until it has now reached those of the population in their 'fifties'.

Between 1931 and 1941 a more pronounced general ageing of the population is shown owing to practically non-existent immigration and a lower birth rate—factors that were emphasized during the depression years. In 1921, the number per 1,000 of total population between 40 and 59 years of age was 183; it was 201 in 1931 and 209 in 1941. Greater proportional increases, however, are shown by the group 60 years of age or over; this group represented 75 per 1,000 of the total population in 1921, 84 in 1931 and no less than 102 per 1,000 in 1941.

In 1951, there were 203·2 persons per 1,000 of total population between 40 and 59 years of age and 113·7 in the group 60 years of age or over. However, there were 222·7 persons per 1,000 of total population in the under 10 years of age group in 1951 as compared with 182·3 in 1941, 212·7 in 1931 and 240·0 in 1921.

Table 13 shows the population of Canada classified by five-year age groups and sex for the census years 1931, 1941 and 1951. The provincial distribution from the 1951 Census, by specified age groups, is shown in Table 14.

13.—Male and Female Populations by Age Group, Census Years 1931-51

Age Group	1931[1]		1941		1951	
	Male	Female	Male	Female	Male	Female
	No.	No.	No.	No.	No.	No.
0- 4 years	543,299	531,293	533,903	517,951	879,063	843,046
5- 9 "	572,648	560,296	529,092	516,728	713,873	683,952
10-14 "	543,067	531,173	556,304	544,573	575,122	555,661
15-19 "	525,536	514,474	565,212	554,823	532,180	525,792
20-24 "	463,978	447,584	517,956	514,470	537,535	551,106
25-29 "	410,220	376,407	488,340	478,650	552,812	578,403
30-34 "	368,346	340,792	431,591	412,255	512,557	530,177
35-39 "	359,318	329,474	396,453	363,101	503,571	495,562
40-44 "	347,989	298,416	348,616	327,929	445,800	422,767
45-49 "	321,749	263,770	332,503	302,643	387,708	356,971
50-54 "	267,526	221,408	315,866	275,838	340,461	322,195
55-59 "	199,296	167,910	275,234	231,658	292,564	278,126
60-64 "	157,019	137,722	218,557	188,594	264,324	241,828
65-69 "	120,770	110,467	162,517	145,207	228,076	205,421
70-74 "	88,630	83,040	111,152	105,949	160,398	154,674
75-79 "	50,046	48,624	67,200	68,495	94,130	94,261
80-84 "	23,891	25,300	34,083	37,431	45,963	50,828
85-89 "	8,670	10,469	12,621	15,015	17,539	22,060
90 years or over	2,543	3,626	3,336	4,809	5,197	7,726
Totals	**5,374,541**	**5,002,245**	**5,900,536**	**5,606,119**	**7,088,873**	**6,920,556**

[1] Persons whose ages were not stated have been pro-rated over the various age groups.

14.—Age Distribution of the Population, by Province, 1951

Province or Territory	0-4	5-9	10-14	15-19	20-24	25-34
	No.	No.	No.	No.	No	No.
Newfoundland	58,831	46,433	36,126	30,403	26,718	48,871
Prince Edward Island	13,213	10,358	9,294	8,296	6,557	12,739
Nova Scotia	82,540	68,816	58,131	51,533	46,275	93,276
New Brunswick	74,869	59,504	49,541	42,850	36,559	72,167
Quebec	541,524	463,444	361,140	337,501	340,902	629,310
Ontario	514,722	399,292	325,300	315,685	352,360	738,282
Manitoba	89,977	72,594	60,143	57,188	58,752	120,780
Saskatchewan	99,855	81,782	73,615	68,482	62,613	122,602
Alberta	116,846	93,063	76,897	73,941	75,527	148,666
British Columbia	125,886	99,892	78,609	70,230	79,824	182,370
Yukon Territory	1,319	809	526	435	934	2,115
Northwest Territories	2,527	1,838	1,461	1,428	1,620	2,771
Canada	**1,722,109**	**1,397,825**	**1,130,783**	**1,057,972**	**1,088,641**	**2,173,949**

Province or Territory	35-44	45-54	55-64	65-69	70+	Total
	No.	No.	No	No.	No.	No.
Newfoundland	41,417	27,883	21,244	9,071	14,419	361,416
Prince Edward Island	11,641	8,985	7,639	3,268	6,439	98,429
Nova Scotia	82,912	57,822	46,354	19,440	35,485	642,584
New Brunswick	61,576	44,147	35,451	14,286	24,747	515,697
Quebec	518,290	375,657	255,816	93,161	138,936	4,055,681
Ontario	643,139	515,607	392,792	155,097	245,266	4,597,542
Manitoba	105,984	78,852	66,803	27,347	38,121	776,541
Saskatchewan	107,217	79,188	69,161	29,103	38,110	831,728
Alberta	123,480	92,480	71,658	29,439	37,504	939,501
British Columbia	168,819	124,693	108,750	52,927	73,210	1,165,210
Yukon Territory	1,313	750	428	186	281	9,096
Northwest Territories	1,912	1,271	746	172	258	16,004
Canada	**1,867,700**	**1,407,335**	**1,076,842**	**433,497**	**652,776**	**14,009,429**

Section 6.—Marital Status

Next to the sex and age distribution of a population, that of marital status is probably most fundamental from a vital, economic and social viewpoint. The number of married females between 15 and 45 years of age is a most significant factor in the fertility of a population; if the proportion of females in this group is small, the expected proportion of births will also be small. In 1951, 64·0 p.c. of all married females were in the age group 15-44 as compared with 61·6 p.c. in 1941 and 63·5 p.c. in 1931. This indicates a resumption of conditions favourable to the birth rate that prevailed from 1871 to 1921 but was arrested temporarily during the period of world-wide depression.

15.—Marital Status of the Population, 15 Years of Age or Over, by Sex, Census Years 1911-51

NOTE.—Persons whose marital status was not stated have been pro-rated and assigned to the various categories shown in this table.

Census Year and Sex	Single		Married		Widowed		Divorced		Total
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.
1911 M.	1,182,167	45·12	1,345,386	51·35	90,121	3·44	2,143[1]	0·08	2,619,817
F.	770,174	34·85	1,256,909	56·87	180,910	8·18	2,283[1]	0·10	2,210,276
1921 M.	1,177,952	39·21	1,702,526	56·67	120,020	4·00	3,675[1]	0·12	3,004,173
F.	884,568	32·04	1,635,009	59·23	237,112	8·59	3,736[1]	0·14	2,760,425
1931 M.	1,522,491	40·98	2,039,918[1]	54·90	149,063	4·01	4,055	0·11	3,715,527
F.	1,149,329	34·01	1,938,094[1]	57·35	288,668	8·54	3,392	0·10	3,379,483
1941 M.	1,703,795	39·80	2,400,100[1]	56·06	170,773	3·99	6,569	0·15	4,281,237
F.	1,328,529	32·99	2,336,485[1]	58·02	354,390	8·80	7,463	0·19	4,026,867
1951 M.	1,579,351	32·09	3,141,754[1]	63·85	186,595	3·79	13,115	0·27	4,920,815
F.	1,242,437	25·68	3,119,824[1]	64·49	456,753	9·44	18,883	0·39	4,837,897

[1] Includes legally separated.

Although Canada has more single than married citizens, information from the 1951 Census shows that the nation's married population grew more than twice as fast as the single population in the decade between 1941 and 1951. With a total population increase of nearly 22 p.c., the number of single persons in Canada increased by 13·5 p.c., married by 32·2 p.c., widowed by 22·5 p.c. and divorced by 128·0 p.c. The entry of Newfoundland into Confederation accounted for 3·3 p.c. of the increase in single persons, 2·9 p.c. in married and widowed persons and 0·5 p.c. in divorced persons. Other striking statistics of marital status are the excess of married males over married females, the great preponderance of widows compared with widowers and the large and increasing number of divorced persons.

16.—Marital Status of the Population, by Age Group and Sex, 1951

Age Group and Sex		Single	Married	Widowed	Divorced	Total
		No.	No.	No.	No.	No.
Under 15 years	M.	2,168,058	—	—	—	2,168,058
	F.	2,082,659	—	—	—	2,082,659
	T.	4,250,717	—	—	—	4,250,717
15 - 19 "	M.	526,909	5,255	15	1	532,180
	F.	484,056	41,633	83	20	525,792
	T.	1,010,965	46,888	98	21	1,057,972
20 - 24 "	M.	400,136	137,054	197	148	537,535
	F.	267,409	282,290	823	584	551,106
	T.	667,545	419,344	1,020	732	1,088,641
25 - 34 "	M.	294,318	766,504	2,409	2,138	1,065,369
	F.	192,921	901,073	9,496	5,090	1,108,580
	T.	487,239	1,667,577	11,905	7,228	2,173,949
35 - 44 "	M.	134,409	803,711	7,431	3,820	949,371
	F.	113,554	771,939	26,086	6,750	918,329
	T.	247,963	1,575,650	33,517	10,570	1,867,700
45 - 54 "	M.	93,992	613,008	17,637	3,532	728,169
	F.	76,738	539,854	58,437	4,137	679,166
	T.	170,730	1,152,862	76,074	7,669	1,407,335
55 - 64 "	M.	64,748	453,977	36,041	2,122	556,888
	F.	52,010	360,651	105,626	1,667	519,954
	T.	116,758	814,628	141,667	3,789	1,076,842
65 - 69 "	M.	27,706	170,043	29,641	686	228,076
	F.	19,717	115,574	69,783	347	205,421
	T.	47,423	285,617	99,424	1,033	433,497
70 years or over	M.	37,133	192,202	93,224	668	323,227
	F.	36,032	106,810	186,419	288	329,549
	T.	73,165	299,012	279,643	956	652,776
All Ages	**M.**	**3,747,409**	**3,141,754**	**186,595**	**13,115**	**7,088,873**
	F.	**3,325,096**	**3,119,824**	**456,753**	**18,883**	**6,920,556**
	T.	**7,072,505**	**6,261,578**	**643,348**	**31,998**	**14,009,429**

Section 7.—Origins

A population composed of diverse racial stocks gives rise to political, economic and social problems quite different in nature from those of one with a small admixture of foreign elements, although, to the extent that certain racial stocks are more readily assimilated than others, the problems are mitigated. It is equally true that the different educational, moral, economic, religious and political backgrounds of a people of mixed origins lend variety and diversity to the national life.

The two basic stocks of the Canadian people are the French and the English: historically the French is much the older and, excepting at the time of the Census of 1921, has exceeded in numbers any one of the basic British stocks.

For purposes of the census, a person's origin or cultural group is traced through his father. For example, if a person's father is German and his mother Norwegian, the origin is entered as "German" Wherever possible, the origin of a person is established by asking the language spoken by the person or by his paternal ancestor when he first came to Canada.

Table **17** shows the population of Canada for the census years 1931, 1941 and 1951 classified by origins, while Table **18** presents the 1951 provincial distribution based on a classification of the numerically largest origins in Canada.

17.—Origins of the Population, Census Years 1931-51

NOTE.—Figures for the Decennial Censuses 1871-1921 are given in the 1948-49 Year Book, p. 154.

Origin	1931	1941	1951	Origin	1931	1941	1951
	No.	No.	No.		No.	No.	No.
British	**5,381,071**	**5,715,904**	**6,709,685**	**Other European—** concluded			
English	2,741,419	2,988,402	3,630,344	Norwegian	93,243	100,718	119,266
Irish	1,230,808	1,267,702	1,439,635	Polish	145,503	167,485	219,845
Scottish	1,346,350	1,403,974	1,547,470	Roumanian	29,056	24,689	23,601
Other	62,494	75,826	92,236	Russian[1]	88,148	83,708	91,279
				Swedish	81,306	85,396	97,780
				Ukrainian	225,113	305,929	395,043
				Yugoslavic	16,174	21,214	21,404
Other European	**4,753,242**	**5,526,964**	**6,872,889**	Other	9,392	9,787	35,616
French	2,927,990	3,483,038	4,319,167				
Austrian	48,639	37,715	32,231				
Belgian	27,585	29,711	35,148	**Asiatic**	**84,548**	**74,064**	**72,827**
Czech and Slovak	30,401	42,912	63,959	Chinese	46,519	34,627	32,528
Danish	34,118	37 439	42,671	Japanese	23,342	23,149	21,663
Finnish	43,885	41,683	43,745	Other	14,687	16,288	18,636
German	473,544	464,682	619,995				
Greek	9,444	11,692	13,966	**Other Origins**	**157,925**	**189,723**	**354,028**
Hungarian	40,582	54,598	60,460	Native Indian and Eskimo	128,890	125,521	165,607
Icelandic	19,382	21,050	23,307	Negro	19,456	22,174	18,020
Italian	98,173	112,625	152,245	Other and not stated	9,579	42,028[2]	170,401
Jewish	156,726	170,241	181,670				
Lithuanian	5,876	7,789	16,224	**Totals**	**10,376,786**	**11,506,655**	**14,009,429**
Netherlanders	148,962	212,863	264,267				

[1] Includes Asiatic Russian. [2] Includes 35,416 half-breeds.

18.—Origins of the Population, by Province, 1951

Province or Territory	British	French	German	Italian	Jewish	Netherlanders
	No.	No.	No.	No.	No.	No.
Newfoundland	337,780	9,841	368	103	214	176
Prince Edward Island	80,669	15,477	317	56	21	677
Nova Scotia	482,571	73,760	28,751	2,494	2,053	20,819
New Brunswick	294,694	197,631	2,623	635	1,095	5,920
Quebec	491,818	3,327,128	12,249	34,165	73,019	3,129
Ontario	3,081,919	477,677	222,028	87,622	74,920	98,373
Manitoba	362,550	66,020	54,251	2,882	18,840	42,341
Saskatchewan	351,862	51,930	135,584	1,028	2,702	29,818
Alberta	451,709	56,185	107,985	5,996	3,935	29,385
British Columbia	766,189	41,919	55,307	17,207	4,858	33,388
Yukon and Northwest Territories	7,924	1,599	532	57	13	241
Canada	**6,709,685**	**4,319,167**	**619,995**	**152,245**	**181,670**	**264,267**

Province or Territory	Polish	Russian	Scandinavian	Ukrainian	Indian and Eskimo	Total[1]
	No.	No.	No.	No.	No.	No.
Newfoundland	79	79	569	20	1,127	361,416
Prince Edward Island	54	12	253	47	257	98,429
Nova Scotia	2,364	699	3,193	1,235	2,720	642,584
New Brunswick	340	220	3,367	129	2,255	515,697
Quebec	16,998	7,909	5,390	12,921	16,620	4,055,681
Ontario	89,825	16,885	37,430	93,595	37,388	4,597,542
Manitoba	37,933	8,463	32,921	98,753	21,050	776,541
Saskatchewan	26,034	19,453	62,439	78,399	22,253	831,728
Alberta	29,661	15,353	70,929	86,957	21,210	939,501
British Columbia	16,301	22,113	65,612	22,613	28,504	1,165,210
Yukon and Northwest Territories	256	93	921	374	12,223	25,100
Canada	**219,845**	**91,279**	**283,024**	**395,043**	**165,607**	**14,009,429**

[1] Includes "others" and "not stated".

Section 8.—Religious Denominations

At each census the actual numbers attached to any religious denomination, as reported by the persons enumerated, have been recorded. The distribution of the principal denominations as at the Censuses of 1931, 1941 and 1951 is given in Table **19**, and the 1951 provincial distribution is presented in less detail in Table **20**.

19.—Principal Religious Denominations of the Population, Census Years 1931-51

NOTE.—More detailed figures for the Decennial Censuses 1871-1921 are given in the 1948-49 Year Book, p. 155.

Religious Denomination	1931	1941	1951		Religious Denomination	1931	1941	1951	
	No.	No.	No.	p.c.		No.	No.	No.	p.c.
Adventist	16,058	18,485	21,398	0·2	Pentecostal	26,349	57,742	95,131	0·7
Baptist	443,944	484,465	519,585	3·7	Presbyterian	872,428	830,597	781,747	5·6
Christian Science	18,499	20,261	20,795	0·1	Roman Catholic	4,102,960	4,806,431	6,069,496	43·3
Church of England in Canada	1,639,075	1,754,368	2,060,720	14·7	Salvation Army	30,773	33,609	70,275	0·5
Evangelical Church	22,239	37,064	50,900	0·4	Ukrainian (Greek) Catholic	186,879	185,948	190,831	1·4
Greek Orthodox	102,529	139,845	172,271	1·2	United Church of Canada	2,021,065	2,208,658	2,867,271	20·5
Jewish	155,766	168,585	204,836	1·5	Other	232,424	221,879	280,424	2·0
Lutheran	394,920	401,836	444,923	3·2					
Mennonite[1]	88,837	111,554	125,938	0·9					
Mormon	22,041	25,328	32,888	0·2	**Totals**	**10,376,786**	**11,506,655**	**14,009,429**	**100·0**

[1] Includes "Hutterite".

20.—Principal Religious Denominations of the Population, by Province, 1951

Province or Territory	Baptist	Church of England in Canada	Greek Orthodox	Jewish	Lutheran	Mennonite[1]
	No.	No.	No.	No.	No.	No.
Newfoundland	249	109,090	16	264	202	3
Prince Edward Island	5,319	6,119	30	26	43	6
Nova Scotia	94,103	117,602	450	2,201	9,743	23
New Brunswick	90,681	59,847	161	1,269	1,016	30
Quebec	12,950	166,761	13,831	82,701	9,390	220
Ontario	212,467	936,002	48,684	85,467	135,581	25,796
Manitoba	13,483	120,690	23,338	19,282	48,744	44,667
Saskatchewan	15,606	95,476	34,506	3,017	91,454	26,270
Alberta	34,720	122,980	40,199	4,626	87,364	13,528
British Columbia	39,445	315,469	10,892	5,969	60,641	15,387
Yukon and Northwest Territories	562	10,684	164	14	745	8
Canada	**519,585**	**2,060,720**	**172,271**	**204,836**	**444,923**	**125,938**

Province or Territory	Presbyterian	Roman Catholic	Ukrainian (Greek) Catholic	United Church of Canada	Other	Total
	No.	No.	No.	No.	No.	No.
Newfoundland	1,914	121,544	8	85,571	42,555	361,416
Prince Edward Island	13,383	44,802	1	25,969	2,731	98,429
Nova Scotia	42,422	217,978	666	141,152	16,244	642,584
New Brunswick	13,323	260,742	20	71,879	16,729	515,697
Quebec	50,410	3,563,951	5,657	129,219	20,591	4,055,681
Ontario	439,072	1,142,140	39,531	1,320,366	212,436	4,597,542
Manitoba	34,686	156,283	63,617	224,554	27,197	776,541
Saskatchewan	33,290	199,424	37,205	247,345	48,135	831,728
Alberta	55,004	186,312	37,514	276,551	80,703	939,501
British Columbia	97,151	168,016	6,516	341,914	103,810	1,165,210
Yukon and Northwest Territories	1,092	8,304	96	2,751	680	25,100
Canada	**781,747**	**6,069,496**	**190,831**	**2,867,271**	**571,811**	**14,009,429**

[1] Includes "Hutterite".

Section 9.—Countries of Birth

The census collects information on both country of birth of immigrant arrivals in Canada and province of birth of the native-born. For persons born outside of Canada the country of birth, as constituted at the date of the census, is recorded. Table 21 gives the total population by country of birth for the census years 1931, 1941 and 1951.

21.—Countries of Birth of the Population, Census Years 1931-51

NOTE.—Figures for the Decennial Censuses 1871-1921 are given in the 1948-49 Year Book, p. 158.

Country of Birth	1931	1941	1951	Country of Birth	1931	1941	1951
	No.	No.	No.		No.	No.	No.
Canada	8,069,261	9,487,808	11,949,518	Europe—concl.			
United Kingdom	1,138,942[1]	960,125[1]	912,482	Union of Soviet Socialist Republics[2]	133,869	124,402	188,292
Other Commonwealth	45,888	43,644	20,567	Scandinavian countries[3]	90,042	72,473	64,522
Europe	714,462	653,705	801,618	Central European countries[4]	317,350	309,360	305,192
Belgium	17,033	14,773	17,251	Other Europe	11,002	9,810	33,143
Finland	30,354	24,387	22,035	Asia	60,608	44,443	37,145
France	16,756	13,795	15,550	United States	344,574	312,473	282,010
Germany	39,163	28,479	42,693	Other countries	3,051	3,512	6,089
Greece	5,579	5,871	8,594				
Italy	42,578	40,432	57,789				
Netherlands, The	10,736	9,923	41,457	**Totals**	**10,376,786**	**11,506,655**[5]	**14,009,429**

[1] Includes the 26 counties of Eire in 1931 and 1941. [2] Includes Lithuania and Ukraine. [3] Includes Denmark, Iceland, Norway and Sweden. [4] Includes Austria, Czechoslovakia, Hungary, Yugoslavia, Poland and Roumania. [5] Includes "birthplace not stated".

Section 10.—Languages and Mother Tongues

Official language is not to be confused with mother tongue. Mother tongue is the language a person first spoke in childhood and still understands; official language (a term used herein for census purposes) refers only to the English and French languages. The numbers of persons speaking one, both or neither of the official languages are given in Table 22, classified by origin.

22.—Population Speaking One, Both or Neither of the Official Languages, by Origin, 1951

NOTE.—Infants are classed as speaking the language of the home.

Origin	Population Speaking—				Total
	English Only	French Only	English and French	Neither English nor French	
	No.	No.	No	No.	No.
British Isles[1]	6,431,396	24,519	253,262	508	6,709,685
French	291,252	2,688,063	1,339,118	734	4,319,167
Other European	2,314,727	20,177	117,533	101,285	2,553,722
German	597,229	2,096	10,043	10,627	619,995
Italian	108,280	7,420	23,878	12,667	152,245
Jewish	147,350	731	28,237	5,352	181,670
Netherlander	247,049	456	4,652	12,110	264,267
Polish	196,407	1,562	8,920	12,956	219,845
Russian	81,798	533	3,962	4,986	91,279
Scandinavian[2]	277,046	554	4,026	1,398	283,024
Ukrainian	360,304	1,901	7,315	25,523	395,043
Other	299,264	4,924	26,500	15,666	346,354
Asiatic	59,180	1,034	5,051	7,562	72,827
Native Indian and Eskimo	115,531	3,814	3,917	42,345	165,607
Other and not stated	175,309	4,205	8,566	341	188,421
Totals	**9,387,395**	**2,741,812**	**1,727,447**	**152,775**	**14,009,429**

[1] Includes English, Scottish, Irish, Welsh and Manx. [2] Includes Danish, Icelandic, Norwegian and Swedish.

Mother tongue spoken is dealt with in Table 23, which shows that 1,659,770 persons had neither English nor French as mother tongue.

23.—Mother Tongues of the Population, 1951

NOTE.—Infants are classed as speaking the language of the home.

Mother Tongue	Number	Percentage of Total	Mother Tongue	Number	Percentage of Total
English	8,280,809	59·11	Lithuanian	12,307	0·09
French	4,068,850	29·04	Magyar	42,402	0·30
Chinese	28,289	0·20	Netherlander	87,935	0·63
Danish	15,714	0·11	Norwegian	43,831	0·31
Estonian	8,784	0·06	Polish	129,238	0·92
Finnish	31,771	0·23	Roumanian	10,105	0·07
Flemish	12,623	0·09	Russian	39,223	0·28
Gaelic	13,974	0·10	Serbo-Croatian	11,031	0·08
German	329,302	2·35	Slovak	45,516	0·32
Greek	8,036	0·06	Swedish	36,096	0·26
Icelandic	11,207	0·08	Syrian and Arabic	5,475	0·04
Indian and Eskimo	144,787	1·03	Ukrainian	352,323	2·51
Italian	92,244	0·66	Yiddish	103,593	0·74
Japanese	17,589	0·12	Other	19,356	0·14
Lettish	7,019	0·05	**Totals**	**14,009,429**	**100·00**

Section 11.—Dwellings, Households and Families

Included in this Section is a summary of the principal statistics on dwellings, households and families recorded at the Census of 1951. More detailed information may be found in Volume III of the 1951 Census.

Dwellings and Households.*—The 1941 Census of Housing was based on a 10-p.c. sample of dwellings situated within the nine provinces. For the 1951 Census, the size of the sample was increased to 20 p.c. and the coverage included Newfoundland but, as in 1941, did not extend to the Yukon and Northwest Territories. For comparison purposes, Newfoundland is omitted from the 1951 figures in Tables **24** and **25**.

Table **24** shows that the increase in the number of dwellings during the 1941-51 decade was 11 p.c. higher than the increase in population, thus reducing the number of persons per dwelling from 4·3 to 4·0. Definitional changes between 1941 and 1951 are partly responsible for the relatively larger increase in dwellings, particularly of the apartment and flat type. Since owned dwellings increased by 49·1 p.c. and rented dwellings by only 4·2 p.c., it would appear that many people who were tenants in 1941 have since bought homes, and that most new homes were built for owners rather than for tenant occupancy.

24.—Dwelling Characteristics, Census Years 1941 and 1951

(Exclusive of Newfoundland and the Territories)

Item	1941	1951	Increase 1941-51	
	No.	No.	No.	p.c.
Population	11,489,713	13,622,913	2,133,200	18·6
Occupied Dwellings[1]	2,575,744	3,338,315	762,571	29·6
Single detached	1,853,454	2,216,275	362,821	19·6
Apartments and flats	533,034	881,245	348,211	65·3
Single attached	189,256	240,795[2]	51,539	27·2
Owned	1,459,357	2,175,415	716,058	49·1
Rented	1,116,387	1,162,900	46,513	4·2
Rooms per dwelling	5·5	5·3	...	...
Persons per dwelling	4·3	4·0	...	...

[1] Exclusive of hotels, institutions, camps, etc. other miscellaneous types.

[2] Includes auto-trailers, houseboats, tents and

The statistics of Table **25** reflect the high level of prosperity throughout the decade in both urban and rural areas. In 1951 a higher percentage of homes had indoor plumbing, electricity and furnace heating, and had such conveniences as mechanical refrigerators, electric vacuum cleaners, telephones, radios and passenger automobiles. There was a sharp drop in the number of homes needing major

* 1951 Census definitions are briefly as follows: DWELLINGS.—A *Dwelling* is defined as a structurally separate set of living premises with private entrance from outside the building, or from a common hallway or stairway inside. A *Single Detached Dwelling*, commonly called a single house, is a house containing one dwelling unit and completely separated on all sides from any other building or structure. *Apartments and Flats* include dwelling units in apartment blocks, suites in duplexes or triplexes, suites in structurally converted houses, living quarters located in business premises, janitor's quarters in schools, etc. In determining the number of *Rooms* in a dwelling, only those used or suitable for living purposes, including rooms occupied by servants, lodgers, or members of lodging families, are counted. HOUSING.—A *Household* is a person or group of persons occupying one dwelling unit, the number of households thus equalling the number of occupied dwellings. Every person must be a member of some household, whether it consists of a family group with or without servants, lodgers, etc., a group of unrelated persons sharing a dwelling, or one person living alone. A dwelling is classed in need of *Major Repair* if it possesses any one of the following defects: sagging or rotting foundations indicated by cracked or leaning walls; faulty roof or chimney; unsafe outside steps or stairways; interior badly in need of repair. A *Crowded Dwelling* (or Household) is defined as one in which the number of persons exceeds the number of rooms occupied.

repair. Washing machines are not shown in Table **25** because there are no comparable 1941 figures but, in 1951, 72·5 p.c. of the dwellings possessed a powered type of washing machine. While much of this advance may be attributed to general prosperity, part of the explanation of the trend is to be found in the increasing urbanization of the Canadian population and the availability of modern conveniences to rural areas.

25.—Housing Characteristics, Census Years 1941 and 1951

(Exclusive of Newfoundland and the Territories)

Characteristics	1941		1951		Increase 1941-51	
	No.	P.C. of Total	No.	P.C. of Total	No.	P.C.
Occupied Dwellings—						
In need of major repair	695,736	27·0	450,625	13·5	−245,111	−28·4
Crowded dwellings[1]	148,418	18·4	175,995	16·0	27,577	18·6
Dwellings with—						
Electric lighting	1,780,667	69·1	2,929,450	87·8	1,148,783	64·5
Furnace heating	997,588	38·7	1,632,275	48·9	634,687	63·6
Running water	1,558,586	60·5	2,503,080	75·0	944,494	60·6
Flush toilet[2]	1,342,198	52·1	2,170,815	65·0	828,617	61·7
Bath or shower[2]	1,169,760	45·4	1,926,455	57·7	756,695	64·7
Electric or gas range	1,019,421	39·6	1,696,130	50·8	676,709	66·4
Electric or gas refrigeration	538,535	20·9	1,589,625	47·6	1,051,090	195·2
Electric vacuum cleaner	624,178	24·2	1,409,090	42·2	784,912	125·8
Telephone	1,037,298	40·3	2,013,640	60·3	976,342	94·1
Radio	2,002,889	77·8	3,086,695	92·5	1,083,806	54·1
Passenger automobile	944,591	36·7	1,435,925	43·0	491,334	52·0
Owner-occupied non-farm dwellings reporting a mortgage	275,623	31·2	515,035	30·9	239,412	86·9
Monthly Rent of Tenant-occupied Non-farm Dwellings—						
Under $30[3]	738,294	75·1	501,540	45·5	−236,754	−32·1
$30–$59	221,189	22·5	437,815	39·8	216,626	97·9
$60 or over	24,034	2·4	162,265	14·7	138,231	575·1

[1] For cities of 30,000 or over only. [2] For exclusive use of household. [3] Includes "rent-free" dwellings.

Of the 3,409,295 occupied dwellings in 1951 (including Newfoundland but excluding the Yukon and Northwest Territories), 18·9 p.c. were farm dwellings, of which more than 90 p.c. were owner-occupied. In comparison, 59·8 p.c. of the 2,765,005 non-farm dwellings were owner-occupied. Among the provinces, Newfoundland had the largest proportion of owner-occupied non-farm dwellings with 86·2 p.c., followed by Nova Scotia with 72·3 p.c. Quebec had the smallest proportion with 39·8 p.c. Of the total owner-occupied non-farm homes in Canada, 40·4 p.c. were in Ontario and 17·4 p.c. in Quebec. A mortgage was reported by 31·3 p.c. of the owner-occupied non-farm dwellings. In this respect, Ontario was highest with 40·1 p.c., followed by Quebec with 32·6 p.c. and British Columbia with 30·7 p.c. Newfoundland reported the lowest percentage with 3·4 p.c. The median rent for non-farm dwellings was also highest in Ontario at $38 and lowest in Newfoundland at $24.

26.—Occupied Dwellings by Tenure, Farm and Non-farm, showing, for Non-farm Dwellings, Reported Mortgages and Median Rents, by Province, 1951

Province	Owned			Rented			Total Occupied Dwellings
	Farm	Non-farm		Farm	Non-farm		
		Total	Reporting Mortgage		Total	Median Rent	
	No.	No.	No.	No.	No.	$	No.
Newfoundland	3,415	58,125	1,970	100	9,340	24	70,980
Prince Edward Island	10,330	7,975	1,755	370	3,780	33	22,455
Nova Scotia	24,830	89,115	16,435	1,430	34,180	27	149,555
New Brunswick	27,615	53,595	8,505	1,085	31,715	26	114,010
Quebec	128,385	288,575	94,145	4,830	436,995	32	858,785
Ontario	152,710	668,625	267,955	18,915	340,875	38	1,181,125
Manitoba	46,550	98,095	28,765	5,355	52,400	36	202,400
Saskatchewan	85,375	79,425	8,905	14,730	41,925	27	221,455
Alberta	74,785	104,270	25,175	11,275	60,420	34	250,750
British Columbia	28,915	206,245	63,395	3,290	99,330	35	337,780
Canada[1]	**582,910**	**1,654,045**	**517,005**	**61,380**	**1,110,960**	**34**	**3,409,295**

[1] Exclusive of the Territories.

Table 27 shows that 66·7 p.c. of the occupied dwellings were of the single detached type, 26 p.c. apartments and flats and 7 p.c. single attached. The percentage of single detached dwellings was highest in Saskatchewan with 86·7 p.c. and lowest in Quebec with 39·7 p.c. The single attached type was highest in Ontario with 11·3 p.c. and lowest in Alberta with 3·1 p.c. Quebec had by far the largest percentage of apartments and flats, 55·9 p.c. of its occupied dwellings being in that category.

27.—Occupied Dwellings by Type, with Average Number of Rooms per Dwelling, Persons per Dwelling, and Persons per Room, by Province, 1951

Province	Type			Average Number of—			Total Occupied Dwellings
	Single Detached	Single Attached	Apartments and Flats	Rooms per Dwelling	Persons per Dwelling	Persons per Room	
	No.	No.	No.	No.	No.	No.	No.
Newfoundland	59,340	7,210	4,320	5·6	5·0	0·9	70,980
Prince Edward Island	18,790	1,890	1,730	6·6	4·3	0·7	22,455
Nova Scotia	117,245	12,260	19,800	6·0	4·2	0·7	149,555
New Brunswick	83,220	9,200	21,380	6·0	4·4	0·7	114,010
Quebec	341,310	35,870	480,215	5·5	4·6	0·8	858,785
Ontario	823,930	133,855	219,360	5·7	3·8	0·7	1,181,125
Manitoba	158,615	7,300	36,090	4·7	3·7	0·8	202,400
Saskatchewan	192,100	8,815	19,705	4·6	3·7	0·8	221,455
Alberta	204,000	7,850	37,085	4·5	3·6	0·8	250,750
British Columbia	277,065	13,405	45,880	4·6	3·3	0·7	337,780
Canada[1]	**2,275,615**	**237,655**	**885,565**	**5·3**	**4·0**	**0·7**	**3,409,295**

[1] Exclusive of the Territories.

Canadian homes, on the whole, were well equipped with household facilities. Among the provinces, a higher percentage of Ontario dwellings contained each of the listed facilities except radios, of which Quebec had a slightly higher percentage; Newfoundland showed the lowest percentage.

28.—Household Facilities in Occupied Dwellings, by Province, 1951

Province	Electric or Gas Range	Electric or Gas Refrigerator	Powered Washing Machine	Electric Vacuum Cleaner	Telephone	Radio	Passenger Automobile	Total Occupied Dwellings
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland	3,310	5,355	18,570	4,520	14,810	56,860	6,670	70,980
P.E. Island	1,875	4,285	9,635	3,895	9,005	20,150	8,665	22,455
Nova Scotia	20,650	45,565	96,870	41,890	76,770	135,125	47,525	149,555
New Brunswick	18,260	29,710	74,375	29,940	52,495	100,975	35,880	114,010
Quebec	385,330	401,020	645,075	283,335	499,565	802,540	231,940	858,785
Ontario	879,660	728,670	927,390	648,035	864,580	1,098,480	640,135	1,181,125
Manitoba	106,095	94,675	140,160	83,305	111,425	186,890	86,915	202,400
Saskatchewan	40,995	48,995	147,930	56,325	108,560	203,955	110,205	221,455
Alberta	121,835	87,230	177,140	92,115	99,070	230,260	121,335	250,750
British Columbia	121,430	149,475	234,330	170,250	192,170	308,320	153,325	337,780
Canada[1]	**1,699,440**	**1,594,980**	**2,471,475**	**1,413,610**	**2,028,450**	**3,143,555**	**1,442,595**	**3,409,295**

[1] Exclusive of the Territories.

The proportion of dwellings with furnace heating ranged from 62·9 p.c. in Ontario to 7·6 p.c. in Newfoundland. In the case of running water, Quebec led all provinces with 89·5 p.c., while Saskatchewan was lowest with 26·7 p.c. Quebec had also the highest proportion of dwellings with flush toilets (81·6 p.c.) and Saskatchewan the lowest with 19·1 p.c. In the case of dwellings reporting a bath or shower, British Columbia showed the highest percentage with 74·8 and Newfoundland the lowest with 16·4.

Wood and brick (or brick veneer) were the two principal exterior materials used in dwellings across Canada. Wood predominated in the Atlantic and western provinces but in Ontario and Quebec brick or brick veneer ranked first. A fairly high percentage of stucco was used in the western provinces, running from 24·2 p.c. in British Columbia to 13·9 p.c. in Manitoba, while 13·3 p.c. of the dwellings in Ontario and Quebec were of imitation brick or other sidings.

29.—Heating and Plumbing Facilities in Occupied Dwellings, Exterior Material, and Dwellings in Need of Major Repair, by Province, 1951

Province	Furnace Heating	Running Water	Flush Toilet[1]	Bath or Shower[1]	Exterior Material		Dwellings in Need of Major Repair	Total Occupied Dwellings
					Wood	Brick or Brick Veneer		
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland	5,410	20,525	16,210	11,640	69,070	365	6,945	70,980
P. E. Island	6,710	9,685	7,460	6,760	20,840	310	2,885	22,455
Nova Scotia	57,480	97,075	73,540	63,245	138,735	2,500	19,505	149,555
New Brunswick	36,475	68,330	55,480	46,115	98,335	4,365	22,350	114,010
Quebec	289,375	768,830	700,385	525,690	288,635	373,540	136,035	858,785
Ontario	743,240	970,980	846,760	805,035	339,630	553,630	115,350	1,181,125
Manitoba	119,705	110,385	90,425	87,625	132,320	23,400	27,440	202,400
Saskatchewan	86,675	59,180	42,395	44,010	159,810	15,470	45,325	221,455
Alberta	117,315	124,495	96,475	95,355	173,795	12,465	48,205	250,750
British Columbia	175,300	294,120	257,895	252,620	234,745	7,990	33,530	337,780
Canada[2]	**1,637,685**	**2,523,605**	**2,187,025**	**1,938,095**	**1,655,915**	**994,035**	**457,570**	**3,409,295**

[1] For exclusive use of household. [2] Exclusive of the Territories.

Housing data for 15 large metropolitan areas show some striking variations. The proportion of single detached dwellings was highest in Victoria with 76·6 p.c. followed closely by Vancouver with 74·4 p.c. The lowest proportion was shown in Montreal with 11·4 p.c. followed by Quebec with 20·7 p.c. As might be expected, the positions were reversed for apartments and flats. The proportion of

owner-occupied dwellings was highest in Toronto with 70·8 p.c., followed by Victoria with 69·6 p.c. and Vancouver with 68·5 p.c. In Montreal, 75·6 p.c. of the dwellings were tenant-occupied, in Quebec 63·8 p.c. and in Saint John 62·1 p.c. Median monthly rents ranged from a high of $53 in Toronto, $46 in London and $44 in Ottawa, to a low of $26 in Saint John, $28 in St. John's and $33 in Quebec.

30.—Dwelling Characteristics, by Census Metropolitan Area, 1951

NOTE.—Numbers of rooms and persons per dwelling and numbers of crowded dwellings for these areas are given in Vol. III of the Census of 1951.

Metropolitan Area	Population	Occupied Dwellings	Owner-occupied		Tenant-occupied		Single Detached Dwellings	Apartments and Flats
			Total	Reporting a Mortgage	Total	Median Rent		
	No.	No.	No.	No.	No.	$	No.	No.
Calgary, Alta.	139,105	40,235	24,135	8,980	16,100	39	24,300	15,250
Edmonton, Alta.	173,075	46,395	28,880	11,420	17,515	41	31,700	13,390
Halifax, N.S.	133,931	29,640	16,230	7,595	13,410	37	16,640	10,130
Hamilton, Ont.	259,685	68,640	46,655	23,055	21,985	41	47,320	16,145
London, Ont.	121,516	32,835	21,170	9,745	11,665	46	22,400	9,115
Montreal, Que.	1,395,400	334,705	81,570	40,875	253,135	37	38,155	280,470
Ottawa, Ont.	281,908	66,265	29,895	13,910	36,370	44	28,830	28,430
Quebec, Que.	274,827	54,930	19,910	6,730	35,020	33	11,345	41,800
Saint John, N.B.	78,337	19,735	7,480	1,855	12,255	26	6,170	11,665
St. John's, N'f'ld.	67,749	12,995	8,565	1,665	4,430	28	5,670	2,800
Toronto, Ont.	1,117,470	273,200	193,405	111,095	79,795	53	142,385	60,340
Vancouver, B.C.	530,728	153,975	105,445	41,165	48,530	41	114,510	32,320
Victoria, B.C.	104,303	31,620	22,010	7,615	9,610	43	24,225	5,865
Windsor, Ont.	157,672	41,595	25,605	9,890	15,990	39	28,790	10,185
Winnipeg, Man.	354,069	95,955	58,770	25,155	37,185	39	62,995	30,220

31.—Household Facilities, by Census Metropolitan Area, 1951

Metropolitan Area	Furnace Heating	Flush Toilet[1]	Bath or Shower[1]	Electric or Gas Range	Electric or Gas Refrigerator
	No.	No.	No.	No.	No.
Calgary, Alta.	32,135	30,365	29,405	38,730	23,030
Edmonton, Alta.	36,830	33,580	32,500	42,530	24,125
Halifax, N.S.	16,990	22,115	20,120	10,220	13,155
Hamilton, Ont.	54,530	59,750	58,080	66,185	51,270
London, Ont.	27,095	29,835	28,415	31,945	22,790
Montreal, Que.	148,685	318,670	288,665	280,385	207,495
Ottawa, Ont.	46,820	58,645	51,460	54,120	45,160
Quebec, Que.	20,895	52,945	38,335	24,535	28,535
Saint John, N.B.	6,260	16,805	12,940	4,885	6,640
St. John's, N'f'ld.	2,430	9,150	6,010	1,605	2,545
Toronto, Ont.	254,700	247,420	244,365	265,750	196,125
Vancouver, B.C.	112,380	138,430	135,710	83,510	80,045
Victoria, B.C.	22,665	29,040	28,600	14,315	14,985
Windsor, Ont.	26,745	38,100	36,520	40,655	27,560
Winnipeg, Man.	79,420	76,445	72,335	82,885	61,630

Metropolitan Area	Powered Washing Machine	Electric Vacuum Cleaner	Telephone	Radio	Passenger Automobile
	No.	No.	No.	No.	No.
Calgary, Alta.	30,860	26,430	26,745	39,025	19,360
Edmonton, Alta.	36,735	26,080	23,285	44,235	20,850
Halifax, N.S.	19,285	11,315	22,730	27,400	10,100
Hamilton, Ont.	52,580	42,740	53,950	65,420	36,625
London, Ont.	26,065	21,650	25,235	31,565	18,205
Montreal, Que.	230,030	155,430	256,230	322,275	89,300
Ottawa, Ont.	51,195	34,115	53,100	63,085	29,200
Quebec, Que.	42,075	19,475	40,920	53,485	14,130
Saint John, N.B.	12,440	7,685	12,780	18,365	6,600
St. John's, N'f'ld.	7,375	2,495	8,465	11,920	3,140
Toronto, Ont.	211,075	184,625	231,060	259,940	140,175
Vancouver, B.C.	110,650	91,220	110,925	144,440	69,900
Victoria, B.C.	20,490	21,015	23,315	30,280	16,335
Windsor, Ont.	35,270	27,400	29,020	39,125	21,970
Winnipeg, Man.	70,225	56,855	68,125	92,550	35,295

[1] For exclusive use of household.

Families.*—The number of families increased at a greater rate during the 1941-51 decade than the general population, with the result that the average number of persons per family dropped from 3·9 to 3·7. Table 32 shows that families with no children or with one or two children increased proportionately at the expense of families with three or more children. It is also interesting to note that the increase in number of families was greater than the increase in the number of children in families. This does not necessarily indicate a trend in the birth rate. Other factors have an important bearing, such as the ageing of the population, the great increase in the marriage rate during the years just prior to the 1951 Census, and the tendency for young people to leave the family home for employment elsewhere.

32.—Family Characteristics, Census Years 1941 and 1951

(Excluding Newfoundland and the Territories)

Item	1941	1951	Increase 1941-51	
			No.	p.c.
Population.....No.	11,489,713	13,622,913	2,133,200	18·6
Families.....No.	2,525,299	3,207,587	682,288	27·0
Persons per family..... "	3·9	3·7	—	—
Children in families..... "	4,692,571	5,357,344	664,773	14·2
Percentage of families with—				
No children at home.....p.c.	31·2	32·5	—	—
1-2 children..... "	41·1	43·4	—	—
3-4 children..... "	17·0	16·5	—	—
5 or more children..... "	10·7	7·6	—	—

In Canada, 90·2 p.c. of the families were reported as maintaining their own households; Saskatchewan was the highest with 94·8 p.c. and Newfoundland the lowest with 86·8 p.c. Of the total family heads, 60·6 p.c. were reported as wage-earners or salary-earners; Ontario was highest with 67·5 p.c., followed by British Columbia with 63·7 p.c. and Saskatchewan was the lowest with 33·2 p.c. followed by Prince Edward Island with 36·8 p.c. Ontario showed the highest median earnings of family head followed by British Columbia and Alberta. Prince Edward Island showed the lowest median earnings.

Of the 778,238 children in the 14-17 age group for Canada, 66·0 p.c. were at school in 1951, 21·5 p.c. were in the labour force and 12·5 p.c. were in neither the labour force nor at school. British Columbia had 79·4 p.c. at school, Alberta 77·7 p.c., and Saskatchewan 76·2 p.c. The percentage at school in Quebec, 52·5, was the lowest among the provinces. In the 18-24 age group for Canada, 13·2 p.c. were at school, 73·9 p.c. were in the labour force and 12·9 p.c. were in neither. British Columbia again was high with 19·5 p.c. at school, followed by Alberta with 18·3 p.c. Newfoundland was the lowest with 8·0 p.c. at school and Quebec followed with 9·4 p.c.

* For census purposes, a *Family* consists of husband and wife (with or without children) or a parent with an unmarried child (or children) living together in the same dwelling. Unmarried sons and daughters under 25 years of age and living with their parents are classed as *Children* as well as wards and guardianship children under 21 years of age. Unmarried sons and daughters, 25 years of age or over, living with their parents are counted as family members but not as children.

33.—Size and Type of Families together with Median Earnings of Head of Wage-Earner Families, by Province, 1951

Province	Total Families	Average Persons per Family	Type of Family			Wage-Earner Families	
			Maintaining Own Household	Not Maintaining Own Household		Total	Median Earnings of Head
				Related	Not Related		
	No.	No.	No.	No.	No.	No.	$
Newfoundland	74,858	4·4	64,957	8,525	1,376	41,180	1,573
P. E. Island	21,381	4·0	19,354	1,686	341	7,872	1,564
Nova Scotia	145,127	3·9	129,036	11,503	4,588	88,091	2,026
New Brunswick	111,639	4·1	100,962	8,935	1,742	63,948	1,886
Quebec	856,041	4·2	776,665	57,061	22,315	538,216	2,238
Ontario	1,162,772	3·4	1,020,152	78,045	64,575	785,162	2,504
Manitoba	191,268	3·6	176,703	8,577	5,988	100,855	2,291
Saskatchewan	196,188	3·7	186,063	6,543	3,582	65,124	2,160
Alberta	223,326	3·7	209,226	8,443	5,657	107,042	2,346
British Columbia	299,845	3·3	278,850	11,872	9,123	190,998	2,466
Canada[1]	**3,287,384**	**3·7**	**2,966,739**	**201,283**	**119,362**	**1,990,559**	**2,345**

[1] Includes the Yukon and Northwest Territories.

34.—Age and Activity of Children 24 Years of Age or Under at Home, by Province, 1951

Province	Under 6 years	6-13 years	14-17 Years			18-24 Years			Total
			At School	In Labour Force	Total	At School	In Labour Force	Total	
Newfoundland	69,861	63,973	15,880	3,945	23,290	1,583	14,435	19,904	177,028
P.E. Island	15,397	15,310	4,412	1,403	6,539	633	3,866	5,322	42,568
Nova Scotia	96,305	99,446	29,280	5,790	39,312	4,421	22,951	32,046	267,109
New Brunswick	87,541	85,841	22,558	6,134	32,917	3,171	19,749	27,184	233,483
Quebec	638,004	644,939	130,803	71,549	249,140	27,732	219,187	295,952	1,828,035
Ontario	593,180	564,276	157,259	48,638	225,315	34,752	169,569	219,627	1,602,398
Manitoba	105,415	105,217	29,397	7,492	41,837	5,495	29,575	39,860	292,329
Saskatchewan	117,093	122,821	40,034	7,459	52,572	6,961	28,560	42,167	334,653
Alberta	136,155	134,542	41,912	7,448	53,974	8,113	30,731	44,412	369,083
British Columbia	146,340	141,555	41,464	6,820	52,226	9,297	33,722	47,565	387,686
Canada[1]	**2,009,730**	**1,981,360**	**513,766**	**167,034**	**778,238**	**102,189**	**572,781**	**774,851**	**5,544,179**

[1] Includes the Yukon and Northwest Territories.

Table 35 shows the population and the number of families in 15 large metropolitan areas, as well as the average size of family and median annual earnings of wage-earner family heads.

35.—Family Characteristics, by Census Metropolitan Area, 1951

Metropolitan Area	Population	Families	Average Persons per Family	Wage-earner Families	
				Total	Median Earnings of Head
	No.	No.	No.	No.	$
Calgary, Alta.	139,105	36,429	3·2	26,675	2,495
Edmonton, Alta.	173,075	43,548	3·4	32,665	2,440
Halifax, N.S.	133,931	30,327	3·6	23,705	2,253
Hamilton, Ont.	259,685	68,820	3·2	54,376	2,675
London, Ont.	121,516	31,117	3·2	24,106	2,522
Montreal, Que.	1,395,400	334,967	3·6	251,418	2,420
Ottawa, Ont.	281,908	67,017	3·6	52,799	2,484
Quebec, Que.	274,827	54,076	4·3	39,168	2,165
Saint John, N.B.	78,337	18,414	3·6	13,579	2,099
St. John's, N'f'ld.	67,749	13,964	4·2	9,957	2,076
Toronto, Ont.	1,117,470	302,381	3·1	230,607	2,653
Vancouver, B.C.	530,728	141,939	3·1	97,723	2,506
Victoria, B.C.	104,303	27,988	3·0	17,759	2,454
Windsor, Ont.	157,672	40,729	3·4	33,232	2,751
Winnipeg, Man.	354,069	94,321	3·2	70,711	2,369

Section 12.—The Blind and Deaf Population

Information was obtained in the 1951 Census for totally blind or deaf persons. Persons blind in one eye, for example, were not recorded as blind and partially deaf persons, such as those able to hear with the help of a mechanical aid, were not included. Table 36 shows the number and proportion of blind and deaf persons per 10,000 population in each province and territory, while Table 37 classifies the blind and deaf population of Canada by age groups. More detailed information on this subject is contained in Volume II of the 1951 Census.

36.—Number of Blind and Deaf Persons and Proportion per 10,000 Population, by Province, 1951

Province or Territory	Number			Number per 10,000 Population		
	Blind	Deaf	Blind and Deaf	Blind	Deaf	Blind and Deaf
Newfoundland	513	497	27	14·2	13·8	0·7
Prince Edward Island	104	88	4	10·6	8·9	0·4
Nova Scotia	943	747	43	14·7	11·6	0·7
New Brunswick	744	554	33	14·4	10·7	0·6
Quebec	3,734	5,139	199	9·2	12·7	0·5
Ontario	4,173	3,897	200	9·1	8·5	0·4
Manitoba	712	596	32	9·2	7·7	0·4
Saskatchewan	590	628	29	7·1	7·6	0·3
Alberta	613	556	21	6·5	5·9	0·2
British Columbia	972	907	68	8·3	7·8	0·6
Yukon Territory	8	4	—	8·8	4·4	—
Northwest Territories	18	3	—	11·2	1·9	—
Canada	**13,124**	**13,616**	**656**	**9·4**	**9·7**	**0·5**

37.—Blind and Deaf Persons, by Age Group, 1951

Age Group	Blind		Deaf		Blind and Deaf	
	No.	p.c.	No.	p.c.	No.	p.c.
0– 4 years	123	0·9	193	1·4	9	1·4
5– 9 "	186	1·4	680	5·0	14	2·1
10–14 "	271	2·1	875	6·4	14	2·1
15–19 "	302	2·3	740	5·4	13	2·0
20–24 "	302	2·3	671	4·9	11	1·7
25–34 "	809	6·2	1,301	9·6	20	3·0
35–44 "	1,022	7·8	1,347	9·9	30	4·6
45–54 "	1,301	9·9	1,330	9·8	40	6·1
55–64 "	2,076	15·8	1,545	11·3	68	10·4
65–69 "	1,490	11·4	1,059	7·8	56	8·5
70 or over	5,242	39·9	3,875	28·5	381	58·1
Totals, All Ages	**13,124**	**100·0**	**13,616**	**100·0**	**656**	**100·0**

Section 13.—Census of the Prairie Provinces

The Census and Statistics Act of 1905 and the Statistics Act of 1918 (replaced by the Statistics Act, 1948) provided for a census of population and agriculture for the Provinces of Manitoba, Saskatchewan and Alberta, to be taken in 1906 and every tenth year thereafter, in addition to the nation-wide decennial census.

The latest Prairie Province census was taken as of June 1, 1946, and the results are summarized in the Year Book 1948-49, pp. 162-171, and in the Year Book 1951, pp. 130-132. More detailed information may be obtained in the census volumes of the 1946 Census of the Prairie Provinces.

Section 14.—The Indians and Eskimos of Canada

The Indians.*—Entry of native tribes into North America probably began as early as 15,000 years ago, according to the findings of archæologists. It is believed that roving bands of hunters, driven from their lands in northeastern Asia, crossed into North America by way of the Bering Strait. Ethnic origins of the Indians appear to have varied. Differences in language were many and, though they varied somewhat from tribe to tribe, religious background and traditions seemed to stem from practically the same source.

There are ten linguistic groups of Indians in Canada, of which four are east of the Rocky Mountains—Algonkian, Athapaskan, Iroquoian and Siouan—and six are west of the Rockies—Kootenayan, Salishan, Wakashan, Tsimshian, Haida, and Tlinkit. Indians of Algonkian stock are the most numerous and are scattered throughout the area from the Atlantic seaboard to the Rocky Mountains. Included in the Algonkian stock are such tribes as the Micmacs of the Maritimes, the Montagnais of Quebec and the Ojibwas, Crees and Blackfeet who live in the Prairie Provinces. The Iroquoian stock, which includes the Hurons, is found mainly in Ontario and Quebec, while tribes of Sioux are located in the Prairie Provinces. The Northwest and Yukon Territories are the usual homelands of the Athapaskan.

According to the 1951 Census, there were 155,874 persons of Indian origin in Canada, distributed by provinces and sex as follows:—

Province	Male	Female	Total	Province	Male	Female	Total
Newfoundland	184	174	358	Saskatchewan	11,265	10,985	22,250
P. E. Island	136	121	257	Alberta	10,743	10,420	21,163
Nova Scotia	1,379	1,338	2,717	British Columbia	14,602	13,876	28,478
New Brunswick	1,164	1,091	2,255	Yukon	734	799	1,533
Quebec	7,556	7,075	14,631	N.W.T.	1,913	1,925	3,838
Ontario	19,025	18,345	37,370				
Manitoba	10,642	10,382	21,024	CANADA	79,343	76,531	155,874

These figures include all persons with a paternal ancestor of Indian race, many of whom have long been assimilated and have lost their identity as Indians. The number of persons considered as Indians under Indian legislation is placed at 136,407. They are divided into about 600 bands and live on 2,200 or more reserves set aside for their use and benefit.

The Indian Act.—First enunciation of the Crown's policy with regard to Indians was the Proclamation of 1763, which confirmed the practice already being followed of recognizing the title of Indians to the lands they occupied and making compensation for the surrender of their aboriginal interest in the soil. The first office devoted solely to Indian affairs was set up in 1755 under Sir William Johnson and in 1860 Indian administration, formerly under the jurisdiction of the Imperial Government, became the responsibility of the Province of Canada and was placed under the Crown Lands Department.

The administration of Indians and Indian lands was made a federal responsibility by the British North America Act. Immediately following Confederation in 1867, Indian Affairs was attached to the Department of the Secretary of State and in 1873 was transferred to the newly created Department of the Interior. In 1880, under the provisions of the Indian Act, the Indian Affairs Branch became a

* Prepared in the Indian Affairs Branch, Department of Citizenship and Immigration, Ottawa.

separate department and remained so until Dec. 1, 1936, when it became a branch of the Department of Mines and Resources. Since Jan. 18, 1950, Indian Affairs has been a branch of the Department of Citizenship and Immigration.

Following Confederation, the Parliament of Canada enacted legislation concerning Indians which was first consolidated in the Indian Act of 1876. This Act, under which Indian administration was conducted, contained nearly all the Canadian law dealing expressly with Indians and was further revised and consolidated in 1880. It remained in effect, as amended from time to time, until Sept. 4, 1951, when the new Indian Act was proclaimed. The new Act was drafted following a complete review of the old Act and inquiry into Indian affairs by a Special Joint Committee of the Senate and the House of Commons during 1946, 1947 and 1948. Proposed legislation was widely circulated among the Indians and others interested in their welfare, and many representations were received suggesting improvements to the various provisions. Before the passing of the Act, the Minister of Citizenship and Immigration discussed the proposed legislation with representative Indian groups at Ottawa and in other parts of Canada.

Administration.—The primary function of the Indian Affairs Branch, under the Citizenship and Immigration Act and the Indian Act, is to administer the affairs of the Indians of Canada in a manner that will enable them to become increasingly self-supporting and independent. The functions of the Branch include the management of Indian reserves and surrendered lands, trust funds, welfare projects, relief, family allowances, education, descent of property, rehabilitation of Indian veterans on reserves, Indian treaty obligations, enfranchisement of Indians and other matters.

The Indian Act provides a measure of self-government on reserves through Band councils chosen according to tribal custom or under an elective system of secret ballot. The various expenditures of Band funds, with few exceptions, require the consent of the Band council, comprising a chief and councillors. The right to vote in Band elections and other votes is extended to all members of a Band, men and women, who have reached the age of twenty-one years. A number of Indian women have been elected to office since the new Act came into force. Secrecy of voting has been provided under election regulations. The powers of Band councils to make by-laws correspond in a general way with those exercised by councils in a rural municipality.

Indians who are veterans of the First or Second World War and their wives may vote in federal elections. Indians who live off the reserve, under certain circumstances, also have the right to vote, while Indians who live on the reserve may vote if they waive exemption to taxation on personal property such as earnings or other incomes received on the reserve. Indians may sue and be sued, subject to provisions of the Indian Act exempting from seizure real and personal property held on the reserve.

Enfranchisement, the removal of all legal distinction between Indians and other members of the community, is provided for under the Indian Act. An enfranchised Indian is no longer subject to the provisions of the Act. In order to facilitate enfranchisement of Indian Bands, agreements may be entered into with provincial or municipal authorities to provide financial assistance to indigent, infirm, or aged members of the enfranchised Band.

The nomadic existence followed by Bands of Indian hunters is gradually giving way to a more stable way of life. Many Indians are profitably engaged in the fishing industry on the British Columbia coast; Indians across Canada are being encouraged to engage in agricultural pursuits and are prominent in many other trades and occupations. For example, the reputation of the Indians from the Caughnawaga Reserve, near Montreal, as skilful structural steel workers is known throughout North America, providing a profitable source of steady employment for these Indians.

The Indian Affairs Branch takes a census of the Indian population under their jurisdiction at five-year intervals. The figures for 1949 given in Tables **38** and **39** are the latest available.

38.—Indian Population, classified by Age Group and Sex, by Province, Departmental Census, 1949

Province or Territory	Under 7 Years		7 Years and Under 16		16 Years and Under 21		21 Years and Under 70		70 Years or Over		Totals	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island	24	20	33	33	16	9	68	58	6	6	147	126
Nova Scotia	273	243	292	302	123	132	635	544	50	47	1,373	1,268
New Brunswick	239	237	253	245	102	111	479	414	33	26	1,106	1,033
Quebec	1,587	1,642	1,611	1,655	844	839	3,832	3,407	293	260	8,167	7,803
Ontario	3,347	3,351	3,323	3,346	1,758	1,745	8,274	7,996	711	720	17,413	17,158
Manitoba	2,023	1,992	1,963	2,024	943	832	3,823	3,349	295	305	9,047	8,502
Saskatchewan	1,853	1,869	1,795	1,866	854	811	3,416	3,347	246	251	8,164	8,144
Alberta	1,681	1,708	1,626	1,570	693	675	2,844	2,541	201	266	7,045	6,760
British Columbia	3,147	3,144	3,003	3,149	1,423	1,412	6,332	5,245	550	531	14,455	13,481
Yukon Territory	158	171	147	163	67	73	333	286	25	20	730	713
Northwest Territories	396	338	375	393	189	181	923	842	63	72	1,946	1,826
Totals	**14,728**	**14,715**	**14,421**	**14,746**	**7,012**	**6,820**	**30,959**	**28,029**	**2,473**	**2,504**	**69,593**	**66,814**

39.—Religious Denominations of the Indian Population, Departmental Census, 1949

Province or Territory	Church of England	Baptist	United Church	Presbyterian	Roman Catholic	Other Christian Beliefs	Aboriginal Beliefs	Totals
	No.	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island	—	—	—	—	273	—	—	273
Nova Scotia	—	—	—	—	2,641	—	—	2,641
New Brunswick	—	—	—	—	2,139	—	—	2,139
Quebec	3,100	—	451	—	12,120	152	147	15,970
Ontario	10,529	1,514	6,436	611	12,065	1,110	2,306	34,571
Manitoba	5,735	12	4,586	731	6,251	118	116	17,549
Saskatchewan	4,980	—	1,682	184	8,402	25	1,035	16,308
Alberta	1,963	127	1,708	—	9,768	—	239	13,805
British Columbia	5,561	—	5,623	—	15,977	775	—	27,936
Yukon Territory	1,191	—	—	—	210	18	24	1,443
Northwest Territories	668	—	—	—	3,104	—	—	3,772
Totals	**33,727**	**1,653**	**20,486**	**1,526**	**72,950**	**2,198**	**3,867**	**136,407**

Information on Indian lands and property is secured each year and is given for the year ended Mar. 31, 1953, in Tables **40** and **41**.

40.—Indian Lands and Property, by Class and Province, Year Ended Mar. 31, 1953

Province or Territory	Land				Property			
	Uncleared and Uncultivated	Cleared but not Cultivated	Under Cultivation	Total Area of Reserves[1]	Private Houses	Churches	Council Houses	Sawmills
	acres	acres	acres	acres	No.	No.	No.	No.
Prince Edward Island	1,721	820	200	2,741	50	1	1	—
Nova Scotia	22,677	1,463	786	19,492	509	10	1	2
New Brunswick	33,158	1,122	288	37,727	409	6	2	1
Quebec	138,461	11,516	5,658	179,619	2,057	23	4	2
Ontario	1,194,691	105,897	38,849	1,559,349	5,564	113	52	28
Manitoba	308,969	156,700	25,173	524,346	3,728	73	16	13
Saskatchewan	469,363	605,300	150,518	1,203,953	3,189	58	17	3
Alberta	545,783	767,841	148,766	1,516,654	3,136	35	19	4
British Columbia	474,212	243,569	39,075	821,090	6,848	165	91	20
Northwest and Yukon Territories	3,538	45	15	5,620	161	2	1	—
Totals	**3,192,573**	**1,894,273**	**409,328**	**5,870,591**	**25,651**	**486**	**204**	**73**

[1] Includes areas under water and waste land.

41.—Live Stock Owned by Indians, by Province, Year Ended Mar. 31, 1953

Province or Territory	Horses			Cattle			
	Stallions	Geldings and Mares	Foals	Bulls	Steers	Milch Cows	Young Stock
	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island	—	9	—	1	7	7	3
Nova Scotia	—	57	—	9	—	62	31
New Brunswick	—	28	—	—	—	6	1
Quebec	1	334	39	23	53	833	427
Ontario	32	1,786	61	85	320	2,797	1,331
Manitoba	3	1,667	44	21	273	758	384
Saskatchewan	2	4,793	134	65	720	1,791	1,008
Alberta	143	6,685	629	240	1,836	7,987	6,090
British Columbia	107	5,283	539	209	3,880	5,313	3,383
Northwest and Yukon Territories	1	18	—	—	—	—	—
Totals	**289**	**20,660**	**1,446**	**653**	**7,089**	**19,554**	**12,658**

Education.—The proportion of Indians who have become satisfactorily adjusted to modern conditions is, of course, greater among those who have taken full advantage of the Federal Government's educational program. Residential schools are available to Indian children from broken homes, orphans or those who, because of isolation or the nomadic way of life of their parents, would otherwise be unable to attend school. For children who can live at home, the Federal Government operates day schools in Indian communities. Alternatively, where conditions are favourable, arrangements are made with local educational authorities for Indian children to attend non-Indian schools. An increasing number of Indian children in the elementary grades have been admitted to schools where other children are enrolled and the majority of Indian children attending secondary school and college classes are educated in association with non-Indians. The Federal Government pays the charges for school fees and books, necessary transportation and, for some students who must live away from home, part or all of the cost of room and board.

Similar assistance is given to Indian young people to encourage them to obtain vocational and professional training. Of those who have qualified as school teachers, more than 40 are now serving in Indian schools. Indians have qualified in medicine, dentistry, nursing, agriculture and other professions. Preference in appointment to positions in the Indian service is given to qualified Indians.

In the year ended Mar. 31, 1953, there were 456 Indian schools in operation, comprising 67 residential schools, 347 regular day schools, 30 seasonal schools and 12 hospital schools. The enrolment in residential schools was 10,112 and in all other schools, 15,837. Enrolment by province was: P.E.I., 52; N.S., 605; N.B., 388; Que., 2,426; Ont., 5,861; Man., 3,562; Sask., 3,609; Alta., 3,272; B.C., 5,447; Y.T., 284; and N.W.T., 443.

42.—Enrolment and Average Attendance at Indian Schools, Years Ended Mar. 31, 1944-53

Year	Residential Schools		Day Schools		All Schools		
	Enrolment	Average Attendance	Enrolment	Average Attendance	Enrolment	Attendance	
						No.	P.C. of Enrolment
1944	8,729	7,902	7,858	5,355	16,587	13,257	79·9
1945	8,865	8,006	7,573	5,159	16,438	13,165	80·1
1946	9,149	8,264	9,656	6,779	18,805	15,043	80·0
1947	9,304	8,192	10,318	7,449	19,622	15,641	79·7
1948	8,986	7,863	11,115	8,296	20,101	16,159	80·3
1949	9,368	8,345	12,615	10,414	21,983	18,759	85·3
1950	9,316	8,593	14,093	12,060	23,409	20,653	88·2
1951	9,357	8,779	15,514	13,526	24,871	22,305	89·7
1952	9,844	9,175	15,746	13,673	25,590	22,848	89·3
1953	10,112	9,309	15,837	13,826	25,949	23,135	89·2

In addition to pupils in Indian schools there were 2,082 Indian children enrolled in elementary grades in provincial schools and 702 in secondary provincial schools, making a total enrolment of Indians in educational classes of 28,739. In the year ended Mar. 31, 1953, there were 1,347 Indians receiving secondary and higher education.

Welfare.—During 1952, 20,713 Indian families received $3,721,164 in family allowances on behalf of 60,747 children. These payments have helped the Indians to give their children a better-balanced diet and to keep them longer at school. Approximately $3,000,000 is given annually to Indians through old age security and old age assistance payments and blind persons allowances.

In cases of necessity, the Government gives direct assistance in the form of food, fuel, clothing, household equipment and care to individuals or groups of individuals. The food ration to destitute Indians has recently been increased and extended welfare services are available to the various reserves through the employment of a number of qualified social workers.

Improvement in housing conditions has been achieved in recent years through the efforts of the Indians themselves, as a result of expenditures from appropriation of Indian Band funds, and through Veterans' Land Act benefits. Costs of house repairs during the year ended Mar. 31, 1952, amounted to approximately $166,085 and the value of new houses built on the various reserves was estimated at $736,987. Revolving Fund loans are available for the purchase of farm machinery, implements, gas and oil, fencing materials, seed grain, live stock and similar essentials, and also for payment of wages and repairs to buildings and vehicles.

Fur Conservation.—During 1952 the fur-development program, undertaken in co-operation with the various provinces, was continued. Beaver production in Saskatchewan, Manitoba and Ontario increased, approximately 143,500 pelts, with an estimated value of $1,200,000, being taken. In addition, about 621,000 muskrats, having a value of $835,000, were trapped in Manitoba and Saskatchewan. Indian participation in the three provinces from the trapping of these fur-bearers was valued at about $1,290,000. In the Province of Quebec, nine fur preserves with a total area of approximately 150,000 sq. miles are set aside exclusively for Indian trappers under joint management by the Indian Affairs Branch and the Quebec Department of Fish and Game. Five reserves are in production and one in partial production. During 1952, these areas produced over 13,300 beaver, which brought more than $235,000 to the Indian trappers.

Eight full-time supervisors are employed across Canada to assist the Indians to derive the fullest possible benefits from hunting and trapping.

The Eskimos.*—The Eskimos are only a fragment of the total population of Canada, numbering, according to the 1951 Census, only 9,733 persons. However, they are part of the human resources of the country and as such are entitled to the benefits of Canadian citizenship and to assistance in adapting themselves to changing conditions. They, together with the Indians, represent the original inhabitants of Canada and their ingenuity and resourcefulness is illustrated by the fact that they have maintained their existence against a harsh unrelenting climate in a region where food, being almost entirely fish or animal, requires great skill to obtain and is most unpredictable in its availability. Advancing civilization has, however, brought many problems to Canada's northernmost citizens, who have been literally translated from the Stone Age to the Atomic Age in a period of 40 to 50 years, and to these problems the Federal Government has been giving increasing attention.

The Northern Administration and Lands Branch of the Department of Resources and Development is responsible for the administration of Eskimo affairs. The Department of National Health and Welfare is responsible for health and medical services. Royal Canadian Mounted Police detachments throughout the north undertake field duties for both Departments. In fact, the problems involved in looking after a sparse Eskimo population scattered over about 900,000 sq. miles of territory requires the continuous co-operation of all northern inhabitants—teachers, missionaries, traders, doctors, nurses, radio operators and weather-station personnel. Administrative contact is maintained by radio and through the Eastern Arctic Patrol which carries representatives of the Administration and other government departments on an annual inspection tour. Officers of the Administration also visit Arctic posts periodically by air.

Family allowances are paid to Eskimos in kind from a list designed to supplement rather than to supplant the normal native diet. Eskimos also enjoy the full benefits of old age security and old age assistance payments and of allowances for blind persons.

Missions, assisted by Government grants, operate hospitals at Aklavik, Chesterfield Inlet and Pangnirtung, and the Department of National Health and Welfare has nursing stations at Coppermine, Fort Chimo, Coral Harbour, Port Harrison, Cape Dorset and Lake Harbour. Tuberculosis and other medical surveys are carried out from year to year and treatment, where necessary, is provided either at the hospitals within the territory or at larger institutions outside.

*Prepared in the Editorial and Information Division, Department of Resources and Development, Ottawa.

To supplement the work of the missions, which operate schools in a number of settlements assisted by Government grants, the Government has, since the end of the Second World War, built eight schools primarily for Eskimo children. These schools are spread across the top of the continent from the Mackenzie Delta to northern Quebec—at Aklavik, Tuktoyaktuk, Coppermine, Chesterfield Inlet, Coral Harbour, Cape Dorset, Port Harrison and Fort Chimo. Missions are also assisted in the operation of two industrial homes, one at Chesterfield Inlet and the other at Pangnirtung, where aged and physically handicapped Eskimos are cared for. Considerable attention has been given in recent years to the conservation of the wildlife resources upon which the Eskimo depends for his livelihood. Game preserves have been established where only natives may hunt and trap and encouragement is given to the observance of hunting practices designed to conserve the supply of game and fish.

To help clarify and co-ordinate thinking on Eskimo problems, a round-table conference was held in May 1952 of all organizations, government and private, concerned with the Eskimos. Represented were the Departments of Resources and Development, Mines and Technical Surveys, National Health and Welfare, Transport, National Defence, and Public Works, as well as the R.C.M.P., the Church of England and Roman Catholic missions, the Hudson's Bay Company, and individuals with special knowledge of or interest in Eskimos. As a result of this conference a continuing committee was established to study the problems of the Eskimos, with a sub-committee to give special attention to educational problems. The first meeting of the committee was held in October 1952. In matters of health it was decided to establish two convalescent or rehabilitation centres for Eskimos who have recovered from tuberculosis and are returning again to the rigours of northern life. These centres will be located at Driftpile, Alta., and Frobisher Bay, southern Baffin Island.

In the education field, it is proposed to extend the present school system (*see* also pp. 319-320) to provide hostels at schools for Eskimo children who live away from the settlements. Many of these children could attend school during the spring and summer months without interfering too much with their normal, nomadic way of life. Plans are also under way to provide higher education and technical training for those who show particular aptitude. Eskimos with the necessary qualifications will be assisted to prepare themselves for work as teachers, nurses or artisans, either among their own people or in settlements in or out of the Arctic. An eight-room school to include high-school classes will be erected at Aklavik, N.W.T., and the existing school there will be converted into a vocational training centre.

An Eskimo Research Unit was established by the Northern Administration and Lands Branch of the Department of Resources and Development to study Eskimo problems and to work in conjunction with the continuing committee. Efforts will be made to encourage self-sufficiency of the Eskimo by better utilization of the existing resources of the country and the development of small local industries such as whaling, fishing, boat-building, manufacture of clothing, eiderdown collecting and art handicrafts. Eskimos in over-populated or depleted areas will be encouraged and assisted to move to areas where game is more plentiful or where employment may be found. A fund has been established from which loans may be made to assist Eskimos to carry out approved projects for the betterment of their economy.

Section 15.—Statistics of World Population

The figures in the following table are from the *United Nations Statistical Year Book 1952* and, except where otherwise indicated, are official mid-year estimates for 1951.

43.—Areas and Populations of the Countries or Areas of the World, 1951

Continent and Country	Area	Population
	sq. miles	'000
Africa		
Self-Governing Territories—		
Egypt	386,101	20,729
Ethiopia	409,267	15,000
Liberia	43,000	1,648[1]
Libya	679,360	1,124
Union of South Africa	472,667	12,683
Non-Self-Governing Territories and Dependencies—		
Belgium—		
Belgian Congo	904,994	11,463[2]
France—		
Algeria	846,126	8,930
Comoro Islands	834	165
French Equatorial Africa	969,114	4,484
French Somaliland	8,378	55
French West Africa	1,835,022	17,208
Madagascar	227,738	4,333
Morocco	150,888	8,500[3]
Reunion	969	263
Tunisia	60,166	3,500
Portugal—		
Angola	481,352	4,130
Cape Verde Islands	1,557	150
Mozambique	297,732	5,781
Portuguese Guinea	13,948	517
São Tomé and Principe	372	60
Spain—		
Moroccan Protectorate:		
Northern Zone	7,589	1,071[4]
Southern Zone	10,000[4]	13[4]
Possessions in North Africa	82[4]	142[4]
Spanish Guinea	10,831	175[4]
Spanish West Africa	103,919	81[4]
United Kingdom—		
Basutoland	11,715	578
Bechuanaland	274,981	290
Gambia	4,003	279
Gold Coast	78,799	3,929
Kenya	224,952	5,680
Mauritius and dependencies	809	500[4]
Nigeria	338,580	25,000
Northern Rhodesia	290,309	1,947[5]
Nyasaland	44,581	2,401
St. Helena	81	5
Seychelles	156	37
Sierra Leone	27,924	1,891[4]
Somaliland Protectorate	67,997	500
Southern Rhodesia	150,327	2,158
Swaziland	6,704	200
Uganda	93,977	5,187
Zanzibar and Pemba	1,020	272
Trust Territories—		
Cameroons (Br. Adm.)	34,080	1,000
Cameroons (Fr. Adm.)	169,498	3,125
Africa—concl.		
Trust Territories—concl.		
Ruanda-Urundi (Belg. Adm.)	20,916	3,835[2]
Somaliland (Ital. Adm.)	198,276	1,247
Tanganyika (Br. Adm.)	362,675	7,827
Togoland (Br. Adm.)	13,041	404
Togoland (Fr. Adm.)	21,236	1,014
Former Mandated Territory (Un. of S. Afr.)—		
South-West Africa	317,713	416
Military Government (U.N.)—		
Eritrea[6]	47,877	1,104[7]
Condominium—		
Anglo-Egyptian Sudan	967,453	8,740
International Administration—		
Tangier	135	172
America, North		
Self-Governing Territories—		
Canada	3,845,144	14,009[8]
Costa Rica	19,695	825
Cuba	44,218	5,469
Dominican Republic	19,129	2,167
El Salvador	13,176	1,920
Guatemala	42,042	2,887
Haiti	10,714	3,112[5, 7]
Honduras	44,481	1,505[7]
Mexico	760,375	26,332
Nicaragua	57,143	1,088
Panama	28,575	817
United States	3,022,275	154,353[3]
Non-Self-Governing Territories and Dependencies—		
Denmark—		
Greenland	840,001[9]	23
France—		
Guadeloupe	687	292[4]
Martinique	425	276[4]
St. Pierre and Miquelon	93	5
Netherlands, The—		
Netherlands Antilles	366	166
United Kingdom—		
Bermuda	21	38[2]
British Honduras	8,867	70
British West Indies	12,498	2,783[4]

For footnotes, *see* end of table, p. 156.

43.—Areas and Populations of the Countries or Areas of the World, 1951—continued

Continent and Country	Area	Population
	sq. miles	'000
America, North—concl.		
Non - Self Governing Territories and Dependencies—concl.		
United States—		
Alaska	586,378	140[4,10]
Panama Canal Zone	553	42[10]
Puerto Rico	3,435	2,253[10]
Virgin Islands	133	27[4,10]
America, South		
Self-Governing Territories—		
Argentina	1,084,362	17,644
Bolivia	424,163	3,054
Brazil	3,288,050	53,377
Chile	286,397	5,912
Colombia	439,520	11,266
Ecuador	106,178	3,203[5,7]
Paraguay	157,047	1,425
Peru	482,259	8,558
Uruguay	72,172	2,353[1]
Venezuela	352,143	5,071[11]
Non - Self - Governing Territories and Dependencies—		
France—		
French Guiana	35,135	26[4]
Netherlands, The—		
Surinam	55,144	223
United Kingdom—		
British Guiana	82,997	431
Falkland Islands	4,618	2
Asia		
Self-Governing Territories—		
Afghanistan	251,000[4]	12,000
Bahrein	231	110
Bhutan	19,300[4]	300[4]
Burma	261,600	18,674
Ceylon	25,331	7,742
China[12]	3,759,191	463,500
India[13]	1,269,593	356,829[5]
Indochina	272,356	30,000[4]
Indonesia	575,894	76,500
Iran	629,345	19,140
Iraq	168,114	5,100[7]
Israel	8,108	1,516
Japan	142,202	84,300
Jordan	37,264	1,320
Korea	85,248	29,291[1]
Kuwait	8,000	170[4]
Lebanon	4,015	1,285
Mongolian People's Republic	626,000[4]	885[4]
Muscat and Oman	82,008	550
Nepal	54,054	7,000
Pakistan	365,894	75,842
Philippines	115,600	20,246
Qatar	8,500[4]	17
Saudi Arabia	...	6,000
Syria	70,014	3,291[14]
Thailand	197,659	18,836
Trucial Oman	5,792	76
Turkey (in Asia)	287,118	19,308[7]
Yemen	75,290	4,500
Asia—concl.		
Non - Self - Governing Territories and Dependencies—		
France—		
French India	193	337
Netherlands, The—		
New Guinea	159,375	1,020
Portugal—		
Macau	6	188
Portuguese India	1,538	639
Portuguese Timor	7,332	450
United Kingdom—		
Aden Colony	80	100
Aden Protectorate	121,996	650
British Borneo	78,682	953
Cyprus	3,572	492
Federation of Malaya	50,598	5,337
Hong Kong	391	2,013[3]
Maldive Islands	115	85
Singapore	292	1,045
Former Mandated Territory (U.K.)—		
Palestine[15]	230[4]	291[4]
Military Government (U.S.)—		
Bonin Islands	40	148[7]
Ryukyu Islands	1,291	929
Europe		
Self-Governing Territories—		
Albania	11,100	1,200[4]
Andorra	175	5[4]
Austria	32,375	6,916
Belgium	11,779	8,678[5]
Bulgaria	42,796	7,310[4]
Czechoslovakia	49,354	12,340[7]
Denmark[16]	16,578	4,304[5]
Finland	130,120	4,050
France[17]	212,736	42,239[18]
Germany	136,430	69,000[4,6]
Greece	51,182	7,600
Hungary	35,912	9,390[4]
Iceland	39,768	145[5]
Ireland, Republic of	27,136	2,959
Italy	116,238	46,598
Liechtenstein	61	14
Luxembourg	998	299[5]
Monaco	[19]	21
Netherlands, The	12,505[20]	10,264[5]
Norway	125,182	3,294[5]
Poland	120,359	24,977[7]
Portugal	35,414	8,606
Roumania	91,700	16,200[4]
San Marino	24[4]	13
Spain	194,232	28,086
Sweden	169,932	7,073[5]
Switzerland	15,944	4,749[5]
Turkey (in Europe)	9,068	1,626[7]
United Kingdom[21]	94,209	50,558
England and Wales	58,341	44,008
Northern Ireland	5,459	1,373
Scotland	30,410	5,114
Vatican City	2	1[4]
Yugoslavia	99,182	16,340

For footnotes, *see* end of table, p. 156.

43.—Areas and Populations of the Countries or Areas of the World, 1951—concluded

Continent and Country	Area	Population
	sq. miles	'000
Europe—concl.		
Non-Self-Governing Territories and Dependencies—		
Norway—		
Svalbard and Jan Mayen Land	24,122	[22]
United Kingdom—		
Channel Islands	75	103
Gibraltar	2	23[3]
Isle of Man	221	55
Malta and Gozo	122	313[3]
International Administration—		
Trieste (Br.-U.S. Zone of Free Territory)	86	292
Oceania		
Self-Governing Territories—		
Australia	2,974,471	8,431[23]
New Zealand	103,469	1,947
Non-Self-Governing Territories and Dependencies—		
Australia—		
Norfolk Island	14	1
Papua	90,537	369
France—		
French Oceania	1,544	63
New Caledonia	7,202	65
New Zealand—		
Cook Islands	100	15
Niue	100	5[4]
Tokelau	4	2
Non-Self-Governing Territories and Dependencies—concl.		
United Kingdom—		
British Solomon Islands	11,500	101[4]
Fiji Islands	7,040	298
Gilbert and Ellice Islands	369	39
Pitcairn	2	130[7]
Tonga	269	49
United States—		
American Samoa	76	19[10]
Guam	206	60[4,10]
Hawaii	6,423	500[4,10]
Trust Territories—		
Nauru (Aust., N.Z. and Br. Adm.)	8	3
New Guinea (Aust. Adm.)	93,050[20]	1,103
Pacific Islands (U.S. Adm.)	661	56
Western Samoa (N.Z. Adm.)	1,130	83
Condominium—		
New Hebrides	5,700	49[4]
U.S.S.R.		
Union of Soviet Socialist Republics	8,598,701	193,000[24]
Byelorussian S.S.R.[25]	80,155	5,568[24]
Ukrainian S.S.R.[25]	222,626	30,960[26]

[1] 1949 estimate. [2] Native population only. [3] Civilian population only. [4] Unofficial estimate. [5] *De jure* population. [6] Eritrea became an autonomous state in federation with Ethiopia on Sept. 11, 1952. [7] 1950 estimate. [8] *De jure* population but excludes civilian citizens outside continental U.S. for an extended period. [9] Area of ice-free portion, 131,931 sq. miles. [10] *De jure* population but includes U.S. armed forces stationed in area. [11] Excludes tribal Indians estimated at 105,120 in 1950. [12] Includes islands of Taiwan (Formosa) and the Pescadores. [13] Includes Hyderabad (area 82,165 sq. miles, population at 1951 census 18,700,000). [14] Excludes nomads, estimated at 288,400 in 1945. [15] "Gaza Strip" (i.e., the part of Palestine not included in Israel or Jordan), currently under Egyptian administration. [16] Excludes Faeroe Islands (540 sq. miles), which had a *de jure* population estimated at 31,000 in 1950. [17] Excludes the Saar (991 sq. miles), which had a *de jure* population estimated at 954,000 in 1951, and small border areas (273 sq. miles) ceded by Italy in 1947. [18] Includes allowances of 300,000 for armed forces and 6,000 for merchant seamen outside country. [19] Less than 0·5 sq. miles. [20] Land area only. [21] Excludes Channel Islands and Isle of Man, shown separately. [22] Inhabited only during winter season. Population, estimated at 1,164, included with Norway. [23] Excludes full-blooded aborigines, estimated at 47,000 in 1944. [24] 1946 estimate. [25] Included in totals for Union of Soviet Socialist Republics. [26] 1939 census.

CHAPTER IV.—IMMIGRATION AND CITIZENSHIP

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—IMMIGRATION AND EMIGRATION

Section 1.—Immigration

Immigration to Canada since early times has been spasmodic, being high in periods of rapid development and prosperity and dropping off during wars and in periods of economic depression. A brief summary of the history of immigration is given in the Year Book 1948-49, pp. 172-173.

Subsection 1.—Immigration Policy and Administration*

Policy.—The present policy of the Federal Government is to foster the growth of the population of Canada by the encouragement of immigration and, by necessary legislation and vigorous administration, to ensure the careful selection and permanent settlement of such numbers of immigrants as can be absorbed advantageously in the national economy. In line with this policy, admissible classes include—in addition to certain British subjects, citizens of France, citizens of the United States, and non-immigrants who served in the Canadian Armed Forces—any European immigrant who complies with immigration regulations and can satisfy the Minister of Citizenship and Immigration that he is a suitable immigrant, having regard to the climatic, social, educational, industrial, labour or other conditions or requirements of Canada, and that he is not undesirable owing to his probable inability to become readily adapted and integrated into the life of a Canadian community and to assume the duties of Canadian citizenship within a reasonable time after his entry.

The regulations governing admission to Canada were widened on July 1, 1950, and from that date to the end of December 1952 the Department of Citizenship and Immigration, through its Immigration Branch, effected the entry of 395,515

* Revised in the Immigration Branch under the direction of Laval Fortier, Deputy Minister, Department of Citizenship and Immigration, Ottawa.

immigrants. The number entering in the post-war period, 1946 to 1952, amounted to 789,278. British immigrants from overseas countries led in this post-war influx, with a total of 245,885, while the highly successful movement to Canada of people from The Netherlands accounted for 71,036 immigrants. Other ethnic groups were: German, 76,265; Italian, 66,021; Ukrainian, 32,223; and French, 15,978. Occupationally, the main groups were: farmers, 102,989; skilled workers, 99,908; and unskilled workers, 94,181. Of the total, 321,846 were adult males, 274,607 adult females and 192,825 children.

The most important factor responsible for the upswing in immigration in the post-war period was, of course, the buoyant Canadian economy which was capable of absorbing the influx of workers and which is, day by day, creating additional opportunities for new Canadians. To meet Canada's need for people, it was necessary for the Department of Citizenship and Immigration to increase its overseas staff, open new offices and make larger supplies of informational material available for prospective immigrants. Urgently needed immigrants, who cannot afford the cost of the ocean voyage, benefit from the provisions of the Assisted Passage Loan Scheme that was put into effect on Feb. 1, 1951. Interest-free loans are allowed to single persons and heads of families to pay part or all of the cost of ocean transportation and inland rail fare, including meals *en route*, to destination in Canada. Repayment is required within 24 months after arrival in Canada.

Administration.—The responsibility for all immigration matters under the provisions of the Immigration Act rests with the Minister of Citizenship and Immigration. The Immigration Branch, one of the four branches comprising the Department of Citizenship and Immigration, administers this Act. Headquarters of the Immigration Branch is at Ottawa.

A primary objective of administration is to assist immigrants to become quickly and satisfactorily settled in the Canadian community. The Federal Government continues its interest in them through the work of the Immigration Branch Settlement Service, the Canadian Citizenship Branch of the Department of Citizenship and Immigration and the National Employment Service of the Department of Labour. Liaison is maintained between the Federal Government and provincial authorities and private organizations with a view to co-ordinating the efforts in this field, filling gaps and eliminating duplication.

Immigration Services.—Immigration services in Canada and overseas operate under the supervision of the Director of Immigration. In Canada there are five districts—Atlantic, Eastern, Central, Western and Pacific—each under the supervision of a Superintendent. There are 324 ports of entry along the Canadian-United States border and on the Atlantic and Pacific seaboards and the admissibility of every person who enters Canada is established by an Immigration Officer at one of these ports. At inland offices, located at strategic points throughout the country, applications for the admission of immigrants are investigated and deportation proceedings conducted.

Immigration offices in the United Kingdom are located at London, Liverpool, Glasgow and Belfast. To facilitate compliance with immigration medical requirements, approved British medical practitioners make it possible for British immigrants to undergo medical examination within a short distance of their place of residence. Immigration offices are also in operation at Dublin, Paris, Brussels, The Hague, Stockholm, Berne, Rome, Athens, Oslo, Copenhagen, Helsinki, Hanover, Linz and Karlsruhe.

For the past twenty-five years, a system of preliminary examination of immigrants from Continental Europe has been in effect. This examination is intended to establish, before they embark, the admissibility of persons wishing to settle in Canada in order to avoid the hardship that would ensue from rejection at the Canadian port of entry and subsequent deportation.

The Settlement Service has staffs in all provinces of Canada and in the British Isles. The Settlement Officers in Canada locate and develop opportunities for immigrants in accordance with the needs of the areas under their supervision, enlist the co-operation of provincial and municipal authorities, and advise voluntary organizations that take an active interest in the establishment of immigrants. It is the responsibility of Settlement Officers overseas to locate suitable immigrants to fill the needs ascertained and the opportunities developed by the Canadian section of the Settlement Service. A continuous two-way flow of up-to-date information exists between the officers of the Settlement Service in Canada and those overseas.

Subsection 2.—Immigration Statistics

Table 1 presents statistics of immigration to Canada from 1908 to 1952. Analyses showing country of last permanent residence, sex, age, marital status, birthplace, origin, nationality, destination and occupation for recent years are given in Tables 2 to 8.

1.—Immigrant Arrivals, 1908-52

NOTE.—Figures for 1852-93 are given in the 1942 Year Book, p. 153, and for 1894-1907 in the 1948-49 edition, p. 175.

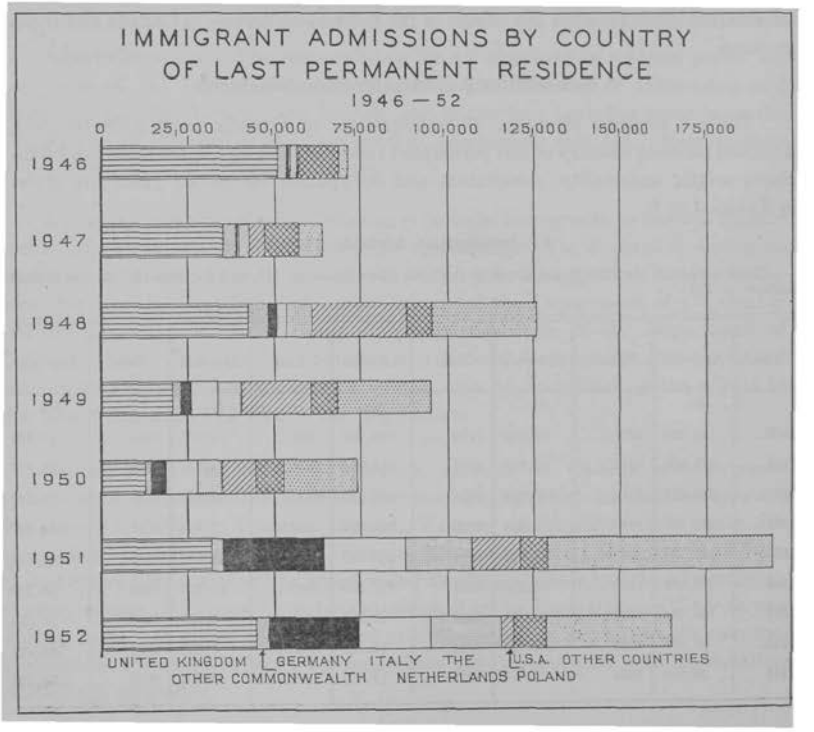
Year	Arrivals	Year	Arrivals	Year	Arrivals	Year	Arrivals	Year	Arrivals
	No.		No.		No.		No.		No.
1908....	143,326	1917.....	72,910	1926.....	135,982	1935....	11,277	1944.....	12,801
1909....	173,694	1918.....	41,845	1927.....	158,886	1936.....	11,643	1945.....	22,722
1910....	286,839	1919.....	107,698	1928.....	166,783	1937.....	15,101	1946.....	71,719
1911....	331,288	1920.....	138,824	1929.....	164,993	1938.....	17,244	1947....	64,127
1912....	375,756	1921.....	91,728	1930.....	104,806	1939.....	16,994	1948.....	125,414
1913....	400,870	1922.....	64,224	1931.....	27,530	1940.....	11,324	1949.....	95,217
1914....	150,484	1923.....	133,729	1932.....	20,591	1941.....	9,329	1950.....	73,912
1915....	36,665	1924.....	124,164	1933.....	14,382	1942.....	7,576	1951.....	194,391
1916....	55,914	1925.....	84,907	1934.....	12,476	1943.....	8,504	1952.....	164,498

2.—Immigrant Admissions, by Country of Last Permanent Residence, 1948-52

NOTE.—Comparable figures for 1946 and 1947 are given in the 1951 Year Book, p. 143, and figures in less detail for 1939-45 in the 1950 edition, p. 186.

Country	1948	1949	1950	1951	1952
	No.	No.	No.	No.	No.
British Isles—					
England	30,450	14,414	9,077	21,155	31,776
Northern Ireland	1,576	1,058	626	1,154	2,671
Scotland	9,886	4,926	2,802	8,885	10,025
Wales	683	339	164	365	588
Other Commonwealth	5,549	2,301	2,211	3,494	3,473
Totals, Commonwealth	48,144	23,038	14,880	35,053	48,533
Republic of Ireland	1,044	927	452	640	947
Continental Europe—					
Czechoslovakia	1,898	2,815	1,698	3,385	514
France	1,326	1,163	1,399	8,279	5,395
Germany	2,475	2,941	3,815	29,196	25,716
Italy	3,204	7,728	8,993	23,426	20,651
Netherlands, The	6,997	6,828	7,169	19,266	21,068
Poland	27,741	20,091	9,747	14,245	3,358
Union of Soviet Socialist Republics[1]	13,445	9,578	5,467	10,155	1,969
Other European countries	10,705	10,593	9,626	37,430	19,253
United States[2]	7,393	7,756	7,821	7,755	9,333
Other countries	1,042	1,759	2,845	5,561	7,761
Totals, All Countries	**125,414**	**95,217**	**73,912**	**194,391**	**164,498**

[1] In both Europe and Asia; includes Estonia, Latvia and Lithuania. [2] Includes U.S.A. citizens on permit but applying for permanent residence.



Sex, Age and Marital Status.—Of the total immigrants 18 years of age or over entering Canada in 1952, 55 p.c. were males. Before 1931, adult male immigrants normally exceeded females in number, but from 1931 to 1946 female immigrants out-numbered male immigrants almost consistently, particularly in 1945 and 1946 when the wives of Canadian service men were coming in. From 1947 to 1950 adult males again exceeded females by from 10 to 27 p.c., in 1951 by 80 p.c. and in 1952 by 24 p.c.

Throughout the years the sex distribution of persons under 18 years of age has been fairly even. In 1952, of the 44,972 immigrants in this class, 39,655 or 88 p.c. were under 15 years of age.

Of the total male immigrants in 1952, 39 p.c. were married and 59 p.c. single, the remainder being widowed or divorced; the percentage for married and single female immigrants was 47 in each case.

3.—Sex Distribution of Immigrants as Adult Males, Adult Females, and Children, 1943-52

NOTE.—Figures for 1930-42 are given in the 1946 Year Book, p. 183.

Year	Adult Males	Adult Females	Under 18 Years		Total
			Males	Females	
	No.	No.	No.	No.	No.
1943	2,113	4,064	1,177	1,150	8,504
1944	2,391	6,253	2,103	2,054	12,801
1945	4,259	11,620	3,442	3,401	22,722
1946	9,934	40,818	10,549	10,418	71,719
1947	27,281	24,787	6,154	5,905	64,127
1948	52,986	45,191	14,104	13,133	125,414
1949	39,044	32,957	12,118	11,098	95,217
1950	30,700	24,172	10,287	8,753	73,912
1951	95,818	53,239	24,348	20,986	194,391
1952	66,083	53,443	23,766	21,206	164,498

4.—Sex and Marital Status of Immigrant Arrivals, by Age Group, 1951 and 1952

Year and Age Group	Males					Females				
	Single	Married	Widowed	Divorced	Total	Single	Married	Widowed	Divorced	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1951										
0-14 years	20,700	—	—	—	20,700	18,774	—	—	—	18,774
15-19 "	8,793	52	—	3	8,848	3,818	600	1	1	4,420
20-24 "	18,991	3,098	1	29	22,119	4,204	5,875	18	46	10,143
25-29 "	12,792	10,799	31	138	23,760	2,764	9,652	82	174	12,672
30-39 "	7,045	19,556	156	410	27,167	1,900	11,766	367	397	14,430
40-49 "	1,712	10,711	220	272	12,915	735	6,271	658	346	8,010
50-59 "	231	2,862	167	61	3,321	283	2,229	933	145	3,590
60 years or over	76	968	276	16	1,336	197	635	1,313	41	2,186
Totals, 1951	**70,340**	**48,046**	**851**	**929**	**120,166**	**32,675**	**37,028**	**3,372**	**1,150**	**74,225**
1952										
0-14 years	20,743	—	—	—	20,743	18,911	1	—	—	18,912
15-19 "	6,093	41	—	—	6,134	3,981	456	1	1	4,439
20-24 "	11,584	1,745	5	9	13,343	5,172	5,065	11	33	10,281
25-29 "	8,811	7,414	25	71	16,321	3,608	9,159	59	138	12,964
30-39 "	4,542	14,175	78	234	19,029	2,261	11,786	298	372	14,717
40-49 "	1,105	8,445	132	179	9,861	818	6,034	536	341	7,729
50-59 "	221	2,696	149	50	3,116	265	2,159	876	174	3,474
60 years or over	82	925	269	26	1,302	167	625	1,293	48	2,133
Totals, 1952	**53,181**	**35,441**	**658**	**569**	**89,849**	**35,183**	**35,285**	**3,074**	**1,107**	**74,649**

Birthplace.—British-born immigrants to Canada in 1952 numbered 44,942 and made up 27 p.c. of the total immigration; the increase over 1951 amounted to 31 p.c. Immigrants born in Continental Europe totalled 105,532, constituting a decrease of 29 p.c. from the previous year. They accounted for 64 p.c. of the immigration compared with 76 p.c. in 1951. Of the 105,532, 19·8 p.c. were born in Italy, 19·7 p.c. in The Netherlands, 19·4 p.c. in Germany and 8·4 p.c. in Poland. The number of United States-born immigrants in 1952 was slightly higher than in 1951, accounting for 5 p.c. of the total as compared with 3 p.c. in the previous year.

5.—Birthplaces of Immigrant Arrivals, 1950-52

NOTE.—Figures for 1942-49 are given in the corresponding table of previous Year Books beginning with the 1948-49 edition.

Country of Birth	1950	1951	1952	Country of Birth	1950	1951	1952
	No.	No.	No.		No.	No.	No.
Commonwealth—				**Continent of Asia—**			
British Isles—				China	1,873	2,967	2,510
England	8,419	18,723	26,221	Israel	—	—	539
Northern Ireland	680	1,302	2,826	Japan	18	19	34
Scotland	3,032	9,199	10,611	Other	214	714	539
Wales	287	635	1,049				
Lesser Isles	38	99	137				
Other Commonwealth—				**Continent of Europe—**			
Africa (British)	93	196	330	Austria	754	4,091	3,112
Australia	317	462	667	Belgium	706	4,235	1,941
Canada	878	719	795	Czechoslovakia	1,848	4,401	1,893
India	199	369	468	Denmark	—	—	2,030
New Zealand	194	199	227	Finland	—	—	2,276
West Indies (British)	326	584	673	France	1,238	7,198	4,505
Other	938	1,754	938	Germany	3,918	24,257	20,423
				Greece	828	2,758	1,542
Republic of Ireland	614	938	1,516	Hungary	1,947	5,099	1,999
				Italy	9,004	23,806	20,930
				Latvia	1,580	2,679	1,545
Continent of Africa				Lithuania	973	1,519	898
(other than British)	104	234	287	Netherlands, The	7,125	18,781	20,850
				Norway	237	925	1,193
				Poland	9,944	17,907	8,839
Continent of North America—				Roumania	1,212	2,930	2,057
				Switzerland	482	1,337	1,518
Central America	22	20	31	Union of Soviet Socialist Republics[1]	2,043	4,489	2,769
Mexico	16	38	121	Yugoslavia	1,558	5,651	3,106
United States	5,909	5,982	7,603	Other	3,932	16,417	2,106
Other	54	98	109				
Continent of South America	254	350	501	**Grand Totals**	**73,912**[2]	**194,391**[3]	**164,498**[4]

[1] In both Europe and Asia. [2] Includes 6 born at sea and 98 others not stated. [3] Includes 8 born at sea and 302 others not stated. [4] Includes 4 born at sea and 230 others not stated.

Origin.—Of the 47,872 immigrants of British stock entering Canada in 1952, 61 p.c. were English, 25 p.c. Scottish, 12 p.c. Irish and 2 p.c. Welsh. Immigrants of Continental European stocks, who together numbered 113,461 and accounted for 69 p.c. of the total, were 25·9 p.c. German, 19·0 p.c. Italian, 19·0 p.c. Netherlanders, 5·0 p.c. Jewish, 5·0 p.c. Polish, 4·4 p.c. French and 2·5 p.c. Ukrainian.

6.—Origins of Immigrant Arrivals, 1950-52

NOTE.—Figures for 1926-49 are given in the corresponding table of previous Year Books beginning with the 1939 edition.

Origin	1950	1951	1952
	No.	No.	No.
British—			
English	11,068	21,348	29,341
Irish	2,322	3,373	5,901
Scottish	3,928	10,002	11,693
Welsh	327	638	937
Totals, British	**17,645**	**35,361**	**47,872**
Continental European—			
Albanian	30	56	20
Belgian	472	2,655	1,375
Bulgarian	85	362	114
Czech	1,498	3,199	1,009
Estonian	1,961	4,599	948
Finnish	504	4,158	2,308
French	1,929	6,949	5,000
German	6,642	33,234	29,344
Greek	913	2,918	1,750
Italian	9,246	24,532	21,554
Jewish	3,006	7,167	5,682
Lettish	1,791	2,846	1,462
Lithuanian	979	1,351	786
Magyar	1,645	4,421	1,514
Maltese	845	1,604	694
Netherlanders	7,635	19,405	21,515
Polish	6,732	13,078	5,638
Portuguese	104	166	262
Roumanian	400	1,000	401
Russian	653	2,305	1,109
Scandinavian—			
Danish	967	4,663	2,140
Icelandic	17	23	45
Continental European—concl.			
Scandinavian—concl.			
Norwegian	341	1,036	1,371
Swedish	281	949	686
Spanish[1]	85	701	356
Swiss[2]	452	1,096	1,314
Ukrainian	3,815	6,949	2,859
Yugoslavic[1]	1,041	4,175	2,205
Totals, Continental European	**54,069**	**155,597**	**113,461**
Other—			
Arabian	29	52	73
Armenian	37	86	77
Chinese	1,746	2,708	2,320
East Indian	77	99	172
Indian (American)	17	26	20
Japanese	13	3	7
Mexican	4	17	12
Negro	159	165	163
Persian	2	7	11
Syrian	104	229	242
Turkish	10	19	19
Not stated	—	22	49
Totals, Other	**2,198**	**3,433**	**3,165**
Grand Totals	**73,912**	**194,391**	**164,498**

[1] Includes a small number of minor groups. [2] Reported as "Swiss" origin but are evidently one of the constituent races such as German, French, Italian, etc.

Nationality.—The nationalities of immigrants entering Canada during the years 1950, 1951 and 1952 are shown in Table 7.

7.—Nationalities of Immigrant Arrivals, 1950-52

NOTE.—Figures for 1930-49 are given in the corresponding table of previous Year Books beginning with the 1936 edition.

Nationality	1950	1951	1952
	No.	No.	No.
African (not British)	35	42	63
Albanian	32	58	17
Argentinian	9	20	57
Armenian	5	9	7
Austrian	395	3,628	2,867
Belgian	669	3,086	1,477
Brazilian	26	27	28
British	15,399	34,790	45,685
Bulgarian	95	395	120
Central American	14	16	20
Chilean	6	9	11
Chinese	1,731	2,689	2,269
Czechoslovakian	1,840	3,905	1,180
Danish	905	4,666	2,040
Ecuadorian	2	3	4
Estonian	2,026	4,748	883
Finnish	444	3,949	2,272
French	1,209	6,811	4,511
German	1,772	25,813	24,410
Greek	845	2,802	1,619
Hungarian	1,970	5,210	1,542
Icelandic	9	17	33
Irish Republican	425	669	1,138
Israeli	103	333	1,385
Italian	8,939	23,432	20,851
Japanese	12	4	4
Latvian	1,828	2,830	1,433
Lithuanian	1,081	1,373	727
Mexican	6	30	58
Netherlanders	7,211	19,137	21,182
Norwegian	239	916	1,202
Paraguayan	13	16	33
Persian	—	18	15
Peruvian	7	3	3
Polish	12,075	20,408	7,709
Portuguese	11	42	82
Roumanian	1,163	2,344	1,127
Russian	1,515	3,744	1,437
South American, *n.e.s.*	17	40	46
Spanish	20	552	152
Swedish	155	796	511
Swiss	475	1,267	1,515
Syrian	98	263	252
Turkish	13	54	56
Ukrainian	120	705	557
United States	7,136	6,904	8,638
Uruguayan	2	5	3
Venezuelan	8	9	38
West Indian (not British)	18	48	40
Yugoslavic	1,702	5,573	2,880
Other	82	183	309
Totals	**73,912**	**194,391**	**164,498**

8.—Intended Destinations and Occupations of Immigrants Entering Canada in 1952

Intended Occupation	Intended Destination																				Canada		
	N'f'ld.		P.E.I.		N.S.		N.B.		Que.		Ont.		Man.		Sask.		Alta.		B.C.		Yukon and N.W.T.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Skilled Workers—																									
Aircraft workers	5	—	11	—	9	—	3	—	150	1	321	9	14	—	2	—	36	—	12	—	—	—	563	10	573
Automobile mechanics	2	—	1	—	29	—	8	—	394	2	743	1	72	—	17	—	101	—	101	—	—	—	1,468	3	1,471
Bakers	3	—	1	—	13	—	3	—	170	5	252	11	37	—	14	—	38	—	37	—	—	—	568	16	584
Barbers	—	1	—	1	2	1	1	—	64	48	124	69	5	4	6	—	12	12	15	11	—	—	229	147	376
Blacksmiths	—	—	—	—	4	—	—	—	38	—	87	—	10	—	11	—	17	—	12	—	—	—	179	—	179
Butchers	—	—	—	—	8	—	5	—	131	—	162	1	18	—	10	—	30	—	23	—	—	—	387	1	388
Cabinetmakers	—	—	—	—	5	—	1	—	33	—	97	—	12	—	2	—	8	—	13	—	—	—	171	—	171
Carpenters	4	—	4	—	43	—	16	—	428	2	1,222	3	97	—	38	—	151	—	200	—	—	—	2,203	5	2,208
Dressmakers	—	—	—	—	—	2	—	2	6	226	7	314	2	23	1	10	—	17	—	33	—	—	16	627	643
Electricians	5	—	—	—	18	—	5	—	281	1	601	1	36	—	17	—	73	—	104	—	—	—	1,140	2	1,142
Engineers, marine	1	—	—	—	24	1	—	—	26	—	56	—	3	—	—	—	3	—	28	—	—	—	141	1	142
Fur workers	—	—	—	—	—	—	—	—	61	6	41	9	2	2	—	—	2	—	3	1	—	—	109	18	127
Locksmiths	—	—	—	—	3	—	—	—	72	—	126	—	25	—	4	—	24	—	17	—	—	—	271	—	271
Machinists	1	—	1	—	43	—	4	—	342	4	975	10	55	—	23	—	92	1	102	2	—	—	1,638	17	1,655
Masons and bricklayers	—	—	—	—	22	—	5	—	221	—	778	—	26	—	20	—	53	—	65	1	—	—	1,190	1	1,191
Moulders	—	—	—	—	1	—	1	—	22	—	69	—	2	—	1	—	3	—	4	—	—	—	103	—	103
Painters and glaziers	—	—	—	—	19	—	2	—	165	2	408	3	33	1	6	—	50	—	61	—	—	—	744	6	750
Photographers	1	—	—	—	1	—	2	—	37	6	60	11	3	3	1	—	6	1	15	3	—	—	125	24	149
Plasterers	1	—	—	—	—	—	1	—	21	—	100	—	4	—	1	—	5	—	3	—	—	—	136	—	136
Plumbers	1	—	—	—	11	—	1	—	76	—	220	—	25	—	5	—	37	—	34	—	—	—	410	—	410
Printers, pressmen and printing trades	—	—	—	—	1	—	—	—	42	3	130	12	7	—	5	—	15	—	10	4	—	—	210	19	229
Seamstresses	—	—	—	1	—	2	—	1	—	75	—	100	1	8	—	1	—	8	—	14	—	—	1	210	211
Sheet metal workers	—	—	2	—	2	—	2	—	21	—	135	—	5	—	2	—	18	—	14	—	—	—	201	—	201
Shoemakers	—	—	—	—	4	—	—	—	95	—	197	—	13	—	2	—	9	—	20	—	—	—	340	—	340
Tailors	—	—	—	—	3	1	3	—	247	51	292	103	21	12	10	4	13	4	35	15	—	—	624	190	814
Textile workers, including weavers and spinners	2	—	—	—	4	3	2	1	219	75	405	231	22	11	5	4	17	9	24	17	—	—	700	351	1,051
Toolmakers, die cutters, etc	4	—	—	—	8	—	—	—	113	—	411	—	11	—	4	—	15	—	20	—	—	—	586	—	586
Upholsterers	—	—	—	—	2	—	—	—	21	—	85	5	10	—	5	—	6	—	10	—	—	—	139	5	144
Watch and clock makers	2	—	—	—	—	—	1	—	33	2	70	—	6	—	3	—	4	—	3	—	—	—	122	2	124
Welders	1	—	—	—	16	—	—	—	96	—	264	1	14	—	8	—	51	—	32	—	—	—	482	1	483
Wood workers, *n.e.s.*	4	—	—	—	2	—	1	—	37	—	63	—	2	—	2	—	3	—	16	—	—	—	130	—	130
Skilled workers, *n.e.s.*	21	1	8	—	80	3	18	1	1,135	73	2,201	143	142	7	48	6	359	9	348	19	—	—	4,360	262	4,622

8.—Intended Destinations and Occupations of Immigrants Entering Canada in 1952—concluded

Intended Occupation	Intended Destination																				Canada		
	N'f'ld.		P.E.I.		N.S.		N.B.		Que.		Ont.		Man.		Sask.		Alta.		B.C.		Yukon and N.W.T.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Unskilled and Semi-Skilled Workers—																							
Lumbermen	—	—	—	—	18	—	3	—	350	—	334	1	12	—	10	—	40	—	206	—	2	—	975	1	976
Miners	1	—	—	—	10	—	—	1	179	—	357	1	16	—	2	—	66	—	78	—	3	—	712	2	714
Fishermen	2	—	—	—	9	—	—	—	1	—	7	—	1	—	—	—	3	—	20	—	—	—	43	—	43
General labourers	7	—	—	—	61	—	27	—	1,955	5	4,721	17	242	1	133	2	432	2	708	2	2	—	8,288	29	8,317
Manufacturing	—	—	2	—	9	7	3	1	162	50	472	229	33	11	11	1	28	7	113	15	1	—	834	321	1,155
Construction	1	—	—	—	5	—	1	—	72	—	742	—	40	—	8	—	43	—	72	—	—	—	984	—	984
Transportation	3	—	—	—	32	—	12	—	254	3	741	4	63	1	18	—	80	—	177	1	—	—	1,380	9	1,389
Apprentices to skilled trades	3	—	3	—	29	5	3	3	398	83	1,155	224	79	13	46	1	139	21	160	29	3	—	2,018	379	2,397
Unskilled and semi-skilled, *n.e.s*	2	3	3	—	39	19	12	5	509	317	1,118	817	68	60	32	38	160	82	207	117	1	2	2,151	1,460	3,611
Other Classes—																							
Farming	3	2	92	1	353	3	141	1	3,339	65	7,870	150	918	53	855	21	1,847	95	1,125	36	1	—	16,544	427	16,971
Domestic servant	—	5	—	5	—	115	—	64	—	2,457	—	3,289	—	416	—	184	—	503	—	517	—	1	—	7,556	7,556
Clerical	13	10	3	2	34	50	19	21	899	790	1,651	2,190	78	75	32	39	141	167	312	370	—	4	3,182	3,718	6,900
Professional	71	51	11	2	80	28	44	26	1,386	479	2,182	870	143	83	135	36	643	110	473	194	6	1	5,174	1,880	7,054
Merchant	11	1	—	2	36	12	22	4	667	153	1,268	485	86	20	26	13	158	40	335	62	1	—	2,610	792	3,402
Miscellaneous[1]	7	16	7	9	88	59	27	41	365	784	832	2,266	61	145	49	106	96	327	304	461	—	6	1,836	4,220	6,056
Occupation not given	—	—	—	—	11	5	7	7	163	92	475	314	23	21	10	12	42	43	80	54	—	—	811	548	1,359
Dependent children	66	59	47	38	395	303	114	116	4,032	3,735	12,072	10,927	955	898	578	493	2,088	1,838	2,260	1,971	3	11	22,610	20,389	42,999
Dependent wives	—	106	—	49	—	497	—	205	—	6,195	—	16,539	—	1,214	—	686	—	2,498	—	3,007	—	15	—	31,011	31,011
Totals	**248**	**255**	**196**	**110**	**1,586**	**1,116**	**520**	**500**	**19,528**	**15,790**	**46,699**	**39,360**	**3,553**	**3,082**	**2,218**	**1,657**	**7,256**	**5,794**	**8,011**	**6,956**	**23**	**40**	**89,838**	**74,660**	**164,498**

[1] Includes the following classes for which totals only are given here: bookbinders, 39; engravers, 23; locomotive engineers, 28; stationary engineers, 14; hat and cap makers, 20; harness and saddle makers, 6; jewellers, goldsmiths and silversmiths, 68; millers, 59; milliners, 26; patternmakers, 59; stonecutters, 12; tanners, 14; tobacco workers, 12; boilermakers, 50; and other, 5,626.

Intended Destination and Occupation.—Experience has shown that not all immigrants reach the province of intended destination or follow intended occupation. Table **8** gives intended destination and occupation as stated by the immigrants entering Canada in 1952. Of the total immigrants, 45 p.c. were dependent wives and children, 10 p.c. were classed as farm workers, 13 p.c. as skilled workers and 12 p.c. as unskilled workers, while 11 p.c. were in the clerical, professional and merchant classes.

Of the total female immigrants, aside from dependent wives and children who accounted for 69 p.c., domestic servants comprised the largest occupational class followed by the clerical and professional classes. Only 3 p.c. were classed as skilled workers.

Rejections and Deportations.—The Immigration Act provides for the rejection and deportation of immigrants belonging to prohibited classes, and also for the deportation of those who become undesirables within five years after legal entry. The results of the operation of these regulations are shown in Table **9.**

9.—Rejections and Deportations of Immigrants and Others, by Cause and Nationality, 1950-52

NOTE.—Figures for 1903-39 are given in the corresponding tables of previous Year Books; those for 1940-49 are given in the 1951 edition, p. 150.

Cause and Nationality	Rejections			Cause and Nationality	Deportations		
	1950	1951	1952		1950	1951	1952
From Overseas—	No.	No.	No.		No.	No.	No.
CAUSE				CAUSE			
Medical	23	15	36	Medical	47	40	54
Civil	316	269	478	Public charges	31	14	23
				Criminality	100	85	102
				Misrepresentation and stealth	176	286	330
				Other causes	33	36	70
				Accompanying deported persons	5	—	1
NATIONALITY							
British	110	103	134	NATIONALITY			
Other	229	181	380	British	154	190	215
Totals from Overseas	**339**	**284**	**514**	United States	108	70	82
From United States	**7,513**	**4,829**	**3,600**	Other	130	201	283
Grand Totals, Rejections	**7,852**	**5,113**	**4,114**	**Grand Totals, Deportations**	**392**	**461**	**580**

Returning Canadians.—The numbers of Canadians who returned to Canada during the years 1947 to 1952 after having resided in the United States were as follows: 1947, 8,970; 1948, 5,678; 1949, 4,050; 1950, 3,518; 1951, 3,635; and 1952, 4,707.

Section 2.—Emigration

Emigration from Canada is an important factor tending to offset both present and past immigration activities. The movement to the United States of native-born Canadians as well as of Europeans who originally migrated to Canada attained considerable proportions at certain periods. The figures of Table **10,**

showing the numbers of persons entering the United States from Canada during the years 1943-52, were obtained from the Immigration and Naturalization Service of the United States Department of Justice. No Canadian statistics on emigration are available.

10.—Persons Entering the United States from Canada, 1943-52

Year	Immigrant Aliens from Canada	U.S. Citizens Returning from Canada	Persons Deported from Canada	Total
	No.	No.	No.	No.
1943	9,571	4,892	78	14,541
1944	9,821	4,743	69	14,633
1945	11,079	5,138	188	16,405
1946	20,434	6,769	414	27,617
1947	23,467	5,003	589	29,059
1948	24,788	4,946	512	30,246
1949[1]	25,156	5,787	425	31,368
1950[1]	21,885	3,859	476	26,220
1951[1]	25,880	4,303	315	30,498
1952[1]	33,354	4,012	343	37,709

[1] Includes Newfoundland.

PART II.—CANADIAN CITIZENSHIP*

An outline of early naturalization procedure and events leading to the passing of the Canadian Citizenship Act is given in the 1951 Year Book, pp. 153-155.

Section 1.—The Canadian Citizenship Act

The Canadian Citizenship Act came into force on Jan. 1, 1947, its purpose being to give a clear definition of Canadian citizenship and to provide an underlying community of status for all the people of Canada, helping to bind them together as Canadians. Since Jan. 18, 1950, the administration of Canadian citizenship has been the responsibility of the Department of Citizenship and Immigration. The provisions of the Act with the changes occasioned by the 1950 and 1951 amendments are outlined in the following paragraphs.

Natural-Born Canadian Citizens.—The Act defines the status of natural-born Canadians before and after the coming into force of the Act, including persons born in and outside of Canada and those born on a Canadian ship or aircraft. A person born outside of Canada out of wedlock is a Canadian citizen if his mother was born in Canada, or on a Canadian ship or aircraft, or was a British subject with Canadian domicile, and had not become an alien. A person born outside of Canada of a Canadian parent before Jan. 1, 1947, is not a Canadian citizen unless, at the commencement of the Act, he had been admitted to Canada for permanent residence, or was a minor. If he was born after Jan. 1, 1947, he is not a Canadian citizen unless, within a two-year period following his birth, or within such extended period as may be authorized in special cases by the Minister, his birth is registered with an official Canadian representative abroad, or with the Minister of Citizenship and Immigration. In addition, a Canadian born outside of Canada before or after Jan. 1, 1947, ceases to be a Canadian citizen unless, within one year of age 21 (or

* Prepared in the Canadian Citizenship Branch under the direction of Laval Fortier, Deputy Minister, Department of Citizenship and Immigration, Ottawa.

within such longer period as may be authorized), he files a declaration of retention of Canadian citizenship and, in the case of dual nationality, a declaration renouncing the other nationality or citizenship. A Canadian citizen, whether he is abroad or at home, may obtain a certificate of proof of his Canadian citizenship upon payment of a fee of $1.

British Subjects, Commonwealth Citizens, Citizens of the Republic of Ireland, and Canadian Citizens.—The Citizenship Act states that a Canadian citizen is a British subject. Before the passage of the Act, he could not, officially, describe himself as a Canadian citizen because the official designation for Commonwealth citizens was British subject. Now, he may officially call himself a *Canadian*. The authority for this procedure is found in Sect. 3 of the Act, which reads:—

> "Where a person is required to state or declare his national status, any person who is a Canadian citizen under this Act shall state or declare himself to be a Canadian citizen and his statement or declaration to that effect shall be a good and sufficient compliance with such requirement."

Non-Canadian British subjects continue to have the right to vote in federal, provincial and municipal elections, but they are not Canadian citizens until they have lived five years in Canada. Those who had that residence (Canadian domicile) on Jan. 1, 1947, are Canadian citizens, and those who attain it after that date must apply for certificates of citizenship before being granted the status of Canadian citizens. Citizens of the Republic of Ireland, who are not British subjects, have the same rights, in Canada, as a British subject.

Canadian Citizens other than Natural-Born.—Under the Act, persons naturalized in Canada before Jan. 1, 1947, and British subjects who had Canadian domicile at the commencement of the Act are Canadian citizens. The Act also defines the status as Canadian citizens of women and children, other than natural-born, and the manner in which they would have acquired Canadian citizenship.

Reinstatement of Persons of Canadian Origin Naturalized Outside of Canada.—By the amendment of July 20, 1950, the Minister may, in his discretion, grant a certificate of citizenship to a person who was a natural-born Canadian, or who was a British subject of Canadian origin, and who lost such status by naturalization outside of Canada or for any reason other than marriage. The qualifications include continuous residence in Canada for a period of one year immediately preceding the date of the application as well as certain other requirements.

Status and Procedure of Non-Canadians to Canadian Citizenship.—Any person who is not a Canadian citizen or is not otherwise a British subject, and is a resident of Canada, may take the first step towards citizenship at any time after his admission to Canada and after he has attained the age of 18 years by filing a Declaration of Intention in the office of the clerk of the court of the district in which he resides. He must then wait not less than one year, and not more than five, before filing with the court his application for citizenship, provided he has reached age 21. He must satisfy the court that he has resided in Canada for one year immediately preceding the date of his application, and a further period of four years in Canada during the six years immediately preceding the date of the application, making a total residence of five years. If he served outside of Canada in the Armed Forces of Canada during time of war, or if the applicant is the wife of and resides in Canada with a Canadian citizen, the residence of one year immediately preceding the date of the application is all that is required. Additional

requirements are lawful admission to Canada for permanent residence, good character, an adequate knowledge of English or French (such knowledge not required if he has resided continuously in Canada for more than 20 years), an adequate knowledge of the responsibilities and privileges of Canadian citizenship, and an intention, if his application is granted, either to reside permanently in Canada or to enter or continue in the public service of Canada or of a province thereof.

When the judge has given his decision, the papers and the decision are forwarded to the Minister of Citizenship and Immigration who may, in his discretion, grant a certificate of citizenship. When a certificate is granted, it is forwarded to the clerk of the court, who then notifies the applicant to appear in court for the purpose of taking the Oath of Allegiance and Declaration of Renunciation of Foreign Allegiance and receiving his certificate of citizenship.

If the application is rejected by the court or by the Minister, the applicant must wait two years before filing a new application.

Status of Married Women.—A Canadian woman does not lose Canadian citizenship upon marriage to an alien, and a non-Canadian woman does not become a Canadian citizen upon marriage to a Canadian citizen. In the former case, she may file with the Minister a Declaration of Renunciation of Canadian citizenship if she has acquired her husband's nationality, and she thereupon ceases to be a Canadian citizen. In the latter case, a non-Canadian woman must apply to the court for a certificate of citizenship. If she is a citizen of another Commonwealth country, she may apply direct to the Minister. The one concession as to qualifications is a residence of only one year in Canada.

A woman of Canadian origin who ceased to be a British subject by reason only of her marriage to an alien prior to Jan. 1, 1947, may regain her status and be granted a certificate of citizenship upon application direct to the Department. She need not be a resident of Canada and no special qualifications are required.

Status of Minors, Foundlings, Posthumous Births, etc.—The Minister may grant a special certificate of citizenship to a minor child of a person to whom a certificate of citizenship is or has been granted under the Act, on the application of that person if the person is the responsible parent, provided the child was born before the date of the grant of the certificate and has been admitted to Canada for permanent residence. The Minister may also grant a certificate to a minor in any special case whether or not the conditions required by the Act have been complied with. Every foundling, who is or was first found as a deserted infant in Canada, shall, until the contrary is proved, be deemed to have been born in Canada. Where a child is born after the death of his father, the child shall, for the purposes of definition of natural-born Canadian citizens, be deemed to have been born immediately before the death of the father.

Children of Diplomatic Representatives in Canada.—The amendment of July 20, 1950 (effective Jan. 1, 1947), excludes from the status of natural-born Canadian citizens the children born in Canada of parents who, at the time of the birth, are the diplomatic or consular representatives of foreign countries in Canada, or who are employees in the service of such representatives.

Adopted or Legitimated Persons.—Effective July 20, 1950, the Act provides that certificates of Canadian citizenship may be granted to adopted or legitimated persons who have been admitted to Canada for permanent residence if the adopter, or the legally recognized father, is a Canadian citizen.

Certificate in Case of Doubt.—A certificate may be granted for the purpose of removing any doubts as to whether the person to whom it is granted is a Canadian citizen, and it is specifically provided that the granting of the certificate shall not be deemed to establish that the person to whom it is granted was not previously a Canadian citizen.

Protection of Status Prior to the Canadian Citizenship Act.—Sect. 44 of the Act provides that, notwithstanding the repeal of the Naturalization Act and the Canadian Nationals Act, the Canadian Citizenship Act is not to be construed or interpreted as depriving any person who is a Canadian national, a British subject or an alien as defined in the said Acts, or in any other law in force in Canada, of the national status he possesses at the time of the coming into force of this Act.

Loss of Canadian Citizenship.—Canadian citizenship may be lost for the following reasons:—

(1) A Canadian citizen who, when outside of Canada and not under disability (minor, lunatic or idiot), acquires, by a voluntary and formal act other than marriage, the nationality or citizenship of a country other than Canada. This does not apply if that country is at war with Canada at the time of acquisition but, in such a case, the Minister may order that he cease to be a Canadian citizen. The purpose of this is to hold the person, if deemed necessary, to his obligations as a Canadian.

(2) A Canadian citizen who, under the law of another country, is a national or citizen of such country and who serves in the armed forces of such country when it is at war with Canada. This does not apply if the Canadian citizen became a national or citizen of such country when it was at war with Canada.

(3) A Canadian citizen who, when in Canada, acquires voluntarily the citizenship of a foreign country (other than by marriage) may be deprived of his Canadian citizenship by Order of the Governor in Council, on recommendation of the Minister.

(4) A Canadian citizen, other than natural-born or one who has served in the Armed Forces of Canada in time of war, who resides outside of Canada for six consecutive years without maintaining substantial connection with Canada, loses his citizenship automatically, but the period of absence may, upon application, be extended beyond the six years for good and sufficient cause.

Loss of Citizenship by Revocation—Applicable Only to Naturalized Persons.—The citizenship of a Canadian citizen, other than a natural-born Canadian citizen, may be revoked by the Governor in Council for such reasons as trading or communicating with an enemy country during time of war; disaffection or disloyalty while out of Canada or who, while in Canada, has, by a court of competent jurisdiction, been convicted of any offence involving disaffection or disloyalty; obtaining a certificate of naturalization or Canadian citizenship by false representation or fraud; residence outside of Canada for not less than six years (without maintenance of substantial connection) since becoming a Canadian citizen or being naturalized in Canada; residence for not less than two years (without maintenance of substantial connection) in a *foreign* country of which he was a national or citizen at any time prior to his becoming a Canadian citizen or being naturalized in Canada.

Loss of Citizenship by Revocation—Applicable to Both Natural-Born and Naturalized Persons.—The Governor in Council may, in his discretion, order that any person shall cease to be a Canadian citizen if, upon a report from the Minister of

Citizenship and Immigration, he is satisfied that such person has, when not under a disability, (1) taken or made an oath, affirmation, or other declaration of allegiance to a foreign country, or (2) made a declaration renouncing his Canadian citizenship.

Loss of Citizenship in Relation to Women.—In the case of marriage, a woman who is a Canadian citizen does not lose the status of a Canadian citizen unless, having on marriage acquired her husband's nationality, she makes a declaration renouncing her Canadian citizenship.*

Section 2.—Canadian Citizenship Statistics

Citizenship of the Total Population.—Results of the 1951 Census show that 96·8 p.c. of all the people in Canada were Canadian citizens while 0·7 p.c. were citizens of other Commonwealth countries, 1·7 p.c. of European countries, 0·1 p.c. of Asiatic countries, 0·5 p.c. of the United States and 0·1 p.c. of other countries. Table 1 shows the 1951 population classified by country of allegiance and origin. According to this table, 98·0 p.c. of the persons of British Isles origins and 99·7 p.c. of those of French origin owed allegiance to Canada. Corresponding percentages for other European and Asiatic origins were 89·3 p.c. and 78·7 p.c., respectively.

1.—Population classified by Country of Allegiance and Origin, 1951

Origin	Country of Allegiance					Total
	Canada	Other Commonwealth Countries	United States	European Countries	Other Countries[1]	
	No.	No.	No.	No.	No.	No.
British Isles[2]	6,577,849	95,567	34,229	1,524	516	6,709,685
French	4,304,972	763	8,370	4,896	166	4,319,167
Other European	2,279,704	6,609	22,025	229,311	16,073	2,553,722
German	586,597	631	8,203	21,739	2,825	619,995
Italian	126,767	1,640	878	22,712	248	152,245
Jewish	161,968	1,475	2,811	12,305	3,111	181,670
Netherlanders	227,552	312	2,327	33,032	1,044	264,267
Polish	179,960	661	845	36,890	1,489	219,845
Russian	83,643	181	459	6,451	545	91,279
Scandinavian[3]	268,904	311	4,218	9,426	165	283,024
Ukrainian	366,160	225	305	25,069	3,284	395,043
Other	278,153	1,173	1,979	61,687	3,362	346,354
Asiatic	57,325	417	220	104	14,761	72,827
Native Indian and Eskimo	165,359	45	169	17	17	165,607
Other and not stated	182,730	670	3,987	638	396	188,421
Totals, All Origins	**13,567,939**	**104,071**	**69,000**	**236,490**	**31,929**	**14,009,429**

[1] Includes persons reported as "stateless". [2] Includes English, Irish, Scottish, Welsh and Manx. [3] Includes Danish, Icelandic, Norwegian and Swedish.

Citizenship Certificates Issued.—In 1952, 20,506 Canadian Citizenship Certificates were issued, 20,135 in English and 371 in French. Corresponding figures for 1951 were 20,937 Certificates, 20,423 in English and 514 in French.

* The foreign countries, under the laws of which a woman does not acquire the citizenship of such countries on marriage, are: Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, Morocco, Palestine, Panama, Paraguay and Uruguay.

During 1952, the Canadian Citizenship Registration Branch recorded 1,563 certificates of registration of births abroad, 13,323 declarations of intention filed with the courts, 143 declarations of retention of citizenship, and 76 declarations of resumption of Canadian citizenship. Certificates issued free to persons who have had active military service numbered 1,646. Corresponding figures for 1951 were 1,261 registrations of births abroad, 8,653 declarations of intention, 91 declarations of retention of citizenship, 49 declarations of resumption of citizenship and 591 Certificates issued free to persons who have had active military service.

2.—Citizenship Certificates Issued, by Status of Recipient, 1950-52

Section of Act	Classification	1950	1951	1952
		No.	No.	No.
Sect. 34 (1) (i)	Certificates of Proof of Status—			
	Canadian citizens by birth	1,697	1,771	2,630
	By naturalization under former Acts	3,950	3,643	3,420
	British subjects with 5 years domicile before Jan. 1, 1947	1,857	1,647	2,208
	Women, through marriage	1,257	1,317	1,495
Sect. 10 (2)	British subjects with 5 years domicile after Jan. 1, 1947	431	841	1,941
Sect. 10 (1)	Aliens	8,931	9,359	6,275
Sect. 10 (5)	Minors whose parents have been granted Certificates	636	1,067	1,614
Sect. 11 (3)	Minors under special circumstances	62	39	37
Sect. 10 (3)	Women who regained lost Canadian citizenship through marriage	486	1,006	678
Sect. 10 (4)	Canadians who regained lost status by naturalization outside Canada	84	227	177
Sect. 11 (1)	Doubtful cases who have been now awarded Certificates	11	6	4
Sect. 11 (2)	Adopted and legitimated persons	7	14	27
	Totals	**19,409**	**20,937**	**20,506**

Characteristics of Aliens* Granted Citizenship Certificates in 1952.—In 1952, for the first time since the Canadian Citizenship Act of 1947 has been in effect, detailed statistics have become available with respect to such characteristics as age, marital status, occupation, period of immigration, residence, as well as previous nationality of aliens granted Certificates of Canadian Citizenship.

Just over 77 p.c. of the aliens granted Citizenship Certificates in 1952 resided in urban centres as compared with 62 p.c. of the total population at the 1951 Census. Regionally, these new Canadians were distributed as follows: 2·2 p.c. in the Atlantic Provinces, 9·9 p.c. in Quebec, 37·5 p.c. in Ontario, 27·0 p.c. in the Prairie Provinces, and 23·3 p.c. in British Columbia.

Almost one-third (31·5 p.c.) of the aliens naturalized in 1952 had immigrated to Canada since the end of World War II. On the other hand, 52 p.c. had immigrated to Canada prior to 1931. Of the post-war immigrant aliens who became Canadian citizens in 1952, slightly over half were Chinese.

Over three-fifths of the aliens naturalized in 1952 were males. Young persons under 20 years of age constituted 18 p.c. of the males but only 6 p.c. of the females. The percentage of both sexes combined who were 20 to 44 years of age was 37, while the percentage 45 to 64 years was 42, and over 65 years, eight.

One-third of all aliens naturalized in 1952 were Chinese and about two-fifths of these Chinese were children recently arrived in Canada. Persons reporting Poland as country of former allegiance were the next largest group, accounting for 17 p.c. of the total.

* Includes all aliens granted Certificates in 1952. In addition to those classified under Sect. 10 (1) of the Citizenship Act 1947, as shown in Table 2, they include the totals shown in Sects. 10 (3) and 10 (4), and a number of those in Sects 10 (5), 11 (1) and 11 (3).

One-fifth of the male aliens granted Citizenship Certificates were employed in agricultural occupations, while a similar proportion were engaged in service fields. Proprietary and managerial occupations and manufacturing occupations each accounted for 11 p.c. of the males. About 75 p.c. of the females were homemakers.

3.—Aliens Granted Citizenship Certificates in 1952, classified by Period of Immigration to Canada and by Province of Residence

Residence	Period of Immigration					Born in Canada[1]	Total
	Before 1921	1921-1930	1931-1940	1941-1950	1951-1952		
	No.	No.	No.	No.	No.	No.	No.
Residing in Canada—							
Newfoundland	2	13	6	4	—	—	25
Prince Edward Island	5	2	1	1	—	—	9
Nova Scotia	23	23	11	49	4	9	119
New Brunswick	9	3	3	19	6	2	42
Quebec	156	264	94	176	123	88	901
Ontario	580	994	397	954	345	124	3,394
Manitoba	159	292	73	85	22	75	706
Saskatchewan	175	233	38	77	83	42	648
Alberta	249	433	114	127	122	48	1,093
British Columbia	659	457	113	316	482	88	2,115
Yukon and Northwest Territories	—	5	1	2	1	—	9
Totals, Residing in Canada	2,017	2,719	851	1,810	1,188	476	9,061
Residing Outside of Canada	1	—	—	—	—	41	42
Totals, Naturalized Aliens	**2,018**	**2,719**	**851**	**1,810**	**1,188**	**517**	**9,103**

[1] Canadian-born who lost their citizenship by marriage; this can apply only to females.

4.—Aliens Granted Citizenship Certificates in 1952, by Sex and Age Group

Age Group	Males	Females	Age Group	Males	Females
0- 4 years	46	14	45-49 years	694	513
5- 9 "	21	21	50-54 "	665	388
10-14 "	131	36	55-59 "	553	294
15-19 "	847	119	60-64 "	509	176
20-24 "	466	185	65-69 "	338	113
25-29 "	292	325	70-74 "	150	48
30-34 "	310	251	75+ "	53	26
35-39 "	262	320			
40-44 "	487	450	**Totals, All Ages**	**5,824**	**3,279**

5.—Aliens Granted Citizenship Certificates in 1952, by Sex and Occupation

Occupation	Male	Female	Occupation	Male	Female
	No.	No.		No.	No.
Proprietary and managerial	624	19	Construction	235	1
Professional	144	56	Labourers, not in primary industries	442	1
Clerical	79	75	Homemakers	...	2,490
Transportation and communication	174	4	No occupation (including students, retired, etc.)	167	115
Commercial and financial	104	18	Children under 14	134	59
Service	823	177	Not stated[1]	1,268	157
Agricultural	807	7			
Fishing, trapping and logging	122	—			
Mining	95	—			
Manufacturing and mechanical	606	100	**Totals, All Occupations**	**5,824**	**3,279**

[1] Mainly children over 14 years of age.

6.—Aliens Granted Citizenship Certificates in 1952, by Sex and Country of Birth

Country of Birth	Male	Female	Total	Country of Birth	Male	Female	Total
	No.	No.	No.		No.	No.	No.
Canada	91	680	771	Roumania	99	70	169
British Isles	12	52	64	Sweden	73	34	107
				Switzerland	47	32	79
United States	256	92	348	U.S.S.R.	158	189	347
				Yugoslavia	106	95	201
Austria	98	64	162	Other European countries	32	30	62
Belgium	70	67	137				
Czechoslovakia	176	213	389	China	2,746	238	2,984
Denmark	69	47	116	Japan	84	72	156
Finland	130	98	228	Other Asiatic countries	19	15	34
France	41	23	64				
Germany	137	141	278	South America	5	3	8
Greece	49	56	105	West Indies	1	3	4
Hungary	130	123	253	Other countries	8	5	13
Italy	94	127	221	At sea	—	1	1
Lithuania	35	29	64	Unknown	1	—	1
Netherlands, The	91	84	175				
Norway	81	41	122	**Totals, All Countries**	**5,824**	**3,279**	**9,103**
Poland	885	555	1,440				

7.—Aliens Granted Citizenship Certificates in 1952, by Country of Former Allegiance

Country of Former Allegiance	No.	Country of Former Allegiance	No.	Country of Former Allegiance	No.
Argentina	1	Greece	119	Norway	157
Austria	190	Haiti	2	Poland	1,517
Belgium	157	Hungary	271	Roumania	154
Bulgaria	11	Iceland	13	Spain	13
Chile	2	Indonesia	1	Sweden	137
China	3,021	Iran	1	Switzerland	100
Colombia	1	Israel	2	Syria	6
Costa Rica	1	Italy	294	Trieste	1
Cuba	1	Japan	193	Turkey	10
Czechoslovakia	391	Latvia	15	United States	646
Denmark	140	Lebanon	12	U.S.S.R.	300
Dominican Republic	1	Leichtenstein	2	Venezuela	1
Estonia	13	Lithuania	72	Yugoslavia	195
Finland	238	Luxembourg	1	Stateless	13
France	71	Mexico	1	Unknown	1
Germany	390	Netherlands, The	224		
				All Countries	**9,103**

CHAPTER V.—VITAL STATISTICS*

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

The history of the collection of vital statistics in Canada is covered in the 1948-49 edition of the Year Book, pp. 185-188. This Chapter of the Year Book is intended to provide a broad summary of the main trends in Canadian vital statistics during the last 30 years, to compare the principal Canadian rates with those for other countries and to provide lay readers and students of demography, public health, sociology and other related fields with basic Canadian vital statistics data. Detailed data are available from regular DBS annual and quarterly reports, notably *Vital Statistics* (Preliminary Report) and *Vital Statistics of Canada*. Certain unpublished data are also available on request.

Births and deaths are classified by place of residence (in the case of births, according to the residence of the mother) and marriages by place of occurrence.

Section 1.—Summary of Vital Statistics

Table 1 gives a summary of the principal vital statistics of the provinces of Canada for the years since 1921 when the system of collection of national statistics was initiated.

In comparing the birth, death and marriage rates of the provinces, it is important to bear in mind that part of the differences observed may be due to differences in the sex and age distribution of their populations. Similarly, changes in these rates may be due partly to changes in this distribution. These remarks apply also to international comparisons of birth, death and marriage rates.

* Revised in the Vital Statistics Section, Health and Welfare Division, Dominion Bureau of Statistics.

1.—Summary of Principal Vital Statistics, by Province, 1921-51

(Exclusive of the Territories)

Province and Year	Live Births		Deaths		Natural Increase		Infant Mortality[2]		Maternal Mortality		Marriages	
	No.	Rate[1]	No.	Rate[1]	No.	Rate[1]	No.	Rate[3]	No.	Rate[3]	No.	Rate[1]
Newfoundland—												
Av. 1921-25	6,986	26·7	3,665	14·0	3,321	12·7	..	..	50	7·1	1,481	5·7
" 1926-30	6,756	25·1	3,684	13·7	3,072	11·4	779	115	33	4·9	1,632	6·1
" 1931-35	6,686	23·4	3,642	12·8	3,044	10·6	782	117	34	5·0	1,708	6·0
" 1936-40	7,638	25·8	3,681	12·4	3,957	13·4	754	99	40	5·3	2,208	7·5
" 1941-45	9,292	29·8	3,681	11·8	5,611	18·0	852	92	39	4·2	2,967	9·5
" 1946-50	12,352	36·2	3,179	9·3	9,173	26·9	754	61	25	2·0	2,711	8·0
1946	12,033	36·5	3,427	10·4	8,606	26·1	887	74	27	2·2	3,067	9·3
1947	12,646	37·5	3,325	9·9	9,321	27·6	790	62	29	2·3	2,917	8·7
1948	11,634	33·8	3,108	9·0	8,526	24·8	685	59	22	1·9	2,610	7·6
1949	12,281	35·6	2,868	8·3	9,413	27·3	651	53	24	2·0	2,445	7·1
1950	13,164	37·5	3,168	9·0	9,996	28·5	758	58	21	1·6	2,515	7·2
1951	11,738	32·5	3,004	8·3	8,734	24·2	637	54	25	2·1	2,517	7·0
P. E. Island—												
Av. 1921-25	1,965	22·6	1,085	12·5	880	10·1	152	77	9	4·6	473	5·4
" 1926-30	1,735	19·7	969	11·0	766	8·7	122	70	8	4·6	473	5·4
" 1931-35	1,961	21·8	1,001	11·1	960	10·7	131	67	10	5·1	496	5·5
" 1936-40	2,054	21·9	1,080	11·5	974	10·4	142	69	10	4·9	623	6·6
" 1941-45	2,180	23·7	964	10·5	1,216	13·2	114	52	9	3·9	686	7·5
" 1946-50	2,869	30·5	922	9·8	1,947	20·7	114	40	4	1·3	677	7·2
1946	2,793	29·7	874	9·3	1,919	20·4	97	35	6	2·1	837	8·9
1947	2,992	31·8	1,020	10·9	1,972	20·9	135	45	6	2·0	676	7·2
1948	2,842	30·6	887	9·5	1,955	21·1	97	34	3	1·1	635	6·8
1949	2,831	30·1	924	9·8	1,907	20·3	135	48	1	0·4	619	6·6
1950	2,885	30·1	903	9·4	1,982	20·7	105	36	3	1·0	616	6·4
1951	2,651	27·1	904	9·2	1,747	17·9	90	34	1	0·4	583	5·9
Nova Scotia—												
Av. 1921-25	12,119	23·4	6,519	12·6	5,600	10·8	1,139	94	70	5·8	3,186	6·1
" 1926-30	11,016	21·4	6,362	12·4	4,653	9·0	934	85	61	5·5	3,224	6·3
" 1931-35	11,486	21·9	6,073	11·6	5,414	10·3	840	73	59	5·1	3,522	6·7
" 1936-40	12,060	21·7	6,126	11·0	5,934	10·7	782	65	48	4·0	4,796	8·6
" 1941-45	15,146	25·2	6,326	10·5	8,820	14·7	870	57	41	2·7	6,302	10·5
" 1946-50	17,994	28·9	6,042	9·7	11,952	19·2	760	42	22	1·2	5,525	8·9
1946	17,914	29·5	6,046	9·9	11,868	19·6	822	46	28	1·6	6,549	10·8
1947	19,265	31·3	6,009	9·8	13,256	21·5	840	44	20	1·0	5,861	9·5
1948	17,791	28·5	6,097	9·8	11,694	18·7	695	39	19	1·1	5,093	8·1
1949	17,739	28·2	5,980	9·5	11,759	18·7	750	42	20	1·1	5,058	8·0
1950	17,262	27·1	6,078	9·5	11,184	17·6	693	40	21	1·2	5,065	7·9
1951	17,125	26·6	5,812	9·0	11,313	17·6	594	35	12	0·7	5,094	7·9
New Brunswick—												
Av. 1921-25	11,080	28·4	5,093	13·1	5,987	15·4	1,164	105	51	4·6	2,953	7·6
" 1926-30	10,327	25·8	5,019	12·5	5,308	13·2	1,040	101	64	6·2	2,970	7·4
" 1931-35	10,440	24·9	4,710	11·3	5,730	13·6	857	82	57	5·5	2,737	6·5
" 1936-40	11,105	25·1	5,040	11·4	6,065	13·7	913	82	54	4·9	3,801	8·6
" 1941-45	13,037	28·2	5,050	10·9	7,987	17·3	960	74	42	3·2	4,433	9·6
" 1946-50	16,878	34·0	4,886	9·8	11,992	24·2	1,015	60	23	1·4	4,864	9·8
1946	16,274	34·0	4,866	10·2	11,408	23·8	1,066	66	34	2·1	5,866	12·3
1947	17,771	36·4	4,832	9·9	12,939	26·5	1,041	59	25	1·4	5,189	10·6
1948	17,279	34·7	4,959	10·0	12,320	24·7	1,047	61	23	1·3	4,640	9·3
1949	16,673	32·8	4,876	9·6	11,797	23·2	993	60	18	1·1	4,251	8·4
1950	16,393	32·0	4,895	9·6	11,498	22·4	927	57	15	0·9	4,376	8·5
1951	16,075	31·2	4,873	9·4	11,202	21·8	835	52	11	0·7	4,386	8·5
Quebec—												
Av. 1921-25	87,032	35·5	33,339	13·6	53,693	21·9	10,834	124	338	3·9	17,529	7·1
" 1926-30	82,771	30·5	36,645	13·5	46,126	17·0	10,518	127	433	5·2	18,731	6·9
" 1931-35	78,888	26·6	32,796	11·0	46,092	15·6	7,757	98	405	5·1	17,089	5·8
" 1936-40	78,509	24·6	33,221	10·4	45,288	14·2	6,470	82	400	5·1	27,111	8·5
" 1941-45	97,906	28·4	34,273	9·9	63,633	18·5	6,690	68	318	3·2	33,126	9·6
" 1946-50	115,496	30·4	33,723	8·9	81,773	21·5	6,205	54	227	2·0	34,874	9·2
1946	111,825	30·7	33,690	9·3	77,595	21·4	6,110	55	229	2·1	36,650	10·1
1947	115,553	31·1	33,708	9·1	81,845	22·0	6,583	57	259	2·2	35,494	9·6
1948	114,709	30·3	33,603	8·9	81,106	21·4	6,211	54	232	2·0	34,646	9·1
1949	116,824	30·1	34,107	8·8	82,717	21·3	6,031	52	234	2·0	33,485	8·6
1950	119,111	30·0	33,507	8·4	85,604	21·6	6,091	51	182	1·5	34,993	8·6
1951	120,930	29·8	34,900	8·6	86,030	21·2	5,821	48	180	1·5	35,704	8·8

[1] Per 1,000 population. [2] Under one year of age. [3] Per 1,000 live births.

1.—Summary of Principal Vital Statistics, by Province, 1921-51—continued

Province and Year	Live Births		Deaths		Natural Increase		Infant Mortality[2]		Maternal Mortality		Marriages	
	No.	Rate[1]	No.	Rate[1]	No.	Rate[1]	No.	Rate[3]	No.	Rate[3]	No.	Rate[1]
Ontario—												
Av. 1921-25	71,454	23·7	34,252	11·3	37,202	12·3	5,916	83	386	5·4	24,037	8 0
" 1926-30	68,704	21·0	36,650	11·2	32,054	9·8	5,091	74	398	5·8	25,449	7·8
" 1931-35	65,000	18·5	35,782	10·2	29,218	8·3	3,962	61	344	5·3	24,260	6·9
" 1936-40	64,461	17·5	37,794	10·3	26,668	7·2	3,196	50	291	4·5	32,719	8·9
" 1941-45	77,738	19·9	39,738	10·2	38,000	9·7	3,276	42	197	2·5	38,012	9·7
" 1946-50	105,161	24·6	42,214	9·9	62,947	14·7	3,795	36	129	1·2	44,084	10·3
1946	97,446	23·8	39,758	9·7	57,688	14·1	3,653	37	160	1·6	46,073	11·3
1947	108,853	26·1	41,619	10·0	67,234	16·1	3,914	36	129	1·2	44,056	10·5
1948	104,195	24·4	42,364	9·9	61,831	14·5	3,684	35	125	1·2	43,242	10·1
1949	106,601	24·3	43,379	9·9	63,222	14·4	3,974	37	134	1·3	43,304	9·9
1950	108,708	24·3	43,948	9·8	64,760	14·5	3,751	35	97	0·9	43,744	9·8
1951	114,827	25·0	43,981	9·6	70,846	15·4	3,545	31	97	0·8	45,198	9·8
Manitoba—												
Av. 1921-25	16,590	26·8	5,348	8·6	11,242	18·1	1,394	84	87	5·2	4,634	7·5
" 1926-30	14,392	21·7	5,507	8·3	8,885	13·4	1,031	72	81	5·6	4,951	7·5
" 1931-35	13,690	19·4	5,413	7·7	8,277	11·7	835	61	60	4·4	5,015	7·1
" 1936-40	13,515	18·8	6,136	8·5	7,379	10·3	773	57	54	4·0	6,931	9·6
" 1941-45	15,831	21·8	6,633	9·1	9,198	12·7	814	51	41	2·6	7,295	10·0
" 1946-50	19,325	25·9	6,702	9·0	12,623	16·9	810	42	24	1·3	7,605	10·2
1946	18,794	25·9	6,537	9·0	12,257	16·9	885	47	32	1·7	8,594	11·8
1947	20,409	27·6	6,771	9·2	13,638	18·4	931	46	23	1·1	7,712	10·4
1948	18,870	25·3	6,675	8·9	12,195	16·4	765	41	28	1·5	7,325	9·8
1949	19,292	25·5	6,919	9·1	12,373	16·4	794	41	25	1·3	7,265	9·6
1950	19,261	25·1	6,610	8·6	12,651	16·5	673	35	14	0·7	7,128	9·3
1951	19,942	25·7	6,735	8·7	13,207	17·0	658	33	22	1·1	7,366	9·5
Saskatchewan—												
Av. 1921-25	21,580	27·7	5,859	7·5	15,721	20·2	1,790	83	127	5·9	4,982	6·4
" 1926-30	21,298	24·7	6,256	7·3	15,042	17·5	1,560	73	126	5·9	6,036	7·0
" 1931-35	20,325	21·9	6,037	6·5	14,288	15·4	1,260	62	91	4·5	5,680	6·1
" 1936-40	18,675	20·4	6,366	7·0	12,310	13·4	1,025	55	68	3·6	6,599	7·2
" 1941-45	18,444	21·7	6,437	7·6	12,007	14·1	858	47	52	2·8	6,541	7·7
" 1946-50	21,907	26·3	6,473	7·8	15,434	18·5	883	40	29	1·3	7,413	8·9
1946	21,433	25·7	6,422	7·7	15,011	18·0	1,004	47	36	1·7	8,279	9·9
1947	23,334	27·9	6,610	7·9	16,724	20·0	1,018	44	38	1·6	7,674	9·2
1948	21,562	25·7	6,496	7·8	15,066	17·9	867	40	22	1·0	7,171	8·6
1949	21,662	26·0	6,596	7·9	15,066	18·1	834	39	27	1·2	7,037	8·5
1950	21,546	25·9	6,243	7·5	15,303	18·4	690	32	21	1·0	6,904	8·3
1951	21,733	26·1	6,440	7·7	15,293	18·4	676	31	22	1·0	6,805	8·2
Alberta—												
Av. 1921-25	15,461	26·0	4,953	8·3	10,508	17·7	1,327	86	97	6·3	4,313	7·3
" 1926-30	15,924	24·2	5,530	8·4	10,393	15·8	1,195	75	105	6·6	5,265	8·0
" 1931-35	16,557	22·1	5,447	7·3	11,110	14·8	997	60	75	4·5	5,530	7·4
" 1936-40	16,282	20·8	6,054	7·7	10,228	13·1	869	53	73	4·5	7,192	9·2
" 1941-45	18,845	23·7	6,355	8·0	12,490	15·7	827	44	46	2·4	7,977	10·0
" 1946-50	24,290	28·4	6,814	8·0	17,476	20·4	889	37	25	1·0	9,090	10·6
1946	22,184	27·6	6,601	8·2	15,583	19·4	945	43	32	1·4	9,478	11·8
1947	24,631	29·9	6,543	7·9	18,088	22·0	915	37	22	0·9	8,797	10·7
1948	24,075	28·2	6,987	8·2	17,088	20·0	930	39	29	1·2	8,844	10·4
1949	24,935	28·2	7,083	8·0	17,852	20·2	823	33	25	1·0	9,037	10·2
1950	25,625	28·1	6,856	7·5	18,769	20·6	831	32	19	0·7	9,294	10·2
1951	27,003	28·8	7,167	7·6	19,836	21·2	889	33	15	0·6	9,305	9·9
British Columbia—												
Av. 1921-25	10,256	18·4	4,812	8·7	5,444	9·8	621	61	61	5·9	3,971	7·1
" 1926-30	10,355	16·2	5,986	9·3	4,369	6·8	571	55	63	6·1	4,786	7·5
" 1931-35	10,005	14·0	6,344	8·9	3,661	5·1	463	46	53	5·3	4,267	6·0
" 1936-40	12,106	15·6	7,697	9·9	4,408	5·7	532	44	46	3·8	7,053	9·1
" 1941-45	17,705	19·8	9,368	10·5	8,337	9·3	684	39	46	2·6	9,535	10·7
" 1946-50	25,859	24·0	10,992	10·2	14,867	13·9	868	34	31	1·2	11,564	10·7
1946	22,609	22·5	10,137	10·1	12,472	12·4	852	38	38	1·7	11,762	11·7
1947	26,286	25·2	10,613	10·2	15,673	15·0	959	36	32	1·2	11,852	11·4
1948	25,984	24·0	11,316	10·5	14,668	13·5	868	33	29	1·1	11,718	10·8
1949	27,301	24·5	11,315	10·2	15,986	14·3	858	31	28	1·0	11,376	10·2
1950	27,116	23·8	11,581	10·2	15,535	13·6	805	30	27	1·0	11,110	9·8
1951	28,077	24·1	11,638	10·0	16,439	14·1	839	30	20	0·7	11,272	9·7

[1] Per 1,000 population. [2] Under one year of age. [3] Per 1,000 live births.

1.—Summary of Principal Vital Statistics, by Province, 1921-51—concluded

Province and Year	Live Births		Deaths		Natural Increase		Infant Mortality[2]		Maternal Mortality		Marriages	
	No.	Rate[1]	No.	Rate[1]	No.	Rate[1]	No.	Rate[3]	No.	Rate[3]	No.	Rate[1]
Canada—[4]												
Av. 1921-25	**247,538**	**27·4**	**101,260**	**11·2**	**146,277**	**16·2**	**24,337**	**98**	**1,226**	**5·0**	**66,078**	**7·3**
" 1926-30	236,521	24·1	108,925	11·1	127,596	13·0	22,063	93	1,339	5·7	71,886	7·3
" 1931-35	228,352	21·5	103,602	9·8	124,750	11·7	17,101	75	1,153	5·0	68,594	6·5
" 1936-40	228,767	20·5	109,514	9·8	119,253	10·7	14,701	64	1,043	4·6	96,824	8·7
" 1941-45	276,832	23·5	115,144	9·8	161,688	13·7	15,093	55	791	2·9	113,936	9·7
" 1946-50	354,869	27·4	119,975	9·3	234,894	18·1	15,620	44	523	1·5	126,687	9·8
1946	**330,732**	**27·0**	**114,931**	**9·4**	**215,801**	**17·6**	**15,434**	**47**	**595**	**1·8**	**134,088**	**10·9**
1947	**359,094**	**28·7**	**117,725**	**9·4**	**241,369**	**19·3**	**16,336**	**45**	**554**	**1·5**	**127,311**	**10·2**
1948	**347,307**	**27·1**	**119,384**	**9·3**	**227,923**	**17·8**	**15,164**	**44**	**510**	**1·5**	**123,314**	**9·6**
1949	**366,139**	**27·3**	**124,047**	**9·2**	**242,092**	**18·1**	**15,843**	**43**	**536**	**1·5**	**123,877**	**9·2**
1950	**371,071**	**27·1**	**123,789**	**9·0**	**247,282**	**18·1**	**15,324**	**41**	**420**	**1·1**	**124,845**	**9·1**
1951	**380,101**	**27·2**	**125,454**	**9·0**	**254,647**	**18·2**	**14,584**	**38**	**405**	**1·1**	**128,230**	**9·2**

[1] Per 1,000 population. [2] Under one year of age. [3] Per 1,000 live births. [4] Figures for Newfoundland are included for 1949-51 only.

Section 2.—Births

International Comparisons.—A comparison of the birth rates in Canada and the provinces with those in other countries is shown in Table 2.

2.—Birth Rates per 1,000 Population of Various Countries compared with Canada and the Provinces, 1951

(Source: *Monthly Bulletin of Statistics of the United Nations* and other official publications. In certain cases final figures are not available and provisional data are used.)

Country or Province	Birth Rate	Country or Province	Birth Rate	Country	Birth Rate
Venezuela	44·3	**Canada**—concluded		Netherlands, The	22·3
Mexico	44·2	Ontario	25·0	Ireland, Republic of	21·2
Ceylon	37·3	British Columbia	24·1	Northern Ireland	20·7
Chile	32·4			Spain	20·1
		Japan	25·6	France[3]	19·4
Canada	**27·2**	Union of South Africa	25·5	Norway	18·5
Newfoundland	32·5	Peru	25·3	Italy	18·1
New Brunswick	31·2	India[1]	25·0	Denmark	17·8
Quebec	29·8	United States	24·5	Scotland	17·7
Alberta	28·8	New Zealand	24·4	Switzerland	17·2
Prince Edward Island	27·1	Portugal	24·2	Belgium	16·4
Nova Scotia	26·6	Finland	23·0	Western Germany	15·7
Saskatchewan	26·1	Australia	22·9	Sweden	15·6
Manitoba	25·7	Czechoslovakia	22·9[2]	England and Wales	15·5
				Austria	14·9

[1] Registration area only. [2] 1950. [3] Excluding infants born alive but who died before registration of birth.

Canadian Births.—In Canada, the birth rate in 1921 was 29 per 1,000. Since a rate of 35 per 1,000 is very high for countries of modern western civilization the Canadian birth rate had probably not fallen far or for long before then. It fell continuously until 1937 when it was 20 per 1,000 but then, owing to economic recovery and the War, it rose to 22 in 1940, to 24 in 1943 and reached its highest point in 1947 at 28·7. As was the case in most other countries, there was a slight decline in 1948 and the Canadian rate has remained remarkably steady at just over 27 for the four years 1948-51. The birth rates in the provinces followed the same general trend, but in the Maritimes the fall stopped before 1930.

Sex of Live Births.—Wherever birth statistics have been collected, they have shown an excess of male over female births. No conclusive explanation of this excess has yet been given. Nevertheless, it is so much of an accepted statistical fact that a proper ratio of male to female births has become one of the criteria of complete registration. The number of males to every 1,000 females born in Canada in 1941-51 varied between 1,051 and 1,067. In 1951 there were 1,058 males born for every 1,000 females. Variations in the provincial sex ratios are due to chance variation because of the relatively small number of births involved. The smaller the total number of births, the greater the chance of wide sex-ratio variations from year to year.

3.—Sex Ratio of Live Births, by Province, 1921-51

Province		Male	Female	Males to 1,000 Females	Province		Male	Female	Males to 1,000 Females
		No.	No.	No.			No.	No.	No.
Newfoundland	1949	6,255	6,026	1,038	Manitoba	1921	9,455	9,023	1,048
	1950	6,853	6,311	1,086		1931	7,255	7,121	1,019
	1951	5,984	5,754	1,040		1941	7,616	7,196	1,058
P. E. Island	1921	1,073	1,083	991		1949	9,949	9,343	1,065
	1931	998	881	1,132		1950	9,950	9,311	1,069
	1941	1,078	971	1,110		1951	10,374	9,568	1,084
	1949	1,457	1,374	1,060					
	1950	1,442	1,443	999	Saskatchewan	1921	11,620	10,873	1,069
	1951	1,373	1,278	1,074		1931	10,942	10,389	1,053
						1941	9,472	8,992	1,053
Nova Scotia	1921	6,695	6,326	1,058		1949	11,179	10,483	1,066
	1931	5,931	5,684	1,043		1950	11,027	10,519	1,048
	1941	7,074	6,829	1,036		1951	11,107	10,626	1,045
	1949	9,219	8,520	1,082					
	1950	8,895	8,367	1,063					
	1951	8,842	8,283	1,067	Alberta	1921	8,493	8,068	1,053
						1931	8,938	8,314	1,075
New Brunswick	1921	5,942	5,523	1,076		1941	8,882	8,426	1,054
	1931	5,548	5,253	1,056		1949	12,783	12,152	1,052
	1941	6,200	6,072	1,021		1950	13,138	12,487	1,052
	1949	8,603	8,070	1,066		1951	13,760	13,243	1,039
	1950	8,472	7,921	1,070					
	1951	8,190	7,885	1,039					
					British Columbia	1921	5,549	5,104	1,087
Quebec	1921	46,705	42,044	1,111		1931	5,350	5,054	1,059
	1931	43,051	40,555	1,062		1941	7,694	7,344	1,048
	1941	45,905	43,304	1,060		1949	13,957	13,344	1,046
	1949	60,153	56,671	1,061		1950	13,887	13,229	1,050
	1950	61,333	57,778	1,062		1951	14,418	13,659	1,056
	1951	62,160	58,770	1,058					
Ontario	1921	38,307	35,845	1,069	**Canada** (Exclusive of the Territories)	**1921**	**133,839**	**123,889**	**1,080**
	1931	35,609	33,600	1,060		**1931**	**123,622**	**116,851**	**1,058**
	1941	37,254	35,008	1,064		**1941**	**131,175**	**124,142**	**1,057**
	1949	54,784	51,817	1,057		**1949**	**188,339**	**177,800**	**1,059**
	1950	55,911	52,797	1,059		**1950**	**190,908**	**180,163**	**1,060**
	1951	59,220	55,607	1,065		**1951**	**195,428**	**184,673**	**1,058**

Hospitalized Births.—In 1951 over 79 p.c. of Canadian births occurred in hospital. Although the proportions of hospitalized births have increased steadily since 1921 in all provinces, these proportions still vary widely. The existence of prepaid or provincially sponsored hospital, maternity or medical-care plans in some provinces, the unavailability of hospital facilities, particularly in remote rural areas, in others, and preference for home delivery in some local areas are among the factors accounting for provincial variations in this respect.

4.—Percentages of Live Births Hospitalized, by Province, 1931-51

(Exclusive of Newfoundland and the Territories)

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
1931	11·2	19·0	12·1	7·3	38·2	43·6	32·5	47·8	65·0	26·8
1941	32·7	50·4	30·8	17·6	67·5	73·6	63·2	77·1	87·3	48·9
1949	81·2	82·2	66·4	44·4	89·2	89·9	93·9	95·6	96·7	74·3
1950	84·3	84·9	67·8	47·8	90·4	91·1	94·6	95·8	96·9	76·0
1951	88·3	87·2	70·7	53·0	93·1	93·1	95·2	93·6	97·3	79·1

Births in Urban Centres.—Table 5 shows the number of births, regardless of where they occurred, to resident mothers of urban centres of over 10,000 population.

5.—Live Births in Urban Centres of 10,000 Population or Over,[1] Average 1946-50 and 1951

Province and Urban Centre	Average 1946-50	1951	Province and Urban Centre	Average 1946-50	1951
	No.	No.		No.	No.
Newfoundland—			**Quebec**—concluded		
St. John's	1,572	1,646	Outremont	335	295
			Quebec	4,275	4,195
Prince Edward Island—			Rimouski	381	404
Charlottetown	497	461	Rouyn	455	602
			St. Hyacinthe	530	587
Nova Scotia—			St. Jean	500	543
Dartmouth	500	584	St. Jérôme	560	595
Glace Bay	782	671	St. Laurent	380	722
Halifax	2,366	2,242	St. Michel	214	331
New Waterford	354	357	Shawinigan Falls	883	860
Sydney	1,011	1,048	Sherbrooke	1,459	1,719
Truro	333	292	Sillery	..	..
			Sorel	470	449
New Brunswick—			Thetford Mines	449	541
Edmundston	385	390	Three Rivers	1,300	1,443
Fredericton	442	437	Valleyfield	677	724
Moncton	769	723	Verdun	1,771	1,730
Saint John	1,595	1,395	Victoriaville	409	450
			Westmount	292	254
Quebec—					
Arvida	388	370	**Ontario—**		
Cap de la Madeleine	518	648	Barrie	324	328
Chicoutimi	972	958	Belleville	483	515
Drummondville	471	536	Brantford	972	936
Granby	683	758	Brockville	336	283
Grand'Mère	329	363	Chatham	518	587
Hull	1,390	1,489	Cornwall	572	514
Jacques-Cartier	..	..	Eastview	409	492
Joliette	436	483	Forest Hill	193	209
Jonquière	833	899	Fort William	918	951
Lachine	657	692	Galt	436	454
Lasalle	257	389	Guelph	650	698
Lévis	357	323	Hamilton	4,548	5,102
Longueuil	312	342	Kingston	953	913
Magog	407	443	Kitchener	1,032	1,158
Montreal	24,535	26,439	Leaside	310	316
Montreal N.	305	420	London	2,279	2,353
Mount Royal	154	226	Mimico	252	300
			New Toronto	207	214
			Niagara Falls	620	541

[1] As at the 1951 Census.

5.—Live Births in Urban Centres of 10,000 Population or Over,[1] Average 1946-50 and 1951—concluded

Province and Urban Centre	Average 1946-50	1951	Province and Urban Centre	Average 1946-50	1951
	No.	No.		No.	No.
Ontario—concluded			**Manitoba**—		
North Bay	480	496	Brandon	442	459
Orillia	336	382	St. Boniface	657	720
Oshawa	727	941	Winnipeg	5,200	5,323
Ottawa	4,332	5,011	**Saskatchewan**—		
Owen Sound	418	406	Moose Jaw	613	614
Pembroke	361	399	Prince Albert	481	533
Peterborough	1,031	1,071	Regina	1,665	1,803
Port Arthur	786	826	Saskatoon	1,393	1,534
St. Catharines	874	857			
St. Thomas	423	444	**Alberta**—		
Sarnia	620	937	Calgary	2,968	3,649
Sault Ste. Marie	849	891	Edmonton	4,122	5,089
Stratford	420	437	Lethbridge	567	701
Sudbury	1,344	1,550	Medicine Hat	397	399
Timmins	867	814			
Toronto	14,344	14,033	**British Columbia**—		
Trenton	343	331	New Westminster	587	523
Waterloo	262	293	North Vancouver	512	569
Welland	391	411	Penticton	..	..
Windsor	2,945	3,158	Trail	349	404
Woodstock	334	342	Vancouver	7,367	7,456
			Victoria	1,148	1,084

[1] As at the 1951 Census.

Illegitimacy.—Less than 4 p.c. of the live births in Canada are illegitimate. This percentage is low compared with many countries of the world. In the five-year period 1926-30 it was 3 p.c., whereas the average of the ten years 1941-51 was just over 4 p.c. The apparent increase was due partly to the more complete registration of illegitimate births brought about by the co-operation of provincial registration officials and social welfare agencies.

6.—Illegitimate Live Births and Percentages of Total Live Births, by Province, 1921-51

(Exclusive of the Territories)

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada[1]
	Illegitimate Live Births										
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Av. 1921-25	..	46	457	245	..	1,658	407	291	321	152	..
" 1926-30	168	42	558	299	2,334	2,196	501	489	479	240	7,138
" 1931-35	205	74	652	373	2,431	2,707	501	651	613	330	8,333
" 1936-40	246	83	766	415	2,539	2,939	506	663	643	475	9,030
" 1941-45	406	107	1,074	591	3,003	3,751	597	673	852	889	11,536
" 1946-50	441	152	1,244	754	3,382	4,256	766	914	1,202	1,516	14,375
1946	507	149	1,288	773	3,031	4,165	750	959	1,218	1,262	13,595
1947	374	149	1,325	767	3,183	4,748	744	961	1,159	1,502	14,538
1948	377	134	1,250	797	3,439	4,795	786	917	1,222	1,585	14,925
1949	484	161	1,172	745	3,555	3,802	773	835	1,224	1,639	14,390
1950	462	165	1,184	687	3,700	3,772	778	899	1,185	1,593	14,425
1951	417	138	1,147	643	3,650	3,807	771	971	1,272	1,633	14,449

Figures for Newfoundland are included for 1949-51 only.

6.—Illegitimate Live Births and Percentages of Total Live Births, by Province, 1921-51—concluded

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada[1]
	Percentages of Total Live Births										
Av. 1921-25	..	2·3	3·8	2·2	..	2·3	2·5	1·3	2·1	1·5	.
" 1926-30	2·5	2·4	5·1	2·9	2·8	3·2	3·5	2·3	3·0	2·3	3·0
" 1931-35	3·1	3·8	5·7	3·6	3·1	4·2	3·7	3·2	3·7	3·3	3·6
" 1936-40	3·2	4·0	6·4	3·7	3·2	4·6	3·7	3·6	3·9	3·9	3·9
" 1941-45	4·4	4·9	7·1	4·5	3·1	4·8	3·8	3·6	4·5	5·0	4·2
" 1946-50	3·6	5·3	6·9	4·5	2·9	4·0	4·0	4·2	4·9	5·9	4·1
1946	4·2	5·3	7·2	4·7	2·7	4·3	4·0	4·5	5·5	5·6	4·1
1947	3·0	5·0	6·9	4·3	2·8	4·4	3·6	4·1	4·7	5·7	4·0
1948	3·2	4·7	7·0	4·6	3·0	4·6	4·2	4·3	5·1	6·1	4·3
1949	3·9	5·7	6·6	4·5	3·0	3·6	4·0	3·9	4·9	6·0	3·9
1950	3·5	5·7	6·9	4·2	3·1	3·5	4·0	4·2	4·6	5·9	3·9
1951	3·6	5·2	6·7	4·0	3·0	3·3	3·9	4·5	4·7	5·8	3·8

[1] Figures for Newfoundland are included for 1949–51 only.

Stillbirths.—The rate of stillbirths has been falling since 1926, though not equally in all provinces. The rate of stillbirths to unmarried mothers has always been considerably higher than that for married mothers, and consequently higher than the over-all rate.

7.—Stillbirths and Rates per 1,000 Live Births, by Province, 1921-51

(Exclusive of the Territories)

Year	Born to All Mothers											Born to Unmarried Mothers[2]	
	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada[1]	No.	P.C. of Total
	Stillbirths												
Av. 1921-25	..	57	457	288	2,659	3,083	546	601	418	295	8,403	.	..
" 1926-30	128	43	365	283	2,212	2,761	479	551	467	297	7,458	356	4·77
" 1931-35	141	67	401	302	2,337	2,284	383	488	421	247	6,930	381	5·50
" 1936-40	162	61	334	282	2,386	2,008	340	393	359	248	6,410	337	5·26
" 1941-45	191	50	388	295	2,786	1,988	345	348	327	309	6,838	355	5·20
" 1946-50	215	54	358	320	2,898	2,020	349	350	385	352	7,177	343	4·85
1951	189	56	319	293	2,768	1,975	340	303	402	365	7,010	327	4·79
	Rates Per 1,000 Live Births											Per 1,000 Illegitimate Live Births[2]	
Av. 1921-25	..	29·1	37·7	26·0	30·5	43·1	32·9	27·9	27·0	28·7	33·9	..	
" 1926-30	19·0	24·8	33·1	27·4	26·7	40·2	33·3	25·9	29·3	28·7	31·5	49·9	
" 1931-35	21·1	34·2	34·9	28·9	29·6	35·1	28·0	24·0	25·4	24·7	30·3	45·7	
" 1936-40	21·2	29·7	27·7	25·4	30·4	31·2	25·2	21·0	22·0	20·5	28·0	37·3	
" 1941-45	20·5	22·8	25·6	22·6	28·5	25·6	21·8	18·9	17·4	17·5	24·7	30·8	
" 1946-50	17·4	18·9	19·9	19·0	25·1	19·2	18·1	16·0	15·9	13·6	20·2	24·2	
1951	16·1	21·1	18·6	18·2	22·9	17·2	17·0	13·9	14·9	13·0	18·4	23·3	

[1] Figures for Newfoundland are included for 1949–51 only. [2] Exclusive of Newfoundland.

Multiple Births.—Approximately one confinement in 85 in Canada results in the birth of more than one child. In the period 1926-51 there have been 82,431 such confinements, of which 81,680 were twins and 741 were triplets. There have been nine sets of quadruplets. The Dionne quintuplets were born in 1934.

The proportion of stillbirths is higher among multiple than among single births. It is about twice as high for twins and between three and five times as high for triplets.

8.—Single and Multiple Births, Live and Stillborn, 1949-51

(Exclusive of the Territories)

Confinements and Births	Numbers			Percentages		
	1949	1950	1951	1949	1950	1951
Confinements—						
Single	364,955	369,578	378,246	98·9	98·8	98·8
Twin	4,169	4,285	4,377	1·1	1·1	1·1
Triplet	39	34	37	--	--	--
Quadruplet	1	—	—	--	—	—
Totals, Confinements	**369,164**	**373,897**	**382,660**	**100·0**	**100·0**	**100·0**
Births—						
Single—						
Live	358,087	362,712	371,539	98·1	98·1	98·2
Stillborn	6,868	6,866	6,707	1·9	1·9	1·8
Twin—						
Live	7,940	8,261	8,458	95·2	96·4	96·6
Stillborn	398	309	296	4·8	3·6	3·5
Triplet—						
Live	108	98	104	92·3	96·1	93·7
Stillborn	9	4	7	7·7	3·9	6·3
Quadruplet—						
Live	4	—	—	100·0	—	—
Stillborn	—	—	—	—	—	—
Totals, Births	**373,414**	**378,250**	**387,111**	**100·0**	**100·0**	**100·0**
Live	366,139	371,071	380,101	98·1	98·1	98·2
Stillborn	7,275	7,179	7,010	1·9	1·9	1·8

Fertility Rates.—Sex and age distribution of the population is an important factor in determining birth, death and marriage rates. Since more than 95 p.c. of children are born to women between the ages of 15 and 50, differences in the proportion of women of these ages to the population as a whole will cause differences in the birth rates of different countries or regions, even though the fertility of women at each age may be the same. Measures of fertility which are independent of the sex and age distribution of the population have, therefore, been devised. The best known of these are age-specific fertility rates and reproduction rates.

Further details on this subject may be found in the 1947 Year Book, pp. 153-154, or in the DBS report, *Gross and Net Reproduction Rates, Canada and the Provinces.*

Ages of Parents.—Ages of the parents is an important variable in any analysis of birth statistics. The numerical and percentage distribution of legitimate live births by the ages of the parents is given for each decennium from 1931 in Table **9**, of illegitimate live births by the age of the mother in Table **10**, and of stillbirths by the age of the mother in Table **11**, as well as the average ages of the parents for each year shown.

Besides the fertility rates at each age, three other factors help, in the main, to determine the average age of parents having children: firstly, the average age of potential parents, at any point in time, that is, of the population between the ages of 15 and 50; secondly, the average age of couples at marriage; and thirdly, the

proportions of first and second births to the total. Other things being equal, a high proportion of first and second births will result in a lower average age of parents. In 1930-32, first and second births were 43 p.c. of the total births. By the period 1945-48, first and second births together were 57 p.c. of the total. These changes are very great and account for the lower average age of parents in recent years. However, by 1951 the proportion of first and second births had declined to about 53 p.c.

These tables illustrate other significant facts: that the average age of fathers of legitimate children is about four years higher than the average age of mothers; that the average age of mothers of illegitimate children is four to five years lower than the average age of mothers of legitimate children—in 1930-32 the difference was six years (the fact that over 70 p.c. of illegitimate children are born to mothers under 25 years of age accounts for this difference); and that the average age of mothers of stillborn children is higher than that of the live born. Further, Table 11 shows that the rate of stillbirths per 1,000 live births increases with the age of the mother. It is almost three times as high among mothers of 40-44 years as it is among mothers at the ages of 20-24, and over four times as high among mothers of 45-49 years.

9.—Legitimate Live Births, by Age of Parent, 1931, 1941 and 1951

(Exclusive of Newfoundland and the Territories)

Age Group	Fathers						Mothers					
	1931		1941		1951		1931		1941		1951	
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Under 20 years	986	0·4	1,203	0·5	2,874	0·8	12,544	5·4	14,185	5·8	19,930	5·6
20 - 24 "	25,977	11·2	29,857	12·2	51,458	14·6	58,307	25·1	67,185	27·4	96,058	27·1
25 - 29 "	57,507	24·8	69,184	28·2	102,368	29·0	64,509	27·8	74,461	30·4	109,850	31·0
30 - 34 "	55,945	24·1	63,436	25·9	86,981	24·7	48,724	21·0	49,484	20·2	73,554	20·8
35 - 39 "	43,769	18·9	42,508	17·4	59,690	16·9	33,440	14·4	28,507	11·6	41,170	11·6
40 - 44 "	28,400	12·3	22,711	9·3	31,243	8·9	12,933	5·6	10,163	4·1	12,551	3·5
45 - 49 "	13,206	5·7	10,567	4·3	12,459	3·5	1,366	0·6	1,049	0·4	1,015	0·3
50 years or over	6,042	2·6	5,515	2·3	5,469	1·6	22	--	19	--	28	--
Totals, Stated Ages	**231,832**	**100·0**	**244,981**	**100·0**	**352,542**	**100·0**	**231,845**	**100·0**	**245,053**	**100·0**	**354,156**	**100·0**
Ages not stated	276	...	235	...	1,789	...	263	...	163	...	175	...
Totals, All Ages	**232,108**	**100·0**	**245,216**	**100·0**	**354,331**	**100·0**	**232,108**	**100·0**	**245,216**	**100·0**	**354,331**	**100·0**
Average Ages	33·6		32·7		32·1		29·2		28·5		28·4	

10.—Illegitimate Live Births, by Age of the Mother, 1931, 1941 and 1951

(Exclusive of Newfoundland and the Territories)

Age Group of Mother	1931		1941		1951	
	No.	p.c.	No.	p.c.	No.	p.c.
Under 20 years	2,750	38·8	2,762	29·9	4,463	33·0
20 - 24 "	2,669	37·7	3,666	39·7	4,984	36·9
25 - 29 "	934	13·2	1,633	17·7	2,265	16·8
30 - 34 "	401	5·7	661	7·2	1,061	7·8
35 - 39 "	243	3·4	368	4·0	557	4·1
40 - 44 "	75	1·1	124	1·3	173	1·3
45 - 49 "	10	0·1	16	0·2	15	0·1
50 years or over	—	—	1	--	1	--
Totals, Stated Ages	**7,082**	**100·0**	**9,231**	**100·0**	**13,519**	**100·0**
Ages not stated	1,283	...	870	...	513	...
Totals, All Ages	**8,365**	**100·0**	**10,101**	**100·0**	**14,032**	**100·0**
Average Ages of Mothers	23·1		23·9		23·8	

11.—Stillbirths, by Age of the Mother, together with Rates per 1,000 Live Births, 1931, 1941 and 1951

(Exclusive of Newfoundland and the Territories)

Age Group of Mother	Stillbirths						Rates per 1,000 Live Births		
	1931		1941		1951		1931	1941	1951
	No.	p.c.	No.	p.c.	No.	p.c.			
Under 20 years	489	6·5	383	5·6	412	6·1	32·0	22·6	16·9
20 – 24 "	1,671	22·3	1,486	21·8	1,485	21·9	27·4	21·0	14·7
25 – 29 "	1,744	23·3	1,862	27·3	1,714	25·3	26·6	24·5	15·3
30 – 34 "	1,543	20·6	1,442	21·1	1,405	20·7	31·4	28·8	18·8
35 – 39 "	1,281	17·1	1,081	15·8	1,192	17·6	38·0	37·4	28·6
40 – 44 "	675	9·0	496	7·3	503	7·4	51·9	48·2	39·5
45 – 49 "	82	1·1	74	1·1	63	0·9	59·6	69·5	61·2
50 years or over	1	--	3	--	1	--	--	--	--
Totals, Stated Ages	**7,486**	**100·0**	**6,827**	**100·0**	**6,775**	**100·0**	...	...	...
Ages not stated	133	...	55	...	46	...	...	...	...
Totals, All Ages	**7,619**	**100·0**	**6,882**	**100·0**	**6,821**	**100·0**	**31·7**	**27·0**	**18·5**
Average Ages of Mothers	30·1		29·9		30·0		...	...	...

Order of Birth.—Table 12 shows the order of birth of legitimate and illegitimate live-born children according to the age of the mother. About 27 p.c. of the legitimate live-born children in 1951 were the first child, whereas 70 p.c. of the illegitimate children were the first-born.

12.—Order of Birth of Legitimate and Illegitimate Live-Born Children, by Age of Mother, 1951

(Exclusive of Newfoundland and the Territories)

Order of Birth of Child	Age of Mother									
	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 or Over	Age Not Stated	All Ages
	LEGITIMATE									
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1st child	19	14,806	42,603	24,555	8,791	3,152	657	49	49	94,681
2nd "	—	4,253	31,279	33,153	15,891	5,762	1,024	38	42	91,442
3rd "	—	755	14,119	23,642	15,573	6,882	1,336	58	25	62,390
4th "	—	91	5,589	13,442	11,142	5,980	1,347	69	19	37,679
5th "	—	6	1,731	7,402	7,519	4,484	1,176	63	11	22,392
6th "	—	—	522	4,040	5,078	3,529	1,116	72	5	14,362
7th "	—	—	161	2,039	3,696	2,791	938	68	4	9,697
8th "	—	—	42	957	2,432	2,301	840	71	4	6,647
9th "	—	—	8	384	1,549	1,867	759	88	3	4,658
10th "	—	—	2	144	922	1,460	700	73	—	3,301
11th "	—	—	—	59	524	1,134	670	70	1	2,458
12th "	—	—	—	19	235	784	579	64	—	1,681
13th "	—	—	—	6	127	430	466	69	1	1,099
14th "	—	—	—	4	45	295	352	54	—	750
15th "	—	—	—	3	13	165	242	43	—	466
16th "	—	—	—	—	9	89	153	29	—	280
17th "	—	—	—	—	4	33	83	29	—	149
18th "	—	—	—	—	2	17	45	13	—	77
19th "	—	—	—	—	1	12	32	8	—	53
20th or over	—	—	—	—	—	2	35	15	—	52
Not stated	—	—	2	1	1	1	1	—	11	17
Totals	**19**	**19,911**	**96,058**	**109,850**	**73,554**	**41,170**	**12,551**	**1,043**	**175**	**354,331**

12.—Order of Birth of Legitimate and Illegitimate Live-Born Children, by Age of Mother, 1951—concluded

Order of Birth of Child	Age of Mother									
	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 or Over	Age Not Stated	All Ages
	Illegitimate									
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1st child	81	3,948	3,535	1,106	411	176	49	4	472	9,782
2nd "	—	387	918	450	145	74	13	—	20	2,007
3rd "	—	43	325	291	130	62	17	—	2	870
4th "	—	4	145	181	108	48	8	1	4	499
5th "	—	—	38	126	75	50	15	2	2	308
6th "	—	—	15	58	50	35	12	4	—	174
7th "	—	—	6	41	50	24	15	2	—	138
8th "	—	—	—	5	48	28	12	—	1	94
9th "	—	—	1	6	22	20	12	1	1	63
10th "	—	—	—	—	12	13	2	1	—	28
11th "	—	—	—	—	6	8	10	—	—	24
12th "	—	—	—	—	2	7	2	1	—	12
13th "	—	—	—	—	1	5	1	—	—	7
14th "	—	—	—	—	—	3	2	—	—	5
15th "	—	—	—	1	1	—	2	—	—	4
16th "	—	—	—	—	—	—	1	—	—	1
17th "	—	—	—	—	—	2	—	—	—	2
18th "	—	—	—	—	—	1	—	—	—	1
19th "	—	—	—	—	—	—	—	—	—	—
20th or over	—	—	—	—	—	1	—	—	—	1
Not stated	—	—	1	—	—	—	—	—	11	12
Totals	**81**	**4,382**	**4,984**	**2,265**	**1,061**	**557**	**173**	**16**	**513**	**14,032**

Birthplaces of Parents.—Table 13 shows the numbers and percentages of children whose parents were born in Canada and other countries. Increased immigration in recent years has resulted in higher proportions of children being born to foreign-born parents.

13.—Live Births, by Nativity of Parents, 1921, 1931, 1941 and 1951

Country of Birth of Parents and Year		Numbers			Percentages		
		Father	Mother	Both Parents	Father	Mother	Both Parents
Canada (exclusive of Newfoundland and the Territories)	1921[1]	93,216	95,549	77,298	55·2	56·5	45·7
	1931	164,263	177,197	148,886	68·3	73·7	61·9
	1941	205,234	226,346	193,256	80·4	88·7	75·7
	1951	315,495	332,337	296,530	85·6	90·2	80·5
Commonwealth (other than Canada)	1921[1]	34,800	36,619	19,352	20·6	21·7	11·5
	1931	28,119	26,409	11,701	11·7	11·0	4·9
	1941	16,208	11,461	2,711	6·3	4·5	1·1
	1951	12,428	14,172	2,174	3·4	3·8	0·6
United States	1921[1]	11,397	12,668	5,115	6·7	7·5	3·0
	1931	10,712	11,366	3,222	4·5	4·7	1·3
	1941	7,495	6,501	1,314	2·9	2·5	0·5
	1951	6,217	6,038	713	1·7	1·6	0·2
Other foreign countries	1921[1]	24,107	21,286	16,858	14·3	12·6	10·0
	1931	28,695	24,018	18,454	11·9	10·0	7·7
	1941	16,122	10,335	6,394	6·4	4·0	2·5
	1951	18,159	14,921	8,207	4·9	4·1	2·2
Unspecified	1921[1]	5,459	2,857	2,088	3·2	1·7	1·2
	1931	8,684	1,483	165	3·6	0·6	0·1
	1941	10,258	674	78	4·0	0·3	--
	1951	16,064	895	106	4·4	0·2	--
Totals	**1921[1]**	**168,979**	**168,979**	**120,711[2]**	**100·0**	**100·0**	**71·4[2]**
	1931	**240,473**	**240,473**	**182,428[2]**	**100·0**	**100·0**	**75·9[2]**
	1941	**255,317**	**255,317**	**203,753[2]**	**100·0**	**100·0**	**79·8[2]**
	1951	**368,363**	**368,363**	**307,730[2]**	**100·0**	**100·0**	**83·5[2]**

[1] Excludes the Province of Quebec.

[2] These figures or percentages are of the children whose fathers and mothers were born in the same country. The difference between this figure and the total number of births represents the number of children whose parents were born in different countries.

Ethnic Origins of Parents.—A person's origin is usually traced through the father. For example, if the father is English and the mother French, the person's origin is said to be English. Illegitimate children, however, are usually classified by the origin of the mother since the particulars of the father are seldom known.

Table 14 shows that about 60 p.c. of Canadian children born in 1951 were born to parents of the same ethnic origin, whereas in 1931 over 72 p.c. were born to parents of the same origin.

14.—Live Births to Parents of Specified Origins, 1921, 1931, 1941 and 1951

(Exclusive of Newfoundland and the Territories)

Origin of Parents and Year	Numbers			Percentages		
	Father	Mother	Both Parents	Father	Mother	Both Parents
English 1921[1]	56,662	59,180	43,348	33·5	35·0	25·7
1931	49,772	52,741	34,106	20·7	21·9	14·2
1941	51,470	54,073	30,393	20·2	21·2	11·9
1951	73,502	79,901	40,698	20·0	21·7	11·0
Irish 1921[1]	18,924	17,738	8,761	11·2	10·5	5·2
1931	21,729	20,898	9,284	9·0	8·7	3·9
1941	23,413	23,185	7,864	9·2	9·1	3·1
1951	35,538	35,616	10,708	9·6	9·7	2·9
Scottish 1921[1]	22,284	22,118	11,326	13·2	13·1	6·7
1931	22,516	22,797	9,884	9·4	9·5	4·1
1941	24,146	24,184	8,134	9·5	9·5	3·2
1951	36,779	36,615	11,125	10·0	9·9	3·0
French 1921[1]	17,908	18,858	15,205	10·6	11·2	9·0
1931	90,500	93,904	85,962	37·6	39·0	35·7
1941	98,946	103,772	92,362	38·8	40·6	36·2
1951	133,256	138,876	120,641	36·2	37·7	32·8
Other 1921[1]	31,628	31,319	24,125	18·7	18·5	14·3
1931	47,039	48,299	34,769	19·6	21·0	14·5
1941	46,811	49,151	27,993	18·2	19·2	10·9
1951	73,681	76,730	37,315	20·0	20·8	10·1
Unspecified 1921[1]	21,573	19,766	17,328	12·8	11·7	10·3
1931	8,917	1,834	404	3·7	0·8	0·2
1941	10,531	952	196	4·1	0·4	0·1
1951	15,607	625	46	4·2	0·2	--
Totals 1921[1]	**168,979**	**168,979**	**120,093[2]**	**100·0**	**100·0**	**71·1[2]**
1931	**240,473**	**240,473**	**174,409[2]**	**100·0**	**100·0**	**72·5[2]**
1941	**255,317**	**255,317**	**166,942[2]**	**100·0**	**100·0**	**65·4[2]**
1951	**368,363**	**368,363**	**220,533[2]**	**100·0**	**100·0**	**59·9[2]**

[1] Excludes the Province of Quebec. [2] These figures or percentages are of children whose fathers and mothers are of the same origin. The difference between this figure and the total number of births represents the number of children whose parents are of different origins.

Section 3.—Deaths

Declines in the death rate have been recorded in many countries during the past twenty years. Crude death rates should be used with caution in comparing the mortality levels of different populations, for they are affected by differences in the age composition of the population as well as by differences in the levels of mortality.

Subsection 1.—General Mortality

International Comparisons.—A comparison of the death rates in Canada and the provinces with those in other countries is shown in Table **15.** It will be noted that the Canadian death rate is among the lowest in the world and that most of the provinces have lower rates than most other countries.

15.—Death Rates per 1,000 Population of Various Countries compared with Canada and the Provinces, 1951

(Source: *Monthly Bulletin of Statistics of the United Nations* and other official publications. In certain cases final figures are not available and provisional data are used.)

Country or Province	Death Rate	Country	Death Rate	Country	Death Rate
Netherlands, The	7·5	Peru	9·2	Ceylon	11·6
Norway	8·3	Union of South Africa (Whites)	9·2	Spain	11·6
Denmark	8·8	New Zealand	9·6	Portugal	12·3
Canada	9·0	Australia	9·7	England and Wales	12·5
Alberta	7·6	United States	9·7	Belgium	12·6
Saskatchewan	7·7	Sweden	9·9	Austria	12·7
Newfoundland	8·3	Finland	10·0	Northern Ireland	12·8
Quebec	8·6	Japan	10·0	Scotland	12·9
Manitoba	8·7	Italy	10·3	France[2]	13·2
Nova Scotia	9·0	Switzerland	10·5	India[3]	14·2
Prince Edward Island	9·2	Western Germany	10·5	Ireland, Republic of	14·3
New Brunswick	9·4	Venezuela	11·2	Chile	15·7
Ontario	9·6	Czechoslovakia	11·4[1]	Mexico	17·2
British Columbia	10·0				

[1] 1950. [2] Excludes infants born alive who died before registration of birth. [3] Registration area only.

Canadian Mortality.—Since 1931, the Canadian death rate has fluctuated between 10·3 and 9·0 per 1,000 of the population, declining slightly in recent years and reaching a record low of 9·0 in 1950 and 1951. As shown in Table 1, pp. 176-178, this decline has been apparent in all provinces but in varying degrees. The generally low rates in the Prairie Provinces are partly due to their younger average population while the uniformly higher rate in British Columbia is due to the increasing proportion of people in the older age groups.

Sex and Age Distribution of Deaths.—Despite reductions in infant mortality over the past 25 or 30 years, more deaths still occur in the first year of life than in any other single year. Of the 107,000 deaths occurring in 1926, 31,000 or almost 30 p.c. were children under five years of age, and three-quarters of those were children under one year of age. In 1951, of the 125,000 deaths, about 17,000 or less than 14 p.c. were children under five years and five-sixths of those were under one year. Most of the reduction took place among children over one month of age but there was a notable decrease as well in the childhood ages up to five years.

Tremendous reductions took place in the mortality pattern since the early 1920's, with the most important reductions in the childhood and early adult ages. In 1926, over 19 p.c. of all male deaths were of persons five to 45 years of age; in 1951, these accounted for only 11 p.c. of total deaths. The reduction in mortality among females in this age group is still more remarkable, dropping from 22 p.c. to 10 p.c. Thus, death rates for males up to age 45 have been roughly halved during the past 25 years while those for females, in the same ages, have been reduced as much as three to four times.

These reductions in the mortality rates in early and middle years of life have, of course, had the effect of increasing the number of people in the older age groups and of raising the average age of the population as a whole. As a natural consequence, much larger proportions of deaths are now occurring at the older ages. Further, the reductions in rates will eventually raise the average age at death. In 1921, the average age at death of males was 39·0 years and of females 41·1 years; by 1951 this had advanced to 56·4 and 58·8, respectively.

16.—Distribution of Deaths, by Age and Sex, 1921, 1931, 1941 and 1951

Age Group	1921[1]		1931		1941		1951	
	Male	Female	Male	Female	Male	Female	Male	Female
	NUMBER							
Under 5 years	10,827	8,303	14,511	11,226	10,666	8,014	9,722	7,390
5 - 9 "	1,166	979	1,241	963	888	670	698	458
10 - 14 "	674	611	821	806	787	536	451	276
15 - 19 "	866	741	1,311	1,132	1,118	823	714	449
20 - 24 "	947	946	1,502	1,453	1,332	1,039	1,000	543
25 - 29 "	1,046	1,035	1,388	1,414	1,317	1,173	983	654
30 - 34 "	1,002	1,051	1,301	1,432	1,211	1,148	1,062	772
35 - 39 "	1,263	1,223	1,512	1,574	1,497	1,242	1,279	1,011
40 - 44 "	1,254	1,073	1,888	1,493	1,744	1,464	1,751	1,259
45 - 49 "	1,345	1,066	2,314	1,738	2,416	1,817	2,452	1,603
50 - 54 "	1,492	1,288	2,855	1,993	3,355	2,227	3,517	2,076
55 - 59 "	1,727	1,337	3,057	2,246	4,394	2,851	4,732	2,828
60 - 64 "	2,121	1,652	3,583	2,855	5,288	3,483	6,454	3,896
65 - 69 "	2,277	1,976	4,249	3,348	6,057	4,412	7,999	5,113
70 - 74 "	2,550	2,184	4,867	4,073	6,495	4,981	8,736	6,433
75 - 79 "	2,378	2,135	4,368	4,029	6,421	5,461	8,248	6,901
80 - 84 "	1,833	1,799	3,206	3,215	5,020	4,906	6,226	6,124
85 years or over	1,643	1,912	2,555	2,998	3,846	4,540	5,329	6,315
Totals, All Ages	**36,411**	**31,311**	**56,529**	**47,988**	**63,852**	**50,787**	**71,353**	**54,101**
	PERCENTAGE							
Under 5 years	29·8	26·5	25·7	23·4	16·7	15·8	13·6	13·7
5 - 9 "	3·2	3·1	2·2	2·0	1·4	1·3	1·0	0·8
10 - 14 "	1·9	2·0	1·5	1·7	1·2	1·1	0·6	0·5
15 - 19 "	2·4	2·4	2·3	2·4	1·8	1·6	1·0	0·8
20 - 24 "	2·6	3·0	2·7	3·0	2·1	2·0	1·4	1·0
25 - 29 "	2·9	3·3	2·5	2·9	2·1	2·3	1·4	1·2
30 - 34 "	2·7	3·4	2·3	3·0	1·9	2·3	1·5	1·4
35 - 39 "	3·5	3·9	2·7	3·3	2·3	2·4	1·8	1·9
40 - 44 "	3·4	3·4	3·3	3·1	2·7	2·9	2·5	2·3
45 - 49 "	3·7	3·4	4·1	3·6	3·8	3·6	3·4	3·0
50 - 54 "	4·1	4·1	5·0	4·2	5·3	4·4	4·9	3·8
55 - 59 "	4·7	4·3	5·4	4·7	6·9	5·6	6·6	5·2
60 - 64 "	5·8	5·3	6·3	5·9	8·3	6·9	9·0	7·2
65 - 69 "	6·2	6·3	7·5	7·0	9·5	8·7	11·2	9·4
70 - 74 "	7·0	7·0	8·6	8·5	10·2	9·8	12·2	11·9
75 - 79 "	6·5	6·8	7·7	8·4	10·1	10·7	11·6	12·8
80 - 84 "	5·0	5·7	5·7	6·7	7·9	9·7	8·7	11·3
85 years or over	4·5	6·1	4·5	6·2	6·0	8·9	7·5	11·7
Totals, All Ages	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**
	RATE PER 1,000 POPULATION							
Under 5 years	28·9	22·7	26·8	21·2	20·0	15·5	11·1	8·8
5 - 9 "	3·1	2·7	2·2	1·7	1·7	1·3	1·0	0·7
10 - 14 "	2·1	1·9	1·5	1·5	1·4	1·0	0·8	0·5
15 - 19 "	3·1	2·7	2·5	2·2	2·0	1·5	1·3	0·9
20 - 24 "	3·7	3·7	3·2	3·2	2·6	2·0	1·9	1·0
25 - 29 "	4·0	4·1	3·4	3·8	2·7	2·5	1·8	1·1
30 - 34 "	3·8	4·5	3·5	4·2	2·8	2·8	2·1	1·5
35 - 39 "	4·7	5·5	4·2	4·8	3·8	3·4	2·5	2·0
40 - 44 "	5·6	5·9	5·4	5·0	5·0	4·5	3·9	3·0
45 - 49 "	7·3	7·1	7·2	6·6	7·3	6·0	6·3	4·5
50 - 54 "	9·8	10·2	10·7	9·0	10·6	8·1	10·3	6·4
55 - 59 "	15·2	13·5	15·4	13·4	16·0	12·3	16·2	10·2
60 - 64 "	21·9	19·7	22·9	20·7	24·2	18·5	24·4	16·1
65 - 69 "	33·4	33·2	35·2	30·3	37·3	30·4	35·1	24·9
70 - 74 "	56·9	52·8	55·0	49·1	58·5	47·0	54·5	41·6
75 - 79 "	89·4	80·9	87·4	82·9	95·7	79·7	87·7	73·3
80 - 84 "	133·8	122·4	134·1	127·1	147·6	131·2	135·6	120·6
85 years or over	228·2	224·9	228·1	212·6	241·9	229·3	234·8	211·9
Totals, All Ages	**10·9**	**10·2**	**10·5**	**9·6**	**10·8**	**9·1**	**10·1**	**7·8**
Average Age at Death	39·0	41·1	43·1	44·8	51·5	53·4	56·4	58·8

[1] Excludes the Province of Quebec.

Deaths in Urban Centres.—In Table 17, deaths are classified by place of residence of the decedent. Death rates in urban centres vary only slightly from those of their respective provinces. However, owing to the influx of young people from the rural areas, the age distribution of the population in urban centres is often more favourable to a low death rate than that of the province as a whole.

17.—Deaths in Urban Centres of 10,000 Population or Over,[1] Average 1946-50 and 1951

Province and Urban Centre	Average 1946-50	1951	Province and Urban Centre	Average 1946-50	1951
	No.	No.		No.	No.
Newfoundland—			**Quebec**—concl.		
St. John's	[2]	541	St. Hyacinthe	253	270
			St. Jean	143	187
Prince Edward Island—			St. Jérôme	134	137
Charlottetown	205	190	St. Laurent	105	161
			St. Michel	36	62
Nova Scotia—			Shawinigan Falls	181	191
Dartmouth	109	90	Sherbrooke	434	497
Glace Bay	226	209	Sillery	.	..
Halifax	749	676	Sorel	153	143
New Waterford	94	93	Thetford Mines	142	133
Sydney	307	283	Three Rivers	411	436
Truro	104	103	Valleyfield	170	183
			Verdun	566	572
New Brunswick—			Victoriaville	108	142
Edmundston	70	79	Westmount	294	294
Fredericton	140	163			
Moncton	219	254			
Saint John	638	539	**Ontario—**		
			Barrie	125	143
Quebec—			Belleville	202	193
Arvida	46	36	Brantford	405	422
Cap de la Madeleine	115	140	Brockville	155	139
Chicoutimi	195	204	Chatham	218	224
Drummondville	103	153	Cornwall	183	199
Granby	154	158	Eastview	82	80
Grand'Mère	82	90	Forest Hill	93	104
Hull	359	377	Fort William	299	347
Jacques-Cartier	.	..	Galt	191	185
Joliette	162	182	Guelph	277	287
Jonquière	145	163	Hamilton	1,837	1,990
Lachine	213	219	Kingston	396	420
Lasalle	59	81	Kitchener	366	344
Lévis	127	132	Leaside	69	96
Longueuil	89	91	London	1,006	1,033
Magog	104	88	Mimico	81	100
Montreal	9,877	10,115	New Toronto	64	77
Montreal N.	70	88	Niagara Falls	237	242
Mount Royal	42	69	North Bay	171	190
Outremont	279	256	Orillia	130	157
Quebec	1,709	1,720	Oshawa	258	320
Rimouski	93	89	Ottawa	1,764	1,946
Rouyn	80	92	Owen Sound	174	234
			Pembroke	132	111

[1] As at the 1951 Census.

[2] Not available for one year of the period.

17.—Deaths in Urban Centres of 10,000 Population or Over,[1] Average 1946-50 and 1951—concluded

Province and Urban Centre	Average 1946-50	1951	Province and Urban Centre	Average 1946-50	1951
	No.	No.		No.	No.
Ontario—concl.			**Saskatchewan**—		
Peterborough	359	370	Moose Jaw	237	292
Port Arthur	304	331	Prince Albert	134	122
St. Catharines	345	358	Regina	493	545
St. Thomas	239	238	Saskatoon	435	488
Sarnia	229	248			
Sault Ste. Marie	289	285			
Stratford	241	215	**Alberta**—		
Sudbury	294	307	Calgary	1,094	1,146
Timmins	202	220	Edmonton	1,037	1,152
Toronto	7,820	7,700	Lethbridge	167	184
Trenton	99	90	Medicine Hat	139	140
Waterloo	88	97			
Welland	134	110			
Windsor	1,047	1,093	**British Columbia**—		
Woodstock	157	162	New Westminster	257	238
			North Vancouver	184	214
Manitoba—			Penticton	..	
Brandon	195	210	Trail	69	70
St. Boniface	179	189	Vancouver	3,903	3,975
Winnipeg	2,254	2,346	Victoria	749	750

[1] As at the 1951 Census.

Causes of Death.—Table 18 shows the deaths in Canada, grouped according to the International Abbreviated List of 50 Causes. About 80 p.c. are due to the following groups of causes: diseases of the heart and arteries, cancer, accidents, diseases of early infancy, the respiratory diseases — tuberculosis, pneumonia and influenza — and nephritis.

The rise in the average age at death has already been noted (p. 188). Causes of death that affect children and young adults mainly have declined. Diphtheria, for example, has been almost wiped out and tuberculosis has been greatly reduced. On the other hand, the ageing of the population increases the proportion of deaths from certain causes that affect older people. Thus, cancer and the diseases of the cardio-vascular-renal systems now account for a substantially larger proportion of all deaths than formerly.

These trends indicate the remarkable success that has attended the attack by health authorities on the infective and contagious diseases which in the past have constituted such a great hazard in the younger and early adult years of life. They have similarly served to emphasize the emergence of the chronic and degenerative conditions of later life as the targets towards which the public health programs of the future will be directed. In effect, Canada has shared the experience of most western nations in exchanging a high mortality in younger life for high morbidity in older age groups.

18.—Deaths and Rates per 100,000 Population, according to the International Abbreviated List of 50 Causes, by Province, 1951

NOTE.—Since 1950, deaths have been classified according to the 1948 (6th) Revision of the International List of Causes of Death, while those for previous years were classified according to earlier revisions of the List.

International List No.		Cause of Death	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada[1]
Abbreviated List	Detailed List		Number of Deaths										
B 1	001–008	Tuberculosis of respiratory system	197	14	106	105	1,283	534	116	123	119	254	2,851
B 2	010–019	Tuberculosis, other forms	59	3	20	29	270	45	42	33	27	38	566
B 3	020–029	Syphilis and its sequelæ	4	2	20	8	115	89	14	7	18	24	301
B 4	040	Typhoid fever	1	—	—	1	7	1	—	1	—	—	11
B 5	043	Cholera	—	—	—	—	—	—	—	—	—	—	—
B 6	045–048	Dysentery, all forms	—	—	2	2	12	20	6	3	5	2	52
B 7	050, 051	Scarlet fever, and streptococcal sore throat	—	—	—	1	17	13	—	5	7	2	45
B 8	055	Diphtheria	—	—	1	4	26	2	1	2	1	—	37
B 9	056	Whooping cough	33	—	8	37	52	32	11	14	7	8	202
B10	057	Meningococcal infections	6	—	4	4	26	33	3	4	3	6	89
B11	058	Plague	—	—	—	—	—	—	—	—	—	—	—
B12	080	Acute poliomyelitis	—	2	23	2	10	101	4	12	2	6	162
B13	084	Smallpox	—	—	—	—	—	—	—	—	—	—	—
B14	085	Measles	14	2	10	8	74	38	13	—	12	6	177
B15	100–108	Typhus and other rickettsial diseases	—	—	—	—	—	—	—	—	—	—	—
B16	110–117	Malaria	—	—	—	—	—	1	—	—	—	—	1
B17	030–039, 041, 042, 044, 049, 052–054, 059–074, 081–083, 086–096, 120–138	All other diseases classified as infective and parasitic	2	1	10	6	88	101	19	25	14	16	282
B18	140–205	Malignant neoplasms, including neoplasms of lymphatic and hæmatopoietic tissues	348	116	832	633	4,735	6,426	1,009	926	1,065	1,731	17,821
	(140–200, 202, 203, 205)	Cancer, excluding Hodgkin's disease, leukæmia and aleukæmia	*341*	*111*	*796*	*601*	*4,544*	*6,103*	*945*	*873*	*1,005*	*1,648*	*16,967*
	(201)	Hodgkin's disease	*3*	*3*	*8*	*10*	*47*	*82*	*16*	*9*	*16*	*22*	*216*
	(204)	Leukæmia and aleukæmia	*4*	*2*	*28*	*22*	*144*	*241*	*48*	*44*	*44*	*61*	*638*
B19	210–239	Benign and unspecified neoplasms	11	1	11	10	76	108	16	17	21	37	308
B20	260	Diabetes mellitus	21	7	76	52	502	584	68	64	89	121	1,584
B21	290–293	Anæmias	6	2	18	19	138	151	24	31	21	36	446

B22	330–334	Vascular lesions affecting central nervous system	253	129	710	444	2,262	5,700	767	665	756	1,194	12,880
B23	340	Nonmeningococcal meningitis	14	2	14	11	143	42	16	11	19	15	287
B24	400–402	Rheumatic fever	3	—	9	7	137	47	11	4	19	22	259
B25	410–416	Chronic rheumatic heart disease	24	13	66	48	460	564	77	97	98	171	1,618
B26	420–422	Arteriosclerotic and degenerative heart disease	308	196	1,259	1,061	6,585	13,431	1,701	1,647	1,658	3,287	31,133
B27	430–434	Other diseases of heart	91	11	106	78	593	396	132	117	163	149	1,836
B28	440–443	Hypertension with heart disease	100	38	275	186	1,441	1,542	182	254	194	496	4,708
B29	444–447	Hypertension without mention of heart	22	13	59	38	411	289	62	50	64	78	1,086
B30	480–483	*Influenza*	114	50	223	163	881	684	77	139	114	127	2,572
B31	490–493	Pneumonia	157	45	220	247	1,327	1,356	300	259	302	451	4,664
B32	500–502	Bronchitis	25	7	29	16	144	168	37	36	28	59	549
B33	540, 541	Ulcer of stomach and duodenum	11	2	26	13	149	279	37	28	57	110	712
B34	550–553	Appendicitis	11	1	9	13	104	59	12	13	18	20	260
B35	560, 561, 570	Intestinal obstruction and hernia	15	8	42	26	243	227	35	50	50	63	759
B36	543, 571, 572	Gastritis, duodenitis, enteritis and colitis, except diarrhœa of the newborn	45	8	29	74	507	313	52	64	62	79	1,233
B37	581	Cirrhosis of liver	2	4	16	9	194	217	26	22	23	94	607
B38	590–594	Nephritis and nephrosis	36	41	97	107	1,741	594	102	110	88	126	3,042
B39	610	Hyperplasia of prostate	12	7	40	27	200	224	33	60	40	85	728
B40	640–652, 660, 670–689	Complications of pregnancy, childbirth and the puerperium	25	1	12	11	180	97	22	22	15	20	405
B41	750–759	Congenital malformations	64	12	106	97	796	828	98	110	166	158	2,435
B42	760–762	Birth injuries, postnatal asphyxia and atelectasis	60	15	133	117	857	838	131	121	171	179	2,622
B43	763–768	Infections of the newborn	18	3	20	43	321	124	38	34	28	30	659
B44	769–776	Other diseases peculiar to early infancy, and immaturity unqualified	144	21	151	207	1,617	1,000	140	188	262	220	3,950
B45	780–795	Senility without mention of psychosis, ill-defined and unknown causes	341	16	143	252	592	387	145	92	134	134	2,236
B46	Residual	All other diseases	236	57	490	333	3,251	3,070	672	525	573	850	10,057
BE47	E810–E835	Motor-vehicle accidents	26	23	109	117	814	954	105	98	179	237	2,662
BE48	E800–E802, E840–E962	All other accidents	132	26	242	185	1,302	1,826	273	290	384	712	5,372
BE49	E963, E970–E979	Suicide and self-inflicted injury	12	5	28	19	177	385	92	63	86	166	1,033
BE50	E964, E965, E980–E999	Homicide and operations of war	1	—	8	3	40	61	14	4	5	19	155
		Totals, All Causes	**3,004**	**904**	**5,812**	**4,873**	**34,900**	**43,981**	**6,735**	**6,440**	**7,167**	**11,638**	**125,454**

[1] Exclusive of the Territories.

18.—Deaths and Rates per 100,000 Population, according to the International Abbreviated List of 50 Causes, by Province, 1951—concluded

International List No.		Cause of Death	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada[1]
Abbreviated List	Detailed List		Rates per 100,000 Population										
B 1	001-008	Tuberculosis of respiratory system	54·5	14·2	16·5	20·4	31·6	11·6	14·9	14·8	12·7	21·8	20·4
B 2	010-019	Tuberculosis, other forms	16·3	3·0	3·1	5·6	6·7	1·0	5·4	4·0	2·9	3·3	4·0
B 3	020-029	Syphilis and its sequelæ	1·1	2·0	3·1	1·6	2·8	1·9	1·8	0·8	1·9	2·1	2·2
B 4	040	Typhoid fever	0·3	—	—	0·2	0·2	[2]	—	0·1	—	—	0·1
B 5	043	Cholera	—	—	—	—	—	—	—	—	—	—	—
B 6	045-048	Dysentery, all forms	—	—	0·3	0·4	0·3	0·4	0·8	0·4	0·5	0·2	0·4
B 7	050, 051	Scarlet fever, and streptococcal sore throat	—	—	—	0·2	0·4	0·3	—	0·6	0·7	0·2	0·3
B 8	055	Diphtheria	—	—	0·2	0·8	0·6	[2]	0·1	0·2	0·1	—	0·3
B 9	056	Whooping cough	9·1	—	1·2	7·2	1·3	0·7	1·4	1·7	0·7	0·7	1·4
B10	057	Meningococcal infections	1·7	—	0·6	0·8	0·6	0·7	0·4	0·5	0·3	0·5	0·6
B11	058	Plague	—	—	—	—	—	—	—	—	—	—	—
B12	080	Acute poliomyelitis	—	2·0	3·6	0·4	0·2	2·2	0·5	1·4	0·2	0·5	1·2
B13	084	Smallpox	—	—	—	—	—	—	—	—	—	—	—
B14	085	Measles	3·9	2·0	1·6	1·6	1·8	0·8	1·7	—	1·3	0·5	1·3
B15	100-108	Typhus and other rickettsial diseases	—	—	—	—	—	—	—	—	—	—	—
B16	110-117	Malaria	—	—	—	—	—	[2]	—	—	—	—	[2]
B17	030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138	All other diseases classified as infective and parasitic	0·6	1·0	1·6	1·2	2·2	2·2	2·4	3·0	1·5	1·4	2·0
B18	140-205	Malignant neoplasms, including neoplasms of lymphatic and hæmatopoietic tissues	96·3	117·9	129·5	122·7	116·7	139·8	129·9	111·3	113·4	148·6	127·4
	(140-200, 202, 203, 205)	Cancer, excluding Hodgkin's disease, leukæmia and aleukæmia	*94·4*	*112·8*	*123·9*	*116·5*	*112·0*	*132·7*	*121·7*	*105·0*	*107·0*	*141·4*	*121·3*
	(201)	Hodgkin's disease	*0·8*	*3·0*	*1·2*	*1·9*	*1·2*	*1·8*	*2·1*	*1·1*	*1·7*	*1·9*	*1·5*
	(204)	Leukæmia and aleukæmia	*1·1*	*2·0*	*4·4*	*4·3*	*3·6*	*5·2*	*6·2*	*5·3*	*4·7*	*5·2*	*4·6*
B19	210-239	Benign and unspecified neoplasms	3·0	1·0	1·7	1·9	1·9	2·3	2·1	2·0	2·2	3·2	2·2
B20	260	Diabetes mellitus	5·8	7·1	11·8	10·1	12·4	12·7	8·8	7·7	9·5	10·4	11·3
B21	290-293	Anæmias	1·7	2·0	2·8	3·7	3·4	3·3	3·1	3·7	2·2	3·1	3·2
B22	330-334	Vascular lesions affecting central nervous system	70·0	131·1	110·5	86·1	55·8	124·0	98·8	80·0	80·5	102·5	92·1
B23	340	Nonmeningococcal meningitis	3·9	2·0	2·2	2·1	3·5	0·9	2·1	1·3	2·0	1·3	2·1

B24	400–402	Rheumatic fever	0·8	—	1·4	1·4	3·4	1·0	1·4	0·5	2·0	1·9	1·9
B25	410–416	Chronic rheumatic heart disease	6·6	13·2	10·3	9·3	11·3	12·3	9·9	11·7	10·4	14·7	11·6
B26	420–422	Arteriosclerotic and degenerative heart disease	85·2	199·1	195·9	205·7	162·4	292·1	219·0	198·0	176·5	282·1	222·6
B27	430–434	Other diseases of heart	25·2	11·2	16·5	15·1	14·6	8·6	17·0	14·1	17·3	12·8	13·1
B28	440–443	Hypertension with heart disease	27·7	38·6	42·8	36·1	35·5	33·5	23·4	30·5	20·6	42·6	33·7
B29	444–447	Hypertension without mention of heart	6·1	13·2	9·2	7·4	10·1	6·3	8·0	6·0	6·8	6·7	7·8
B30	480–483	Influenza	31·5	50·8	34·7	31·6	21·7	14·9	9·9	16·7	12·1	10·9	18·4
B31	490–493	Pneumonia	43·4	45·7	34·2	47·9	32·7	29·5	38·6	31·1	32·1	38·7	33·4
B32	500–502	Bronchitis	6·9	7·1	4·5	3·1	3·6	3·7	4·8	4·3	3·0	5·1	3·9
B33	540, 541	Ulcer of stomach and duodenum	3·0	2·0	4·0	2·5	3·7	6·1	4·8	3·4	6·1	9·4	5·1
B34	550–553	Appendicitis	3·0	1·0	1·4	2·5	2·6	1·3	1·5	1·6	1·9	1·7	1·9
B35	560, 561, 570	Intestinal obstruction and hernia	4·2	8·1	6·5	5·0	6·0	4·9	4·5	6·0	5·3	5·4	5·4
B36	543, 571, 572	Gastritis, duodenitis, enteritis and colitis, except diarrhœa of the newborn	12·5	8·1	4·5	14·3	12·5	6·8	6·7	7·7	6·6	6·8	8·8
B37	581	Cirrhosis of liver	0·6	4·1	2·5	1·7	4·8	4·7	3·3	2·6	2·4	8·1	4·3
B38	590–594	Nephritis and nephrosis	10·0	41·7	15·1	20·7	42·9	12·9	13·1	13·2	9·4	10·8	21·8
B39	610	Hyperplasia of prostate	3·3	7·1	6·2	5·2	4·9	4·9	4·2	7·2	4·3	7·3	5·2
B40	640–652, 660, 670–689	Complications of pregnancy, childbirth and the puerperium	6·9	1·0	1·9	2·1	4·4	2·1	2·8	2·6	1·6	1·7	2·9
B41	750–759	Congenital malformations	17·7	12·2	16·5	18·8	19·6	18·0	12·6	13·2	17·7	13·6	17·4
B42	760–762	Birth injuries, postnatal asphyxia and atelectasis	16·6	15·2	20·7	22·7	21·1	18·2	16·9	14·5	18·2	15·4	18·7
B43	763–768	Infections of the newborn	5·0	3·0	3·1	8·3	7·9	2·7	4·9	4·1	3·0	2·6	4·7
B44	769–776	Other diseases peculiar to early infancy, and immaturity unqualified	39·8	21·3	23·5	40·1	39·9	21·8	18·0	22·6	27·9	18·9	28·2
B45	780–795	Senility without mention of psychosis, ill-defined and unknown causes	94·4	16·3	22·3	48·9	14·6	8·4	18·7	11·1	14·3	11·5	16·0
B46	Residual	All other diseases	65·3	57·9	76·3	64·6	80·2	66·8	86·5	63·1	61·0	72·9	71·9
BE47	E810–E835	Motor-vehicle accidents	7·2	23·4	17·0	22·7	20·1	20·8	13·5	11·8	19·1	20·3	19·0
BE48	E800–E802, E840–E962	All other accidents	36·5	26·4	37·7	35·9	32·1	39·7	35·2	34·9	40·9	61·1	38·4
BE49	E963, E970–E979	Suicide and self-inflicted injury	3·3	5·1	4·4	3·7	4·4	8·4	11·8	7·6	9·2	14·2	7·4
BE50	E964, E965, E980–E999	Homicide and operations of war	0·3	—	1·2	0·6	1·0	1·3	1·8	0·5	0·5	1·6	1·1
		Totals, All Causes	831·2	918·4	904·5	944·9	860·5	956·5	867·9	774·3	762·9	998·8	897·1

[1] Exclusive of the Territories. [2] Less than 0·1 per 100,000 population[1]

Subsection 2.—Infant Mortality

International Comparisons.—The completeness of registration of live births and infant deaths varies from country to country and there is some evidence that the under-registration of deaths is proportionately greater for infants than for other ages. The reliability of the basic data should, therefore, be kept in mind when comparing the rates. Despite these variations, the Canadian rate as well as the rates for some of the provinces appear to be considerably higher than those for many other countries of the world.

19.—Infant Mortality per 1,000 Live Births in Various Countries compared with Canada and the Provinces, 1951

(Source: *Monthly Bulletin of Statistics of the United Nations* and other official publications. In certain cases final figures are not available and provisional data are used.)

Country	Infant Mortality Rate	Country or Province	Infant Mortality Rate	Country	Infant Mortality Rate
Sweden	21	**Canada**	38	France[2]	46
New Zealand	23	British Columbia	30	Belgium	50
Australia	25	Ontario	31	Western Germany	53
Netherlands, The	27	Saskatchewan	31	Japan	57
Norway	28[1]	Alberta	33	Austria	62
Denmark	29	Manitoba	33	Italy	67
United States	29	Prince Edward Island	34	Spain	68
England and Wales	30	Nova Scotia	35	Czechoslovakia	78[1]
Switzerland	30	Quebec	48	Ceylon	88
Union of South Africa (Whites)	34	New Brunswick	52	Portugal	89
Finland	35	Newfoundland	54	Mexico	100
Scotland	37	Northern Ireland	41	India[3]	137[1]
		Ireland, Republic of	45	Chile	148

[1] 1950. [2] Excludes infants born alive but who died before registration of birth. [3] Registration area only.

Canadian Infant Mortality.—Table **1**, pp. 176-178, shows the striking improvement that has taken place in the rate of infant mortality during the past 25 years. Of the children born in 1946-50, approximately 87,000 lived to their first birthday who would have died at the rate prevailing in the period 1926-30.

As illustrated in Table **20**, infant mortality of males is 25 to 30 p.c. higher than that of females for Canada as a whole, with wider variations for the individual provinces. As pointed out earlier, there were between 1,051 and 1,067 males born to every 1,000 females in the 1941-51 period. Because male infant mortality is higher, the excess of males is reduced drastically by the end of the first year. For example, in 1940-42, 397,038 male children were born compared with 347,908 female children, an excess of 22,130 or 5·9 p.c.; 25,024 male children died during their first year compared with 18,646 female children, that is 6,378 more. The excess of males at one year of age is thus reduced to 15,752, or 4·4 p.c.

As indicated in Tables **1** and **19**, infant mortality rates vary considerably from province to province. One of the principal causes of these variations appears to be the different proportions of births that take place in hospital or under proper

medical care, as pointed out previously on p. 179. Along with increased hospitalization has come better and more widespread pre-natal and post-natal care. Other factors, particularly the supervision of water supplies, improved sanitation and the pasteurization of milk, have also been important.

20.—Distribution of Infant Deaths, by Sex and Province, 1921, 1931, 1941 and 1949-51

Province and Year	Males	Females	Rate per 1,000 Male Live Births	Rate per 1,000 Female Live Births	Province and Year	Males	Females	Rate per 1,000 Male Live Births	Rate per 1,000 Female Live Births
Newfoundland.....1949	363	288	58	48	Manitoba.....1921	868	665	92	74
1950	408	350	60	55	1931	535	389	74	55
1951	361	276	60	48	1941	447	341	59	47
					1949	451	343	45	37
P. E. Island.....1921	95	85	89	78	1950	394	279	40	30
1931	78	50	78	57	1951	369	289	36	30
1941	102	61	95	63					
1949	79	56	54	41					
1950	54	51	37	35	Saskatchewan.....1921	1,048	766	90	70
1951	60	30	44	23	1931	851	612	78	59
					1941	531	415	56	46
Nova Scotia.....1921	738	573	110	91	1949	456	378	41	36
1931	510	404	86	71	1950	391	299	35	28
1941	545	363	77	53	1951	353	323	32	30
1949	434	316	47	37					
1950	396	297	45	35	Alberta.....1921	808	583	95	72
1951	344	250	39	30	1931	675	522	76	63
					1941	506	373	57	44
New Brunswick.....1921	740	559	125	101	1949	462	361	36	30
1931	565	379	102	72	1950	470	361	36	29
1941	515	421	83	69	1951	531	358	39	27
1949	603	390	70	48					
1950	533	394	63	50					
1951	472	363	58	46	British Columbia....1921	343	259	62	51
					1931	292	222	55	44
Quebec.....1931	5,417	4,026	126	99	1941	316	236	41	32
1941	3,916	2,854	85	66	1949	516	342	37	26
1949	3,474	2,557	58	45	1950	460	345	33	26
1950	3,456	2,635	56	46	1951	487	352	34	26
1951	3,335	2,486	54	42					
Ontario.....1921	3,918	2,845	102	79	**Canada** (exclusive 1921[1]	**8,558**	**6,335**	**98**	**77**
1931	2,744	2,089	77	62	of the Territories) **1931**	**11,667**	**8,693**	**94**	**74**
1941	1,910	1,384	51	40	**1941**	**8,788**	**6,448**	**67**	**52**
1949	2,237	1,737	41	34	**1949**	**9,075**	**6,768**	**48**	**38**
1950	2,211	1,540	40	29	**1950**	**8,773**	**6,551**	**46**	**36**
1951	2,010	1,535	34	28	**1951**	**8,322**	**6,262**	**43**	**34**

[1] Excludes the Province of Quebec.

Infant Mortality in Urban Centres.—Because of the relatively small numbers of infant deaths in individual cities and towns, the rates for these centres usually vary widely from year to year. As is evident from Table 21, many cities and towns have, however, maintained consistently low rates as compared with the national rate or the rates for the province in which they are situated.

Causes of Infant Deaths.—Of the 14,584 infant deaths in 1951, almost 15 p.c. were due to immaturity; 14 p.c. to congenital malformations; over 10 p.c. each to pneumonia among infants over four weeks of age and injury at birth; and about 8 p.c. to post-natal asphyxia and atelectasis. These specific causes accounted for 57 p.c. of the total infant deaths.

21.—Deaths and Death Rates of Infants Under One Year of Age (Exclusive of Stillbirths) in Urban Centres of 10,000 Population or Over,[1] 1941 and 1951

Province and Urban Centre	Infant Deaths		Rates per 1,000 Live Births		Province and Urban Centre	Infant Deaths		Rates per 1,000 Live Births	
	1941	1951	1941	1951		1941	1951	1941	1951
	No.	No.				No.	No.		
Newfoundland—					**Ontario**—concluded				
St. John's	113	76	102	46	Brockville	17	11	81	39
					Chatham	18	15	43	26
Prince Edward Island—					Cornwall	40	19	88	37
Charlottetown	24	9	73	20	Eastview	9	9	44	18
					Forest Hill	1	4	6	19
Nova Scotia—					Fort William	34	20	60	21
Dartmouth	15	8	49	14	Galt	10	5	35	11
Glace Bay	57	33	77	49	Guelph	22	26	51	37
Halifax	87	63	48	28	Hamilton	96	164	33	32
New Waterford	31	14	107	39	Kingston	38	41	54	45
Sydney	48	35	58	33	Kitchener	22	23	32	20
Truro	21	6	72	21	Leaside	4	8	27	25
					London	44	54	29	23
New Brunswick—					Mimico	4	8	29	27
Edmundston	16	13	69	33	New Toronto	12	5	79	23
Fredericton	9	15	51	34	Niagara Falls	21	24	44	44
Moncton	35	31	67	43	North Bay	21	24	63	48
Saint John	78	37	62	27	Orillia	14	9	68	24
					Oshawa	20	33	38	35
Quebec—					Ottawa	167	137	54	27
Arvida	..	12	..	32	Owen Sound	17	18	54	44
Cap de la Madeleine	18	32	51	49	Pembroke	22	19	77	48
Chicoutimi	55	49	81	51	Peterborough	22	38	39	35
Drummondville	18	37	54	69	Port Arthur	28	18	53	22
Granby	19	26	41	34	St. Catharines	16	17	26	20
Grand'Mère	11	13	45	36	St. Thomas	20	6	58	14
Hull	70	73	66	49	Sarnia	14	31	37	33
Jacques-Cartier	..	..	..	..	Sault Ste. Marie	27	22	41	25
Joliette	34	26	97	54	Stratford	11	13	39	30
Jonquière	45	54	70	60	Sudbury	61	53	46	34
Lachine	33	19	76	27	Timmins	42	35	43	43
Lasalle	..	8	..	21	Toronto	343	363	36	26
Lévis	20	17	74	53	Trenton	14	20	54	60
Longueuil	8	14	52	41	Waterloo	5	8	33	27
Magog	18	8	60	18	Welland	14	14	52	34
Montreal	1,292	940	69	36	Windsor	71	104	32	33
Montreal N.	5	19	40	45	Woodstock	14	5	62	15
Mount Royal	..	7	..	31					
Outremont	11	8	39	27	**Manitoba—**				
Quebec	458	288	115	69	Brandon	13	11	48	24
Rimouski	15	30	58	74	St. Boniface	12	19	32	26
Rouyn	25	27	65	45	Winnipeg	148	124	41	23
St. Hyacinthe	34	21	89	36					
St. Jean	10	29	27	53	**Saskatchewan—**				
St. Jérôme	24	30	72	50	Moose Jaw	18	14	47	23
St. Laurent	4	22	31	30	Prince Albert	12	11	40	21
St. Michel	..	9	..	27	Regina	32	45	29	25
Shawinigan Falls	54	34	78	40	Saskatoon	18	45	24	29
Sherbrooke	57	94	59	55					
Sillery	..	..	..	..	**Alberta—**				
Sorel	42	30	117	67	Calgary	66	92	37	25
Thetford Mines	32	26	73	48	Edmonton	61	117	32	23
Three Rivers	91	94	71	65	Lethbridge	15	22	57	31
Valleyfield	43	37	75	51	Medicine Hat	9	10	40	25
Verdun	40	40	31	23					
Victoriaville	25	48	80	107					
Westmount	6	8	34	31	**British Columbia—**				
					New Westminster	25	7	52	13
Ontario—					North Vancouver	9	11	52	19
Barrie	14	6	50	18	Penticton	..	..	..	..
Belleville	23	17	67	33	Trail	5	10	15	25
Brantford	36	25	53	27	Vancouver	119	173	27	23
					Victoria	11	24	14	22

[1] As at the 1951 Census.

22.—Infant Mortality and Rates per 100,000 Live Births, by Selected Cause and by Province, 1951

NOTE.—Since 1950, deaths have been classified according to the 1948 (6th) Revision of the International List of Causes of Death, while those for previous years were classified according to earlier revisions of the List.

International List No.	Cause of Death	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada[1]
		NUMBER OF DEATHS										
001-019	Tuberculosis	4	—	1	2	30	6	8	5	7	4	67
020-029	Syphilis	—	—	—	2	7	—	—	—	—	—	9
045-048	Dysentery	—	—	—	2	8	7	2	2	4	2	27
050	Scarlet fever	—	—	—	—	1	1	—	—	—	—	2
052	Erysipelas	—	—	—	—	2	2	—	—	—	—	4
055	Diphtheria	—	—	—	—	—	—	—	—	—	—	—
056	Whooping cough	26	—	7	23	40	18	6	9	3	7	139
057	Meningococcal infections	1	—	2	2	10	11	2	1	1	3	33
085	Measles	7	2	5	4	33	7	4	—	5	3	70
273	Diseases of thymus gland	3	1	2	5	34	12	3	3	4	12	79
340	Meningitis (non-meningococcal)	7	1	4	4	75	15	7	6	8	5	132
391, 392	Otitis media	1	—	1	5	185	3	—	—	1	5	201
480-483	Influenza	24	4	16	37	243	41	12	28	21	14	440
490-493	Pneumonia (4 weeks and over)	88	15	72	97	657	243	96	79	97	83	1,527
500-502	Bronchitis	10	2	5	8	42	19	9	7	5	14	121
543	Gastritis and duodenitis	1	—	—	1	7	1	—	—	—	—	10
571	Gastro-enteritis and colitis	38	6	12	60	373	169	35	34	41	34	802
572	Chronic enteritis, and ulcerative colitis	—	—	—	—	2	1	1	—	—	—	4
750-759	Congenital malformations	58	11	87	85	705	689	73	89	136	130	2,063
760, 761	Injury at birth	28	8	54	63	570	464	67	63	62	82	1,461
762	Postnatal asphyxia and atelectasis	32	7	79	54	286	374	64	58	109	97	1,160
763	Pneumonia of newborn (under 4 weeks)	13	2	15	30	195	81	29	23	19	16	423
764	Diarrhœa of newborn (under 4 weeks)	3	1	2	13	103	31	7	9	7	9	185
769	Antenatal toxæmia	—	1	12	14	64	44	3	9	17	11	175
770	Erythroblastosis	5	2	19	10	136	91	5	16	29	23	336
772	Nutritional maladjustment	9	—	7	12	66	32	5	7	9	10	157
773	Ill-defined diseases peculiar to early infancy	40	3	16	27	817	79	25	27	14	11	1,059
774-776	Immaturity	88	15	92	143	496	723	95	121	186	158	2,117
795	Ill-defined and unknown causes	49	1	9	79	32	52	20	6	13	13	274
E800-E936	Accidental causes	24	1	25	20	83	158	28	28	37	37	441
	Other specified causes	78	7	50	33	519	171	52	46	54	56	1,066
	Totals, All Causes	**637**	**90**	**594**	**835**	**5,821**	**3,545**	**658**	**676**	**889**	**839**	**14,584**

[1] Exclusive of the Territories.

22.—Infant Mortality and Rates per 100,000 Live Births, by Selected Cause and by Province, 1951—concluded

International List No.	Cause of Death	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada[1]
		Rates per 100,000 Live Births										
001–019	Tuberculosis	34	—	6	12	25	5	40	23	26	14	18
020–029	Syphilis	—	—	—	12	6	—	—	—	—	—	2
045–048	Dysentery	—	—	—	12	7	6	10	9	15	7	7
050	Scarlet fever	—	—	—	—	1	1	—	—	—	—	1
052	Erysipelas	—	—	—	—	2	2	—	—	—	—	1
055	Diphtheria	—	—	—	—	—	—	—	—	—	—	—
056	Whooping cough	222	—	41	143	33	16	30	41	11	25	37
057	Meningococcal infections	9	—	12	12	8	10	10	5	4	11	9
085	Measles	60	75	29	25	27	6	20	—	19	11	18
273	Diseases of thymus gland	26	38	12	31	28	10	15	14	15	43	21
340	Meningitis (non-meningococcal)	60	38	23	25	62	13	35	28	30	18	35
391, 392	Otitis media	9	—	6	31	153	3	—	—	4	18	53
480–483	Influenza	204	151	93	230	201	36	60	129	78	50	116
490–493	Pneumonia (4 weeks and over)	750	566	420	603	543	212	481	364	359	296	402
500–502	Bronchitis	85	75	29	50	35	17	45	32	19	50	32
543	Gastritis and duodenitis	9	—	—	6	6	1	—	—	—	—	3
571	Gastro-enteritis and colitis	324	226	70	373	308	147	176	156	152	121	211
572	Chronic enteritis, and ulcerative colitis	—	—	—	—	2	1	5	—	—	—	1
750–759	Congenital malformations	494	415	508	529	583	600	366	410	504	463	543
760, 761	Injury at birth	239	302	315	392	471	404	336	290	230	292	384
762	Postnatal asphyxia and atelectasis	273	264	461	336	237	326	321	267	404	345	305
763	Pneumonia of newborn (under 4 weeks)	111	75	88	187	161	71	145	106	70	57	111
764	Diarrhœa of newborn (under 4 weeks)	26	38	12	81	85	27	35	41	26	32	49
769	Antenatal toxæmia	—	38	70	87	53	38	15	41	63	39	46
770	Erythroblastosis	43	75	111	62	112	79	25	74	107	82	88
772	Nutritional maladjustment	77	—	41	75	55	28	25	32	33	36	41
773	Ill-defined diseases peculiar to early infancy	341	113	93	168	676	69	125	124	52	39	279
774–776	Immaturity	750	566	537	890	410	630	476	557	689	563	557
795	Ill-defined and unknown causes	417	38	53	491	26	45	100	28	48	46	72
E800–E936	Accidental causes	204	38	146	124	69	138	140	129	137	132	116
	Other specified causes	665	264	292	205	429	149	261	212	200	199	280
	Totals, All Causes	**2,988**	**3,837**	**5,427**	**3,395**	**3,469**	**5,194**	**4,814**	**3,087**	**3,300**	**3,110**	**3,292**

[1] Exclusive of the Territories.

Subsection 3.—Maternal Mortality

As indicated in Table 1, pp. 176-178, the number of mothers who die in pregnancy and childbirth has been greatly reduced in recent years. Although the number of births has been much greater in recent years, the number of maternal deaths has declined steadily since about 1930 (when there were 1,215 deaths and a rate of almost five deaths for every 1,000 live births) to 380 in 1951. Since 1945, the rate of maternal mortality has dropped below two per 1,000 live births and was just over one per 1,000 live births in 1951. Mortality among unmarried mothers is higher than among married mothers.

Age at Death.—Table 23 shows the distribution of maternal deaths by age groups and average age at death. The latter is slightly more than two years higher than the average age of all mothers at the time of childbirth. The rates per 1,000 live births by age groups show that age is a most important factor in maternal mortality. Though all the rates are much lower than they used to be, the inequalities between the age groups remain. The rate at 30-34 years is almost twice as high as the rate at 20-24 years, and at 40-44 years it is about five times as high. The higher rate for the "under 20" age group, compared with the age group 20-24, is due to the high proportion of illegitimate children born to young mothers.

23.—Maternal Mortality and Rates per 1,000 Live Births, by Age Group, 1931, 1941 and 1951

(Exclusive of Newfoundland and the Territories)

Age Group	Maternal Deaths						Rates per 1,000 Live Births		
	1931		1941		1951		1931	1941	1951
	No.	p.c.	No.	p.c.	No.	p.c.			
Under 20 years	70	5·8	47	5·2	18	4·7	4·58	2·77	0·74
20 – 24 "	193	15·9	160	17·8	68	17·9	3·17	2·26	0·67
25 29 "	254	20·9	217	24·1	81	21·3	3·88	2·85	0·72
30 34 "	270	22·2	203	22·5	78	20·5	5·50	4·05	1·05
35 39 "	265	21·8	184	20·4	83	21·8	7·87	6·37	1·99
40 44 "	142	11·7	82	9·1	42	11·1	10·92	7·97	3·30
45 49 "	21	1·7	7	0·8	7	1·8	15·26	6·57	6·80
50 years or over	—	—	1	0·1	3	0·8	—	--	--
Totals, All Ages	**1,215**	**100·0**	**901**	**100·0**	**380**	**100·0**	**5·05**	**3·53**	**1·03**
Average Age at Death	31·6		30·9		31·6		...	...	...

Causes of Maternal Deaths.—Table 24 shows, by cause, the numbers and rates of maternal deaths per 100,000 live births. Until a decade ago, puerperal sepsis and toxæmias of pregnancy were by far the most important causes. Since 1936, the rate for puerperal sepsis has been reduced by almost 95 p.c. owing in large measure to the use of sulpha and other antibiotics. Although there has been a reduction of over 70 p.c. since 1936 in the maternal death rate from toxæmias of pregnancy, this still remains the second major cause of maternal deaths, after complications of delivery.

24.—Maternal Mortality and Rates per 100,000 Live Births, by Cause and by Province, 1951

NOTE.—Since 1950 deaths have been classified according to the 1948 (6th) Revision of the International List of Causes of Death, while those for previous years were classified according to earlier revisions of the List.

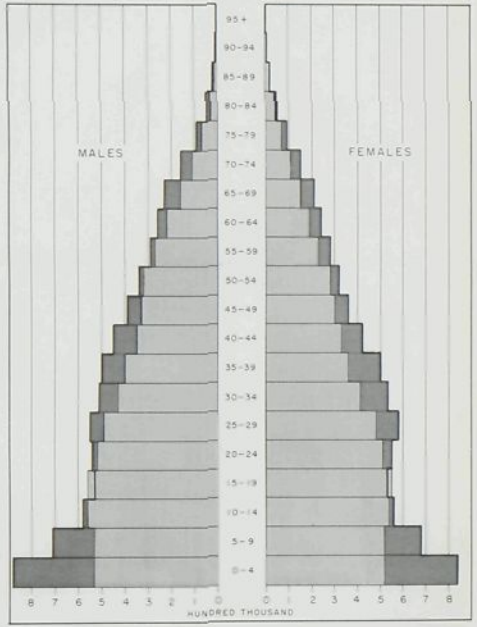
International List No.	Cause of Death	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada[1]
		NUMBER OF DEATHS										
640, 641	Infections associated with pregnancy...	—	—	—	—	1	—	—	—	—	—	1
642	Toxæmias of pregnancy	4	—	4	5	50	28	3	10	5	2	111
643, 644	Hæmorrhages associated with pregnancy	—	—	—	—	3	1	1	1	1	—	7
645	Ectopic pregnancy	1	—	—	—	4	6	1	—	—	1	13
646–649	Other conditions of pregnancy	—	—	—	—	5	2	3	2	2	2	16
650	Abortion without mention of infection	—	—	—	—	7	3	—	1	—	5	16
651, 652	Abortion with mention of infection	1	—	1	1	5	18	6	1	—	2	35
660	Delivery without complication	1	—	—	—	2	—	2	—	—	1	6
670–678	Delivery with complication	15	—	5	2	78	25	4	4	5	4	142
680, 681	Puerperal sepsis	2	—	1	—	7	2	—	1	—	1	14
682–689	Other complications of the puerperium	1	1	1	3	18	12	2	2	2	2	44
	Totals, All Puerperal Causes	**25**	**1**	**12**	**11**	**180**	**97**	**22**	**22**	**15**	**20**	**405**
		RATES PER 100,000 LIVE BIRTHS										
640, 641	Infections associated with pregnancy...	—	—	—	—	1	—	—	—	—	—	[2]
642	Toxæmias of pregnancy	34	—	23	31	41	24	15	46	19	7	29
643, 644	Hæmorrhages associated with pregnancy	—	—	—	—	2	1	5	5	4	—	2
645	Ectopic pregnancy	9	—	—	—	3	5	5	—	—	4	3
646–649	Other conditions of pregnancy	—	—	—	—	4	2	15	9	7	7	4
650	Abortion without mention of infection	—	—	—	—	6	3	—	5	—	18	4
651, 652	Abortion with mention of infection	9	—	6	6	4	16	30	5	—	7	9
660	Delivery without complication	9	—	—	—	2	—	10	—	—	4	2
670–678	Delivery with complication	128	—	29	12	65	22	20	18	19	14	37
680, 681	Puerperal sepsis	17	—	6	—	6	2	—	5	—	4	4
682–689	Other complications of the puerperium	9	38	6	19	15	10	10	9	7	7	12
	Totals, All Puerperal Causes	**213**	**38**	**70**	**68**	**149**	**84**	**110**	**101**	**56**	**71**	**107**

[1] Exclusive of the Territories. [2] Less than one per 100,000 live births.

GRAPHIC RECORD OF VITAL STATISTICS IN CANADA* 1931 – 52

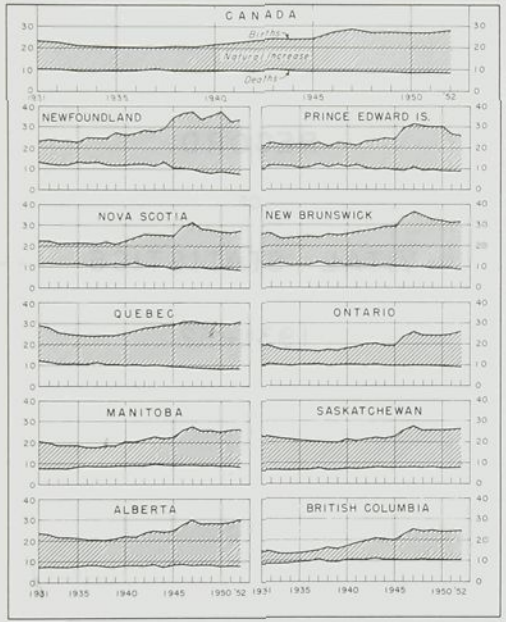
POPULATION OF CANADA BY SEX AND QUINQUENNIAL AGE GROUPS

1941 — 1951 —



BIRTH, DEATH AND NATURAL INCREASE RATES

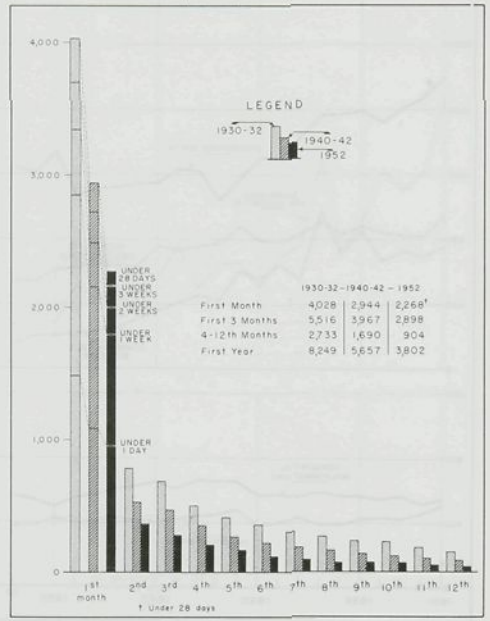
Rates per 1,000 Population



INFANT MORTALITY

AT EACH AGE PERIOD

Rates per 100,000 Live Births

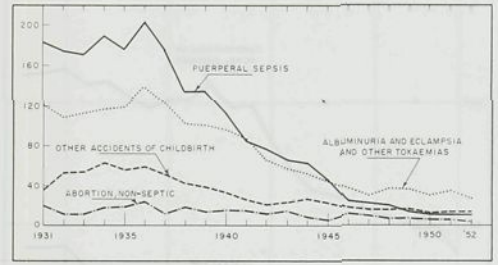


	1930-32	1940-42	1952
First Month	4,028	2,944	2,268†
First 3 Months	5,516	3,967	2,898
4-12th Months	2,733	1,690	904
First Year	8,249	5,657	3,802

MATERNAL MORTALITY

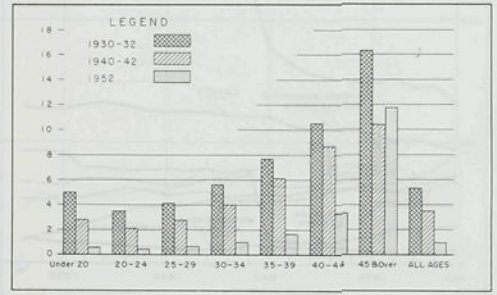
FROM CERTAIN GROUPS OF CAUSES

Rates per 100,000 Live Births



MATERNAL MORTALITY

Rates per 1,000 Live Births, by Ages

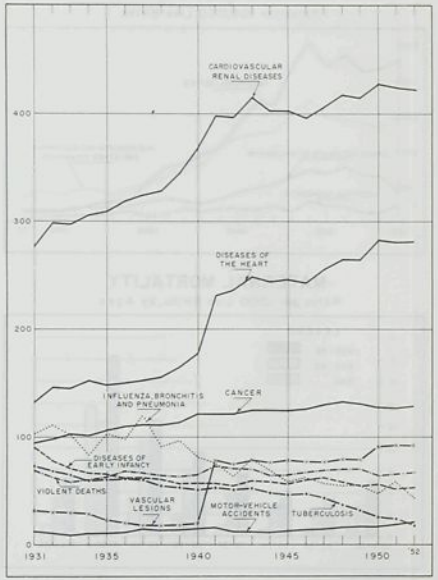


* Exclusive of the Yukon and Northwest Territories

(Continued)

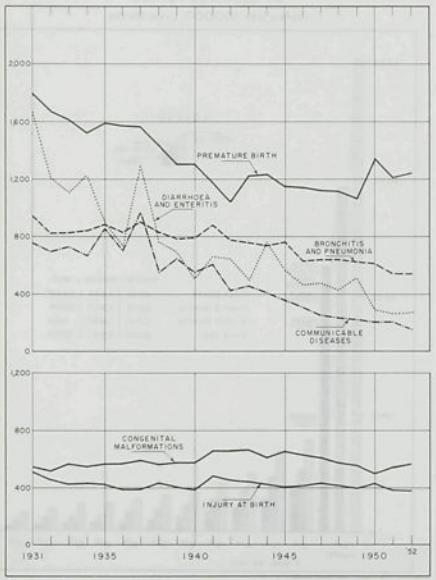
LEADING CAUSES OF DEATH

Rates per 100,000 Population



LEADING CAUSES OF INFANT MORTALITY

Rates per 100,000 Live Births



RECORD

OF

VITAL STATISTICS

1931-52

Section 4.—Natural Increase

In 1926-30, the rate of natural increase in Canada (excess of births over deaths) was 13 per 1,000 population. Owing partly to the depression, the birth rate declined more than the death rate and the rate of natural increase fell to 9·7 in 1937. Since then the rate increased to 12·6 in 1940-42, 14·6 in 1945, 17·6 in 1946 and 19·3 in 1947. The rates of 17·8 in 1948, 18·1 in 1949, 18·1 in 1950 and 18·2 in 1951 were lower owing to increases in total deaths in recent years.

Table 25 shows that the rates of natural increase in the provinces followed generally the rate for Canada as a whole. In earlier years, Saskatchewan and Quebec had the highest rates. The high rates in all the Prairie Provinces were due partly to their relatively younger populations and consequent low death rates. In Quebec, on the other hand, the death rate in 1926-30 was high; it has declined steadily since. Owing to high birth rates, Newfoundland and New Brunswick have had the highest rates of natural increase in Canada in recent years.

The rates are generally higher for females than for males for the reason that death rates for males are higher than for females. In the western provinces particularly, the fact that the ratio of males to females in the total population is higher than in other parts of Canada tends to lower the rate of natural increase.

In a country such as Canada with a fairly young population and where immigration has been large, an excess of males is to be expected but the higher rate of natural increase for females will gradually reduce this excess. The trend is towards an eventual excess of females in the total population as there now is in most European countries.

25.—Natural Increase and Rates of Natural Increase, by Sex and Province, 1921, 1931, 1941 and 1949-51

Province and Year	Excess of Births Over Deaths	Rate per 1,000 Population	Males		Females	
			Number	Rate per 1,000 Males	Number	Rate per 1,000 Females
Newfoundland.....1949	9,413	27·3	4,659	26·4	4,754	28·2
1950	9,996	28·5	5,079	28·3	4,917	28·7
1951	8,734	24·2	4,369	23·6	4,365	24·8
Prince Edward Island.....1921	947	10·7	454	10·1	493	11·3
1931	967	10·9	517	11·4	450	10·6
1941	915	9·6	483	9·8	432	9·4
1949	1,907	20·3	926	19·0	981	21·7
1950	1,982	20·7	978	19·8	1,004	21·5
1951	1,747	17·9	872	17·4	875	18·2
Nova Scotia.....1921	6,601	12·6	3,323	12·5	3,278	12·7
1931	5,647	11·0	2,836	10·8	2,811	11·3
1941	6,989	12·1	3,335	11·3	3,654	13·0
1949	11,759	18·7	5,898	18·5	5,861	18·9
1950	11,184	17·6	5,499	17·0	5,685	18·1
1951	11,313	17·6	5,596	17·2	5,717	18·0

25.—Natural Increase and Rates of Natural Increase, by Sex and Province, 1921, 1931, 1941 and 1949-51—concluded

Province and Year	Excess of Births Over Deaths	Rate per 1,000 Population	Males		Females	
			Number	Rate per 1,000 Males	Number	Rate per 1,000 Females
New Brunswick 1921	6,055	15·9	3,084	16·0	2,971	15·9
1931	6,157	15·1	3,099	14·9	3,058	15·3
1941	7,088	15·5	3,396	14·5	3,692	16·5
1949	11,797	23·2	5,931	23·0	5,866	23·5
1950	11,498	22·4	5,782	22·3	5,716	22·6
1951	11,202	21·8	5,522	21·3	5,680	22·1
Quebec 1921	55,316	23·4	29,431	24·9	25,885	21·9
1931	49,119	17·1	24,984	17·3	24,135	16·9
1941	54,871	16·5	27,561	16·5	27,310	16·5
1949	82,717	21·3	41,445	21·3	41,272	21·3
1950	85,604	21·6	42,937	21·6	42,667	21·5
1951	86,030	21·2	42,961	21·2	43,069	21·2
Ontario 1921	39,601	13·5	20,245	13·7	19,356	13·3
1931	33,504	9·8	16,472	9·4	17,032	10·1
1941	33,036	8·7	15,705	8·2	17,331	9·3
1949	63,222	14·4	30,661	13·9	32,561	15·0
1950	64,760	14·5	31,409	14·0	33,351	15·0
1951	70,846	15·4	34,737	15·0	36,109	15·8
Manitoba 1921	13,090	21·5	6,491	20·2	6,599	22·8
1931	9,057	12·9	4,239	11·5	4,818	14·5
1941	8,317	11·4	3,834	10·1	4,483	12·7
1949	12,373	16·4	5,941	15·4	6,432	17·3
1950	12,651	16·5	6,046	15·4	6,605	17·6
1951	13,207	17·0	6,388	16·2	6,819	17·9
Saskatchewan 1921	16,897	22·3	8,542	20·6	8,355	24·3
1931	15,265	16·5	7,499	15·0	7,766	18·4
1941	12,006	13·4	5,651	11·8	6,355	15·2
1949	15,066	18·1	7,217	16·5	7,849	19·9
1950	15,303	18·4	7,206	16·5	8,097	20·5
1951	15,293	18·4	7,192	16·6	8,101	20·4
Alberta 1921	11,621	19·7	5,635	17·4	5,986	22·6
1931	11,950	16·4	5,843	14·6	6,107	18·4
1941	10,923	13·7	5,016	11·8	5,907	16·0
1949	17,852	20·2	8,433	18·2	9,419	22·4
1950	18,769	20·6	8,949	18·7	9,820	22·6
1951	19,836	21·1	9,331	19·0	10,505	23·5
British Columbia 1921	6,445	12·3	2,949	10·1	3,496	15·1
1931	4,290	6·2	1,604	4·2	2,686	8·7
1941	6,533	8·0	2,342	5·4	4,191	10·9
1949	15,986	14·3	6,857	11·9	9,129	17·0
1950	15,535	13·6	6,683	11·4	8,852	16·0
1951	16,439	14·1	7,107	11·9	9,332	16·4
Canada (exclusive of the Territories). **1921**	**156,573**	**17·8**	**80,154**	**17·7**	**76,419**	**18·0**
1931	**135,956**	**13·1**	**67,093**	**12·5**	**68,863**	**13·8**
1941	**140,678**	**12·2**	**67,323**	**11·4**	**73,355**	**13·1**
1949	**242,092**	**18·1**	**117,968**	**17·3**	**124,124**	**17·8**
1950	**247,282**	**18·1**	**120,568**	**17·4**	**126,714**	**18·8**
1951	**254,647**	**18·2**	**124,075**	**17·5**	**130,572**	**18·9**

Natural Increase in Urban Centres.—The classification of births and deaths by place of residence makes it possible to compile the natural increase in the population of urban centres; the figures are given in Table 26.

26.—Natural Increase in Urban Centres of 10,000 Population or Over,[1] 1946-50 and 1951

Province and Urban Centre	Average 1946-50	1951
Newfoundland—		
St. John's	[2]	1,105
Prince Edward Island—		
Charlottetown	292	271
Nova Scotia—		
Dartmouth	391	494
Glace Bay	556	462
Halifax	1,617	1,566
New Waterford	260	264
Sydney	704	765
Truro	229	189
New Brunswick—		
Edmundston	315	311
Fredericton	302	274
Moncton	550	469
Saint John	957	856
Quebec—		
Arvida	342	334
Cap de la Madeleine	403	508
Chicoutimi	777	754
Drummondville	368	383
Granby	529	600
Grand'Mère	247	273
Hull	1,031	1,112
Jacques-Cartier	..	..
Joliette	274	301
Jonquière	688	736
Lachine	444	473
Lasalle	198	308
Lévis	230	191
Longueuil	223	251
Magog	303	355
Montreal	14,658	16,324
Montreal N.	235	332
Mount Royal	112	157
Outremont	56	39
Quebec	2,566	2,475
Rimouski	288	315
Rouyn	375	510
St. Hyacinthe	277	317
St. Jean	357	356
St. Jérôme	426	458
St. Laurent	275	561
St. Michel	178	269
Shawinigan Falls	702	669
Sherbrooke	1,025	1,222
Sillery	..	..
Sorel	317	306
Thetford Mines	307	408
Three Rivers	889	1,007
Valleyfield	507	541
Verdun	1,205	1,158
Victoriaville	301	308
Westmount	−2	−40
Ontario—		
Barrie	199	185
Belleville	281	322
Brantford	567	514
Ontario—concluded		
Brockville	181	144
Chatham	300	363
Cornwall	389	315
Eastview	327	412
Forest Hill	100	105
Fort William	619	604
Galt	245	269
Guelph	373	411
Hamilton	2,711	3,112
Kingston	557	493
Kitchener	666	814
Leaside	241	220
London	1,273	1,320
Mimico	171	200
New Toronto	143	137
Niagara Falls	383	299
North Bay	309	306
Orillia	206	225
Oshawa	469	621
Ottawa	2,568	3,065
Owen Sound	244	172
Pembroke	229	288
Peterborough	672	701
Port Arthur	482	495
St. Catharines	529	499
St. Thomas	184	206
Sarnia	391	689
Sault Ste. Marie	560	606
Stratford	179	222
Sudbury	1,050	1,243
Timmins	665	594
Toronto	6,524	6,333
Trenton	244	241
Waterloo	174	196
Welland	257	301
Windsor	1,898	2,065
Woodstock	177	180
Manitoba—		
Brandon	247	249
St. Boniface	478	531
Winnipeg	2,946	2,977
Saskatchewan—		
Moose Jaw	376	322
Prince Albert	347	411
Regina	1,172	1,258
Saskatoon	958	1,046
Alberta—		
Calgary	1,874	2,503
Edmonton	3,085	3,937
Lethbridge	400	517
Medicine Hat	258	259
British Columbia—		
New Westminster	330	285
North Vancouver	328	355
Penticton	..	..
Trail	280	334
Vancouver	3,464	3,481
Victoria	399	334

[1] As at the 1951 Census. [2] Not available for one year of the period.

Section 5.—Marriages and Divorces

Subsection 1.—Marriages

International Comparisons.—Table 27 shows the marriage rates in Canada and the provinces in comparison with those of other countries.

27.—Marriage Rates per 1,000 Population of Various Countries compared with Canada and the Provinces, 1951

(Source: *Monthly Bulletin of Statistics of the United Nations* and other official publications. In certain cases final figures are not available and provisional data are used.)

Country or Province	Marriage Rate	Country or Province	Marriage Rate	Country	Marriage Rate
United States	10·6	**Canada**—concluded		Japan	8·0
Czechoslovakia	10·4[1]	New Brunswick	8·5	Switzerland	7·9
Hungary	10·4[1]	Saskatchewan	8·2	Chile	7·8
Western Germany	10·3	Nova Scotia	7·9	Portugal	7·7
Union of South Africa (Whites)	10·2	Newfoundland	7·0	Sweden	7·6
Australia	9·2	Prince Edward Island	5·9	France	7·5
		Austria	9·1	Spain	7·5
		Netherlands, The	8·8	Ceylon	6·9
		New Zealand	8·7	Italy	6·9
Canada	9·2	Norway	8·3	Northern Ireland	6·9
Alberta	9·9	England and Wales	8·2	Mexico	6·1
Ontario	9·8	Belgium	8·1	Ireland, Republic of	5·4
British Columbia	9·7	Denmark	8·1	Venezuela	4·9
Manitoba	9·5	Scotland	8·1	Peru	2·6
Quebec	8·8	Finland	8·0		

[1] 1950.

As a rule, marriage rates vary with the level of economic prosperity. In Canada, England and the United States, the number of marriages was exceptionally high in 1940-42, decreased in 1943 and 1944 but increased in 1945 and 1946, reaching peak rates in the immediate post-war years.

Canadian Marriages.—Table 28 shows the number of marriages and the marriage rates per 1,000 population in Canada and the provinces. Percentages of brides and bridegrooms, according to place of birth, are also given. In 1951, for the country as a whole, about 85 p.c. of the grooms were born in Canada—70 p.c. in the province in which they were married. Almost 90 p.c. of the brides were born in Canada—over 75 p.c. in the province in which they were married. However, there are wide variations from this pattern as between provinces; as might be expected, in the older Atlantic Provinces and Quebec there is a greater tendency to marry native and/or province-born partners than in the other provinces.

28.—Marriages and Marriage Rates, by Province, with Percentage Distribution of Bridegrooms and Brides by Nativity, 1921, 1931, 1941 and 1951

Province and Year	Total Marriages	Rate per 1,000 Population	Born in Province Where Married		Born in Other Provinces		Born Outside Canada	
			Grooms	Brides	Grooms	Brides	Grooms	Brides
	No.		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Newfoundland—1951	2,517	7·0	85·2[1]	96·7[1]	2·4[1]	1·9[1]	12·4[1]	1·4[1]
Prince Edward Island—1921	518	5·8	92·3	94·6	5·0	1·9	2·7	3·5
1931	490	5·6	89·4	91·8	5·1	4·1	5·5	4·1
1941	673	7·1	78·8	86·6	15·0	9·4	6·2	4·0
1951	583	5·9	82·3	91·1	12·9	6·0	4·8	2·9
Nova Scotia—1921	3,550	6·8	76·3	81·3	6·4	4·5	17·3	14·2
1931	3,394	6·6	80·3	86·7	5·4	3·6	14·3	9·7
1941	6,596	11·4	73·2	83·8	16·8	9·5	10·0	6·7
1951	5,094	7·9	78·2	86·7	15·9	9·0	6·0	4·3

[1] Excludes "not stated" birthplace.

28.—Marriages and Marriage Rates, by Province, with Percentage Distribution of Bridegrooms and Brides by Nativity, 1921, 1931, 1941 and 1951—concluded

Province and Year	Total Marriages	Rate per 1,000 Population	Born in Province Where Married		Born in Other Provinces		Born Outside Canada	
			Grooms	Brides	Grooms	Brides	Grooms	Brides
	No.		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
New Brunswick.....1921	3,173	8·4	73·4	78·0	10·1	8·4	16·5	13·6
1931	2,544	6·2	77·7	81·8	10·1	9·2	12·2	9·0
1941	4,941	10·8	78·5	84·4	13·3	9·7	8·2	5·9
1951	4,386	8·5	80·0	86·9	10·1	6·7	9·8	6·4
Quebec.....1931	16,783	5·8	79·7	83·4	4·2	3·7	16·0	13·0
1941	32,782	9·8	86·1	89·3	6·7	5·9	7·2	4·8
1951	35,704	8·8	86·7	89·5	6·1	5·5	7·2	5·0
Ontario.....1921	24,871	8·5	63·6	66·7	5·6	4·7	30·8	28·6
1931	23,771	6·9	57·4	63·4	7·7	7·7	34·9	28·8
1941	43,270	11·4	89·2	89·0	4·2	4·5	6·7	6·5
1951	45,198	9·8	65·9	72·4	14·6	12·2	19·5	15·4
Manitoba.....1921	5,310	8·7	26·4	37·2	18·1	14·1	55·5	48·7
1931	4,888	7·0	41·6	55·7	10·9	9·2	47·5	35·1
1941	8,305	11·4	63·0	73·7	17·4	15·0	19·6	11·4
1951	7,366	9·5	67·9	75·1	15·4	13·3	16·8	11·6
Saskatchewan.....1921	5,101	6·7	7·1	15·6	31·4	28·1	61·5	56·3
1931	5,700	6·2	27·6	48·3	22·5	16·9	49·9	34·7
1941	7,036	7·9	64·7	79·1	16·1	10·0	19·1	10·9
1951	6,805	8·2	78·3	86·4	10·7	6·4	11·1	7·2
Alberta.....1921	4,661	7·9	7·0	14·2	26·2	25·1	66·8	60·7
1931	5,142	7·0	22·1	38·5	19·4	17·6	58·5	43·9
1941	8,470	10·6	50·0	63·4	23·9	19·9	26·2	16·8
1951	9,305	9·9	56·0	67·4	25·7	19·6	18·3	13·0
British Columbia.....1921	3,889	7·4	13·7	18·3	22·6	20·5	63·7	61·2
1931	3,879	5·6	22·2	30·6	21·1	24·7	56·7	44·7
1941	9,769	11·9	35·9	43·5	35·6	37·1	28·5	19·4
1951	11,272	9·7	35·5	41·6	43·1	43·0	21·3	15·5
Canada (exclusive of the Territories). **1921**[1]	**51,073**	**8·0**	**46·9**	**52·0**	**13·0**	**11·3**	**40·1**	**36·7**
1931	**66,591**	**6·4**	**56·7**	**64·9**	**10·0**	**9·2**	**33·3**	**26·0**
1941	*121,842*	*10·6*	*76·8*	*81·5*	*11·4*	*10·1*	*11·7*	*8·4*
1951	128,230	9·2	70·5[2]	76·5[2]	15·1[2]	12·8[2]	14·5[2]	10·6[2]

[1] Excludes the Province of Quebec. [2] *See* note [1].

Age and Marital Status of Bridegrooms and Brides.—Over 91 p.c. of the marriages in 1951 were between persons who had not previously been married; 5 p.c. of the brides and grooms had been widowed, while almost 4 p.c. of the marriages were of divorced persons. The average age at marriage of bachelors is less than 27 years and that of spinsters less than 24. The average age of widowers and widows at the time of re-marriage is almost double that of bachelors and spinsters. Nine out of ten spinsters married in 1951 were less than 30 years of age—7 out of 10 below 25 years—while 8 out of 10 bachelors were less than 30 and about one-half of the total were below 25 years of age.

29.—Numbers and Percentages of Bridegrooms and Brides, by Age and Marital Status, 1951

(Exclusive of the Territories)

Age Group	Bridegrooms							
	Numbers				Percentages			
	Bachelors	Widowers	Divorced	Total	Bachelors	Widowers	Divorced	Total
Under 20 years	6,663	—	1	6,664	5·7	—	--	5·2
20 — 24 "	54,277	51	132	54,460	46·2	0·8	3·0	42·5
25 — 29 "	33,778	201	668	34,647	28·8	3·1	15·3	27·0
30 — 34 "	12,295	362	965	13,622	10·5	5·6	22·1	10·6
35 — 39 "	5,202	526	915	6,643	4·4	8·2	21·0	5·2
40 — 44 "	2,440	585	676	3,701	2·1	9·1	15·5	2·9
45 — 49 "	1,340	668	499	2,507	1·1	10·4	11·5	2·0
50 — 54 "	715	825	263	1,803	0·6	12·8	6·0	1·4
55 — 59 "	363	866	157	1,386	0·3	13·4	3·6	1·1
60 — 64 "	188	862	48	1,098	0·2	13·4	1·1	0·9
65 years or over	151	1,499	34	1,684	0·1	23·3	0·8	1·3
Totals, Stated Ages	**117,412**	**6,445**	**4,358**	**128,215**	**100·0**	**100·0**	**100·0**	**100·0**
Ages not stated	12	3	—	15	--	--	—	--
Totals, All Ages	**117,424**	**6,448**	**4,358**	**128,230**	**91·6**	**5·0**	**3·4**	**100·0**
Average ages	26·6	53·8	38·5	28·3	...	...	...	...

Age Group	Brides							
	Numbers				Percentages			
	Spinsters	Widows	Divorced	Total	Spinsters	Widows	Divorced	Total
Under 20 years	31,733	15	11	31,759	27·0	0·2	0·3	24·8
20 — 24 "	54,559	176	367	55,102	46·4	2·7	9·0	43·0
25 — 29 "	19,296	515	980	20,791	16·4	8·0	24·0	16·2
30 — 34 "	6,355	740	1,041	8,136	5·4	11·5	25·5	6·3
35 — 39 "	2,836	741	715	4,292	2·4	11·5	17·5	3·3
40 — 44 "	1,456	763	505	2,724	1·2	11·8	12·4	2·1
45 — 49 "	759	852	234	1,845	0·6	13·2	5·7	1·4
50 — 54 "	355	802	143	1,300	0·3	12·4	3·5	1·0
55 — 59 "	169	690	55	914	0·1	10·7	1·3	0·7
60 — 64 "	94	500	18	612	0·1	7·7	0·4	0·5
65 years or over	58	668	11	737	--	10·3	0·3	0·6
Totals, Stated Ages	**117,670**	**6,462**	**4,086**	**128,212**	**100·0**	**100·0**	**100·0**	**100·0**
Ages not stated	17	1	—	18	--	--	—	--
Totals, All Ages	**117,687**	**6,463**	**4,080**	**128,230**	**91·8**	**5·0**	**3·2**	**100·0**
Average ages	23·8	46·9	34·6	25·3	...	...	...	...

Religious Denominations of Brides and Bridegrooms.—The distribution of brides and bridegrooms by religious denominations is roughly the same as that for the population as a whole. Table **30** shows the very strong influence that

religion has on marriage. About 70 p.c. of all marriages are between persons of the same religious denomination; among those of Jewish faith, it was 95 p.c. in 1951; among Roman Catholics 89 p.c.; United Church 62 p.c.; and Eastern Orthodox 55 p.c.

30.—Marriages, by Religious Denominations of Contracting Parties, 1951

(Exclusive of the Territories)

Denomination of Bridegroom	Denomination of Bride										Total Marriages	Percentage
	Church of England	Baptist	Eastern Orthodox	Jewish	Lutheran	Presbyterian	Roman Catholic[1]	United Church	Other Sects	Not Stated		
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
Church of England	8,503	693	119	6	402	944	1,804	3,914	539	4	16,928	13·2
Baptist	708	2,139	30	7	119	212	405	959	266	—	4,845	3·8
Eastern Orthodox	125	23	1,020	1	82	26	384	156	63	1	1,881	1·5
Jewish	27	7	3	1,838	11	11	44	27	13	—	1,981	1·5
Lutheran	405	109	69	2	2,354	151	584	743	252	1	4,670	3·6
Presbyterian	1,138	264	40	3	158	2,284	704	1,467	196	—	6,254	4·9
Roman Catholic[1]	1,643	350	343	14	612	482	51,398	1,885	730	4	57,461	44·8
United Church	3,858	861	154	6	660	1,188	2,001	15,727	824	2	25,281	19·7
Other sects	616	221	55	14	275	191	871	924	5,737	2	8,906	6·9
Not stated	2	—	2	—	—	—	6	3	3	7	23	--
Totals	**17,025**	**4,667**	**1,835**	**1,891**	**4,673**	**5,489**	**58,201**	**25,805**	**8,623**	**21**	**128,230**	**100·0**
Percentages	13·3	3·6	1·4	1·5	3·6	4·3	45·4	20·1	6·7	--	100·0	71·0[2]

[1] Includes Greek Catholic. [2] Percentage of marriages between contracting parties of the same religious denomination.

Subsection 2.—Dissolutions of Marriage (Divorces)

For many years after Confederation, the number of divorces granted in Canada were small. There were fewer than 20 divorces in every year before 1900, 21 in 1903, 51 in 1909 and 60 in 1913. These numbers represent less than one per 1,000 of the yearly number of marriages.

The end of World War I in 1918 saw an increase in the number of divorces. The generally unsettled conditions and the long separation of men on Active Service from their wives may have contributed to this increase. Changes in law and procedure may also have been a further factor—at present, Quebec and Newfoundland are the only provinces in which applicants for divorce must secure a private Act of Parliament. The number of divorces had increased to 114 in 1918; 608 in 1926; 700 in 1931; 1,570 in 1936; and 2,369 in 1940. From 1940, the number increased annually to a peak of 8,199 in 1947, declining gradually since that year until in 1951 they were 5,263 or 36 p.c. lower than in 1947. The number rose to 5,562 in 1952.

31.—Dissolutions of Marriage (Divorces), by Province, 1900-52

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Northwest Territories		B.C.	Canada
	No.	No.	No.	No.	No.	No.	No.		No.	No.
1900	—	1	1	1	2	1	1		4	11
1901	—	10	—	—	2	—	—		7	19
1902	—	9	1	—	2	—	—		3	15
1903	—	8	4	1	2	1	1		4	21
1904	—	6	2	1	5	—	—		5	19
1905	—	6	2	3	2	2	2		18	35
							Sask.	Alta.		
1906	—	5	1	3	10	—	—	1	17	37
1907	—	8	3	1	3	1	—	—	9	25
1908	—	5	5	—	8	—	—	—	12	30
1909	—	8	5	4	8	2	1	1	22	51
1910	—	13	6	2	14	3	1	—	12	51
1911	—	10	6	4	13	3	—	2	19	57
1912	—	4	4	3	9	1	1	2	11	35
1913	1	—	4	4	20	6	1	4	20	60
1914	—	10	12	7	18	2	2	4	15	70
1915	—	13	6	3	10	1	1	3	16	53
1916	—	14	11	1	18	2	2	1	18	67
1917	—	8	6	4	10	—	1	2	23	54
1918	—	24	10	2	10	—	1	2	65	114
1919	—	36	13	4	46	88	3	36	147	373
1920	—	45	15	9	89	42	20	112	136	468
1921	—	41	13	10	96	122	59	89	128	558
1922	—	35	12	6	91	97	35	129	138	543
1923	—	22	19	10	102	81	44	88	139	505
1924	—	42	15	13	113	77	26	118	136	540
1925	—	30	15	13	119	79	43	101	150	550
1926	—	19	12	10	111	85	50	154	167	608
1927	—	29	17	13	181	101	62	148	197	748
1928	—	28	13	24	213	79	57	173	203	790
1929	—	30	21	30	207	89	71	147	222	817
1930	—	19	27	41	204	114	64	151	255	875
1931	1	36	20	38	91	94	55	157	208	700
1932	—	35	26	27	343	114	66	150	245	1,006
1933	—	27	12	24	307	116	48	138	258	930
1934	—	33	17	38	365	126	67	170	306	1,122
1935	2	52	36	28	491	145	68	225	384	1,431
1936	—	41	38	40	519	179	84	218	451	1,570
1937	2	36	53	43	607	200	112	259	520	1,832
1938	2	51	39	83	824	205	126	271	625	2,226
1939	—	64	40	50	747	181	133	272	581	2,068
1940	—	60	52	62	916	206	125	274	674	2,369
1941	1	68	87	48	949	242	146	311	609	2,461
1942	2	70	69	71	1,185	284	209	375	824	3,089
1943	2	73	114	90	1,243	277	174	413	877	3,263
1944	3	93	78[1]	108	1,471	316	226	484	1,009	3,788
1945	2	158	171[1]	177	1,940	405	282	575	1,366	5,076
1946	4	260	382	290	2,639	636	505	962	2,005	7,683
1947	18	207	236	348	3,509	665	509	881	1,826	8,199
1948	49	78[2]	211	292	3,107	477	333	651	1,683	6,881
1949	20	181[2]	202	350	2,396	411	289	594	1,491	5,934
1950	13	199	194	234	2,228	309	280	534	1,377	5,373[3]
1951	10	187	156	289	2,102	361	226	589	1,339	5,263[3]
1952	9	188	200	309	2,130	338	223	630	1,532	5,562[3]

[1] No fall term of court held in 1944. Cases held over until January 1945. [2] By a new rule adopted in August 1948, a *decree nisi* became absolute at the end of three months. As a result, a number of divorces did not become effective until the following year. [3] Includes 5, 4 and 3 divorces granted to Newfoundland residents in 1950, 1951 and 1952, respectively.

Section 6.—Vital Statistics of the Yukon and Northwest Territories

The vital statistics of the Yukon and Northwest Territories have been collected since 1924. These statistics are not presented with those of the ten provinces in the tables of this Chapter, because the figures are not considered complete in that the personal particulars in many cases are not available, the small and varying population of each year is not accurately known and, as some areas are accessible

only during the summer months, complete returns are not available sufficiently early in the calendar year for inclusion in the national totals for routine publication. A summary of the principal vital statistics for these Territories is presented in Table **32.**

32.—Vital Statistics of the Yukon and Northwest Territories, 1926-51

NOTE.—Figures for 1944-51 are by place of residence; for previous years by place of occurrence.

Year	Yukon Territory			Northwest Territories		
	Births	Marriages	Deaths	Births	Marriages	Deaths
	No.	No.	No.	No.	No.	No.
Av. 1926-30	33	14	54	158	24	185
" 1931-35	49	24	61	190	41	137
" 1936-40	67	36	72	228	72	177
" 1941-45	105	60	96	383	95	332
" 1946-50	254	73	91	626	139	372
1941	72	36	67	314	82	306
1942	96	36	108	369	109	222
1943	99	67	120	403	94	304
1944	136	94	100	316	66	349
1945	123	69	87	511	122	478
1946	146	66	80	593	177	347
1947	224	61	77	625	111	376
1948	274	77	112	645	117	370
1949	309	76	86	644	134	434
1950	316	84	99	622	154	332
1951	342	68	85	649	110	284

Section 7.—Canadian Life Tables

Two official life tables for Canada have been published: the first was calculated on the basis of the deaths of 1930-32 and the census population of 1931; the second on the basis of the deaths of 1940-42 and the census population of 1941. In addition, tables have been computed for Canada as a whole for the years 1945 and 1947 based on estimated populations by sex and age and the deaths recorded as having occurred during those years. The life table for 1947 is given in abbreviated form in Table **33.**

Life tables give a summary of the health and general conditions of survival of the population in a conventional, standard form. A hypothetical number (100,000) of births of each sex is assumed as a starting point. The life tables show how, on the basis of the mortality rates at each age in the given years, these 100,000 of each sex are reduced in number by death. For example, during the year 1947, of 100,000 males born, 5,198 died in their first year, so that 94,802 survived to one year of age; 408 died in their second year, so that 94,394 survived to two years of age; and so on. At 100 years of age, only 56 of the original 100,000 would have survived. The probability of death at each age is the ratio between the number of deaths and the population at each age. Finally, the expectation of life is the average number of years which a person might expect to live if the mortality rates in the given years remained constant.

33.—Canadian Life Table, 1947

Age	Males				Females			
	Number Living at Each Age	Number Dying Between Each Age and the Next	Probability of Dying at Each Age	Expectation of Life	Number Living at Each Age	Number Dying Between Each Age and the Next	Probability of Dying at Each Age	Expectation of Life
Under 1 year.....	100,000	5,198	·05198	65·18	100,000	4,003	·04003	69·05
1 year.....	94,802	408	·00431	67·75	95,997	362	·00377	70·93
2 years.....	94,394	237	·00251	67·04	95,635	193	·00202	70·19
3 "	94,157	170	·00180	66·20	95,442	141	·00147	69·33
4 "	93,987	147	·00157	65·32	95,301	114	·00120	68·43
5 "	93,840	542	·00140	64·43	95,187	377	·00101	67·52
10 "	93,298	460	·00091	59·79	94,810	330	·00060	62·78
15 "	92,838	728	·00132	55·07	94,480	583	·00101	57·99
20 "	92,110	894	·00185	50·48	93,897	739	·00149	53·33
25 "	91,216	944	·00204	45·95	93,158	780	·00163	48·73
30 "	90,272	1,018	·00212	41·41	92,378	900	·00182	44·12
35 "	89,254	1,342	·00264	36·85	91,478	1,142	·00218	39·53
40 "	87,912	1,904	·00367	32·37	90,336	1,688	·00325	35·00
45 "	86,008	2,925	·00576	28·03	88,648	2,168	·00438	30·61
50 "	83,083	4,130	·00859	23·92	86,480	3,045	·00608	26·32
55 "	78,953	5,972	·01299	20·04	83,435	4,353	·00889	22·18
60 "	72,981	8,377	·02010	16·46	79,082	6,506	·01398	18·25
65 "	64,604	10,982	·03091	13·25	72,576	9,267	·02213	14·65
70 "	53,622	13,004	·04576	10·44	63,309	12,613	·03553	11·41
75 "	40,618	14,129	·06849	7·96	50,696	15,414	·05705	8·60
80 "	26,489	13,003	·10527	5·87	35,282	15,992	·09259	6·24
85 "	13,486	8,872	·16198	4·21	19,290	12,260	·15016	4·37
90 "	4,614	3,771	·24453	2·94	7,030	5,716	·23748	2·98
95 "	843	787	·35882	2·02	1,314	1,234	·36234	1·98
100 "	56	56	·51075	1·35	80	80	·53246	1·28

Mortality rates for males are higher at all ages than for females, particularly in infancy. Infant mortality in 1940-42 was 62 per 1,000 live births for males compared to 49 per 1,000 for females. Because infant mortality is still so high, the expectation of life at birth is lower for both sexes than at age one. In 1947 males who had survived their first year had an expectation of life of almost 68 years and females of almost 71 years. The expectation of life of a boy at age 15 was 55 years, and of a girl 58 years. At age 25, it was about 46 years for men and almost 49 for women. At age 70, it was 10·4 years for men and 11·4 years for women.

Table 34 summarizes the life expectancy figures extracted from the Canadian Life Tables for 1931, 1941 and 1947. During this period, life expectancy at birth increased from 60 to over 65 years for males and from 62 to 69 years for females. The greatest increases were among the younger ages for both sexes but were appreciably higher among females than among males and, for females, extended into the older ages. There was little or no appreciable increase between 1931 and 1947 in life expectancy among males over 40, whereas for females the rates increased at all ages up to 80. Increases in life expectation among women of child-bearing age are worthy of note.

34.—Expectation of Life, 1931, 1941 and 1947

Age	1931		1941		1947	
	Male	Female	Male	Female	Male	Female
Under 1 year	60·00	62·10	62·96	66·30	65·18	69·05
1 year	64·69	65·71	66·14	68·73	67·75	70·93
2 years	64·46	65·42	65·62	68·16	67·04	70·19
3 "	63·84	64·75	64·88	67·38	66·20	69·33
4 "	63·11	63·99	64·07	66·56	65·32	68·43
5 "	62·30	63·17	63·22	65·69	64·43	67·52
10 "	57·96	58·72	58·70	61·08	59·79	62·78
15 "	53·41	54·15	54·06	56·36	55·07	57·99
20 "	49·05	49·76	49·57	51·76	50·48	53·33
25 "	44·83	45·54	45·18	47·26	45·95	48·73
30 "	40·55	41·38	40·73	42·81	41·41	44·12
35 "	36·23	37·19	36·26	38·37	36·85	39·53
40 "	31·98	33·02	31·87	33·99	32·37	35·00
45 "	27·79	28·87	27·60	29·67	28·03	30·61
50 "	23·72	24·79	23·49	25·46	23·92	26·32
55 "	19·88	20·84	19·64	21·42	20·04	22·18
60 "	16·29	17·15	16·06	17·62	16·46	18·25
65 "	12·98	13·72	12·81	14·08	13·25	14·65
70 "	10·06	10·63	9·94	10·93	10·44	11·41
75 "	7·57	7·98	7·48	8·19	7·96	8·60
80 "	5·61	5·92	5·54	6·03	5·87	6·24
85 "	4·10	4·38	4·05	4·35	4·21	4·37
90 "	2·97	3·24	2·93	3·13	2·94	2·98
95 "	2·14	2·40	2·09	2·26	2·02	1·98
100 "	1·53	1·77	1·46	1·64	1·35	1·28

Section 8.—Communicable Diseases

The national reporting of communicable diseases in Canada (exclusive of the Territories) was undertaken in 1933 by the Dominion Bureau of Statistics, at the request of the Federal Department of Pensions and National Health, in co-operation with the Provincial Departments of Health. Since then, the Health and Welfare Division of the Bureau has been responsible for the weekly compilation and analysis of communicable diseases except for a short period during 1939-40, when the work was transferred to the Department of Pensions and National Health. The reports of cases of venereal diseases are included in the current analyses and a standard report form is used by all the provinces.

Table 35 indicates the relative number of cases of certain communicable diseases reported to the Dominion Bureau of Statistics by the Provincial Departments of Health in 1951. The reporting of five diseases (*see* footnotes to Table 35) is not compulsory in all provinces and the totals should, therefore, be accepted with reservations.

35.—Cases of Certain Communicable Diseases Reported by Provincial Departments of Health, 1951

Disease	N'fld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Chickenpox	131	—	1,366	138	7,626	21,930	1,842	2,198	4,735	6,671	46,637
Diphtheria	4	—	—	9	191	19	7	16	2	5	253
Dysentery[1]	4	—	—	1	146	70	26	62	4	249	562
Amœbic	—	—	—	*1*	*28*	*4*	*1*	*2*	*2*	—	*38*
Bacillary	*4*	—	—	—	*118*	*66*	*25*	*60*	*2*	*249*	*524*
Encephalitis (infectious)[2]	—	—	5	1	7	9	4	17	3	—	46
Influenza (epidemic)[3]	4,322	—	18,418	5,079	554	3,477	798	3,747	—	10,897	47,292
Measles	460	20	3,229	343	9,653	29,293	3,173	863	7,997	6,269	61,300
Meningitis (meningococcal)	20	—	15	26	49	96	36	16	10	30	298
Mumps	221	—	568	61	6,568	12,925	1,582	2,950	4,478	5,836	35,189
Poliomyelitis (epidemic)	5	23	216	51	274	1,701	50	92	59	92	2,563
Rubella[4]	16	—	1,596	—	1,154	5,498	47	614	1,410	2,289	12,624
Scarlet fever	69	—	49	42	3,564	1,904	1,316	988	2,339	4,146	14,417
Tuberculosis	642	162	192	717	4,203	1,291	987	451[5]	845	1,662	11,152
Pulmonary	*634*	*125*	*181*	*711*	*4,095*	[6]	*977*	*350*	*745*	*1,520*	*9,318*
Non-pulmonary	*8*	*37*	*11*	*6*	*108*	[6]	*10*	*112*	*100*	*142*	*534*
Typhoid and paratyphoid	8	2	1	16	315	44	5	12	43	113	559
Undulant fever[7]	—	—	—	—	88	66	12	3	4	18	191
Venereal diseases	436	74	667	541	5,464	3,223	1,433	1,383	1,934	3,785	18,940
Syphilis	*145*	*35*	*283*	*173*	*1,977*	*772*	*168*	*400*	*157*	*467*	*4,577*
Gonorrhœa	*289*	*39*	*384*	*368*	*3,485*	*2,451*	*1,264*	*983*	*1,777*	*3,301*	*14,341*
Other venereal diseases	*2*	—	—	—	*2*	—	*1*	—	—	*17*	*22*
Whooping cough	57	5	153	181	2,483	2,980	632	459	805	1,134	8,889

[1] Reporting not compulsory in Newfoundland and New Brunswick. [2] Reporting not compulsory in Newfoundland. [3] Reporting not compulsory in Newfoundland and Alberta. [4] Reporting not compulsory in New Brunswick and Manitoba. [5] Includes 9 cases where type was not stated. [6] Type not segregated. [7] Reporting not compulsory in Prince Edward Island and New Brunswick.

CHAPTER VI.—PUBLIC HEALTH, WELFARE AND SOCIAL SECURITY

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

A special article on the development of public health, welfare and social security in Canada appears in the 1952-53 Year Book, pp. 224-229. That article outlines the evolution of provincial and municipal administration, the development of federal responsibility, and governmental expenditure in the fields of health, welfare and social security. The special article in the current edition deals in detail with one aspect of federal health activity—the National Health Grant Program.

THE NATIONAL HEALTH GRANT PROGRAM*

The National Health Grant Program, launched in 1948 with the announcement by the Prime Minister of ten specific health grants, entered its second five-year period in May 1953 with the addition of three new grants† designed to bring about major advances in the fields of child and maternal health, rehabilitation, and laboratory and radiological services.

* Prepared by the Research Division, Department of National Health and Welfare, based on information supplied by the Directorate of Health Insurance Studies.

† Beginning in 1953-54, there are a total of twelve grants under the Program owing to the non-recurring nature of the Health Survey Grant.

The ten original grants were inaugurated to assist the provinces in achieving a number of broad purposes which, set out in relation to the grants with which they are most closely associated, are as follows:—

To survey provincial health services	The Health Survey Grant
To aid in new hospital construction	The Hospital Construction Grant
To improve public health facilities and services in rural and urban Canada	The General Public Health Grant
To intensify efforts to combat mental illness, tuberculosis, cancer, venereal disease, rheumatism and arthritis, and crippling conditions in children.	The Mental Health Grant The Tuberculosis Control Grant The Cancer Control Grant The Venereal Disease Control Grant The Crippled Children Grant
To increase the number of trained workers	The Professional Training Grant
To encourage health research	The Public Health Research Grant

Background of the Program.—While the Canadian constitution places primary responsibility for public health matters upon the provinces, the nature of particular health problems and the fiscal needs of the provinces have combined to bring about federal participation in certain health areas. A federal Department of Health was established in 1919 and the Government began in that year to extend conditional grants-in-aid to the provinces to assist in the control of venereal disease. This grant was generally believed to have been successful in achieving its object of promoting more effective provincial control programs and, although it was discontinued for a few years during the 1930's, the grant was favourably reported upon by the Rowell-Sirois Commission in 1940. In a study prepared for the Commission, it was concluded that federal grants-in-aid of the type established for venereal disease control were required to support broad public health programs which should include sustained attacks upon tuberculosis, mental illness, venereal disease and cancer, together with expanded services in the fields of general public health, maternity care and industrial hygiene.

A parallel concern about the economic aspects of illness led at various times to Parliamentary examination of health insurance as a means of meeting the costs of medical services. By the early 1940's, active consideration was being given to plans for health insurance combined with federal grant support for the training of health workers, for research, and for programs to control a number of specific diseases. In 1941, a Bill was drafted in which public health grants were made conditional upon the adoption by the provinces of health-insurance measures. This approach was retained throughout the intensive examination of the question by the Special Committee on Social Security of the House of Commons in 1943 and also appeared, somewhat modified, in the *Proposals of the Government of Canada* for the Dominion-Provincial Conference on Reconstruction held in 1945. The Proposals set out four types of financial assistance which the Federal Government was prepared to make available to the provinces as part of a general program of reconstruction including: a planning and organization grant to help in the preliminary work of organizing provincial health-insurance systems; health-insurance grants designed to give the provinces financial aid in establishing comprehensive insurance programs; low-cost loans for hospital construction; and grants of varying amounts for such purposes as general public health, tuberculosis control, mental health, venereal-disease control, crippled children, blindness, professional training and public health research.

As a result of the failure of the Conference to reach general agreement, the federal health proposals were not acted upon. In 1948, however, the Government brought forward, as the National Health Grant Program, ten grants which incorporated, in revised form, three of the four types of assistance offered in the Proposals of 1945. The availability of the grants to the provinces was not made contingent upon the provinces establishing health insurance. The Prime Minister described the grants as "fundamental pre-requisites of a nation-wide system of Health Insurance", but stated that they were "essential steps in the development of adequate health services . . regardless of whether or not Health Insurance was eventually to be introduced". After five years of experience in the administration of these grants it was considered appropriate to add three new grants in 1953.

Administration of the Program.—Upon its inauguration, the National Health Grant Program became a responsibility of the Minister of National Health and Welfare who assigned its day-to-day administration to the Directorate of Health Insurance Studies. Legislative authority for the Program is derived from the Department of National Health and Welfare Act, from various Appropriation Acts and, more specifically, from annual Orders in Council. During the first two years of the Program, Orders in Council were approved for each of the ten grants individually but, since 1950, the Orders have appeared as General Health Grants Regulations which, in addition to setting forth the provisions governing the specific grants, contain regulations affecting the grant program in general. Under the authority of the Regulations, the Minister has prescribed a number of definitions, forms and conditions, and these, in 1951, were brought together in a Reference Manual which outlines policy provisions and administrative procedures.

The administration of the Program consists, in simple terms, of allocating to the provinces, on a project basis, the funds available under the specific grants. Projects submitted by the provinces are required to meet the conditions outlined in the Regulations, which are designed to secure the aims of the particular grants without impairing the provinces' control of provincial health administration. Provincial autonomy in health planning is, in particular, assured in the provision that the projects submitted should form part of long-term provincial plans and programs in the various health fields. The additional requirements associated with the grants are largely related to matters of financial accounting, adequate record-keeping and the submission of periodic progress reports relating to the effects of the grants in extending and improving health services and facilities.

The projects require the approval of the Minister of National Health and Welfare who, in the process of approval, has the advice of Departmental consultants in a number of health fields and outside advice from health authorities in such agencies as the Canadian Tuberculosis Association and the National Cancer Institute. In the broader aspects of administration, the Minister may consult with the Dominion Council of Health which is composed largely of senior provincial health officials, thus bringing provincial points of view into deliberations on health-grant policies.

Following the Minister's approval of a project, federal funds in the amount designated become available for carrying out that project. The "repayment method" is normally followed with federal funds being paid periodically on evidence of provincial expenditure in approved amounts for approved purposes. Amendments to projects are permitted, subject to the usual approval procedure.

While the administration of the Program continues to be based primarily on the individual grants, the Regulations since 1951-52 have permitted the transfer of funds unexpended by a province under one grant to supplement another which has been fully expended. This provision, designed to give the Program increased flexibility on a year-to-year basis, relates to all of the ten initial grants except the health survey, hospital construction and public health research grants.

Financial Terms and Extent of the Ten Original Grants.—In relation to the financial terms of the grants, it may be stated that the entry of Newfoundland into Confederation resulted in increases being made to all grants in the year ended Mar. 31, 1950, and that further increases were made to most of the grants beginning in the year ended Mar. 31, 1953, through the extension of their provisions to the Yukon and Northwest Territories. Other financial terms of the ten original grants, in summary form, are as follows:—

Health Survey—
A non-recurring grant of $645,180, divided on the basis of $5,000 to each province and the balance allocated according to population, with no province receiving less than $15,000.

Hospital Construction—*
Initially $13,000,000 available annually. In the year ended Mar. 31, 1953, $30,673,733 was available, made up of the annual amount of $13,366,819 together with $17,306,914 brought forward from earlier years. The grant is allocated to the provinces, solely on the basis of population, for hospital construction at $1,000 per active treatment bed or bed equivalent (three bassinets each contained in a separate cubicle, 300 sq. feet in a community health centre or 300 sq. feet in a combined laboratory), $1,500 per chronic bed, and $500 for a nurses' living quarters bed. The province must match or exceed the federal contribution which in no case exceeds one-third of the total cost.

General Public Health—
This grant, allocated solely on a basis of population, began at 35 cents per capita in the year ended Mar. 31, 1949, and increased at the rate of 5 cents per capita annually to a maximum of 50 cents per capita reached in the fiscal year 1951-52. Maximum available in 1952-53, $7,085,501.

Mental Health—
The initial basis was $4,000,000 available in the year ended Mar. 31, 1949, increased biennially by equal amounts to reach $7,000,000 at the beginning of the seventh year; maximum available in the fiscal year 1952-53 was $6,203,652, divided on the basis of $25,000 to each province, with the balance allocated according to population.

Tuberculosis Control—
$3,000,000 available in the year ended Mar. 31, 1949, increased to $4,000,000 at the commencement of the third year of the Program. Maximum available in the fiscal year 1952-53, $4,239,531—$25,000 to each province with balance allocated 50 p.c. on the basis of population and 50 p.c. on the basis of average number of deaths from tuberculosis in each province in the previous five years.

Cancer Control—
$3,500,000 allocated solely on the basis of population, the Federal Government matching the provincial government expenditure. Maximum available in the year ended Mar. 31, 1953, $3,598,795.

Venereal Disease Control—
$500,000 allocated on the basis of $4,000 to each province and the balance according to population, the Federal Government matching the provincial government expenditure. Maximum available in the year ended Mar. 31, 1953, $518,099.

Crippled Children—
$500,000 allocated on the basis of $4,000 to each province and the balance according to population. Maximum available in the year ended Mar. 31, 1953, $519,898.

* The new financial provisions of the Hospital Construction Grant, beginning in the fiscal year 1953-54, are given at p. 220.

Professional Training—
$500,000 allocated on the basis of $4,000 to each province and the balance according to population. Maximum available in the year ended Mar. 31, 1953, $516,300.

Public Health Research—
Commenced at $100,000 and increased by the same amount annually to a maximum of $500,000 in the year ended Mar. 31, 1953. Maximum available in 1952-53, $512,900. Allocated to provinces and universities, or research bodies sponsored by provinces, for projects recommended by the Dominion Council of Health and approved by the Minister.

Shortages of qualified personnel and other essential factors in the development of health programs have limited the utilization of the funds made available by the Federal Government under the National Health Grants Program. In each year since the establishment of the grants, however, their utilization has increased. The annual amounts of expenditure were as follows: 1948-49, $7,600,000; 1949-50, $15,500,000; 1950-51, $18,700,000; 1951-52, $23,900,000; and 1952-53, $27,300,000. The utilization of the available funds, by grant, over the five-year period is presented in Table 1.

1.—Amounts Available to the Provinces and Amounts and Percentages Expended under the National Health Grant Program, by Grant, Years Ended Mar. 31, 1949-53.

Grant	Amount Available	Amount Expended	Percentage Expended
	$	$	p.c.
Health Survey	645,180	521,059	80·8
Hospital Construction	66,389,048[1]	35,555,155	53·6
General Public Health	29,753,301	13,088,841	44·0
Mental Health	23,638,023	12,969,829	54·9
Tuberculosis Control	18,868,145	16,305,898	86·4
Cancer Control	17,874,088	7,745,342	43·3
Venereal Disease Control	2,566,643	2,232,501	87·0
Crippled Children	2,568,442	1,276,515	49·7
Professional Training	2,564,844	2,170,352	84·6
Public Health Research	1,536,748	1,158,179	75·4
Totals	**166,404,462**	**93,023,670**	**65·9**

[1] Adjusted to exclude a carryover of unexpended funds from earlier years of the Program.

The Grants Initiated in May 1953.—The three new grants launched in May 1953 were described by the Minister of National Health and Welfare as "logical extensions of the National Health Program" decided upon in the light of experience gained in the previous five years and required to bridge remaining gaps in Canada's health services.

The Child and Maternal Health Grant.—Infant mortality in Canada, though showing annual improvement, has continued to be high as compared with that of other Western nations and has indicated the need of improved Canadian services for mothers and infants. The aim of the Child and Maternal Health Grant is to close gaps in existing services by offering funds to the provinces on a basis related to their indicated needs. A rather wide latitude is to be allowed in the type of projects that might be approved under this grant, including the following possibilities: more clinics where mothers can get guidance on child birth and infant care; more follow-up home nursing visits; expanded services given by provincial divisions of child and maternal health; better educational services for expectant mothers; more medical research on pregnancy; improved equipment for maternity wards in hospitals; and more services for mothers and children in hospital out-patient departments and community health centres.

The Medical Rehabilitation Grant.—Many programs for the rehabilitation of disabled persons have been developed in Canada and a number of these have received federal aid. The programs have been mainly concerned with specific groups and not until the formation, under Federal Government auspices, of the National Advisory Committee on Rehabilitation in 1951, were attempts made to formulate comprehensive plans for rehabilitation. As a major means of closing gaps in existing services, the Committee recommended a federal grant to assist provincial and voluntary programs. The Medical Rehabilitation Grant was established to help achieve this end. It is anticipated that the projects under the grant will be of three major types:

(1) For the professional training of rehabilitation workers, including physicians, psychiatrists, physiotherapists, occupational therapists, social workers, nurses, remedial gymnasts and rehabilitation officers.

(2) For rehabilitation equipment, including such items as electrotherapy apparatus, Hubbard baths, whirlpool baths, remedial gymnastic apparatus and other special equipment used to correct disabilities.

(3) For rehabilitation health services, including the conducting of case-finding surveys, the employment of necessary professional staff for hospitals and rehabilitation centres, the setting-up of units where crippled persons can get help with their appliances and the establishing of other specialized clinics and units essential in a well-balanced program for the disabled.

Laboratory and Radiological Services Grant.—Diagnostic facilities and services, which are of increasing importance in modern medical practice, have been rapidly expanded in recent years, often with the help of various of the national health grants. While such services and facilities are at a high level in a number of centres, many Canadian communities require assistance towards their establishment or improvement. The Laboratory and Radiological Services Grant is designed to provide such assistance through the training of radiologists and other personnel, the extension of laboratory facilities, the provision of diagnostic equipment and the maintenance of laboratory and radiological services.

Financial Extent of the New Grants.—The establishment of the new grants involves a federal financial commitment of $42,000,000 over a period of five years. The total commitment of the whole National Health Grant Program is not, however, increased by all of this amount. All expenditures under the Health Survey Grant were made in the first five-year period and that grant is non-recurring. A more significant saving is achieved through reducing, by one-half, the Hospital Construction Grant, a reduction made possible by the high rate of construction between 1948 and 1953. After provision is made for completing projects approved during the first five-year period, it is proposed to make $6,850,000 available annually for new construction.

The three new grants differ in the amounts they make available to the provinces and in the conditions governing projects carried out under them. As a common feature, however, each of the grants increases in amount following the first year of its operation; the Medical Rehabilitation Grant doubles the second year, the Child and Maternal Health Grant doubles at the beginning of the second and third years, and increases in the Laboratory and Radiological Services Grant occur annually for five years. The amounts available over the period are given in Table 2.

2.—Amounts Available under the New National Health Grants, Years Ended Mar. 31, 1954-58

Year Ended Mar. 31—	Child and Maternal Health	Medical Rehabilitation	Laboratory and Radiological Services	Total
	$	$	$	$
1954	500,000	500,000	4,300,000	5,300,000
1955	1,000,000	1,000,000	5,100,000	7,100,000
1956	2,000,000	1,000,000	6,000,000	9,000,000
1957	2,000,000	1,000,000	6,800,000	9,800,000
1958	2,000,000	1,000,000	7,800,000	10,800,000
Totals	**7,500,000**	**4,500,000**	**30,000,000**	**42,000,000**

The financial terms of the three grants are as follows:—

Child and Maternal Health—

Specified sums are extended to the Yukon and Northwest Territories and $10,000 is made available to each of the provinces; the balance is allocated 50 p.c. on the basis of the average number of births over the previous five years and 50 p.c. on the basis of the average number of infant deaths over the previous five years.

Medical Rehabilitation—

Specified sums are extended to the Yukon and Northwest Territories and $10,000 is made available to each of the provinces with the balance allocated on the basis of population. Projects submitted by the provinces must form part of a co-ordinated program, bringing together components of the rehabilitation process. Training and equipment projects are eligible for federal payment in full amounts spent by the province; provision-of-service projects are payable by the Federal Government to the extent of one-half the amount expended by the province. While the terms do not specify that provincial services must be maintained at the level existing at the time the grant is established, emphasis is placed on the fact that it is not intended to make rehabilitation a federal field of action but rather to assist the provinces in meeting what is, basically, their responsibility.

Laboratory and Radiological Services—

Distributed solely on a basis of population beginning at 30 cents per capita and increasing by five cents per capita per year for five years. Where services are concerned, the grant is on a matching basis, the costs of approved projects being shared equally by the Federal Government and the province; where training and equipment is involved, payment of the full amount expended may be paid from the federal grant. While the aim is to encourage extension of services, it will also assist the provinces in improving their existing services. The terms of the grant require that these be maintained at at least the standard and to the extent existing at Mar. 31, 1953.

Health Advances with National Health Grant Support.—Since the inauguration of the Program, it has been possible with the national health grant expenditures and with parallel increases in health expenditures by provincial and local governments, to achieve new levels in the extent and quality of Canadian health services. The progress made with the assistance and stimulation of the national health grants extends into many health areas and takes many forms. A partial summary of achievements follows.

Extensive surveys of provincial health personnel, facilities and services have been undertaken by all provinces. Information gained has already resulted in numerous program changes and, as the process of collating and analyzing the data from these surveys and other sources, such as the Canadian Sickness Survey, continues, a basis will be provided for further health planning in Canada.

Federal hospital construction grants have supplemented provincial and local funds in the construction of over 400 hospitals and hospital additions including general, mental, tuberculosis, chronic and convalescent hospitals. Under the

grants during the five-year period the construction was completed, or approved, of 46,000 beds, nearly 6,000 bassinets, approximately 5,700 nurses' beds and space in community health centres and combined laboratories exceeding 2,600 bed equivalents. Hospital facilities have been established for the first time in 144 communities across Canada.

Federal funds under the various grants have made possible the training of about 5,000 health workers. By subsidizing provincially sponsored courses and educational facilities in universities, hospitals and other training centres and by providing living allowances, book and travel allowances and tuition fees to individual students, the health grants have helped to reduce the deficiencies in trained personnel that have retarded all aspects of Canadian health progress. Training has been authorized and supported under nearly all of the grants and the large number of categories of persons trained reflects the broad scope of the programs receiving grant aid. Nurses of various types have constituted the largest single group receiving training, followed by physicians, sanitation personnel and social workers. A large number of training projects have related to hospital administration and to the professional and technical skills required in modern hospital practice. Through funds provided for training and for the extension of services, about 4,600 health workers have been employed on provincial and local staffs.

General public health services have been greatly extended. The organization of local health units has been assisted by the grants and, owing to the rapid increase of the past five years, health-unit services are available in areas covering 60 p.c. of the Canadian population. Provincial and municipal health facilities and services have been strengthened by the purchase of additional technical equipment and the extension of both preventive and treatment services.

The grants have enabled the provinces to intensify their campaigns against the major health hazards. Mental health services have been notably extended. During the five years of the health grants, there has been an increase from 17 to 77 in the number of mental health clinics in operation and a proportionate increase has taken place in measures for the prevention, diagnosis and early treatment of mental illness. Tuberculosis control has presented a particularly encouraging trend. Vigorous case-finding programs and the use of new drugs have served to reinforce an established trend and, in the period under review, have reduced the death rate from this disease by almost one-half. Cancer programs, supported by federal, provincial and voluntary funds, have also grown at a rapid rate and have provided diagnostic or combined diagnostic and treatment services to more than 100,000 persons. Provincial venereal disease control programs, financed jointly by the Federal and provincial governments, have been able to utilize modern advances in treatment and thereby to achieve new success in reducing the incidence of the disease; the decline between 1948 and 1953 was almost 50 p.c. Programs to alleviate crippling conditions in children, to arrest and cure cases of arthritis and rheumatism and to meet the challenge of other diseases have developed as the additional staff and facilities have been made available through the grants.

There has been a significant increase in health research in Canada because of the additional federal funds provided. Projects approved under the Public Health Research Grant and a number of other grants have covered a wide range of health areas including public health administration, sanitation, industrial hygiene, nutrition, geriatrics, clinical medicine and pathology. A considerable number of

additional projects have been concerned with specific diseases, particularly mental illness and tuberculosis and including, as well, blindness, alcoholism, cardiac disease and other illnesses.

PART I.—PUBLIC HEALTH*

The planning, supervising and financing of public health and medical care services in Canada rest mainly with the provinces though the actual administration of services is conducted, in most provinces, by municipal and other local authorities. The Federal Government provides consultative and specialist services, assists in the financing of provincial health activities through the National Health Grant Program, and also maintains services for special groups such as veterans and Indians. The functions of the Federal Government are described in Section 1, provincial and municipal health activities are reviewed in Section 2, and hospital statistics are given in Section 3.

Section 1.—Federal Health Activities

Federal participation in health matters is largely centred in the Department of National Health and Welfare, with certain important programs being administered by the Department of Veterans Affairs, which provides medical and hospital care to veterans chiefly for disabilities resulting from war service; the Department of National Defence, responsible for the health of the Armed Forces; the Medical Division of the National Research Council, which administers grants for medical research; and the Dominion Bureau of Statistics, responsible for the collection and compilation of health statistics. The Department of Agriculture has certain responsibilities in connection with food production.

Under the Department of National Health and Welfare Act of 1944, the Department is responsible for the administration of certain statutes, for research in health matters, for the carrying out of international health obligations undertaken by Canada and, in co-operation with the provinces, for the preservation and improvement of public health.

Under the Quarantine Act, the Department maintains a maritime and aerial navigation quarantine service against entry of infectious diseases; it advises on the administration of sections of the Immigration Act dealing with health, and conducts, in Canada and overseas, the medical examination of applicants for immigration. It also provides care for sick mariners as required under Part V of the Canada Shipping Act, and has certain national and international responsibilities with regard to the pollution of boundary and other waters.

Under the Food and Drugs Act, the Proprietary or Patent Medicine Act and the Opium and Narcotic Drug Act, the Department is responsible for the control of the safety and purity of food and drugs; the registration, preparation and sale of proprietary or patent medicines; and control of the import, export and distribution of narcotic drugs.

The Department advises on the visual eligibility of applicants for blindness allowances and co-operates with the provinces in the provision of surgical or remedial treatment for selected recipients of these allowances; it is responsible

* Sections 1 and 2 of this Part were prepared by the Research Division, Department of National Health and Welfare, Ottawa.

for supervision of health conditions for persons employed on federal public works, as provided under the Public Works Health Act, and maintains a program for the conservation and promotion of the health of civil servants and other Federal Government employees. Medical advisory services are provided to the Department of Transport in all matters pertaining to the safety, health and comfort of air crew and passengers.

The National Health Grant Program.—This Program is dealt with in detail in the special article at pp. 215-223.

Federal Grants to Non-governmental Organizations.—Grants are paid directly to the following non-governmental agencies engaged in health work: the Canadian Red Cross Society, the Canadian Tuberculosis Association, the Victorian Order of Nurses, the St. John Ambulance Association, the Canadian Paraplegic Association, the Canadian Mental Health Association, the Health League of Canada, the Canadian Public Health Association, the Canadian National Institute for the Blind, L'Association Canadienne-Française des Aveugles, L'Institut Nazareth de Montréal and the Montreal Association for the Blind.

Federal grants are also provided under the National Health Grant Program to assist in the operation of special treatment services carried out in a number of provinces by voluntary organizations, such as the Canadian Arthritis and Rheumatism Society and various agencies engaged in the rehabilitation of crippled children.

Medical Care of Indians and Eskimos.—Health services for Indians and Eskimos are administered by the Department of National Health and Welfare. In 1953, 18 hospitals, 33 nursing stations and 62 other health centres were operated by the Department which also reimburses, on a per diem basis, the mission and other non-federal hospitals that provide accommodation for Indians and Eskimos. Full-time departmental medical officers serve the larger Indian reserves and part-time officers serve the smaller bands. In some cases, fees are paid to local physicians for services to Indians.

Consultative and Co-ordinating Services.—The principal co-ordinating agency in the health field in Canada is the Dominion Council of Health, which is composed of the Deputy Minister of National Health who serves as chairman, the Chief Health Officer of each province and five other persons. The Council advises the Minister of National Health and Welfare on the formulation of policy. It is largely responsible for the development of a co-operative health program and for the establishment of services by the Federal Government to assist the provincial health departments. Federal-provincial committees of the Council deal with specific aspects of public health.

Certain Divisions of the Department provide technical information and advice concerning the evaluation of programs and procedures and the establishment of standards in various health fields, and conduct surveys in research and development both independently and in co-operation with other departments and agencies. These Divisions include Blindness Control, Child and Maternal Health, Occupational Health, Nutrition, Mental Health, Dental Health, Epidemiology, Hospital Design, the Laboratory of Hygiene, Information Services, and Research.

Section 2.—Provincial and Municipal Health Activities

Health services in the provinces are administered in different ways but provincial functions commonly include central planning and administration; the operation of special programs affecting the entire province in such fields as cancer, mental health, tuberculosis and laboratories; consultant service to local authorities; the administration of regulations governing local services; the provision of basic services in areas without municipal organization; and participation in the work of local health units in areas where that type of administration has been developed.

At the local level, responsibility for services varies widely, but municipalities in most provinces provide a range of basic public health services and participate in the costs of hospital care for indigents. In recent years there has been a rapid growth of health services in smaller centres and rural areas through the organization of health units with full-time staff serving counties or other combinations of local government areas. This type of organization, which concentrates on a generalized health program that includes public health nursing, sanitary inspection, communicable disease control, child, maternal and school hygiene and health education, has been introduced in most provinces; financial and administrative responsibility is shared by the provincial and local authorities involved. Despite a trend towards greater provincial participation in these local units, many remain under local administration as do the highly developed health departments found in the larger cities. Outside of fully organized health-unit areas, municipalities usually appoint part-time medical officers and other personnel while the provincial authorities assume responsibility in the areas lacking municipal organization.

Newfoundland.—Health measures in Newfoundland are centrally administered by a Department of Health. Its main functions include the operation of tuberculosis and communicable and venereal disease control programs, nutrition and sanitary inspection services, and the provision, on a prepayment basis, of medical, hospital and nursing care in certain regions.

The Provincial Tuberculosis Dispensary at St. John's provides free diagnostic and treatment services and acts as the centre for tuberculosis control. The Province subsidizes separate tuberculosis control programs conducted in the northern areas by the International Grenfell Association and the Notre Dame Bay Memorial Hospital, and assists the Newfoundland Tuberculosis Association, which maintains a sea-borne X-ray unit, with surveys in other areas.

Free treatment services and drugs for venereal disease are available throughout the Province through full-time and part-time district medical health officers and public health nurses. A school health program includes educational work and such activities as the distribution of chocolate milk-powder and cod-liver oil.

The Department operates a general hospital, a tuberculosis sanatorium and a hospital for mental and nervous diseases all at St. John's and has recently opened a new provincial sanatorium at Corner Brook. Hospitals operated by voluntary agencies receive per diem payments for departmental cases and, in certain outlying areas, substantial provincial grants.

The "cottage hospital" scheme operates on a voluntary prepayment basis and is designed to provide hospital service to approximately 150,000 and domiciliary medical care to about 100,000 of the population of outlying areas. Services are provided through 17 small provincially operated hospitals with a total capacity of about 430 beds and equipped in most cases with laboratory and X-ray facilities.

Medical officers and nursing stations in adjoining communities supplement these services. In most cottage hospital areas, prepayment of $15 annually for the head of each family and $7·50 for single adults entitles subscribers to out-patient diagnosis and treatment, to home visits by the doctor and to hospitalization, as required. When necessary, hospitalized cases may be referred to the general hospital at St. John's or to hospitals outside the Province. Hospitalization for maternity is provided only in complicated cases. In three areas, additional premium payments are required to purchase medical services outside of hospitals. In districts not served by doctors, nursing services are provided on payment of a small annual fee. In general, the cost of medical and hospital care for indigents is borne by the Province, but beneficiaries under such programs as federal Old Age Security are usually required to pay premiums in cottage hospital areas.

Prince Edward Island.—The Health Branch of the Department of Health and Welfare includes Divisions of Public Health Nursing, Nutrition, Sanitary Engineering, Dental Health, Laboratories, Venereal Disease Control, Cancer Control, Tuberculosis Control, Mental Health and Vital Statistics.

Generalized public health nursing services are conducted by ten district nurses, and sanitary services are provided under the direction of a public health engineer. Free dental treatment is available for needy children at permanent clinics at Charlottetown and Summerside and for children in Grade I classes in rural areas through a mobile unit. Laboratory facilities are being decentralized through the establishment in the larger hospitals of branches that remain under the supervision of the Central Laboratory at Charlottetown. Venereal disease clinics are operated at Charlottetown and Summerside.

Free diagnostic services for tuberculosis are provided through five clinics maintained by the Division of Tuberculosis Control and through a mobile unit which operates under voluntary auspices. At the Provincial Sanatorium at Charlottetown, streptomycin for treatment, a rehabilitation program of training, and an employment-placement service are available free of charge to all patients. Sanatorium care, though not unqualifiedly free, is heavily subsidized by the Province. Free diagnostic services for cancer are given at a clinic located at Charlottetown. Hospitalization for diagnosis is provided without charge for a period of three days for indigent cancer patients.

A mental health diagnostic clinic chiefly for adults has been opened at Charlottetown and a speech-therapy service has been established for school children with speech and hearing impairments. Patients suffering from the effects of poliomyelitis may receive hospitalization and special treatment services at the Polio Unit of the Provincial Sanatorium, Charlottetown.

Per diem grants are made to general hospitals for all patients and the Province also defrays the cost of operating the Falconwood Mental Hospital.

Nova Scotia.—The principal Divisions of the Department of Public Health are Laboratories, Neuropsychiatry, Hospitals, Vital Statistics, Dental Hygiene, Nutrition, Nursing Service and Sanitary Engineering. In addition, a provincial program of generalized public health services is administered through eight local health divisions, each staffed by public health nurses and sanitary inspectors under the supervision of a full-time divisional medical health officer. The City of Halifax operates its own Health Department.

Laboratory services, including bacteriological and other examinations and milk and water analyses, have been improved and extended through the work of the Provincial Central Laboratory at Halifax and branch laboratories at Sydney and Kentville. Laboratory tests and field investigations are also conducted by the Section of Industrial Hygiene in the Division of Laboratories. Streptomycin for tuberculosis and penicillin for venereal disease cases are provided free.

Three mobile dental clinics provide treatment for children in rural areas; field psychiatrists provide mental guidance and consultant services in two regions and mobile chest X-ray units provide diagnostic services for tuberculosis. At the Victoria General Hospital, Halifax, the Province operates an in-patient and out-patient psychiatric service, a cancer clinic and a Kenny treatment clinic for poliomyelitis.

Five provincially owned hospitals are operated under the direction of the Department—Victoria General Hospital, the Nova Scotia Hospital for mental illness, and three tuberculosis sanatoria. All treatment for tuberculosis and treatment for mental illness in the Nova Scotia Hospital is given without charge. All approved general hospitals receive a provincial per diem subsidy for each patient.

Recipients of blind persons' allowances and mothers' allowances are eligible for limited medical services from the Medical Society of Nova Scotia, including physician's care in the home and office but excluding hospital attendances, surgery, and medical aids or appliances. Under the Hospital Act of Nova Scotia, persons in any of the public-assistance categories as well as other indigents are entitled to receive hospitalization as a municipal responsibility.

New Brunswick.—The Health Branch of the Department of Health and Social Services includes the following Divisions: Hospital Services and Cancer Diagnostic Clinics, Laboratories, Public Health Nursing, Communicable and Venereal Disease Control, Tuberculosis Control, Maternal and Child Health, Dental Health, Mental Health, and Sanitary Engineering.

Medical health officers and most public health nurses are employed by the Province while other local health services are provided through 16 local sub-districts, each corresponding to a county and each having a board of health composed of members appointed by municipal councils. Responsibility for the various local public health functions is divided between the Province and the boards of health. Usually, from three to five sub-districts are serviced by a district medical health officer assisted by public health nurses. In some cases, locally administered nursing services are subsidized by the Province.

Pathological, bacteriological, serological and chemical tests are provided by the Provincial Laboratories at Saint John and Fredericton which also supervise the distribution of vaccines, sera and bacteriologicals, including free immunizing agents, drugs for the treatment of venereal diseases and insulin for indigent diabetics. A Mobile Hygiene Laboratory conducts milk and water analyses during the summer months.

Free X-ray and diagnostic services for tuberculosis are provided at eight clinics in larger centres and physicians' fees are paid for pneumothorax treatments for convalescent tuberculous patients. The Health Department supervises and provides free treatment and care in three privately operated and two provincially owned sanatoria. Ten cancer diagnostic clinics provide free diagnosis and free tissue-examination service. X-ray and radium treatments are provided without

charge in four of the larger hospitals to patients who come under the supervision of the cancer clinics. Acute and immediate post-paralytic cases of poliomyelitis also receive free hospital treatment and grants are made to the Junior Red Cross to provide free treatment for other crippling conditions in children.

A mental health program includes the operation of three preventive and diagnostic clinics and provides special psychiatric training for teachers on regular school staffs in the larger centres. Hospitalization for mental illness is available at the Provincial Mental Hospital at Saint John.

Provincial per diem grants are paid, on behalf of all patients, to approved hospitals.

Quebec.—The Ministry of Health maintains the following Divisions: County Health Units, Sanitary Engineering, Epidemiology, Laboratories, Demography, Hospitals for Mental Diseases, Public Charities, Industrial Hygiene, Nutrition, Venereal Disease, Tuberculosis, Health Education, and Medical Services to Settlers.

The Division of County Health Units supplies services through 67 county and multi-county health units covering more than 60 p.c. of the population of the Province. The maintenance and operation of these units, each with a full-time medical health officer assisted by public health nurses and sanitary inspectors, is the responsibility of the Ministry of Health, with small local financial contributions. In addition, full-time health departments operated by the larger cities serve more than one-third of the provincial population. Drugs supplied by the Provincial Department to physicians and health units include vaccines, sera, streptomycin for sanatoria patients and penicillin for venereal disease. Laboratory services, including bacteriological and other analyses, are available to physicians and health units at the Central Laboratory, Montreal. Assistance is given to agencies operating clinics or dispensaries for prevention, case-finding and treatment of tuberculosis. The Department pioneered with the initiation in 1949 of BCG immunization against tuberculosis administered to new-born infants in hospitals and available to children generally through the health units.

The Department operates public mental institutions and supervises tuberculosis sanatoria which are operated chiefly under private and religious auspices and in which the majority of patients receive care without charge.

The Medical Services to Settlers Division provides free nursing and physician services to residents of isolated areas. The staff consists of salaried nurses and part-time physicians paid on a fee-for-service basis. Services given include obstetrical care, examinations, vaccinations and immunizations, and emergency medical care.

No specially organized program of medical care exists for public assistance recipients in Quebec, although free care to indigents is available from a variety of dispensaries, clinics and other charitable agencies. Under the provisions of the Public Charities Act, free public hospital care is provided to persons unable to pay, with about 50 p.c. of the cost assumed by the Province, 15 p.c. by the responsible municipality and the remainder by the recognized agency providing the service.

Ontario.—The Department of Health carries on public health services through the following Divisions: Public Health Administration, Public Health Nursing, Maternal and Child Hygiene, Dental Services, Epidemiology, Venereal Disease Control, Tuberculosis Prevention, Industrial Hygiene, Laboratories, Medical Statistics, Mental Hygiene and Ontario Hospitals, Nurses' Registration, Public and Private Hospitals, and Sanitary Engineering.

Local public health services are available to more than one-quarter of the population through 27 health units administered locally but with consultative services and financial support supplied by the Department. Elsewhere, local services are organized through full- or part-time municipal health departments, and by the Province in unorganized territory. Provincial grants are made to local boards of health for school dental services and venereal disease clinics.

Public health legislation affecting water supplies, milk and food and other environmental sanitation is administered by the Department. Maternal and child health care is provided through clinics and, in addition, any expectant mother may receive one free pre-natal examination. Systematic dental examinations combined with instruction in dental hygiene have been initiated in five local health units, and a number of school dental-treatment clinics have been established, financed largely by municipalities. In northern areas, two railway dental cars operated by the Province provide treatment and three mobile units operated by the Red Cross also conduct an educational and treatment service in less-populated districts.

The Central Laboratory and 15 branch laboratories (nine provincially operated and six subsidized) carry out bacteriological and other examinations for clinics, hospitals and private physicians. Biologicals and other materials for the prevention and control of communicable diseases, insulin for indigent diabetics and streptomycin for tuberculous patients are distributed free of charge by the Department. Chest clinics, held in approximately 200 centres, are financed mainly through funds of local tuberculosis associations and the Department. The Province pays the major portion of the cost of maintaining patients in sanatoria. Cancer control is administered by the Ontario Cancer Treatment and Research Foundation and provincial grants are given to this organization to subsidize diagnosis and treatment in eight clinics. Care is provided for the mentally ill in 17 institutions operated by the Province. Special units are concerned with the care of epileptics, the tubercular and the criminally insane. In addition, the Province operates four travelling mental health clinics. A provincial hospital for alcoholics and a treatment clinic have recently been opened.

A formal arrangement between the Province and the Ontario Medical Association makes limited medical services available to the recipients of all types of public assistance, including former means-test old age pensioners now receiving the universal pension, and persons receiving old age assistance, blindness allowances, mothers' allowances, and unemployment relief. New applicants for the universal old age pension may qualify under the medical plan on a means-test basis. Recipients of Ontario's disabled persons' allowances (for permanently disabled persons 18 to 65 years of age) have also been included since the inauguration of this new categorical program in July 1952. The medical program includes the services of a physician in his office or the patient's home, necessary consultations, home confinements, and emergency drugs. With the exception of unemployment relief cases where the costs are shared equally by the Province and the responsible municipality, the Province assumes the costs of the monthly per capita payments made for such services.

Provincial per diem grants, which vary according to hospital size, are paid to all public hospitals on the basis of public-ward bed days. Special per diem grants are also made by municipalities on behalf of hospitalized patients, including any persons under the public assistance or pension schemes who can qualify for free hospitalization.

Manitoba.—The Department of Health and Public Welfare consists of four main Divisions: General Administration, Health Services, Psychiatric Services and Welfare Services.

Local preventive health services including local health units and diagnostic units are maintained and operated by the Health Extension Section of the Health Services Division, which recovers part of the costs from the municipalities served. Public health services, currently covering approximately one-third of the Province's population, are provided through 13 full-time units, each comprising a variable number of municipalities; another third of the population is covered by Winnipeg's health service facilities. In three health-unit areas, prepaid diagnostic X-ray and laboratory facilities have been organized. Outside the health-unit areas, the Provincial Nursing Service provides certain public health services.

Under a system of district organization for hospital and medical care, 34 hospital districts have been established; all but two contain at least one general hospital augmented in many cases by one or more medical nursing units. Municipal prepayment plans for medical care, provincially subsidized, operate in a number of districts.

Provincial mental institutions are operated at Winnipeg, Selkirk and Brandon and a school for the mentally defective at Portage la Prairie. Community mental health services are also conducted, including out-patient services at mental hospitals and child guidance clinics.

Provincially operated clinics provide preventive and treatment services for venereal disease. Tuberculosis control is administered by the Sanatorium Board of Manitoba and services include diagnostic and travelling clinics, chest X-ray surveys and a rehabilitation program. The Province assists in the program by maintaining a Central Registry of Tuberculosis and a follow-up service for discharged patients carried out by public health nurses. The cost of hospitalization and treatment in sanatoria is met by provincial grants and by payments from municipalities determined by the patient-days accrued by residents. The Manitoba Cancer Relief and Research Institute, which is subsidized by the Province, administers all cancer activities. A free cancer biopsy service is available and diagnostic services are provided to medically indigent rural residents. Radium and X-ray treatments are available without charge in rural areas and at a nominal charge in urban areas.

Laboratory services are provided through provincial laboratories at Winnipeg, Brandon and Portage la Prairie. In addition, the Department distributes, to doctors, hospitals and government agencies, penicillin and other drugs for the treatment of venereal disease, insulin and other biologicals for indigents and antibiotics for tuberculous patients.

The Provincial Government contributes a grant of one dollar per diem to hospitals and sanatoria for all public-ward patients and lump-sum grants to teaching hospitals.

Public assistance recipients in Manitoba are eligible for limited medical, dental and optical care, on a means-test basis, with almost the entire cost of services assumed by the responsible municipality. Hospital care is provided on a similar basis, municipalities making a payment of $4 per day for persons with local residence, in addition to the provincial per diem grants. The Province assumes the cost of medical and hospital care provided to some indigents who are unable to establish local residence.

Saskatchewan.—The Saskatchewan Department of Public Health has five main Branches: Regional Health Services, Medical and Hospital Services, Psychiatric Services, Research and Statistics, and Administrative Services. The Health Services Planning Commission functions as an advisory and planning agency on major policy and administrative matters in the Department.

The Regional Health Services Branch includes divisions of communicable disease control, child health, laboratories, venereal disease control, nursing services, dental health, nutrition and sanitation. The Communicable Diseases Division distributes free vaccines and sera to doctors, health departments and hospitals and supervises immunization programs and poliomyelitis clinics at Saskatoon and Regina. The Child Health Division provides services for crippled children, including mobile consultation units and a rehabilitation centre for cerebral palsy patients. Public health laboratory services and the free distribution of certain drugs and biologicals are carried out by the Provincial Laboratories. Field services for venereal disease, tuberculosis, mental health and other public health programs are provided by the Nursing Services Division.

The Regional Health Services Branch is responsible for the organization of health regions which are administered by locally elected health boards although staff is appointed and financial assistance is provided by the Province. Eight of the proposed regions are currently in operation. In addition to the general public health services provided in all regions, the Swift Current Health Region has a prepaid medical-care plan including general practitioner, specialist and diagnostic care for all residents, and limited dental services for children. The plan is financed by personal and property taxes with some Provincial Government contributions. Dental health programs for children have been launched in two other regions.

The Medical and Hospital Services Branch is responsible for the operation of the Saskatchewan Hospital Services Plan, administers the program of medical services to most public assistance recipients, and supervises the operations of the municipal doctor programs and the Air Ambulance Service. In addition to free hospital care, complete medical as well as dental and optical services, including some auxiliary services, are provided to the recipients (including spouses) of the universal old age pension who were formerly in receipt of the old age means-test pension or who can qualify for the provincial supplementary allowance. Persons and their dependants receiving blindness or mothers' allowances, social aid cases and provincial wards are also eligible. Drugs are provided subject to deterrent charges paid by patients of 20 p.c. of the cost. The Provincial Government meets the expenses under the medical program and, for most of these cases, the hospital insurance tax as well. Provincial subsidies of 25 cents per capita per annum and equalization grants are paid to about 100 municipalities with municipal doctor contracts.

The Psychiatric Services Branch supervises psychiatric hospitals and administers community psychiatric services including clinics. Free care and treatment is given for all mentally ill and mentally defective persons requiring hospitalization. The tuberculosis control program, operated by the Saskatchewan Anti-tuberculosis League, includes preventive and treatment services, the latter financed by provincial per diem grants and municipal levies. The Saskatchewan Cancer Commission co-ordinates all cancer-control measures and operates publicly financed consultative, diagnostic and treatment clinics at Saskatoon and Regina.

Under the Saskatchewan Hospital Services Plan, which is a universal compulsory hospital-insurance scheme, most residents are eligible for in-patient public-ward care by the annual prepayment of a personal tax of $10 by all persons 18 years of age or over or self-supporting, and of $5 for each dependant under 18 years of age, with a maximum family tax of $30. Additional funds are provided by the Province, as needed, from general revenue, including, since April 1950, one-third of the proceeds of a 3-p.c. sales tax.

Alberta.—The Department of Public Health includes Divisions of Communicable Disease, Public Health Education, Hospital and Medical Service, Municipal Hospitals, Laboratory, Public Health Nursing, Social Hygiene, Sanitary Engineering, Cancer Services, Mental Health, Tuberculosis Control, Entomology, Nutrition Services and Vital Statistics.

For the provision of local health services, the Province is divided into health-unit districts. The units are administered, with Departmental supervision and financial aid, by local boards of health composed of members appointed by local governments. Fourteen units are directed by full-time medical health officers and two units by public health nurses. Outside the health-unit areas, the Department operates a district nursing service in outlying communities, and is generally responsible for health services in unorganized territory. The larger cities have their own full-time health departments.

Free services regularly provided through Departmental clinics include diagnosis and treatment for venereal disease, medical examination for cancer, mental guidance and psychiatric examinations, X-ray examinations and tests for tuberculosis at stationary and travelling clinics, and mobile X-ray units. Provincial laboratory services at Edmonton and Calgary are available to all doctors and approved hospitals, and sera and biologicals are distributed for preventive work.

On the recommendation of provincial cancer clinics, surgical, X-ray and radium treatment, and hospitalization up to a limit of seven days for diagnostic purposes are provided by the Department. There are four provincial institutions for the mentally ill and one for mental defectives. Sanatoria care and treatment are provided without charge for all resident tuberculous patients and out-patient pneumothorax services are also available. The Department bears the cost of hospital and medical care for rheumatoid arthritic patients under 25 years of age and provides all residents suffering from poliomyelitis with medical, surgical and hospital care and rehabilitation services. Provision has been made to extend treatment services to cerebral palsy patients. All maternity patients satisfying resident requirements may be hospitalized for a 12-day period at provincial expense, and a provincial grant is authorized to assist those who receive maternity services at home.

By agreement with the Alberta College of Physicians and Surgeons and the Dental Association, full medical and dental and optical services are provided to all persons (and dependants) on the universal old age pension who were formerly in receipt of the means-test pension or who can qualify for the provincial supplementary allowance, as well as recipients of old age assistance or blindness or mothers' allowances. The Province assumes the costs involved and also reimburses the municipalities for 60 p.c. of their expenditure on any medical care provided to local indigents. An agreement exists with the Associated Hospitals of Alberta under which public assistance recipients receive standard public-ward care and necessary drugs, with the Province paying reduced per diem rates.

A municipal hospital program provides standard hospitalization for nearly all the population of the Province. The plan is operated at the local level, under provincial supervision, with costs distributed among the patient, the municipality and the Provincial Government. The patient is charged $1 per day and the municipality pays the remainder of the basic ward rate, raised by a mill-rate tax on real property. The Provincial Government then reimburses the municipality for one-half of this amount.

British Columbia.—The Health Branch of the Department of Health and Welfare consists of three bureaux, two located at Victoria and one at Vancouver. The Bureau of Local Health Services at Victoria includes Divisions of Health Units, Public Health Nursing, Environmental Sanitation, Environmental Management, and Preventive Dentistry. The Central Administration Bureau, also at Victoria, includes Vital Statistics and Public Health Education. The Divisions of Tuberculosis Control, Venereal Disease Control and Laboratories form the Bureau of Special Preventive and Treatment Services, located at Vancouver.

The provision of local public health services is on a health-unit basis. These units are administered and staffed by the Province but are jointly financed by the Province and the local municipalities concerned. Fifteen of the 18 units planned are in operation. In isolated areas, Public Health Nursing Districts, staffed by public health nurses and sanitary inspectors, are forerunners of fully organized health units. The cities of Vancouver and Victoria have their own health departments; other centres have part-time medical health officers.

Special provincial public health services include tuberculosis clinics which provide free diagnostic and consultative service, venereal disease clinics which offer free diagnosis and treatment, and maternal and child health clinics operated by public health nurses which provide immunization and pre-natal and post-natal advice. Branch laboratories are maintained in various parts of the Province through which immunizing agents are distributed free of charge to doctors, health officers and public health nurses. Children's preventive dental programs, provincially subsidized, have been organized in seven local health units. In addition, child dental clinics with local dentists participating are established in 20 communities, the costs being met equally by the community and the Province. In connection with mental health services, the Province operates stationary and travelling child-guidance clinics. A clinic of psychological medicine at the provincial hospital at Essondale functions as an investigatory and active treatment centre for short-term patients.

Provisions for the treatment and control of cancer, which include a treatment centre and a nursing home at Vancouver, consultative clinics located throughout the Province and a free province-wide biopsy service, are the responsibility of the British Columbia Cancer Foundation, an official agent of the Provincial Government. The Province pays the operating costs of the Foundation and helps finance voluntary programs concerned with the physical rehabilitation of paraplegics and cerebral palsied children, the care and treatment of arthritics, and the maintenance of blood-transfusion services.

Institutions for the care of tuberculous and mental patients and infirmaries for persons with incapacitating disabilities are operated by the Province. Indigents are hospitalized in these institutions at public expense while other patients pay if financially able. Rehabilitation and visiting homemaker services are available to tuberculous patients.

Full medical and limited dental and optical care and some drugs are provided to all persons (and their dependants) receiving the universal old age pension who were formerly on the means-test old age pension or who can qualify for the provincial supplementary allowance, and to recipients (including dependants) of old age assistance, blindness or mothers' allowances, local relief and to certain child wards. The Provincial Government assumes the costs of hospitalization for all such persons. Where they hold municipal residence, the Province assumes 80 p.c. of the cost of the medical program, the remainder being shared by all municipalities on a population basis.

Public-ward hospital care is available to nearly all residents through a compulsory provincial prepayment plan. The plan is financed by flat-rate premiums, statutory provincial and municipal per diem grants and grants from provincial consolidated revenue when necessary. Annual premiums amount to $27 for a single person and $39 for a person with one or more dependants. Payment of $1 for each day of hospitalization, with no maximum, is required of patients.

Section 3.—Hospital Statistics*

This Section presents a brief outline of hospital conditions in Canada in 1951. In the 1952-53 Year Book, statistics of mental hospitals for 1949 were published. Figures for 1950 may be obtained from the report, *Mental Institutions, 1950*, available from the Dominion Bureau of Statistics.

For statistical purposes, hospitals are classified on the basis of admission policy as public, private or federal. Public hospitals are subdivided into general and special hospitals. However, because mental illness and tuberculosis are major public health problems, statistics for hospitals treating these conditions are prepared independently of those for other public hospitals. This results in five groups of hospitals for which statistics are collected, viz., public, private, federal, mental and tuberculosis.

The number of hospitals reporting is shown in Table **1**, and the capacity of such hospitals in Table **2**. In these tables, all federal hospitals, whatever the conditions they treat, have been placed in one group. The reason is that, while a large number of these hospitals treat tuberculous patients, only three are designed exclusively for that disease. On the other hand, private hospitals for mental illness and tuberculosis are included in these categories rather than under the classification "private hospitals"

* Prepared in the Institutions Section of the Health and Welfare Division, Dominion Bureau of Statistics.

1.—Reporting Hospitals, classified by Type and Province, 1951

Type of Hospital	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Public—												
General	—	6	42	30	79	155	61	148	96	72	10	699
Special	—	—	4	3	27	27	4	3	5	6	—	79
Private	—	—	13	5	80	42	8	9	10	51	2	220
Federal	1	1	7	4	8	24	12	4	10	12	1	84
Mental	1	1	18	1	10	18	4	4	5	5	—	67
Tuberculosis	2	1	5	5	18	14	4	3	4	8	—	64
Totals, All Hospitals	**4**	**9**	**89**	**48**	**222**	**280**	**93**	**171**	**130**	**154**	**13**	**1,213**

2.—Beds and Bassinets in Reporting Hospitals, classified by Type and Province, 1951

Type of Hospital	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Public—												
General—												
Beds	—	601	3,075	1,836	13,717	17,212	3,494	5,511	5,413	6,026	475	57,360
Bassinets	—	133	553	312	1,871	3,310	808	908	969	943	35	9,842
Special—												
Beds	—	—	242	139	5,090	4,218	941	17	108	559	—	11,314
Bassinets	—	—	79	15	444	184	—	16	30	55	—	823
Private—												
Beds	—	—	57	113	1,291	848	136	27	184	1,321	20	3,997
Bassinets	—	—	38	33	347	158	14	21	16	13	1	641
Federal—												
Beds	35	25	946	475	2,620	4,501	1,589	309	1,239	2,234	50	14,023
Bassinets	—	—	—	2	—	40	15	17	21	—	—	95
Mental—												
Beds	530	250	2,412	1,100	14,390	14,190	2,608	2,926	2,854	3,365	—	44,625
Tuberculosis—												
Beds	680	166	868	912	4,582	4,064	808	803	505	806	—	14,194
Totals, All Hospitals—												
Beds	**1,245**	**1,042**	**7,600**	**4,575**	**41,690**	**45,033**	**9,576**	**9,593**	**10,303**	**14,311**	**545**	**145,513**
Bassinets	—	**133**	**670**	**362**	**2,662**	**3,692**	**837**	**962**	**1,036**	**1,011**	**36**	**11,401**

3.—Summary Statistics of Reporting Public and Private Hospitals, 1947-51

Item	1947	1948	1949	1950	1951
	No.	No.	No.	No.	No.
Public Hospitals—					
Hospitals reporting	671	696	738	761	778
Bed capacity	65,617	68,003	71,210	75,691	79,339
Patients under care	1,640,445	1,714,874	1,829,236	1,900,628	2,012,773
Patient days during year	18,750,477	19,198,398	20,221,160	21,189,308	21,920,099
Private Hospitals—					
Hospitals reporting	212	209	194	225	220
Bed capacity	3,906	3,997	3,722	4,593	4,638
Patients under care	61,434	61,530	63,052	70,577	67,486
Patient days during year	934,196	923,779	877,054	1,029,935	1,076,207

Subsection 1.—Statistics of Public Hospitals

Movement of patients, personnel and facilities for in-patients in public hospitals in 1951 are summarized in Tables 4 and 6. Revenue and expenditure are shown in Table 5; the last item in this table, cost per patient day, provides a connection between patient and financial statistics.

4.—Movement of Patients, Personnel and Facilities

	Item	Prince Edward Island	Nova Scotia		New Brunswick		Quebec		Ontario	
			General	Special	General	Special	General	Special	General	Special
		No.	No.	No.	No.	No.	No.	No.	No.	No.
1	Hospitals reporting.....	6	42	4	30	3	79	27	155	27
	Movement of Patients[1]									
2	Admissions.....	14,398	81,933	8,649	77,545	848	371,133	36,916	609,164	43,241
3	Live births.....	2,315	12,932	2,195	10,827	359	49,289	8,010	95,196	8,696
4	Discharges.....	13,965	79,772	8,556	75,812	805	361,105	35,584	591,069	41,207
5	Deaths.....	392	1,980	93	1,712	43	9,716	1,294	17,003	1,573
6	Patient days during year.....	147,682	871,606	73,774	690,016	42,931	4,110,237	1,625,358	5,943,558	1,170,343
	Personnel—									
7	Salaried doctors, full-time.....	1	9	1	7	—	136	71	85	16
8	Interns.....	1	68	7	18	—	547	90	577	58
9	Graduate nurses.....	118	604	45	432	9	2,710	522	5,735	629
10	Student nurses[2]	112	807	91	838	—	3,103	200	4,964	247
11	Other personnel.....	234	1,652	236	1,404	42	10,274	2,561	14,613	3,148
12	**Totals, Personnel**..	**466**	**3,140**	**380**	**2,699**	**51**	**16,770**	**3,444**	**25,974**	**4,098**
	Facilities—									
13	Radiology.....	6	33	3	26	—	76	14	150	8
14	Clinical laboratory....	6	29	3	23	—	73	15	99	10
15	Physiotherapy.....	2	11	1	14	—	61	8	66	19

[1] Includes newborn. [2] Includes probationers.

5.—Finances of Reporting Public

	Item	Prince Edward Island	Nova Scotia		New Brunswick		Quebec	
			General	Special	General	Special	General	Special
		No.	No.	No.	No.	No.	No.	No.
1	Hospitals reporting.....	6	41	4	30	3	74	22
		$	$	$	$	$	$	$
	Revenue—							
2	Net earnings from patients	779,022	5,187,712	366,171	4,741,547	80,671	28,626,838	2,908,869
3	Provincial and municipal grants.....	107,589	449,270	97,406	842,234	3,085	4,035,292	2,764,691
4	Other revenue.....	39,315	522,651	77,346	254,634	26,881	5,651,382	1,213,413
5	**Totals, Revenue**.....	**925,926**	**6,159,633**	**540,923**	**5,838,415**	**110,637**	**38,313,512**	**6,886,973**
	Expenditure—							
6	Salaries and wages.....	306,584	2,691,920	229,191	2,321,926	41,624	17,871,771	3,505,647
7	Supplies.....	430,455	2,845,940	249,637	2,411,866	70,645	13,767,519	2,770,649
8	Other expenditure.....	211,158	1,194,614	86,352	1,114,224	24,409	6,718,883	1,284,474
9	**Totals, Expenditure**....	**948,197**	**6,732,474**	**565,180**	**5,848,016**	**136,678**	**38,358,173**	**7,560,770**
10	Cost per patient day....	6·34	7·31	7·56	8·07	3·18	8·76	5·70

of Reporting Public Hospitals, by Province, 1951

Manitoba		Saskatchewan		Alberta		British Columbia		Yukon and N.W.T.	Canada	
General	Special	General	Special	General	Special	General	Special		All Public	
No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
61	4	148	3	96	5	72	6	10	778	1
124,553	5,724	183,790	517	190,708	1,066	199,712	8,930	2,553	1,961,380	2
17,846	—	20,066	251	25,121	402	24,394	2,744	250	280,893	3
121,779	5,387	180,128	511	186,974	1,066	194,441	8,821	2,465	1,909,447	4
2,845	229	3,666	—	3,357	6	5,071	94	75	49,149	5
1,045,959	247,486	1,967,545	5,162	1,683,800	32,466	1,942,351	190,283	129,542	21,920,099	6
29	6	8	—	21	—	41	—	3	434	7
102	7	58	—	100	—	138	2	—	1,773	8
664	58	1,241	5	1,128	22	2,087	104	30	16,143	9
833	45	1,268	—	1,198	—	1,401	—	—	15,107	10
2,424	460	3,902	11	3,574	48	4,785	440	140	49,948	11
4,052	**576**	**6,477**	**16**	**6,021**	**70**	**8,452**	**546**	**173**	**83,405**	12
56	2	128	—	88	1	70	3	9	673	13
34	2	92	1	56	1	48	3	8	503	14
10	2	43	—	24	1	35	2	—	299	15

Hospitals, by Province, 1951

Ontario		Manitoba		Saskatchewan	Alberta		British Columbia		Total	
General	Special	General	Special	General	General	Special	General	Special	All Public	
No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
154	20	60	3	144	92	3	72	6	734	1
$	$	$	$	$	$	$	$	$	$	
47,530,600	3,863,800	7,266,322	397,202	14,856,698	10,342,449	21,226	21,550,042	738,389	149,257,558	2
11,090,950	3,249,625	430,518	345,265	323,542	3,626,063	76,271	244,297	488,142	28,174,240	3
11,661,562	2,052,575	492,826	14,004	2,124,302	972,947	102,839	5,127,404	236,218	30,570,299	4
70,283,112	**9,166,000**	**8,189,666**	**756,471**	**17,304,542**	**14,941,459**	**200,336**	**26,921,743**	**1,462,749**	**208,002,097**	5
34,007,168	4,867,500	3,935,119	384,177	8,305,300	7,379,876	113,038	14,218,466	919,382	101,098,689	6
21,663,581	2,293,483	3,060,484	232,491	5,296,245	5,140,409	50,465	6,567,044	304,298	67,155,211	7
6,993,833	1,015,001	1,104,946	282,287	2,148,613	2,397,659	13,060	3,073,765	286,195	27,949,473	8
62,664,582	**8,175,984**	**8,100,549**	**898,955**	**15,750,158**	**14,917,944**	**176,563**	**23,859,275**	**1,509,875**	**196,203,373**	9
9·69	6·72	8·04	4·20	7·74	8·64	6·30	11·21	7·81	8·64	10

Organized Services.—Organized services shown in Table 6 are departments or services within hospitals under the supervision of qualified staff. Many smaller hospitals have facilities for specialized services but, since these are not organized, they are not included in the table.

6.—Organized Services and Medical Staffs of Reporting Public Hospitals, by Province, 1951

Item	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Service—										
General medicine	2	17	9	59	69	13	14	13	26	222
General surgery	2	16	9	58	64	12	14	14	25	214
Obstetrics	2	16	10	57	64	9	14	14	24	210
Pædiatrics	2	5	6	49	48	8	11	13	16	158
Gynæcology	2	8	4	46	50	7	6	8	12	143
Otolaryngology	2	5	4	50	41	5	5	4	7	123
Ophthalmology	2	6	4	48	35	4	6	4	7	116
Urology	2	8	3	34	34	5	7	5	11	109
Orthopædics	—	3	3	39	37	6	3	6	9	106
Cardiology	2	2	3	38	[1]	7	3	6	12	73
Dermatology	1	1	1	29	17	5	3	2	5	64
Dentistry	—	3	1	35	[1]	5	1	3	4	52
Venerology	—	1	—	25	15	3	2	1	1	48
Contagious diseases	—	1	3	8	17	4	7	1	6	47
Neurology	—	1	—	15	15	3	1	2	4	41
Neuro-psychiatry	—	1	—	19	11	3	1	1	4	40
Tuberculosis	—	6	—	10	—	1	3	1	2	23
Radiology (X-ray)	2	20	5	65	65	12	14	15	28	226
Radium therapy	2	1	1	17	17	1	3	3	4	49
Clinical laboratory	2	13	5	58	58	12	7	13	27	195
Physiotherapy	2	4	3	49	43	5	8	9	16	139
Medical Staff—										
Organized medical staffs	3	25	17	69	111	13	19	19	34	310
Staff doctors	36	411	305	2,373	3,102	354	468	687	732	8,468

[1] Not reported.

Organized Out-Patient Departments.—Table 7 shows the number of organized out-patient departments in public hospitals and the number of treatments given in 1951. Quebec and Ontario together accounted for 41 of the 52 out-patient departments.

7.—Organized Out-Patient Departments of Reporting Public Hospitals, by Province, 1951

Province	Out-Patient Departments	Treatments	Province	Out-Patient Departments	Treatments
	No.	No.		No.	No.
Nova Scotia	1	45,010	Manitoba	4	94,852
New Brunswick	2	32,199	Alberta	1	6,974
Quebec	28	1,117,433	British Columbia	3	58,476
Ontario	13	423,577	**Totals**	52	1,778,521

Subsection 2.—Statistics of Mental Institutions

The 69 mental institutions operating in Canada during 1951 included two Federal Government and four private institutions. Table 8 contains information from 68 of these hospitals. One hospital did not report movement of patients or personnel. The number of patients at the end of 1951, as shown in this table,

includes 4,868 non-residents either on parole or boarding out, distributed by province as follows: Nova Scotia, 119; New Brunswick, 182; Quebec, 1,441; Ontario, 2,443; Manitoba, 175; Saskatchewan, 318; Alberta, 57; British Columbia, 133.

Financial data for 1951, shown in Table 9, cover only public mental institutions, thus excluding private and federal institutions. In addition, two provincial institutions did not report financial statistics. Three municipal institutions in Nova Scotia, now listed as welfare institutions, are also excluded from the financial table, although their movement of psychiatric patients is included in Table 8.

8.—Movement of Patients and Personnel of Reporting Mental Institutions, by Province, 1951

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Institutions reporting	1	1	18	1	10	19	4	4	5	5	68
Movement of Patients—											
Admissions (excluding transfers)	244	145	824	518	3,896	6,078	897	1,339	965	2,837	17,743
Patients under care	929	434	3,199	2,009	19,428	23,838	4,135	5,880	4,334	7,505	71,691
Separations (excluding transfers)	234	142	779	410	3,543	5,327	904	1,250	889	2,835	16,313
Patients at Dec. 31, 1951	698	292	2,540	1,735	17,337	20,798	3,465	4,911	3,510	4,977	60,263
Personnel—											
Medical staff, full-time (including interns)	3	1	6	8	54	107	17	32	16	31	275
Medical staff, part-time (including interns)	—	—	15	2	30	44	12	3	8	—	114
Registered nurses	25	2	44	20	247	496	16	18	47	34	949
Other nurses	189	45	229	172	1,588	3,062	478	958	488	1,090	8,299
Other personnel	115	43	300	127	1,337	1,747	323	457	418	468	5,335
Totals, Personnel	**332**	**91**	**594**	**329**	**3,256**	**5,456**	**846**	**1,468**	**977**	**1,623**	**14,972**

9.—Finances of Reporting Mental Institutions, by Province, 1951

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.
	$	$	$	$	$	$
Revenue—						
Government and municipal payments	2,080,800	284,222	1,313,090	1,096,853	5,907,410	19,120,052
Paying patients	23,333	38,318	149,590	72,606	967,740	1,648,663
Other sources	—	—	192,408	5,091	1,550,741	455,066
Totals, Revenue	**2,104,133**	**322,540**	**1,655,088**	**1,174,550**	**8,425,891**	**21,223,781**
Expenditure—						
Salaries (net)	463,488	111,946	674,911	573,910	3,285,440	9,879,041
Provisions	231,976	91,610	540,358	257,413	2,287,210	2,905,898
Other maintenance expenditure	474,403	118,984	447,216	337,457	2,652,558	3,731,867
Totals, Maintenance Expenditure	1,169,867	322,540	1,662,485	1,168,780	8,225,208	16,516,806
New buildings and improvements	934,266	—	639,858	5,770	938,639	4,706,975
Other expenditure	—	—	8,039	—	265,825	—
Totals, Non-maintenance Expenditure	934,266	—	647,897	5,770	1,204,464	4,706,975
Totals, Expenditure	**2,104,133**	**322,540**	**2,310,382**	**1,174,550**	**9,429,672**	**21,223,781**

9.—Finances of Reporting Mental Institutions, by Province, 1951— concluded

Item	Man.	Sask.	Alta.	B.C.	Canada
	$	$	$	$	$
Revenue—					
Government and municipal payments	3,015,492	5,068,548	4,008,408	5,992,384	47,887,259
Paying patients	235,951	194,191	408,881	641,180	4,380,453
Other sources	91,798	267,859	51,692	—	2,614,655
Totals, Revenue	**3,343,241**	**5,530,598**	**4,468,981**	**6,633,564**	**54,882,367**
Expenditure—					
Salaries (net)	1,364,232	3,129,082	1,990,793	3,512,186	24,985,029
Provisions	676,031	725,565	749,440	1,502,577	9,968,078
Other maintenance expenditure	588,700	873,968	685,917	1,539,345	11,450,415
Totals, Maintenance Expenditure	2,628,963	4,728,615	3,426,150	6,554,108	46,403,522
New buildings and improvements	714,278	339,934	980,433	79,456	9,339,609
Other expenditure	—	—	31,524	—	305,388
Totals, Non-maintenance Expenditure	714,278	339,934	1,011,957	79,456	9,644,997
Totals, Expenditure	**3,343,241**	**5,068,549**	**4,438,107**	**6,633,564**	**56,048,519**

Subsection 3.—Statistics of Tuberculosis Institutions

Table **10** shows that, of a total of 18,407 beds in tuberculosis institutions, 4,213 or 22·9 p.c. were located in Federal Government sanatoria and tuberculosis units of the Federal Government and general public hospitals. Movement-of-patients statistics in Table **11** include data from these hospitals and units. Statistics of personnel and hospital facilities include data from sanatoria only. Financial statistics in Table **12** are for public sanatoria only.

10.—Bed Complement of Tuberculosis Institutions and Units, by Province, 1951

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Public sanatoria	680	166	868	912	4,582	4,064	808	803	505	806	—	14,194
Federal Government sanatoria	—	—	—	—	300	212	474	—	471	495	—	1,952
Units in public hospitals	104	—	194	—	788	—	—	—	—	10	304	1,400
Units in Federal Government hospitals	—	—	142	92	233	204	12	78	—	100	—	861
Totals, Bed Complement	**784**	**166**	**1,204**	**1,004**	**5,903**	**4,480**	**1,294**	**881**	**976**	**1,411**	**304**	**18,407**

11.—Movement of Patients, Personnel and Facilities of Tuberculosis Institutions and Units, by Province, 1951

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.
	No.	No.	No.	No.	No.	No.
Movement of Patients—						
Admissions	792	180	2,118	1,556	6,773	4,212
Discharges[1]	642	179	2,057	1,521	6,552	4,159
Deaths[2]	64	11	59	70	588	416
Patients under care	667	325	1,378	2,360	11,217	8,162
Collective stay in days	199,864	57,446	349,773	309,070	1,863,218	1,562,835
Personnel—[3]						
Salaried doctors	8	3	17	26	198	87
Graduate nurses	30	20	76	106	315	389
Other personnel	256	90	430	481	1,900	2,178
Totals, Personnel	**294**	**113**	**523**	**613**	**2,413**	**2,654**
Hospital Facilities—[3]						
X-ray	1	1	3	4	18	16
Clinical laboratory	1	1	3	5	18	16
Physiotherapy	1	1	2	3	10	7

Item	Man.	Sask.	Alta.	B.C.	N.W.T.	Canada
	No.	No.	No.	No.	No.	No.
Movement of Patients—						
Admissions	1,811	852	853	1,409	235	20,791
Discharges[1]	1,828	903	822	1,444	206	20,313
Deaths[2]	123	82	76	149	23	1,661
Patients under care	2,934	1,546	1,715	2,572	..	32,876
Collective stay in days	418,002	305,344	320,924	495,315	105,593	5,987,384
Personnel—[3]						
Salaried doctors	22	19	23	50	—	453
Graduate nurses	73	80	86	155	—	1,330
Other personnel	721	468	374	822	—	7,720
Totals, Personnel	**816**	**567**	**483**	**1,027**	—	**9,503**
Hospital Facilities—[3]						
X-ray	7	3	5	9	—	67
Clinical laboratory	6	3	5	9	—	67
Physiotherapy	4	3	4	6	—	41

[1] Includes deaths. [2] Deaths as reported by 102 of 111 institutions. [3] Sanatoria only.

12.—Finances of Public Tuberculosis Sanatoria, by Province, 1951

(Exclusive of Federal Government sanatoria)

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.
	No.	No.	No.	No.	No.	No.
Sanatoria reporting	1	1	3	5	17	14
	$	$	$	$	$	$
Revenue—						
Government and municipal grants and payments	858,223	249,278	1,448,541	1,768,576	5,061,421	6,501,952
Paying patients	—	34,847	—	370	331,113	237,743
Other sources	—	10,083	9,103	55,687	755,623	1,208,296
Totals, Revenue	**858,223**	**294,208**	**1,457,644**	**1,824,633**	**6,148,157**	**7,947,991**
Expenditure—						
Salaries and wages	294,677	148,188	687,638	877,035	2,740,531	4,037,037
Supplies	477,257	130,782	739,528	703,318	2,703,949	2,512,172
Other expenditure	86,289	26,221	30,473	348,680	1,493,737	1,272,106
Totals, Expenditure	**858,223**	**305,191**	**1,457,639**	**1,929,033**	**6,938,217**	**7,821,315**
Cost per patient day[1]	5·86	5·31	6·57	6·26	4·29	4·96

[1] Excludes perquisites, out-patient expenditure and non-operating expenditure.

12.—Finances of Public Tuberculosis Sanatoria, by Province, 1951—concluded

Item	Man.	Sask.	Alta.[2]	B.C.[2]	Canada
	No.	No.	No.	No.	No.
Sanatoria reporting	4	3	4	6	58
	$	$	$	$	$
Revenue—					
Government and municipal grants and payments	1,229,247	1,847,308	643,847	2,813,709	22,422,102
Paying patients	24,650	—	—	99,530	728,253
Other sources	156,312	26,386	619,791[3]	—	2,841,281
Totals, Revenue	**1,410,209**	**1,873,694**	**1,263,638**	**2,913,239**	**25,991,636**
Expenditure—					
Salaries and wages	688,593	978,791	400,628	1,391,596	12,244,714
Supplies	499,768	515,457	197,546	721,743	9,201,520
Other expenditure	274,501	371,539	665,465	799,902[4]	5,368,913
Totals, Expenditure	**1,462,862**	**1,865,787**	**1,263,639**	**2,913,241**	**26,815,147**
Cost per patient day[1]	5·00	6·55	7·45	9·53	5·41

[1] Excludes perquisites, out-patient expenditure and non-operating expenditure. [2] Includes all institutions operated by the Provincial Division of Tuberculosis Control. [3] Includes $609,078 not classified. [4] Includes $175,476 to cover contracts for care of patients in units of other hospitals.

Subsection 4.—Statistics of Federal Government Hospitals

Hospitals operated by the Federal Government are conducted for special purposes connected with departmental administration, such as care of war veterans and members of the Armed Forces, quarantine and care of immigrants and lepers, care of Indians, etc. Table **13** gives a composite picture of the activities of Federal Government departments in the hospital field in 1951.

13.—Summary Statistics of Federal Government Hospitals, 1951

Item	Department of Veterans Affairs	Department of National Health and Welfare		Department of National Defence	All Federal Hospitals
		Indian Health Services Division	Quarantine, Immigration and Sick Mariners Division		
	No.	No.	No.	No.	No.
Number of hospitals	20	22	6	29[1]	77[1]
Number of beds	9,785	2,227	304	1,582	13,898
Movement of Patients—					
Admissions	48,616	8,413	1,095	23,611	81,735
Discharges	46,866	7,959	1,008	23,467	79,300
Deaths	1,807	272	19	20	2,118
Patient days during year	2,947,695	707,573	59,964	211,030	3,926,262
Personnel—					
Salaried doctors	133	56	13	102	304
Graduate nurses	1,502	199	31	215	1,947
Other personnel	7,052	1,210	124	839	9,225
Totals, Personnel	**8,687**	**1,465**	**168**	**1,156**	**11,476**
Facilities—					
Radiology	14	18	1	26	59
Laboratory	15	14	1	26	56
Physiotherapy	19	1	1	10	31

[1] Excludes seven hospitals, with a combined capacity of 125 beds, which did not report movement of population, and four other hospitals, the statistics for which are a duplication of D.V.A. statistics.
[2] Excludes newborn.

PART II.—PUBLIC WELFARE AND SOCIAL SECURITY*

Responsibility for social welfare in Canada has rested in large part on the provinces which, in turn, have delegated an important share of this responsibility to the municipalities. While constitutional authority has not changed, except with respect to unemployment insurance and old age assistance and security, the financial participation of the Federal Government has been greatly extended in the past two decades in the provision of income maintenance payments.

The creation of the Department of National Health and Welfare in 1944 established for the first time in the Federal Government a department in which matters of welfare are a major responsibility. The Department is charged with the administration of federal Acts relating to welfare which are not assigned by law to other departments. In addition to the general promotion of social welfare, the Welfare Branch of the Department administers the family allowances program, the old age security program and the federal aspects of old age assistance and allowances for blind persons. In addition, grants are made to the provinces to promote physical fitness.

Unemployment insurance is administered by the Unemployment Insurance Commission; welfare and health services for veterans by the Department of Veterans Affairs; and the welfare of Indians and Eskimos by the Department of Citizenship and Immigration and the Department of Resources and Development, respectively.

Administration and financial responsibility in other fields of welfare, such as mothers' allowances, child protection and general assistance or relief, are left entirely to the provinces and their local subdivisions.

Section 1.—Federal Government Programs

Subsection 1.—Family Allowances

The Family Allowances Act was introduced in 1944 as a basic social security measure designed to assist in providing equal opportunity for all Canadian children. The allowances involve no means test and are paid entirely out of the Federal Consolidated Revenue Fund. They are not part of taxable income, although persons with children eligible for family allowances obtain a smaller income tax exemption for such children than for children not so eligible.

Allowances are payable in respect of every child under the age of 16 years who was born in Canada or has been a resident of the country for one year, or whose father or mother was domiciled in Canada for three years immediately prior to the birth of the child. Monthly payment is made normally to the mother although any person who substantially maintains the child may be paid the allowance on his behalf. The allowances are paid at the monthly rate of $5 for each child under 6 years; $6 for each child from 6 to 9 years; $7 for each child from 10 to 12 years; and $8 for each child from 13 to 15 years. The allowances are paid by cheque, except for Eskimo children and a group of Indian children for whom payment is made largely in kind because of lack of exchange facilities in remote areas and the need for education in the use of nutritive foods.

* Except as otherwise indicated, this Part was prepared in the Research Division, Department of National Health and Welfare, Ottawa.

If it is satisfactorily shown to the authorities that the allowances are not being spent for the purpose outlined in the Act, payment may be discontinued or made to some other person or agency on behalf of the child. Allowances are not payable for any child who fails to comply with provincial school regulations or on behalf of a girl who, although she is under 16 years of age, is married.

Family allowances are administered by the National Director of Family Allowances of the Department of National Health and Welfare through Regional Directors in offices located in each provincial capital. A Welfare Section in each regional office deals with welfare questions arising out of the administration of allowances. A Supervisor of Welfare Services advises each Regional Director and reports through him to the Chief Supervisor of Welfare Services, who acts in a similar advisory capacity to the National Director. The actual preparing and issuing of the cheques is the responsibility of the treasury division of each regional office which reports to the Chief Treasury Officer of the Department of Finance with the Department of National Health and Welfare.

The Regional Director for the Yukon and Northwest Territories, located at Ottawa, is responsible for payments to families in those areas. Close co-operation is maintained with the Departments of Citizenship and Immigration and of Resources and Development which are responsible for the welfare of Indians and Eskimos, respectively (*see* Population Chapter, pp. 151 and 152).

1.—Family Allowance Statistics, by Province, Years Ended Mar. 31, 1950-53

Province	Year Ended Mar. 31-	Families Receiving Allowance in March	Children for Whom Allowance Paid in March	Average Number of Children per Family in March	Average Allowance[1]		Net Total Allowances Paid During Fiscal Year
					per Family	per Child	
		No.	No.	No.	$	$	$
Newfoundland	1950	50,694	139,571	2·75	16·48	5·99	9,747,030
	1951	51,663	145,230	2·81	16·87	6·00	10,224,103
	1952	52,552	150,995	2·87	17·11	5·96	10,613,908
	1953	53,800	157,280	2·92	17·43	5·96	11,038,874
Prince Edward Island	1950	13,165	33,588	2·55	15·41	6·04	2,411,291
	1951	13,317	34,308	2·58	15·56	6·04	2,467,257
	1952	13,248	34,698	2·62	15·73	6·01	2,495,987
	1953	13,207	35,060	2·65	15·99	6·02	2,522,830
Nova Scotia	1950	91,012	213,981	2·35	14·18	6·03	15,291,614
	1951	92,095	218,496	2·37	14·32	6·04	15,660,003
	1952	93,051	222,664	2·39	14·43	6·03	15,949,541
	1953	94,414	227,698	2·41	14·56	6·04	16,297,170
New Brunswick	1950	72,410	188,593	2·60	15·61	5·99	13,375,434
	1951	72,692	191,608	2·63	15·77	5·98	13,708,198
	1952	73,167	195,355	2·67	15·99	5·99	13,892,907
	1953	74,426	201,240	2·70	16·23	6·00	14,287,535
Quebec	1950	507,727	1,350,588	2·66	16·00	6·01	95,901,763
	1951	525,358	1,405,161	2·67	16·06	6·00	99,558,247
	1952	542,651	1,454,369	2·68	16·08	6·00	102,883,812
	1953	564,219	1,507,272	2·67	16·12	6·03	107,084,124
Ontario	1950	603,847	1,204,558	1·99	12·01	6·02	84,940,809
	1951	627,511	1,265,313	2·02	12·07	5·99	89,034,871
	1952	651,272	1,327,304	2·04	12·20	5·98	93,207,144
	1953	681,870	1,405,125	2·06	12·35	5·99	98,303,868

[1] Based on gross payments for March.

1.—Family Allowance Statistics, by Province, Years Ended Mar. 31, 1950-53—concluded

Province or Territory	Year Ended Mar. 31-	Families Receiving Allowance in March	Children for Whom Allowance Paid in March	Average Number of Children per Family in March	Average Allowance[1]		Net Total Allowances Paid During Fiscal Year
					per Family	per Child	
		No.	No.	No.	$	$	$
Manitoba	1950	105,611	220,862	2·09	12·58	6·02	15,668,695
	1951	108,288	228,245	2·11	12·66	6·00	16,235,520
	1952	110,466	235,347	2·13	12·78	6·00	16,703,467
	1953	113,329	244,376	2·16	12·93	6·00	17,283,660
Saskatchewan	1950	116,917	261,623	2·24	13·56	6·06	18,953,600
	1951	118,276	264,582	2·24	13·59	6·08	19,237,071
	1952	119,006	267,625	2·25	13·64	6·06	19,424,562
	1953	120,781	272,958	2·26	13·73	6·07	19,723,352
Alberta	1950	130,686	280,780	2·15	12·89	6·00	19,822,387
	1951	135,864	292,104	2·15	12·91	6·01	20,762,273
	1952	140,497	303,646	2·16	12·99	6·01	21,573,430
	1953	147,006	320,934	2·18	13·12	6·01	22,575,584
British Columbia	1950	156,367	299,838	1·92	11·44	5·96	20,813,661
	1951	161,088	313,525	1·95	11·59	5·95	21,952,569
	1952	166,734	329,130	1·97	11·81	5·98	23,063,643
	1953	173,993	347,610	2·00	12·02	6·02	24,399,859
Yukon and Northwest Territories	1950	3,833	8,281	2·16	13·51	6·25	587,750
	1951	4,040	8,819	2·18	13·89	6·36	625,349
	1952	4,077	9,053	2·22	13·26	5·97	649,273
	1953	4,296	9,619	2·24	13·67	6·10	680,828
Canada	**1950**	**1,852,269**	**4,202,263**	**2·27**	**13·64**	**6·01**	**297,514,034**
	1951	**1,910,192**	**4,367,391**	**2·29**	**13·72**	**6·00**	**309,465,461**
	1952	**1,966,721**	**4,530,186**	**2·30**	**13·82**	**6·00**	**320,457,673**
	1953	**2,041,341**	**4,729,172**	**2·32**	**13·94**	**6·02**	**334,197,685**

[1] Based on gross payments for March.

Subsection 2.—Old Age Security

Under the Old Age Security Act (R.S.C. 1952, c. 200), effective January 1952, a universal pension of $40 a month is payable by the Federal Government to all persons aged 70 or over, subject only to a residence qualification. Residence requirement is 20 years immediately preceding commencement of pension with certain temporary absences allowed. Where the applicant has not so resided for the complete 20 years, the periods of absence may be made up by having been present in Canada, prior to the 20-year period, for double the periods of absence; for these persons, there is a further requirement of one year's residence immediately preceding the commencement of the pension.

Payment of the pension is suspended when the pensioner leaves Canada. On his return, the pension may be resumed and, in the case of absences not exceeding six months, payment may then be made retroactively for as many as three such months in any calendar year.

The program is financed on a pay-as-you-go basis. Payment of the pension is made from the Consolidated Revenue Fund and charged to the Old Age Security Fund account. The income of the Old Age Security Fund is derived from three sources. First, there is a 2-p.c. tax on personal taxable income, that is, on income less exemptions and deductions. The maximum tax per person is $60 per annum; the tax became effective in July 1952, resulting in a maximum tax of $30 for that year. The fund also receives the amount collected by a special 2-p.c. tax on corporate

taxable income and the proceeds of a 2-p.c. sales tax. Temporary loans may be made to the Old Age Security Fund, subject to repayment as directed. Operations of the Fund for the first two years are shown in Table 2.

2.—Operations of the Old Age Security Fund, Years Ended Mar. 31, 1952 and 1953

Item	Year Ended Mar. 31—	
	1952[1]	1953
Revenue	$	$
Taxes—		
Individual income	100,000	45,250,000
Corporation income	2,000,000	36,850,000
Sales	24,297,979	141,558,292
Grant from Consolidated Revenue	49,668,855	—
Loan from Consolidated Revenue	—	99,483,322
Totals, Revenue	**76,066,835**	**323,141,614**
Expenditure		
Totals, Expenditure (Benefit Payments)	**76,066,835**	**323,141,614**

[1] Program in effect for last three months only of fiscal year.

The program is administered by the National Director of Old Age Security of the Department of National Health and Welfare through the ten regional offices established in connection with the payment of family allowances. The two programs are administered largely by the same personnel.

Persons in receipt of pension at the end of 1951 under the Old Age Pensions Act of 1927 were transferred to the rolls of the universal pension as of January 1952 without further action on their part. Other persons make application to the Regional Director located at their provincial capital. The Regional Director for the Yukon and Northwest Territories is located at Ottawa.

In Saskatchewan, Alberta, British Columbia and Yukon Territory, the provincial or territorial governments make supplementary payments to recipients of old age security who qualify under a means test and residence test. In Saskatchewan, the allowance is a flat rate of $2.50 a month while in the three other jurisdictions it cannot exceed $10 monthly.

3.—Old Age Security Statistics, by Province, Years Ended Mar. 31, 1952[1] and 1953

Province	Pensioners in March	Pensions Paid (net)	Province or Territory	Pensioners in March	Pensions Paid (net)
	No.	$		No.	$
Newfoundland—			Manitoba—		
1952[1]	14,177	1,697,080	1952[1]	37,826	4,457,480
1953	14,792	6,995,760	1953	40,489	19,019,960
Prince Edward Island—			Saskatchewan—		
1952[1]	6,338	754,720	1952[1]	37,153	4,399,120
1953	6,553	3,155,700	1953	40,553	19,037,305
Nova Scotia—			Alberta—		
1952[1]	34,832	4,124,080	1952[1]	36,637	4,333,120
1953	36,150	17,259,287	1953	40,203	18,745,260
New Brunswick—			British Columbia—		
1952[1]	24,540	2,935,240	1952[1]	72,225	8,543,040
1953	25,689	12,254,680	1953	79,464	36,802,800
Quebec—			Yukon and N.W.T.—		
1952[1]	139,954	16,579,994	1952[1]	406	48,040
1953	147,833	69,570,127	1953	447	217,720
Ontario—			**Canada—**		
1952[1]	238,925	28,194,920	**1952[1]**	**643,013**	**76,066,834**
1953	253,954	120,083,015	**1953**	**686,127**	**323,141,614**

[1] Program in effect for last three months only of the fiscal year.

The Old Age Pensions Act, 1927.—The Old Age Pensions Act of 1927, under which old age pensions were paid jointly by the Federal and Provincial Governments, ceased to be effective Dec. 31, 1951, at which time all recipients thereunder were automatically transferred to the rolls of the universal pension under the Old Age Security Act, 1951. A description of the provisions of the Old Age Pensions Act of 1927 will be found in the 1951 Year Book, pp. 234-236, and statistics of operation for the years ended Mar. 31, 1950 and 1951, and the nine months ended Dec. 31, 1951, are given in the 1952-53 Year Book, pp. 264-265.

Subsection 3.—Government Annuities*

Under the Government Annuities Act (R.S.C. 1952, c. 132) passed in 1908, the Federal Government carries on a service to assist Canadians to make provision for old age. The Act is administered by the Minister of Labour.

A Canadian Government annuity is a fixed yearly income purchased from and paid by the Government of Canada. The annuity is payable in monthly instalments for life, or for life and guaranteed for a period of years. The minimum annuity is $10 and the maximum $1,200 a year or the actuarial equivalent if the annuity is to reduce by the amount of payments under the Old Age Security Act. Annuity contracts may be deferred or immediate. Deferred annuities are purchased by periodic or single premiums. Immediate annuity contracts provide immediate income.

The property and interest of the annuitant are neither transferable nor attachable. In the event of the death of the annuitant before a deferred annuity vests, all money paid is refunded with interest to the purchaser or his legal representative. Provision is made in the Act for group annuity contracts, whereby employers may contract for the purchase of annuities on behalf of their employees, or associations on behalf of their members, the purchase money being derived partly from wages and partly from employer contributions. Group annuity plans now in effect cover a variety of industries and many municipal corporations throughout Canada. Annuities arising from individual contracts are taxable as to the interest portion of the annuity payment and the return-of-capital portion is exempt; annuities arising from approved pension plans are fully taxable but the employee and the employer are entitled to tax exemption year by year on their annual contributions to the pension plan.

From Sept. 1, 1908, the date of the inception of the system, to Mar. 31, 1953, the total number of annuity contracts and certificates issued, excluding replacements, was 350,224. On the latter date, 61,238 annuities were being paid amounting to $28,218,012 annually, and 246,724 deferred annuities were being purchased The total amount of purchase money received up to Mar. 31, 1953, was $773,286,981·

Up to Mar. 31, 1953, 940 corporations, institutions and associations, as compared with 915 up to Mar. 31, 1952, had entered into agreements with the Government to purchase annuities. Under these agreements, 137,537 employees or members were holding certificates for purchase of deferred annuities as compared with 131,749 one year earlier. The number of certificates issued under groups in the year 1952-53 was 13,634 as compared with 12,135 in the previous year.

* Revised in the Government Annuities Branch, Department of Labour, Ottawa.

4.—Government Annuities Contracted and Purchase Money Received, Years Ended Mar. 31, 1934-53

NOTE.—Figures for 1909 to 1933 will be found in the 1942 Year Book, p. 873.

Year	Contracts and Certificates	Purchase Money Received	Year	Contracts and Certificates	Purchase Money Received
	No.	$		No.	$
1934	2,412	7,071,439	1944	19,354	26,600,098
1935	3,930	13,376,400	1945	15,796	33,076,436
1936	6,357	21,281,981	1946	25,538	46,954,536
1937	7,806	23,614,824	1947	43,585	72,009,764
1938	5,724	13,550,483	1948	40,945	75,067,827
1939	8,518	18,189,319	1949	36,332	64,311,116
1940	9,014	20,001,533	1950	21,078	63,133,242
1941	11,994	18,803,645	1951	21,775	59,648,323
1942	8,593	19,630,645	1952	17,038	57,548,671
1943	9,608	20,415,365	1953	18,433	62,787,282

5.—Government Annuities Fund Statements, Years Ended Mar. 31, 1949-53

Item	1949	1950	1951	1952	1953
	$	$	$	$	$
Assets					
Fund at beginning of fiscal year	429,518,235	501,737,659	563,182,111	620,398,995	675,931,703
Receipts during the year, less payments	72,219,424	61,444,452	57,216,884	55,532,708	60,609,224
Fund at end of fiscal year	501,737,659	563,182,111	620,398,995	675,931,703	736,540,927
Liabilities					
Value of outstanding contracts	501,737,659	563,182,111	620,398,995	675,931,703	736,540,927
Receipts					
Immediate annuities	9,363,110	8,500,020	6,954,048	4,437,155	5,823,356
Deferred annuities	55,193,325	55,165,127	53,101,159	53,438,891	57,347,618
Interest on fund	17,804,595	20,504,145	22,680,245	24,671,668	26,994,535
Amount transferred to maintain reserve	11,408,468	1,255,772	659,787	940,138	743,616
Totals, Receipts	**93,769,498**	**85,425,064**	**83,395,239**	**83,487,852**	**90,909,125**
Payments					
Payments under vested annuity contracts	20,120,185	22,031,613	23,964,819	25,820,310	27,693,728
Return of premiums with interest	1,184,569	1,417,094	1,806,652	1,807,459	2,222,482
Return of premiums without interest	245,319	531,905	406,884	327,375	383,691
Totals, Payments	**21,550,074**	**23,980,612**	**26,178,355**	**27,955,144**	**30,299,901**

6.—Numbers and Values of Annuity Contracts, as at Mar. 31, 1952 and 1953

Classification	1952			1953		
	Contracts	Amount of Annuity	Value, at Mar. 31, of Contracts in Force	Contracts	Amount of Annuity	Value, at Mar. 31, of Contracts in Force
	No.	$	$	No.	$	$
Immediate ordinary	23,776	9,119,867	86,089,722	25,355	9,839,736	91,521,234
Immediate guaranteed	29,817	15,113,865	174,277,914	31,521	16,277,276	186,165,210
Immediate last survivor	4,464	2,107,871	28,565,657	4,362	2,101,000	28,204,383
Deferred	231,636	[1]	386,998,410	246,724	[1]	430,650,100
Totals	**289,693**	**26,341,603**	**675,931,703**	**307,962**	**28,218,012**	**736,540,927**

[1] Undetermined.

Subsection 4.—Other Federal Government Programs

Unemployment Insurance and National Employment Service.—In 1940, by an amendment to the British North America Act, the Federal Government was given jurisdiction in the field of unemployment insurance and the Unemployment Insurance Act was passed, establishing a national system of unemployment insurance which is outlined in Chapter XVII.

The National Employment Service is operated in conjunction with the unemployment insurance scheme. It is administered through the employment and claims offices and supervised by the Department of Labour. This program is also described in Chapter XVII.

Prairie Farm Assistance.—The Prairie Farm Assistance Act is administered by the Department of Agriculture; a description of the legislation is given in Chapter X.

Welfare Services for Indians and Eskimos.—The welfare of Indians and Eskimos is administered by the Department of Citizenship and Immigration and the Department of Resources and Development, respectively; this field is covered in the Population Chapter, pp. 151 and 152.

Section 2.—Federal-Provincial Programs

Subsection 1.—Old Age Assistance

The Old Age Assistance Act (R.S.C. 1952, c. 199), effective January 1952, provides for federal financial aid to the provinces for assistance, not exceeding $40 a month, to persons aged 65 or over subject to a residence qualification of at least 20 years. The payment of old age security commencing at age 70, makes old age assistance effective from ages 65 to 69. Within the limits of the federal Act each province is free to fix the amount of the maximum assistance payable, the maximum income allowed and other conditions of eligibility. The Federal Government's contribution per recipient cannot exceed 50 p.c. of $40 per month or of the assistance paid, whichever is less.

For an unmarried person the total income allowed, including assistance, cannot exceed $720 a year; for a married couple, $1,200 a year; where the spouse is blind within the meaning of the Blind Persons Act, the total income of the couple cannot exceed $1,320 a year. The exact pension payable in each case depends on the amount of outside income and the resources of the applicant and his spouse. To be eligible for assistance the applicant must not be in receipt of an allowance under the Blind Persons Act or the War Veterans Allowance Act. The applicant must have resided in Canada for at least 20 years immediately preceding the commencement of the assistance, but may have certain temporary absences; where the applicant has not so resided for the 20 years he must have been physically present in Canada, prior to the 20 years, for a total period equal to twice the total of the absences during the 20 years.

Implementation of the program in any province is contingent upon the province passing enabling legislation and signing an agreement with the Federal Government. The program became effective in January 1952 in all areas except Newfoundland, Yukon Territory and the Northwest Territories where the effective date was Apr. 1, 1952. The maximum assistance is $40 per month in all provinces and territories, except in Newfoundland where it is $30 per month.

Administrative responsibility for the program is vested in the province; the provincial plan for such administration must be approved by, and cannot be changed except with the consent of, the Governor in Council. Assistance is paid by the province with federal reimbursement made through the Department of National Health and Welfare. The Old Age Assistance Division of that Department administers the federal aspects of the program.

In Alberta, British Columbia and Yukon Territory, the provincial or territorial governments make supplementary payments to recipients of old age assistance who qualify under a means and residence test. The supplementary allowance cannot exceed $10 monthly.

7.—Old Age Assistance Statistics, by Province, Years Ended Mar. 31, 1952[1] and 1953

Province or Territory and Year	Recipients in March	Average Amount of Assistance Monthly	P.C. of Recipients to Population Age 65-69[2]	Federal Contribution During Year
	No.	$	p.c.	$
Newfoundland.....1953[3]	5,037	29·14	55·35	833,898
Prince Edward Island.....1952[1]	305	21·72	8·97	6,532
1953	551	24·07	16·21	66,313
Nova Scotia.....1952[1]	2,271	34·09	11·53	95,673
1953	4,789	33·49	24·56	893,059
New Brunswick.....1952[1]	3,237	36·91	22·64	165,638
1953	5,371	36·83	37·30	1,113,921
Quebec.....1952[1]	12,267	38·61	12·80	690,081
1953	30,490	37·59	31·18	6,927,593
Ontario.....1952[1]	12,697	37·28	8·04	672,512
1953	20,401	36·95	12·75	4,586,572
Manitoba.....1952[1]	1,239	38·45	4·47	106,690
1953	4,400	38·03	15·71	1,036,021
Saskatchewan.....1952[1]	2,497	36·93	8·55	133,393
1953	4,206	36·65	14·35	997,396
Alberta.....1952[1]	2,954	37·36	9·88	144,051
1953	4,688	36·96	15·68	967,948
British Columbia.....1952[1]	4,134	38·28	7·80	262,668
1953	7,685	37·56	14·55	1,701,854
Yukon and N.W.T.....1953[3]	57	38·68	15·92	4,257
Canada.....1952[1,4]	**41,601**	**37·47**	**9·46**	**2,277,238**
1953	**87,675**	**36·57**	**19·74**[5]	**19,128,837**

[1] Program in effect only for the last three months of the fiscal year. [2] Estimated population as at June 1 of each year. [3] Program became effective on Apr. 1, 1952. [4] Exclusive of Newfoundland and the Yukon and Northwest Territories. [5] Exclusive of the Yukon and Northwest Territories.

Subsection 2.—Allowances for the Blind

The Blind Persons Act (R.S.C. 1952, c. 17), effective January 1952, provides for financial aid to the provinces toward the provision of allowances not exceeding $40 a month to blind persons aged 21 or over, subject to a residence qualification of at least 10 years. Within the limits of the federal Act, each province is free to fix the amount of the maximum allowance payable and the maximum income allowed. The Federal Government's contribution per recipient cannot exceed 75 p.c. of $40 per month or of the allowance paid, whichever is less.

For an unmarried person, the total income allowed, including the allowance, cannot exceed $840 a year; for an unmarried person with one or more dependent children, $1,040; for a married couple, $1,320 a year; where the spouse is also blind within the meaning of the Blind Persons Act, the total income of the couple cannot exceed $1,440 a year. The exact allowance payable in each case depends on the amount of outside income and the resources of the applicant and his spouse. To be eligible for an allowance the applicant must not be in receipt of assistance under the Old Age Assistance Act, of an allowance under the War Veterans Allowance Act, of a pension under the Old Age Security Act or of a pension in respect of blindness under the Pensions Act. The applicant must have resided in Canada for at least 10 years immediately preceding the commencement of the allowance but may have certain temporary absences; where the applicant has not so resided for the 10 years, he must have been physically present in Canada, prior to the 10 years, for a total period equal to twice the total of the absences during the 10 years.

Implementation of the program in any province is contingent upon the province passing enabling legislation and signing an agreement with the Federal Government. The program became effective in January 1952 in all provinces and in the Yukon and Northwest Territories.

Administrative responsibility for the program is vested in the province; the provincial plan for such administration must be approved by, and cannot be changed except with the consent of, the Governor in Council. The allowances are paid by the province with federal reimbursement made through the Department of National Health and Welfare. The Old Age Assistance Division of that Department administers the federal aspects of the program.

Certain provinces make supplementary payments to recipients of allowances for blind persons. In Saskatchewan a flat rate of $2.50 a month is payable, without a means test, to recipients of allowances for the blind who fulfil certain residence requirements; in Alberta and British Columbia, a supplementary allowance of up to $10 a month is payable to those who qualify under both a means and a residence test. The Yukon Territory makes supplementary payments up to $10 monthly.

8.—Statistics of Allowances for the Blind, by Province, Years Ended Mar. 31, 1952[1] and 1953

Province or Territory and Year	Recipients in March	Average Amount of Assistance Monthly	P.C. of Recipients to Population Age 20-69[2]	Federal Contribution During Year
	No.	$	p.c.	$
Newfoundland....1952[1]	321	39·26	0·178	28,237
1953	336	39·88	0·183	117,937
Prince Edward Island....1952[1]	75	38·10	0·141	6,460
1953	79	37·83	0·145	26,681
Nova Scotia....1952[1]	734	38·69	0·210	64,199
1953	722	38·54	0·204	253,718
New Brunswick....1952[1]	783	39·25	0·292	69,186
1953	750	39·85	0·276	273,941
Quebec....1952[1]	3,013	39·48	0·132	271,902
1953	3,041	39·23	0·131	1,104,180
Ontario....1952[1]	1,604	39·20	0·056	142,984
1953	1,751	38·87	0·060	632,329
Manitoba....1952[1]	401	39·37	0·086	35,949
1953	430	39·24	0·092	153,549
Saskatchewan....1952[1]	343	39·25	0·072	30,667
1953	342	39·22	0·071	123,692
Alberta....1952[1]	378	38·89	0·068	33,767
1953	383	39·31	0·067	133,822
British Columbia....1952[1]	426	39·25	0·059	37,827
1953	485	39·19	0·066	162,910
Yukon Territory....1952[1]	2	40·00	0·035	180
1953	2	40·00	0·035	720
Northwest Territories....1952[1]	1	40·00	0·012	90
1953	11	40·00	0·130	1,740
Canada....1952[1]	**8,079**	**39·26**	**0·098[3]**	**721,449**
1953	**8,332**	**39·17**	**0·099[3]**	**2,955,217**

[1] Program in effect for the last three months only of the fiscal year. [2] Estimated population as at June 1 of each year. [3] Exclusive of the Yukon and Northwest Territories.

A description of the pensions payable to blind persons under the Old Age Pensions Act 1927, repealed in 1951, will be found in the 1951 Year Book, pp. 234-235. The final statistics of operations under that program are given in the 1952-53 Year Book, p. 267.

Subsection 3.—National Physical Fitness Program

A program of physical fitness and recreation for Canadians was introduced with the proclamation on Oct. 1, 1943, of the National Physical Fitness Act. A National Council was set up on Feb. 15, 1944, to promote the well-being of the people of Canada through physical fitness and recreational activities; its members are appointed by the Governor General in Council. In some provinces, councils have been established by the provincial governments.

A number of projects of significance have been initiated. National Fitness Scholarships are awarded annually to give financial assistance to professionally qualified Canadians with three years' successful experience who desire to improve

their professional qualifications. The Council has convened a number of national conferences, including conferences on undergraduate professional preparation and on employee recreation. A Continuing Committee on Employee Recreation and a Canadian Advisory Committee on Aquatics were set up in 1952.

A diploma course for public recreation personnel, limited to 30 students, was organized in 1952 at the Council's request by the University of British Columbia because of the need for trained recreation leaders in the small towns and rural communities of Canada. The Council provided a grant of $5,000 to assist in organizing and conducting the course. In addition, the Council provided funds for the tuition fees of 29 students selected on a quota basis from all provinces and for the transportation costs of those living outside British Columbia. Nine provinces and the Northwest Territories were represented.

The Act is administered by the Department of National Health and Welfare through the Physical Fitness Division, which provides consultative services on all aspects of fitness and recreation at the request of national organizations and provincial authorities and operates a preview library service for visual aids. The Division acts as a clearing-house for the latest information on fitness, recreation, community centres, physical education, athletics, sports and games, theatre arts and related activities. In addition, it maintains liaison with national associations and comparable organizations in other countries. On behalf of the Council, the Division in 1952 undertook a National Sports Opinion Survey, obtaining from a great number of interested persons opinions on athletic sports and games, with particular emphasis on international competition. The initial report was presented at the annual meeting of the Canadian Sports Advisory Council.

The Federal Government makes available to the provinces on a per capita basis an amount not exceeding $232,000 annually for the promotion of physical fitness and recreation programs. Financial assistance is given only to those provinces that have signed specific agreements with the Federal Government and to the extent to which they match it dollar for dollar up to the maximum available. During 1952-53, seven provinces and the Northwest Territories participated in the program.

9.—Grants Available under the National Physical Fitness Act

Province	Annual Grant Available	Province or Territory	Annual Grant Available
	$		$
Newfoundland	5,985	Manitoba	12,860
Prince Edward Island	1,630	Saskatchewan	13,774
Nova Scotia	10,641	Alberta	15,558
New Brunswick	8,540	British Columbia	19,296
Quebec	67,163	Yukon Territory	151
Ontario	76,136	Northwest Territories	265

Subsection 4.—Training Programs

Under the Vocational Training Co-ordination Act of 1942 as amended, the Federal Department of Labour, in co-operation with the provincial governments, carries on various training projects. Details of these schemes will be found in Chapter XVII, Section 6.

Section 3.—Provincial Programs

Subsection 1.—Mothers' Allowances

All provinces have statutory provision for allowances to enable certain needy mothers to remain at home to care for their dependent children. The total cost of this assistance is paid from provincial funds, except in Alberta where a portion of each allowance is charged to the municipality of residence.

Subject to the conditions of eligibility, which vary from province to province, the allowances are payable to applicants who are widowed or whose husbands are mentally incapacitated and, except in Alberta, to those whose husbands are physically disabled and unable to support their families. They are also payable, except in Nova Scotia, to deserted wives who meet specified conditions; in several provinces to mothers who have been granted a divorce or legal separation and in some to unmarried mothers. Adoptive mothers and foster mothers are also eligible under certain circumstances. The child or children must be under 16 years of age except in Manitoba where the age limit is 15 years. Provision is made in most provinces to extend payment for a specified period if the child is attending school and five provinces continue to pay allowances on behalf of physically and mentally handicapped children for from two to five years.

In all provinces applicants must satisfy conditions of need and residence but both the amount of outside income and resources allowed and the length of residence required prior to application vary considerably, the latter, for example, from one year in Saskatchewan, Ontario and Newfoundland to five years in Quebec. All provinces require that the applicant be resident at the time of application and that the child or children live with the recipient, and most provinces require that they continue to live in the province while in receipt of an allowance. Nationality is a condition of eligibility in six provinces. The applicant must be a British subject, the wife or widow of a British subject or her child must be a British subject, except in Quebec and New Brunswick, where Canadian citizenship is required.

In each province the Act is administered by public welfare authorities, in most provinces through a mothers' allowances board or commission which either makes the final decision regarding eligibility and the amount of allowance granted or acts in an advisory capacity. In some provinces local advisory committees are also appointed. Rates of benefit as of January 1952 are given in the following paragraph.

In *Newfoundland*, the maximum allowance for a mother and one child is $25 a month, with $5 for each additional child and for a disabled father at home; the maximum for a family is $50 a month, with supplementary assistance of up to $20 monthly if necessary for proper care and maintenance. In *Prince Edward Island* a mother with one child may receive up to $25 a month, with up to $5 for each additional child; the family maximum is $50 monthly. In *Nova Scotia* a monthly maximum of $80 for a family is fixed by statute; the amount payable to a mother and one child is determined by family need. In *New Brunswick* the family maximum is $80 a month, with $35 for a mother and one child and $7.50 for each additional child. Where necessary, an additional $10 may be granted for rent if it is needed and if the allowance is below the family maximum. The maximum allowance in *Quebec* for a mother and one child is $35 in a district where the population is under 5,000 and $40 where it is 5,000 or over. An additional $1 per month is paid for each of the second, third, fourth and fifth children, $2 for the sixth and seventh, and $3 for the eighth and subsequent children. An extra $5 is allowed when the mother is unable to work or when a disabled father is living at home. *Ontario* pays a maximum of $50 a month for a mother and one child, with $10 for each additional

child and for a disabled father at home. A foster mother with one child may receive up to $24 per month, with two children up to $48, and $10 for each additional child. The allowance may be increased up to $20 a month where need is shown and a winter fuel allowance is also granted. The maximum monthly allowance in *Manitoba* for a mother and one child is $51 per month. An additional $10 is paid for a child aged one to six years, $13 for a child seven to 11 years, and $15.50 for a child 12 to 14 years; $17.25 is paid for a disabled father in the home. The family maximum is $167 plus winter fuel for seven months, with supplementary assistance of up to $25 in special circumstances. In *Saskatchewan* the maximum allowance for a family is $85 a month, with $35 being paid for a mother and one child, $10 for a second child, $5 for each subsequent child and $10 for a disabled father at home. Supplementary assistance under the social aid program may be granted by the local municipality and the costs are shared equally by the Province and the municipality. The allowance in *Alberta* may not exceed $50 per month for a mother with one child or $60 if her other income does not exceed $120 a year, $20 for the second child, $15 for the third and $10 for each subsequent child. A maximum of $145 is set for a family with nine or more children. Supplementary aid in the form of public assistance may be granted, where necessary, by the municipality of residence, with the Province reimbursing 60 p.c. of the cost. In *British Columbia* the maximum monthly mothers' allowance set by statute is $42.50 for a mother with one dependent child, and $7.50 for each additional child and for a disabled father living at home. Supplementation from social allowance funds brings the actual maximum monthly payments to $62.50 per month for a mother and one child and $12 for each additional child and for a disabled father living at home. Extra expenditure may be met through social allowance funds, and a nutrition allowance is available for tuberculous patients and their families.

10.—Mothers' Allowances, by Province, as at Mar. 31, 1950-53[1]

Province and Year[1]	Families Assisted	Children Assisted	Benefits Paid
	No.	No.	$
Newfoundland—			
1951[2]	3,129	6,417	1,112,976
1952	3,267	7,996	1,261,541
1953	3,017	7,875	1,217,401
P. E. Island—			
1950[3]	170	468	26,839
1951	230	857	52,120
1952	225	627	59,668
1953	207	548	64,738
Nova Scotia—			
1950[4]	1,918	5,754	1,376,631
1951[4]	2,043	6,124	1,386,996
1953[5]	2,405	6,667	1,405,765
New Brunswick—			
1950[6]	1,788	5,002	844,242
1951[6]	1,814	5,130	854,027
1953[7]	2,066	5,947	1,225,263
Quebec—			
1950	13,591	39,413	5,454,980
1951	13,817	40,070	5,623,847
1952	13,750	38,500	5,502,571
1953	15,442	43,238	7,482,521
Ontario—			
1950	7,304	15,581	5,346,016
1951	7,382	15,885	5,546,054
1952	7,748	16,843	6,037,618
1953	7,621	16,798	6,431,729[p]
Manitoba—			
1950	786	2,073	606,009
1951	880	2,305	679,854
1952	932	2,482	783,184
1953	1,005	2,591	866,156
Saskatchewan—			
1950	2,610	6,024	1,083,188
1951	2,690	5,979[r]	1,106,506
1952	2,573	6,033	1,111,310
1953	2,424	5,815	1,328,884[p]
Alberta—			
1950	1,462	3,110	792,274
1951	1,503	3,191	836,469
1952	1,488	3,229	895,643
1953	1,524	3,360	1,048,772
British Columbia—			
1950	643	1,372	366,588[8]
1951	569	1,206	332,494[8]
1952	503	1,064	286,440[8]
1953	470	1,009	.

[1] Year ended Mar. 31, unless otherwise indicated. [2] Fourteen months ended Mar. 31; initial payments were retroactive to Feb. 1, 1950. [3] Ten months ended Mar. 31; program became effective June 1949. [4] Year ended Nov. 30. [5] Because of change in fiscal year, figures are for 16 month period, Dec. 1, 1951, to Mar. 31, 1953. [6] Year ended Oct. 31. [7] Because of change in fiscal year, figures are for 17 month period, Nov. 1, 1951, to Mar. 31, 1953. [8] Not including $71,353, $64,055 and $128,980 paid as supplementation from social allowances funds in 1950, 1951 and 1952, respectively.

Subsection 2.—Provincial Welfare Services

The care and protection of neglected and dependent children, care of the aged, social assistance or relief, and other special services outlined in the following summary are governed by provincial legislation, although in many areas responsibility for services rests with municipal or voluntary organizations. While the programs and the methods of financing vary considerably, most provinces share the costs of some or all of the municipal services in organized areas and assume the total cost in unorganized territories. The medical services available to social assistance recipients are described at pp. 225-234. Mothers' allowances are dealt with separately at pp. 254-255, old age assistance at pp. 249-250, and allowances for the blind at pp. 251-252.

Newfoundland.—Provincial welfare services are administered by the Department of Public Welfare through a number of regional welfare centres.

Child Care and Protection.—Child welfare has developed largely as a public service and is administered by the Child Welfare Division. Neglected children, made wards of the Director, are placed in foster or adoptive homes or in institutions. The Department pays for the maintenance of wards, grants subsidies for children admitted to orphanages administered by religious organizations, and contributes towards the cost of educating blind and deaf-mute children in institutions at Halifax, N.S., and Montreal, Que. The Division operates an Infants' Home providing short-term care.

In 1953, a Division of Corrections was established to deal with both juvenile delinquents and adult offenders and, for the present, to administer correctional institutions for boys and girls. The Corrections Act, 1953, provides for the establishment of a Youth Guidance Authority, an Adult Guidance Authority and classification centres.

Care of the Aged.—The Province maintains a Home for the Aged and Infirm at St. John's and also pays a per diem rate for needy old people in the Salvation Army Home and in approved boarding homes.

Social Assistance.—Under the Dependents' Allowances Act, the Province grants assistance to needy unemployables not eligible for other forms of statutory assistance. Aid for certain needy able-bodied persons is provided under the Health and Public Welfare Act.

Prince Edward Island.—The Department of Health and Welfare is responsible for the administration of provincial welfare services.

Child Care and Protection.—Under the Children's Protection Act, neglected or delinquent children may be placed under the guardianship of the Director of Child Welfare or an approved child welfare agency. The children are placed in foster or adoptive homes, boarding homes or children's institutions under the inspection of the Director. Provincial grants are made to child welfare agencies and to the two private orphanages, one Protestant and one Roman Catholic. Juvenile Courts are under the Attorney General's Department, and juvenile delinquents are cared for at the expense of the Department of Health and Welfare in correctional institutions of the neighbouring provinces.

Care of the Aged.—The aged and infirm are cared for in Falconwood Mental Hospital and in two provincial infirmaries.

Social Assistance.—The Department provides direct social assistance in rural areas and, by agreement, assumes 50 p.c. of the cost of assistance granted by the City of Charlottetown and the incorporated towns and villages. The Department also operates a province-wide program of financial aid to families where the bread-winner is suffering from tuberculosis and is unable to support the family.

Nova Scotia.—Provincial welfare services are administered by the Department of Public Welfare through a number of regional offices.

Child Care and Protection.—The Child and Family Welfare Branch administers the child-protection legislation including the inspection of institutions and the licensing of foster and maternity homes. Neglected children may be made wards of the Director of Child Welfare or of approved Children's Aid Societies. Each Society receives annually a provincial grant of up to $2,000; a sum equal to 50 p.c. of funds received through private campaigns or from municipalities for general operating expenses; and an additional grant of not less than $1,000, the maximum determined on a per capita basis. The Province and municipality of residence contribute towards the maintenance of each ward placed in a foster home or institution, unless a court order for support is made against the parents.

The Branch operates the Nova Scotia Training School for mentally defective children and the Nova Scotia School for Boys for juvenile delinquents. It is also responsible for the operation of the six Juvenile Courts and the supervision of their probation staffs. The municipality of residence is responsible for the maintenance of children in reformatories although the Province may contribute also if the reformatory complies with specified standards.

Care of the Aged.—The aged are cared for in municipal or county homes, in homes operated by religious or private organizations and in private boarding homes where the municipality of residence may contribute to the cost of maintenance. Homes for the aged are subject to provincial inspection but they do not receive direct assistance from the Province.

Social Assistance.—Relief to unemployables is a local responsibility.

New Brunswick.—The Department of Health and Social Services administers provincial welfare legislation.

Child Care and Protection.—Under the Children's Protection Act, administered by the Minister of Health and Social Services, responsibility for protection and placement services is largely delegated to Children's Aid Societies throughout the Province. Guardianship of a neglected child may be vested in a Society, the Director of Child Welfare or in the Court. Orphanages are operated by religious, private or, in some cases, municipal organizations. With a few exceptions, boarding homes must be licensed and are subject to the provincial inspection required for all child-caring institutions. The Province and the municipality of residence each contributes towards the maintenance of wards committed to an institution, and the Province also reimburses municipalities for one-half of the cost of maintaining wards placed in foster homes, up to a prescribed maximum. The Department may place blind or deaf-mute children in special schools at Halifax, N.S. Juvenile Courts are under the Attorney-General's Department and delinquent boys may be placed in the Provincial Industrial School for Boys which reports to the Minister of Health and Social Services.

Care of the Aged.—Homes for the aged are operated under municipal, religious, fraternal or private auspices and are subject to provincial inspection but they receive no direct financial support from the Province.

Social Assistance.—Relief to unemployables is a local responsibility.

Quebec.—Major responsibility for the administration of provincial welfare measures is shared by the Department of Health and the Department of Social Welfare and Youth. The former administers the Quebec Public Charities Act which embodies the Government's policy of granting subsidies to religious and private institutions where they exist rather than creating public services. Grants are made to these institutions on a per diem basis, with the Province, the municipality of residence and the institution sharing the cost of maintenance of indigent persons admitted for care. The Department of Social Welfare and Youth is responsible for preventive and rehabilitative work among neglected and dependent children and for grants to recreation and welfare agencies, in addition to certain important educational functions. Social Welfare Courts are, however, under the jurisdiction of the Department of the Attorney-General.

Child Care and Protection.—Needy or abandoned children are generally cared for in institutions such as orphanages, nurseries and other homes, assisted under the Quebec Public Charities Act, although there is an increasing use of foster homes by child-welfare agencies. However, children who are found by a Social Welfare Court or other court to be particularly exposed to moral or physical dangers may be admitted to recognized youth protection schools under the Youth Protection Schools Act, 1950, administered by the Department of Social Welfare and Youth. Municipalities of residence are required by law to contribute 50 p.c. of the operating and maintenance costs of these schools but, in practice, the Province pays approximately 87 p.c. of all expenses and the entire cost of new construction. The Social Welfare Courts, which in 1950 replaced Juvenile Courts, have statutory responsibility in connection with child and youth protection and certain other provincial programs and also serve as Family Courts.

Children who have been exposed to tuberculosis but who have not been infected are placed with rural families under the supervision of the Department of Health in co-operation with child-welfare agencies.

Care of the Aged.—Institutional care for indigent old people is provided under the Quebec Public Charities Act through private institutions. Under the same Act, family-welfare agencies administer home allowances to needy old people who do not require institutional care.

Social Assistance.—Financial aid is not provided to needy families in Quebec but institutional care for indigents is available under the Quebec Public Charities Act. The Department of Colonization operates a program whereby families in need are settled on the land in newly opened districts and granted financial aid until they become self-supporting. In these areas, a disability pension scheme is linked to a program of free medical services.

Ontario.—Provincial welfare services are administered by the Department of Public Welfare. The Province is divided into 17 welfare districts with a supervisor in charge of each district.

Child Care and Protection.—Child protection legislation is administered by the Child Welfare Branch which supervises the local Children's Aid Societies to which responsibility for the care and protection of neglected and dependent children is delegated. Annual provincial grants to these Societies include token grants based upon the quality and level of services provided in addition to grants equal to 25 p.c. of the amounts raised through voluntary effort. The Province also reimburses the municipalities of residence in amounts not exceeding 25 p.c. of the net cost of maintaining children made wards of Children's Aid Societies. Children's institutions and day nurseries are supervised by the Day Nurseries Branch and must be licensed. The Province makes small per diem grants to non-profit-making charitable institutions and pays one-half of the operating and maintenance costs of municipal day nurseries. Juvenile Courts are under the Attorney-General's Department, while training schools for juvenile offenders are operated by the Department of Reform Institutions.

Care of the Aged.—Municipalities are required by law to provide institutional care for the aged, with the Province contributing 50 p.c. of the net operating and maintenance costs and 50 p.c. of the costs of approved new construction or approved additions and extensions. Both public and private institutions are subject to provincial regulations and inspection and, under certain circumstances, charitable institutions may receive a small per diem grant for each person maintained. Grants are made available to limited-dividend housing corporations to assist in the construction and equipment of low-rental housing projects for elderly persons.

Social Assistance.—Under the Unemployment Relief Act, the Province reimburses municipalities, up to a prescribed maximum, for 50 p.c. of their expenditures on relief to needy unemployables and on incapacitation allowances and rehabilitative measures for single, needy, handicapped residents. In unorganized areas the program is administered and financed by the Department. The Soldiers' Aid Commission extends emergency assistance and advice to former service men and their families. Assistance of up to $40 per month is granted to permanently and totally disabled persons under the Disabled Persons' Allowances Act.

Manitoba.—The Public Welfare Division of the Department of Health and Public Welfare is generally responsible for provincial welfare services.

Child Care and Protection.—The Director of Public Welfare administers the child-welfare legislation. Included in this administration is the supervision of Children's Aid Societies and of child-caring institutions. The Provincial Public Welfare Division carries on these services directly through a decentralized program of district offices in a large area of the Province. In the remainder of the Province, the Director supervises the four non-denominational Children's Aid Societies in their respective territories. Neglected children may be made wards of the Director of Public Welfare or of a Children's Aid Society. Municipalities are responsible for the maintenance of wards but the Province reimburses them for a portion of these costs from the $500,000 annual fund distributed among the municipalities in proportion to their relief and child-welfare expenditures. Under agreements between the Province and the Children's Aid Societies, payment of annual provincial grants is conditional on the provision of a basic level of service and the collection of equivalent voluntary contributions; payments are made in accordance with a formula based on the number and cost of social workers per 100,000 population in a representative area where the Division directly administers child-welfare services.

The Division provides foster-home care and supervision for mental defectives placed in the custody of the Director of Public Welfare and, with the Division of Psychiatry, operates a home for mentally defective girls. The Attorney-General's Department is responsible for Juvenile Courts and operates a boys' home and a girls' home for delinquents.

Care of the Aged.—Institutions and nursing homes for the aged and infirm are supervised and licensed by the Department under public health legislation.

Social Assistance.—Municipalities are responsible for assistance to needy residents, but these expenses, as well as ward maintenance costs, are partly reimbursed by the Province from the $500,000 annual social assistance fund which is allocated on a *pro-rata* basis. In addition, whenever the costs of social assistance and ward maintenance to any municipality exceed in a year a sum equivalent to four mills of the equalized assessment of such municipality, the Public reimburses 60 p.c. of the excess. The Province is responsible for aid to persons without municipal residence as well as for general assistance in unorganized territory.

Saskatchewan.—Provincial welfare services are administered by the Department of Social Welfare and Rehabilitation.

Child Care and Protection.—The Department provides welfare services for children throughout the Province, with the exception of Saskatoon where certain responsibilities are delegated to the Children's Aid Society. Children found to be neglected are, by court order, made wards of the Minister and are placed in foster homes, adoptive homes or institutions. A portion of the maintenance costs of wards, except of children born out of wedlock, is paid by the municipality of residence. The Branch operates two institutions for the temporary care of wards. It also operates a program of non-ward care and a program for unmarried mothers.

The Corrections Branch of the Department is responsible for both adult and juvenile correctional services, supervises probation and parole services for juvenile delinquents and administers the Saskatchewan Boys' School and the provincial gaols. The Juvenile Court is presided over by a judge who devotes his time exclusively to cases of juvenile delinquency. Juveniles are discharged from correctional institutions only by parole. A Youth Guidance Authority supervises the discharging of juveniles from probation, from institutions and from parole.

Care of the Aged.—The Department operates three homes for the aged, and licenses and supervises all privately operated homes. Maintenance, where necessary, may be arranged under the social-aid program. The Nursing Homes and Housing Branch is responsible for planning to meet future needs of the aged and for co-operating with other governmental organizations in the fields of institutional care and housing for the aged.

Social Assistance and Special Services.—The costs of assistance to needy persons are shared equally by the municipalities and the Department, but the Province pays the entire cost for transients and for persons in unorganized areas. The Rehabilitation Branch provides training and placement services for the handicapped; one-half the cost of this training is borne by the Province and one-half by the municipality of residence. It is also responsible for the rehabilitation of minority groups and operates a farm where the Metis—persons of mixed Indian and white stock who do not qualify under the Indian Act—are instructed in modern methods of farming while being paid for their work. Three schools are conducted for Metis children.

The Department administers the Provincial Housing Act which empowers the Province to enter into public housing projects under Sect. 35 of the National Housing Act, and to stimulate construction of low-rental housing projects by limited-dividend housing corporations.

Alberta.—The Department of Public Welfare is responsible for the administration of provincial welfare measures. It has branches at the four larger centres, and inspectors are located in suitable areas throughout the Province.

Child Care and Protection.—The care of children who are made wards of the Government under court orders or by agreement is under the control of the Child Welfare Commission. These children may be placed in foster homes or in licensed boarding homes or institutions. Permanent wards may also be placed in adoptive homes. The cost of maintenance of wards is paid by the Province which recovers 40 p.c. of such cost from the municipality of residence. The Home Investigating Committee is responsible for the inspection and the licensing, where required, of all homes and institutions in which children are given care. The Attorney-General's Department administers legislation regarding juvenile delinquency.

Care of the Aged.—The Province reimburses municipalities for 50 p.c. of cost incurred for the maintenance of needy, aged or infirm persons in municipally licensed homes. These homes must meet a specified standard before a licence is given and they are inspected periodically by officials of the Department of Public Welfare.

Social Assistance.—Municipalities are responsible for assistance to indigent residents but the Province is authorized to make grants to the municipalities of up to 60 p.c. of the value of the assistance. The Province pays the total cost of assistance granted to transients and to residents of unorganized districts, subject to a refund of 40 p.c. from the districts, through the Department of Municipal Affairs. Families may be assisted through settlement on suitable farm lands. The Single Men's Division maintains two hostels and one welfare centre to care for unemployable, single, homeless men without municipal domicile. Single ex-service men are cared for at Calgary and Edmonton without being placed in institutions. The Province has also established nine Metis colonies where settlers have extensive fishing, hunting and trapping rights, and are encouraged to engage in lumbering, agriculture and stock-raising. Educational services are provided and government-operated stores sell goods at cost price.

Widows and Disabled Persons Pensions.—Under the Widows Pension Act which came into force on Apr. 1, 1952, widows aged 60 to 64 years, inclusive, may receive pensions of up to $40 per month. Wives of husbands committed to hospital under the Mental Diseases Act and wives who have been deserted without reasonable cause for a specified period are also eligible if within the age group. To be eligible, applicants must meet certain conditions of need and residence and must not be in receipt of a mothers' or blind persons' allowance. The maximum income including the pension is $720 a year.

The Disabled Persons Pension Act, which came into force on June 1, 1953, provides for the payment of pensions of up to $40 per month to persons who are not under 21 years of age and who have suffered from a chronic disability for at least 12 months and are therefore unable to accept gainful employment. To be eligible, an applicant must not be in receipt of assistance under certain other statutory

programs. The income limits including the pension are, for a single person, $720 a year and, for a married person living with his spouse, $1,200 a year including the income of the spouse.

British Columbia.—The administration of provincial welfare services by the Social Welfare Branch of the Department of Health and Welfare is decentralized through district and municipal offices in six regions covering the whole Province. Generalized field service is provided by provincial social workers. The staff of the Social Welfare Branch is also responsible for welfare services required in connection with a number of programs operated by the Health Branch.

Cities and municipalities of over 10,000 population must have their own social welfare departments to administer the social assistance program and to provide case-work services. The Province pays 50 p.c. of the salaries of municipal social workers or, where more than one is needed, matches the municipal appointees worker for worker. Smaller municipalities may have their own or amalgamated social-welfare departments or they may pay for the services of the Social Welfare Branch.

Child Care and Protection.—The Child Welfare Division administers legislation governing the protection of children, including adoptions, and provides direct services except at Vancouver and Victoria where it supervises the Children's Aid Societies. Municipalities are responsible for the costs of maintaining wards, but the Province reimburses them to the extent of 80 p.c. of such expenditure and pays the entire cost for children in unorganized areas. The Province pays the total maintenance cost of wards who are children of unmarried mothers. Child-caring institutions, boarding homes and day nurseries are licensed and supervised. The Social Welfare Branch administers a Boys' and a Girls' Industrial School for delinquent children. Family case-work and rehabilitative supervision of boys and girls released from the schools are carried on in co-operation with the Psychiatric Division and the probation service of the Juvenile Courts, which are under the jurisdiction of the Attorney-General's Department.

Care of the Aged.—The Social Welfare Branch operates the Provincial Home which provides care for aged men. In addition, the Province operates Provincial Homes for the Aged under the mental health program administered by the Provincial Secretary's Department, as well as the Provincial Infirmary for chronic care under the B.C. Hospital Insurance Service. The Province also contributes 33 p.c. of the capital cost of construction of municipal nursing homes, and licenses and supervises municipal and private nursing homes and boarding homes. The maintenance of needy residents, where necessary, is shared with the municipalities on an 80-20 basis. The Province assumes the total cost for provincial charges.

Social Assistance.—The social assistance program is administered by the Director of Welfare and supervised by the Family Division. It includes allowances to indigent individuals or families, counselling services, occupational training and the maintenance costs of nursing-home or boarding-home care. The Province reimburses the municipalities 80 p.c. of the cost of basic and certain supplementary social assistance payments to indigent municipal residents and assumes the total cost of assistance granted to provincial residents.

Subsection 3.—Workmen's Compensation

In all ten provinces, legislation is in force providing for compensation for injury to a workman by accident arising out of and in the course of employment, or by a specified industrial disease. A summary of provincial workmen's compensation legislation is given in the Labour Chapter.

Subsection 4.—Care of Dependent and Handicapped Persons

Statistics of charitable and benevolent institutions are compiled every five years. The Census of 1951 covered 533 institutions, 490 being residential institutions and 43 being day nurseries. Table **11** shows selected data for 1950 concerning the residential institutions, while Table **12** presents statistics concerning the persons under care on June 1, 1951.

11.—Summary Statistics of Reporting Charitable, Benevolent and Welfare Institutions, by Province, 1950

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.
	No.	No.	No.	No.	No.	No.
Institutions reporting[1]	9	6	24	23	157	136
Bed capacity	650	646	1,239	1,815	24,840	9,872
Personnel, full-time	108	112	229	301	5,647	1,734
Operating Body—						
Governmental	2	2	5	2	1	4
Lay corporation	1	—	1	1	2	8
Religious organization	3	3	7	10	137	51
Other	3	1	11	10	17	73
Movement of Population—						
Admissions	360	322	843	860	16,748	13,625
Discharges	363	195	757	734	15,755	12,437
Deaths	48	78	79	91	1,256	793
Days of care during 1950	200,244	209,201	362,386	428,019	7,739,682	2,886,010
Personnel, Full-time—						
Social-service workers	12	9	16	7	91	80
Graduate nurses	14	5	9	11	135	124
Other	82	98	204	283	5,421	1,530

Item	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.
Institutions reporting[1]	26	31	46	30	2	490
Bed capacity	1,542	1,613	2,972	1,215	66	46,470
Personnel, full-time	377	338	508	208	11	9,573
Operating Body—						
Governmental	4	6	6	7	—	39
Lay corporation	1	2	2	6	—	24
Religious organization	10	16	21	9	2	269
Other	11	7	17	8	—	158
Movement of Population—						
Admissions	1,150	1,324	2,495	1,107	2	38,836
Discharges	978	1,216	2,219	979	8	35,641
Deaths	200	113	199	71	—	2,928
Days of care during 1950	449,166	451,318	838,830	347,790	10,623	13,923,269
Personnel, Full-time—						
Social-service workers	75	10	27	15	—	342
Graduate nurses	23	24	29	13	2	389
Other	279	304	452	180	9	8,842

[1] Excludes day nurseries.

12.—Statistics of Persons under Care in Charitable, Benevolent and Welfare Institutions, by Province, at June 1, 1951

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Adults—												
Male	67	177	347	265	2,821	3,095	536	472	614	606	2	9,002
Female	105	222	332	336	3,937	2,817	476	367	364	637	2	9,595
Children—												
Male	93	91	338	308	8,245	1,580	265	261	776	167	13	12,137
Female	286	82	314	329	5,634	1,525	216	252	699	189	13	9,539
Totals, Under Care	**551**	**572**	**1,331**	**1,238**	**20,637**	**9,017**	**1,493**	**1,352**	**2,453**	**1,599**	**30**	**40,273**
In homes for adults	155	266	614	504	3,564	5,718	922	817	903	1,196	—	14,659
In Homes for Adults and Children—[1]												
Adults	17	133	65	97	3,194	194	90	22	75	47	4	3,938
Children	61	27	234	223	3,803	301	77	82	194	119	2	5,123
In homes for children	318	146	398	414	9,899	1,558	208	431	1,281	206	24	14,883
In day nurseries	—	—	20	—	177	1,246	196	—	—	31	—	1,670

[1] Includes homes for unmarried mothers.

PART III.—NATIONAL VOLUNTARY HEALTH AND WELFARE ACTIVITIES

A number of national voluntary agencies carry on important work in the provision of health and welfare services, planning and education. These agencies, some of which are described below, supplement the services of the federal and provincial authorities in many fields and play a leading role in stimulating public awareness of health and welfare needs and in promoting action to meet them.

Canadian Welfare Council.—The Council, established in 1920, is a national association of organizations and individual citizens in partnership to secure comprehensive, well-administered social services of high quality for the Canadian people. It furnishes authoritative information, technical advice and field service in the main areas of social welfare and provides a means of co-operative planning and action by serving as a link between the public and private agencies. Member organizations include community chests and councils, private social agencies, various federal, provincial and municipal departments and other groups and individuals active in the fields of health, welfare and education.

The policies and programs of the Council are determined by its members with the help of a nationally representative elected board of governors. Aided by professional staff, the members work together through divisions of Child and Family Welfare, Recreation, Public Welfare, Delinquency and Crime, and Community Chests and Councils. Other aspects of social welfare are dealt with by special committees and departments, including the Department of French-speaking Services.

Some subjects to which the Council is giving study are: labour, Canadian adoption laws as a step towards improved adoption procedure in all provinces, needs of the aged, public assistance, residence and settlement legislation, rehabilitation of the disabled, health insurance and civil defence. A large number of surveys on a

variety of subjects have been requested by agencies, communities and provinces. Council publications include the periodicals *Canadian Welfare* and *Bien-être social canadien*, an annual directory of Canadian welfare services, and division bulletins, pamphlets and reports.

Canadian Conference of National Voluntary Health and Welfare Organizations.—The Conference, set up in 1949, provides national health and welfare agencies with a clearing-house and a medium for exchange of experience and for joint study and action with a view to increasing co-operation in matters of common concern.

Canadian National Institute for the Blind.—The Institute, founded in 1918, provides extensive rehabilitative services for blind persons and carries on an active program for the prevention of blindness. Its services include home teaching of touch reading and writing, handicrafts, occupational training and placement, welfare services and financial assistance. It operates factories to afford employment for blind men and women and controls tobacco stands, news stands and industrial cafeterias managed by the sightless. Field services are provided through over 30 district offices staffed by field workers and teachers, most of whom are blind. The Instituțe maintains a national library of Braille and recorded literature, operates several residences and gives financial support to recreational clubs for blind persons. In the preventive field, it operates eye clinics, arranges treatments and distributes literature. The Institute is supported by government grants and voluntary subscriptions.

The Canadian Red Cross Society.—The peacetime program of the Society consists of eight major services. The operation of outpost hospitals and of a blood-transfusion service are important projects in nearly all provincial divisions. Nutrition and visiting homemaker's services, and instruction in swimming and water safety are carried on in most branch areas. In addition, relief is supplied in times of national and international disaster, craft training and recreational centres are operated for hospitalized war veterans, and a national inquiry bureau traces persons for the purpose of reuniting families and friends.

The Canadian Junior Red Cross promotes health and good citizenship in schoolroom branches across Canada. As part of its program, the Junior Red Cross Crippled Children's Fund is maintained to assist in providing treatment for handicapped children.

The Victorian Order of Nurses for Canada.—The Victorian Order of Nurses is a voluntary public health agency, national in scope and having as its primary object the care of the sick in their own homes. Care is given, under medical direction, by visiting nurses to medical, surgical and maternity patients, a large percentage of whom would otherwise be without skilled nursing services. Patients are expected to pay the cost of the home visits, but fees are scaled according to family income and service is never refused because of inability to pay.

Part-time nursing service is given in industrial plants where the number of employees does not warrant full-time employment of a nurse. In smaller centres where the Order provides the only public health nurse, the program is usually enlarged to include school nursing, assistance at immunization clinics and child health centres, and other public health services.

The Health League of Canada.—The Health League of Canada is a voluntary association devoted to health education. Through the media of press, radio, posters, pamphlets, motion pictures and the public platform, the League keeps the public informed concerning the health value of milk pasteurization, immunization procedures for preventable diseases, proper nutritional habits, sanitary work practices by public food-handlers and organized health programs for industrial workers. The League supplements its year-round program with the annual sponsoring of National Health and National Immunization Weeks.

The Order of St. John.—The primary purpose of the Order is to teach first aid and home nursing to citizens of Canada irrespective of age, race and creed, and to provide trained and organized personnel to help in time of emergency. The Canadian branch was organized in 1895 and, since that time, more than 1,250,000 persons have been trained and have passed examinations in various subjects. The Order has its headquarters and national offices at Ottawa, branches in every province and local centres in hundreds of cities, towns and villages throughout Canada. There are two subsidiary branches, the St. John Ambulance Association and the St. John Ambulance Brigade, the first devoted to teaching and the second to rendering voluntary public assistance as required. The Order has been selected as the official organization to train civil defence workers in basic and advanced first aid.

The Canadian Arthritis and Rheumatism Society.—The Canadian Arthritis and Rheumatism Society was incorporated in 1948 for the purpose of reducing morbidity and mortality from arthritic and rheumatic diseases. Its objectives include the raising of funds to support research, the education of professional personnel and of the general public, and the promotion and organization of treatment facilities. A Medical Advisory Board composed of leading physicians, surgeons and scientists advises on the research program, professional education and public relations.

Divisions of the Society are organized in nearly every province. Arthritis clinics sponsored by the Society have been established in 30 out-patient hospital departments and, in addition, 44 mobile physiotherapy units provide treatment and consultations to those unable to leave home.

The Canadian Mental Health Association.—The Canadian Mental Health Association operated between the years 1918 and 1950 as the National Committee for Mental Hygiene. The Association carries on a continuous educational campaign for the general public on various aspects of mental health and, in co-operation with the University of Toronto, conducts a mental health liaison course for selected teachers from all provinces. Provincial branches seek to promote a better understanding of the problems of mental illness and the need for community participation in mental health services. The program of the Association also includes fact-finding surveys of current mental health services and research studies of specific aspects of mental illness and social behaviour.

Other National Health Organizations.—Additional voluntary agencies are engaged in a variety of health activities including financial support and operation of educational programs, research and training, and the provision of treatment. These activities may be directed towards the general public or towards specific categories of ill or disabled persons, such as the paraplegics. Some organizations,

such as those dealing with the blind and the deaf, are interested in the welfare as well as the health problems of the groups served. Organizations of professional medical and related personnel, in particular of public health personnel, assist in the development of agencies and in guiding their activities.

PART IV.—VETERANS HEALTH AND WELFARE SERVICES*

Section 1.—The Department of Veterans Affairs

The great majority of veterans have now been assimilated into civilian life and the work of the Department of Veterans Affairs has settled into a well-defined pattern, its major functions being concerned with medical treatment, payment of pensions and allowances, welfare work and land settlement. The Department maintains 18 district offices and two sub-district offices in Canada as well as district offices at London, England. The administration of the Veterans' Land Act also requires the maintenance of district and regional offices in locations as accessible as possible to veterans. Travelling welfare officers operate from these offices.

The basis of administration of the Department of Veterans Affairs, established in 1944, is dealt with in the 1946 Year Book, pp. 1053-1054. The work of the Department as it developed year by year is outlined in subsequent editions and is brought up to Mar. 31, 1953, in the following Sections.

Section 2.—Medical, Dental and Prosthetic Services

Medical Services.—It is the policy of the Department to give veterans the most modern medical treatment possible. Wherever a Departmental hospital is situated in proximity to a medical school, close co-operation is maintained between the two. Veterans hospitals are actively engaged in under-graduate and post-graduate teaching, and members of the medical faculties are employed in the hospitals with other specialists. Eleven hospitals have received approval by the Royal College of Physicians and Surgeons of Canada for advanced post-graduate teaching in internal medicine and general surgery. Seven of these are also approved for advanced post-graduate teaching in specialties. The majority of the consultant staffs at Departmental hospitals are employed on a part-time basis and are also usually engaged in medical teaching.

Professional and other members of the university staffs are employed as consultants and advisers in the same way as medical consultants. Thus, the Department receives expert advice in nursing, pathology, medical social services and other medical sciences.

Special centres for the investigation and treatment of arthritis, paraplegia, tuberculosis, etc., are active in the larger hospitals. Where Departmental facilities are not available, veterans with service-related disabilities receive treatment and hospitalization through the doctor of their choice.

During the year ended Mar. 31, 1953, 106 research projects were submitted to the Advisory Board for Medical Research and Education and, of these, 58 were continuing and 48 were new. These projects included clinical research of the effects of ACTH and Cortisone on various diseases, a follow-up study on Hong Kong

* Contributed by the various Branches of the Department of Veterans Affairs through G. G. Yates, Chief of Information.

prisoners of war, a study on Canadian veterans of World War II and a five-year study of gunshot wounds of the head. During the fiscal year 1952-53, the Department embarked on a long-term project concerning the causes and treatment of atherosclerosis. An ultracentrifuge—one of the few in Canada—was installed at Montreal for carrying out the necessary analyses. In addition, studies were in progress on paraplegia, mental diseases, chronic bronchitis and circulatory diseases. Research information is constantly being exchanged with authorities in the United Kingdom and the United States.

At the end of 1952, the Department had in operation 9,915 beds in 19 institutions. Of these, 12 were active treatment hospitals, two were health and occupational centres for convalescents, four were veterans homes and one was a special institution. (*See* also p. 242.)

Dental Services.—The number of dental treatments given during the years ended Mar. 31, 1941-53 were:—

Year ended Mar. 31—	*Treatments*	*Year ended Mar. 31—*	*Treatments*
	No.		No.
1941	99,590	1948	1,191,218
1942	73,113	1949	218,173
1943	102,554	1950	158,149
1944	66,562	1951	128,206
1945	249,170	1952	103,242
1946	509,703	1953	103,255
1947	2,700,052		

Prosthetic Services.—The Prosthetic Services Branch of the Department of Veterans Affairs supplies, by manufacture or procurement, all orthopædic and surgical appliances prescribed by the Treatment Services Branch. The maintenance and renewal of such prostheses for all eligible cases is also the concern of the Branch. A large modern centre at Sunnybrook Hospital, Toronto, together with 11 district centres and five visiting centres in the principal cities, extends the manufacturing, maintenance and fitting service across the country. This system ensures a standardization of parts of major prostheses, a control of quality of supplies and availability of service at all times.

A Research and Development Section at Toronto is constantly at work on improvements and, in co-operation with the manufacturing services, conducts the field-testing of new developments. Close contact is maintained with the National Research Council and with research committees in the United States and the United Kingdom.

During the year ended Mar. 31, 1953, 61,488 persons were supplied with appliances or accessories compared with 60,053 during the previous fiscal year. Total issues during these two years numbered 117,374 and 113,530, respectively.

Vetcraft Shops.—The Department operates Vetcraft Shops at Toronto and Montreal giving sheltered employment to disabled veterans. These shops manufacture poppy emblems and wreaths for sale by the Canadian Legion on Remembrance Day. An average of 60 veterans are employed. Production value was approximately $238,800 for the 1952 campaign.

Section 3.—Pensions and Allowances

The Canadian Pension Commission.—The Commission administers the Pension Act and the Civilian War Pensions and Allowances Act and reports to Parliament through the Minister of the Department of Veterans Affairs. The Head Office of the Commission is at Ottawa and representatives, known as Pension Medical Examiners, are located at each District Office of the Department.

It is the responsibility of the Commission to adjudicate upon claims for injury or disease resulting in disability or death during service with the Naval, Army or Air Forces of Canada, and to consider claims for the supplementation of awards to Canadians who suffered disability or death while serving in the Armed Forces of the United Kingdom or its allies in World War I or World War II.

The Pension Act.—Under the Pension Act (R.S.C. 1952, c. 207):—

(1) Pensions payable to veterans of the Fenian Raid and Northwest Rebellion under authority of Orders in Council are supplemented to the Canadian scale.
(2) Pensions payable by Great Britain on account of Canadians who served in the South African War are supplemented to the Canadian scale.
(3) Pensions for peacetime service prior to World War I payable under Orders in Council are supplemented to the Canadian scale.
(4) Pensions are paid in respect of service in World Wars I and II for injury or disease or the aggravation thereof resulting in disability or death attributable to or incurred during service.
(5) Pensions for peacetime service between World Wars I and II and subsequent thereto are paid when the injury or disease or aggravation thereof resulting in disability or death arose out of or was directly connected with service.
(6) Special provision was made for the Canadian Army Special Force and for those who serve in a theatre of operations.

In previous issues of the Year Book information is given regarding the development of Canadian pension legislation and yearly statistics regarding numbers and liability. As at Dec. 31, 1952, pensions in force were as follows:—

Payable—	*Pensions*	*Liability*
	No.	$
To dependants	33,695	33,909,476
For disability	160,610	91,461,688
TOTALS	194,305	125,371,164

The pension paid for a total disability to a former member of the Armed Forces of the rank of major and below, with a wife and two or more children, amounts to a personal pension of $125 monthly, an additional $45 for his wife, $20 for the first child, $15 for the second, and $12 for each additional child. If he is helpless and in need of attendance, he is granted a Helplessness Allowance, which might vary from a minimum of $480 to a maximum of $1,400 per annum depending on the amount of attendance required. In the case of the blind, where the attendance required is not constant, the helplessness award is $960 per annum.

A pensioned widow receives $100 per month, with $40 for the first child, $30 for the second and $24 for each additional child. If she remarries, she is granted one year's pension as a final payment and pension usually continues for her children. Pension for a boy expires when he reaches the age of 16, and for a girl at 17. However, it may be continued to the age of 21 if the child is making satisfactory progress in a course of education approved by the Commission.

Civilian War Pensions and Allowances Act.—This Act extends pension legislation to a number of civilian groups whose work was closely associated with the World War II war effort, including merchant seamen, auxiliary services personnel, fire fighters who served in the United Kingdom, special constables with the Royal Canadian Mounted Police, overseas welfare workers, etc.

Veterans' Bureau.—The Veterans' Bureau, staffed by Pensions Advocates, most of whom are lawyers, was established in 1930 to assist those seeking war disability or dependant's pension in presenting their claims to the Canadian Pension Commission (*see* 1947 Year Book, p. 1142). This service is also given to persons applying for pension under the Civilian War Pensions and Allowances Act. There are District Pensions Advocates in all district offices of the Department. The service is free of charge and most applications for pension are handled in this way. At Mar. 31, 1953, the Veterans' Bureau had 6,644 active claims in hand.

Section 4.—Rehabilitation of Veterans

The Veterans Welfare Services Branch of the Department of Veterans Affairs is responsible for the administration of benefits available to discharged members of the Forces under the terms of the Veterans' Rehabilitation Act, the War Service Grants Act, and the Veterans Benefit Act of 1951.

The Department renders assistance to veterans and advises them in social problems through the Social Service Division of the Veterans Welfare Services Branch. At the same time, it does not duplicate any service that is already available to a veteran as a citizen. The rehabilitation of women veterans has been conducted along with that of the male veterans and no particular problems have been encountered.

War Service Grants.—The amounts expended as gratuities under the War Service Grants Act up to Mar. 31, 1953, are shown in Table 1.

1.—Gratuity Payments under the War Service Grants Act, Years Ended Mar. 31, 1945-53

Year and Service	Navy	Army	Air Force	Miscellaneous	Total
	$	$	$	$	$
1945—					
Forces	973,958	14,663,621	3,468,852	—	19,106,431
1945-46—					
Forces	27,277,979	121,003,582	64,157,016	—	212,438,577
Canadian Fire Fighters	—	—	—	161,760	161,760
Auxiliary Services	180	58,646	36,116	—	94,942
1946-47—					
Forces	17,766,529	170,658,329	32,949,430	—	221,374,288
Auxiliary Services	365	254,616	98,475	—	353,456
1947-48—					
Forces	940,778	11,386,313	1,372,651	—	13,699,742
Auxiliary Services	—	315,046	Cr. 5,198	—	309,848
1948-49—					
Forces	140,907	589,132	226,686	—	956,725
Auxiliary Services	—	35,563	—	—	35,563
1949-50—					
Forces	37,595	133,117	168,582	—	339,294
Auxiliary Services	—	9,483	—	—	9,483
Netherlands, The	—	—	—	91,737	91,737
1950-51—					
Forces	21,318	76,348	344,717	—	442,383
1951-52—					
Forces	9,708	128,058	124,366	—	262,132
Special Force	1,340	18,208	—	—	19,548
1952-53—					
Forces	..	..	..	..	112,437
Special Force	600,036	2,769,829	26,567	—	3,396,432
Total	...	...	...	...	**473,204,778**

Re-establishment Credits.—To Mar. 31, 1953, 979,385 veterans re-establishment credit accounts had been opened and 747,284 of these accounts had been closed owing to authorization having been given for the complete disposal of the credit. In addition to the $285,584,280 authorized for use for the purposes listed in Table 2, about $59,132,333 was written off for veterans who had used the alternative benefit of training, or had made application to settle under the Veterans' Land Act. Of the total re-establishment credit issued to Mar. 31, 1953, more than 79 p.c. was used for homes.

The expenditures made to Mar. 31, 1953, resulted from 1,988,377 individual approved applications for use of the credit.

2.—Re-establishment Credits Paid, by Required Purposes, Years Ended Mar. 31, 1952 and 1953, with Cumulative Totals to Mar. 31, 1953

Purpose	1952	1953	Total to Mar. 31, 1953
	$	$	$
Homes—			
Purchased under National Housing Act	130,439	64,320	3,195,177
Purchased other than under National Housing Act	750,376	478,147	31,421,167
Repairs, etc	481,137	391,133	15,602,417
Furniture and equipment	5,924,726	4,627,488	170,668,396
Reduction of mortgage	78,822	60,578	4,313,730
Totals, Homes	**7,365,500**	**5,621,666**	**225,200,887**
Business—			
Purchase of a business	41,302	16,566	3,640,890
Working capital	517,834	403,823	24,125,848
Tools and equipment	972,313	744,130	24,452,529
Totals, Business	**1,531,449**	**1,164,519**	**52,219,267**
Miscellaneous—			
Insurance, annuities, etc	581,421	382,159	7,508,788
Special equipment for training	44,482	39,748	608,517
Clothing	21,245	19,925	46,821
Totals, Miscellaneous	**647,148**	**441,832**	**8,164,126**
Grand Totals	**9,544,097**	**7,228,017**	**285,584,280**

Casualty Rehabilitation.—The Casualty Welfare Division, the function of which is to provide vocational guidance, assistance in securing suitable employment and vocational after-care, maintains a register of all those veterans whose disabilities in relation to other factors, such as education, previous employment experience and personality, constitute a serious problem in occupational adjustment.

There were, up to Mar. 31, 1953, 38,085 registrations with this Division of which 6,662 were still active cases. The registration, according to the type of disability, is shown in the following statement:—

Type of Disability	*Active Cases*	*Closed Cases*
	No.	No.
Amputation	240	1,998
Neuro-muscular and skeletal system disabilities	1,494	10,392
Total and partial loss of hearing or sight	313	2,474
Neurological cases	279	1,107
Heart and vascular system	337	3,163
Respiratory disabilities	2,992	7,491
Mental and emotional disabilities	309	686
Unclassified	698	4,112
TOTALS	6,662	31,423

Among the national agencies with which the Department is in continuous liaison in connection with casualty welfare are: the Army, Navy and Air Force Veterans Association; the Canadian Legion, BESL; the Canadian National Institute for the Blind; the Canadian Paraplegic Association; the Canadian Red Cross Society; the Canadian Tuberculosis Association; the National Society of the Deaf and Hard of Hearing; and War Amputations of Canada.

During the fiscal year ended Mar. 31, 1953, the total number of registrants increased by almost 1,300 cases but the number of active cases decreased by 976. Progress in the rehabilitation of the cases between Mar. 31, 1952, and Mar. 31, 1953, was as follows:—

Status	*Mar. 31, 1952*	*Mar. 31, 1953*
	No.	No.
Employed	29,991	31,267
Unemployed	786	669
Receiving treatment, training or other services	3,037	2,887
Rehabilitation not feasible	1,874	2,088
Closed on WVA	1,100	1,174
TOTALS	36,788	38,085

Social Service.—The Social Service Division is staffed by professionally qualified social workers who act as consultants to Veterans Welfare Officers dealing with social problems of veterans and their dependants and handle the more complex problems directly. They also have special responsibility regarding staff training in social welfare principles and methods. The Division maintains close liaison with a wide variety of health and welfare agencies, both public and private, to ensure that veterans and their dependants obtain all possible assistance from the community, to which they may be entitled as citizens.

At the request of the Department of National Defence, the Department of Veterans Affairs inquires into home circumstances of members of the Armed Forces. These inquiries are designed to assist the Department of National Defence in making administrative decisions regarding applications for compassionate leave, posting and discharge, and to help the dependants by counselling and, where necessary, by referring them to community agencies. The Social Service Division maintains a full-time liaison office at National Defence Headquarters to facilitate this work. During the year ended Mar. 31, 1953, 3,700 such cases were referred to the Department of Veterans Affairs, an increase of almost one-quarter over the previous year.

Rehabilitation of Older Veterans.—Gainful employment of older veterans, is a continuing problem requiring special attention. Employers have responded admirably to the placement activities of the veteran sections of the National Employment Service, and of the "Older Veteran" Welfare Counsellors of the Department of Veterans Affairs.

Out of a present population of 340,000 veterans of World War I whose average age is 61 years, the unplaced portion of those seeking employment throughout Canada is less than 6,000.

The Corps of Commissionaires is now firmly organized from Newfoundland to Vancouver Island. Employers are finding it a convenient and economical means of filling positions in which trustworthiness is of prime importance. About 6,000 older veterans, many over 70 years of age, are steadily employed through the Corps

of Commissionaires. Employers generally have come to recognize the advantages of older men, particularly veterans, for many jobs that are unattractive or unsuitable for younger men.

A 'team-work' procedure has been developed between the Department, the National Employment Service and local veterans associations, to help fit every older veteran into a job he can do, or otherwise to ensure his means of maintenance. Collectively, about 50,000 cases a year are handled.

Assistance Fund.—New Assistance Fund Regulations were made by Order in Council P.C. 3730, dated Aug. 6, 1952, following the passage of the revised War Veterans Allowance Act. A veteran or a widow receiving an allowance under the Act, with no other income, may, if considered to be in need under the Regulations, be granted up to $120 per annum from the Fund. Assistance is paid in the form of a continuing monthly grant in cases where income is insufficient to meet the cost of rent, fuel, food and health needs calculated according to the prescribed formula. In other cases, a single grant may be given to meet an emergency.

Applicants are helped to obtain financial assistance from any other source to which they may be entitled, and to utilize all available community health and welfare resources. Increased monthly allowances under the War Veterans Allowance Act of 1952, made retroactive to Jan. 1, 1952, plus the granting of Old Age Security to War Veterans Allowance recipients at age 70, reduced applications to the Assistance Fund. From Aug. 6, 1952, to Mar. 31, 1953, the reported number of applicants was 2,554, of which 2,190 were assisted.

Education Assistance.—Assistance for the university training of veterans is provided under the Veterans' Rehabilitation Act as outlined in the 1948-49 Year Book, pp. 321-322. Since veterans were obliged to commence their university training within 15 months after discharge, the number entering training has dropped very sharply. In the academic year 1952-53, approximately 1,400 veterans in universities were receiving assistance through the Department of Veterans Affairs, compared with about 8,000 in 1951-52, 15,000 in 1949-50 and 24,000 in 1948-49. Since the commencement of the training program, 9,000 veterans have had insufficient qualifying service to carry them through to graduation but 6,068 of them qualified for continued assistance by securing scholarship standing. The distribution of the 1,400 veterans enrolled in 1952-53, by academic years, was: first year 97; second year 120; third year 142; fourth or subsequent year 660, and post-graduate 381. Since the inception of the rehabilitation program in 1941, 54,600 veterans have received university training. This includes 50 men who served with the Special Force in Korea.

The Children of War Dead (Education Assistance) Act, 1953, became effective July 1, 1953. The purpose of this legislation is to make it financially possible for pensioned sons and daughters of men who have died as a result of war service to proceed with educational training beyond the secondary school level. An eligible student may receive a monthly allowance of $25 while actually in full-time intramural attendance at an educational institution in Canada requiring high-school

graduation for admission thereto. In addition to the allowance, tuition and other fees are payable under conditions respecting educational training that applied in the case of World War II veterans.

Rehabilitation Benefits for Members of the Special Force.—The Veterans Benefit Act, 1951, provides for the extension of rehabilitation benefits to ex-members of the Special Force. Persons who enlisted in the Special Force, served in a theatre of operations and were discharged on strength of the Special Force are eligible for benefits similar to those provided for veterans of World War II. This also applies to members of the reserve and regular forces who served with the Special Force in a theatre of operations subject to certain conditions and time limits respecting commencement and termination of the service performed with the Special Force.

The Veterans' Land Act.—The net number of accounts opened during the year ended Mar. 31, 1953, was 4,223, representing an increase in new settlement under this Act of 336 as compared with the previous fiscal year. Included in the new accounts were 21 opened for veterans of the Special Force.

The payment record of the veterans settled under the Act was further improved during 1952-53. Out of 47,451 World War II veterans with repayable contracts in effect at Mar. 31, 1953, only 0·3 p.c. of the small holders were in arrears of $100 or more, and only 2·8 p.c. of the full-time farmers and commercial fishermen were in arrears in excess of $200. Of the latter, the majority are settled in the Prairie Provinces and payment from them is anticipated as soon as circumstances permit them to deliver and market their 1952 harvest.

Lower prices for farm products, unaccompanied by a corresponding decrease in the price of the things farmers buy, forced VLA farmers and the Administration officials to extend and intensify the attention they have been giving to methods of reducing farm production costs. In their day-to-day contact with these veterans and through field days, demonstrations, evening meetings and the dissemination of sound agricultural information, the VLA supervisory staff have assisted them to maintain or increase their incomes in the face of the lower price trend.

Supervision activity in connection with small holders continued to stress the economic advantages of the kitchen garden and the opportunities for secondary incomes through well-chosen agricultural enterprises. The small holders were also encouraged and assisted to maintain the value of their properties through building maintenance and landscaping.

The good payment record of the veterans is undoubtedly due, in part, to the advisory and educational services rendered. In this connection, the Administration gratefully acknowledges the extensive assistance and co-operation received from departments of agriculture, experimental farms, schools and colleges, and from private organizations and associations, commercial companies and successful farmers.

Table 3 shows the number of veterans who qualified for settlement, the number for whom financial assistance was approved, and the amounts approved in the form of loans and grants from the inception of the Act to the end of March 1953.

3.—Summary of Settlement Status, Loans and Grants under the Veterans' Land Act, 1942, as at Mar. 31, 1953[1]

Item		Full-Time Farming	Small Holdings	Commercial Fishing	Provincial Lands	Federal Lands	Total
Qualified for settlement.	No.	31,779	42,620	1,035	5,464	403	81,301
Approved for financial assistance.....	No.	25,146	28,908	899	4,412	322	59,687
Amounts approved for land and permanent improvements.....	$	95,496,982	141,994,692	2,628,797	4,185,532	702,383	245,008,386
Amounts approved for stock and equipment.	$	30,219,978	7,271,282	962,521	5,756,189	11,620	44,260,480
Average amounts approved per veteran...	$	4,999	5,163	3,995	2,253	2,217	4,846
Average conditional grants per veteran...	$	1,950	1,392	1,751	2,253	2,217	1,669

[1] Excludes Indian veterans on reserve lands.

Contracts for new houses continued at approximately the same level in 1952-53 as in the previous year. Of the 16,673 new houses constructed, or on which construction had started, approximately 78 p.c. were built by the veterans themselves, acting as their own contractors.

4.—House Construction under the Veterans' Land Act, 1942, Year Ended Mar. 31, 1953

Item	Full-Time Farming	Small Holdings	Commercial Fishing	Provincial Lands	Federal Lands	Total
	No.	No.	No.	No.	No.	No.
Houses completed.....	1,169	12,407	219	1,087	85	14,967
Houses under construction.....	175	1,298	12	206	15	1,706
Houses projected.....	298	934	14	178	—	1,424
Net applications for new housing.....	1,642	14,639	245	1,471	100	18,097

Further activity took place during 1952-53 in connection with the joint assistance building program on city lots with Central Mortgage and Housing Corporation. Order in Council P.C. 147/3233, of July 1, 1950, which authorized this program, was expanded in February 1953 for a period of one year by P.C. 36/258, to provide for the operation of the program on city lots not previously owned by the Director, Veterans' Land Act.

Veterans Life Insurance.—The administration and statistics concerning veterans life insurance will be found in Chapter XXVI.

War Veterans' Allowance.—The War Veterans' Allowance Act is administered by the War Veterans' Allowance Board. The allowance provides assistance to veterans with service in a theatre of actual war or who, in lieu of such service, are in receipt of a disability pension and have reached the age of 60, or earlier if their physical condition prevents them from earning their own living. The allowance may also be paid to the widows of veterans who would themselves have been qualified, but in the case of widows it is payable at the age of 55, or earlier if their physical condition makes the allowance necessary. The allowance is not paid as of right but is subject to certain financial tests.

This Act was completely revised during the Sixth Session of the 21st Parliament, 1952. The new Act recognizes that many of the older veterans are still able to take light or intermittent employment, and its provisions encourage this by eliminating the ceiling on wages for eligible veterans over 60 years during the months in which they are employed and permitting them to receive the allowance during the months in which they may be unemployed.

The maximum rate of an allowance for a single recipient was increased from $40.41 to $50 a month, and for a married recipient from $70.83 to $90 a month. The permissible income ceiling was raised from $610 to $720 a year for a single veteran and from $1,100 to $1,200 a year for a married veteran. Where a veteran's wife is blind, the ceiling was raised from $1,100 to $1,320 a year.

The previous provision whereby upon the death of a recipient the widow could be granted twelve monthly payments of the amount of the award in payment to him at the time of his death has been changed to permit the payment to the widow of the maximum amount permissible under the Act, i.e., $90 a month for twelve months. The same provision has been extended in the new Act to the recipient bereft by death of his spouse. This latter provision is entirely new and is designed to assist the veteran recipient in discharging the costs of the last illness and funeral of his wife and his adjustment to single status.

The maximum monthly allowance for orphans has been increased to $40 for one orphan, $70 for two orphans, and $85 for three or more orphans of one veteran. The amount of personal liquid assets that an applicant may have before being granted the allowance is $1,000 in the case of a single veteran and $2,000 for a married veteran. In both instances, interest from bonds, etc., up to a maximum of $25 annually is permitted as exempt income. The permissible value of property which the veteran owns or in which he may have an equity has been raised from $4,000 to $6,000. Complete medical and dental treatment by the Department, without cost, is available.

As at Mar. 31, 1953, there were 40,547 recipients including 9,684 widows. The liability for the year was $26,332,903.

CHAPTER VII.— CRIME AND DELINQUENCY*

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—Canadian Criminal Law and Procedure†

The system under which justice is administered in a State is never rigid. This is neither expedient nor indeed possible. A judicial system must grow and adapt itself to the requirements of the people, and the exact limits of the powers of the different legislative bodies require continued definition by the courts.

The exclusive legislative authority of the Parliament of Canada extends to criminal law throughout Canada. This law is based on the common law of England, built up through the ages and consisting first of customs and usages and later of principles enunciated by generations of judges and introduced into Canada, as regards criminal law, by Royal Proclamation in 1763. For particulars of the federal judiciaries see Chapter II, pp. 45-47.

The judicial systems of the provinces as they exist to-day are based upon the British North America Act of 1867. Section 91 provides that "the exclusive legislative authority of the Parliament of Canada extends to . . . the criminal law, except the constitution of courts of criminal jurisdiction, but including the procedure in criminal matters" In each province (Sect. 92, ss. 14), the legislature may, exclusively, make laws in relation to "the administration of justice in the province, including the constitution, maintenance and organization of provincial courts, both of civil and of criminal jurisdiction and including procedure in civil matters in those courts". The Parliament of Canada may, however (Sect. 101), establish any additional courts for the better administration of the laws of Canada. For particulars of provincial judiciaries, see Chapter II, pp. 47-55.

It is frequently difficult to distinguish between 'law' and 'procedure'. Procedure may be interpreted to relate simply to the organic working of the courts, but, in a wider sense, it may also affect the rights or alter the legal relations arising out of any given set of facts.

* Except as otherwise credited, this Chapter has been revised in the Judicial Section, Health and Welfare Division, Dominion Bureau of Statistics.

† Revised by F. P. Varcoe, Deputy Minister, Department of Justice, Ottawa.

Prior to Confederation, each province had its own criminal jurisprudence and statutes which caused great and increasing inconvenience until the adoption of various consolidation Acts, the chief of which are the Criminal Law and Amendment Acts of 1869 and the Criminal Procedure Act of 1886. These Acts deal exhaustively with procedure in respect of indictable and non-indictable offences, jurisdiction of justices of the peace, juvenile offenders, speedy trials, criminal law, schedules and forms, etc.

Codification of the law of crimes by a Criminal Code Bill, founded on the English draft code of 1880, Stephen's *Digest of Criminal Law*, Burbidge's *Digest of the Canadian Criminal Law*, and on the Canadian statutory law, was introduced by the Minister of Justice, Sir John Thompson, passed both Houses of Parliament and became law on July 1, 1893.

The Criminal Code classifies offences as indictable and non-indictable. Indictable offences include all offences that are not punishable by way of summary convictions. A limited few of such offences are triable by magistrates without the consent of the accused, by virtue of Part XVI of the Criminal Code relating to the summary trial of indictable offences. The majority, however, are triable only in the Superior Court of the province with a jury, or by consent of the accused, either under Part XVIII of the Criminal Code relating to the speedy trial of indictable offences, or under Part XVI of the Criminal Code relating to the summary trial of indictable offences. Cases triable by jury without the consent of the accused are: treason, treasonable offences, assaults on the Queen, mutiny, unlawfully obtaining and communicating official information, taking of oath to commit certain crimes, seditious offences, libels on foreign sovereigns, piracy, corruption of officers employed in prosecuting offenders, frauds on the Government, breach of trust by public officers, municipal corruption, selling of appointments to any office, murder, attempt to murder, conspiracy to murder, accessory after the fact to murder, manslaughter, rape, attempt to commit rape, defamatory libel, combination in restraint of trade, conspiring or attempting to commit, or being accessory after the fact to any of the above offences, also bribery or undue influence, personation or other corrupt practice under the Canada Elections Act. Also, when an offence is punishable with imprisonment for a period exceeding five years, the Attorney General may require the charge to be tried by jury.

Capital offences now include levying war, murder, piracy in cases of violence, rape, and treason. This is a drastic modification of the Code as it stood a century and a half ago. Further details of law and procedure are given in the 1951 Year Book, pp. 256-258.

In the Province of Quebec a district magistrate has powers extending beyond those of a magistrate in any other province. He has the same jurisdiction as a county court judge in Ontario and disposes of cases under Part XVIII of the Criminal Code, whereas the jurisdiction of the magistrates of other provinces extends only to Parts XV and XVI of the Criminal Code.

Non-indictable offences include cases usually dealt with summarily by police magistrates and justices of the peace under Part XV of the Criminal Code or under the provincial summary convictions Acts, as the case may be, and comprise breaches of municipal regulations and other minor offences.

The statistics presented in this Chapter are collected directly from the criminal courts in the different judicial districts throughout Canada. There are 157 such districts divided by provinces as follows: Newfoundland 7, Prince Edward Island 3, Nova Scotia 7, New Brunswick 15, Quebec 28, Ontario 48, Manitoba 6, Saskatchewan 21, Alberta 12, British Columbia 8, Yukon Territory 1 and the Northwest Territories 1.

Section 2.—Adult Offenders and Convictions

Subsection 1.—Adults Convicted of Indictable Offences

The main interest in criminal statistics is concerned with those persons guilty of the more serious crimes. Such offenders are fewer than those who commit non-indictable offences but, from the standpoint of the protection of society, they are more important.

In 1949, the basis of the statistics of indictable crimes was changed from convictions to persons; therefore, the tables in this Subsection can be compared only with those of the 1952-53 Year Book. Another significant difference from the previous tabulations is the change of the reporting year in 1951 from the 12 months ending Sept. 30 to the calendar year.

Where any person is prosecuted at the same hearing for several offences, one offence has to be selected for tabulation. The rule followed is to select that for which the proceedings were carried to the furthest stage—to conviction and sentence if the prisoner was tried on several charges; if there were several convictions, the offence selected is that for which the heaviest punishment was awarded; if the final result of proceedings on two or more charges was the same, the most serious offence (as measured by the maximum penalty allowed by the law) appears in the tables. Where a person was prosecuted for one offence and convicted of another (e.g., charged with murder and convicted of manslaughter), the case appears only under the offence for which he was convicted.

In the case of non-indictable offences, the figures given in Subsection 3 continue to be based on convictions and are comparable with those previously published.

Statistics include only cases finally determined within the year. Cases not entirely disposed of within the year (e.g., tried but sentence postponed) are held over for the next year's report.

Criminal statistics for Newfoundland are included for the first time in 1951.

During the year Jan. 1 to Dec. 31, 1951, the courts of Canada dealt with 34,181 adults charged with 48,225 indictable crimes, of whom 28,980 were found guilty of 39,309 offences. This was a decrease of 7·7 p.c. as compared with the year ended

Sept. 30, 1950, despite the addition of figures for Newfoundland included in the tables for the first time in 1951.

1.—Adults Convicted of Indictable Offences and Ratio per 10,000 Population, 16 Years of Age or Over, by Province, Years Ended Sept. 30, 1950 and Dec. 31, 1951

NOTE.—Figures for years prior to 1951 are for the fiscal year ended Sept. 30; 1951 figures are for the calendar year. Statistics for the three intervening months, October-December 1950, are given in DBS report *Statistics of Criminal and Other Offences*. Figures for Newfoundland are included for the first time in 1951.

Province or Territory	1950		1951	
	Persons Convicted	Ratio per 10,000 Population	Persons Convicted	Ratio per 10,000 Population
	No.	No.	No.	No.
Newfoundland	..	..	490	23
Prince Edward Island	124	20	109	17
Nova Scotia	1,464	33	1,296	31
New Brunswick	905	27	746	23
Quebec	6,417	25	5,726	22
Ontario	12,818	39	11,801	36
Manitoba	1,802	32	1,565	29
Saskatchewan	1,134	19	1,049	19
Alberta	2,401	40	2,302	36
British Columbia	4,178	50	3,821	45
Totals	**31,243**	**34**	**28,905**	**30**
Yukon and Northwest Territories	142	[1]	75	46
Canada	**31,385**	[1]	**28,980**	**30**

[1] Estimates of population 16 years of age or over are not available for the Yukon and Northwest Territories.

Indictable offences are divided into six classes as shown in Table 2. Class I covers crimes against the person. In 1951 the number of offenders in this class was 13·3 p.c. lower than in the previous reporting period. Two-thirds of the offenders were convicted of assaults of various kinds and obstructing police. Fifteen persons were convicted of murder (four fewer than in 1950), seven of attempted murder as compared with 13, and 92 of manslaughter as against 75 in the preceding reporting year.

Classes II, III, IV and V cover offences against property. Thieves predominate among the offenders in these classes though the number was slightly lower in 1951 than in 1950. Burglars and robbers whose serious crimes involve acts of violence are the next most numerous, though in 1951 they decreased by 10·4 p.c. as compared with the previous reporting period. The number of persons who maliciously damaged property also decreased by 23·6 p.c. in the same comparison.

Miscellaneous offences are listed in Class VI. Drunken drivers increased by 22·8 p.c. during 1951. There were 353 offenders under the Opium and Narcotic Drug Act, of whom 312 were convicted of possessing heroin; 238 were males; and 297 were born in Canada. British Columbia courts convicted 54·4 p.c. of the drug offenders and Ontario courts 21·5 p.c.

2.—Adults Convicted of Indictable Offences, by Class of Offence, Years Ended Sept. 30, 1950 and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280.

Class and Offence	1950			1951			Increase or Decrease in Persons Convicted
	Adults Charged	Adults Convicted		Adults Charged	Adults Convicted		
		M.	F.		M.	F.	
	No.	No.	No.	No.	No.	No.	p.c.
Class I.—Offences against the Person—							
Abduction	21	13	3	24	13	2	− 6·2
Assault, common, aggravated and on police	5,241	3,930	225	4,551	3,298	193	−16·0
Offences against females[1]	1,163	845	27	1,154	823	30	− 2·2
Manslaughter and murder	174	83	11	226	97	10	+13·8
Attempted murder; shooting and wounding	263	184	12	272	189	19	+ 6·1
Non-support, desertion	336	221	8	103	77	11	−61·6
Other offences against the person	396	310	27	412	332	21	+ 4·7
Totals, Class I	**7,594**	**5,586**	**313**	**6,742**	**4,829**	**286**	**−13·3**
Class II.—Offences against Property with Violence—							
Burglary and robbery	4,838	4,292	44	4,380	3,830	53	−10·4
Totals, Class II	**4,838**	**4,292**	**44**	**4,380**	**3,830**	**53**	**−10·4**
Class III.—Offences against Property without Violence—							
Fraud, embezzlement and false pretences	2,265	1,809	141	2,002	1,544	128	−14·3
Receiving stolen goods	1,105	867	46	1,081	815	48	− 5·5
Theft	11,179	9,162	804	11,222	9,051	820	− 0·9
Totals, Class III	**14,549**	**11,838**	**991**	**14,305**	**11,410**	**996**	**− 3·3**
Class IV.—Malicious Offences against Property—							
Arson	136	107	5	55	35	4	−65·2
Malicious damage to property	774	606	36	668	502	35	−16·4
Totals, Class IV	**910**	**713**	**41**	**723**	**537**	**39**	**−23·6**
Class V.—Forgery and Other Offences against the Currency—							
Offences against currency	36	27	—	21	17	1	−33·3
Forgery and uttering forged documents	715	607	70	613	516	58	−15·2
Totals, Class V	**751**	**634**	**70**	**634**	**533**	**59**	**−15·9**
Class VI.—Offences not included in the Foregoing Classes—							
Dangerous or reckless driving	2,006	1,703	31	1,708	1,510	25	−11·5
Driving car while drunk	1,842	1,574	11	2,192	1,917	30	+22·8
Opium and Narcotic Drug Act, offences against	420	252	104	424	238	115	− 0·8
Gambling and lotteries	897	782	61	686	558	38	−29·3
Keeping bawdy houses and inmates	229	83	134	214	34	131	−24·0
Various	2,441	1,985	143	2,173	1,648	164	−14·8
Totals, Class VI	**7,835**	**6,379**	**484**	**7,397**	**5,905**	**503**	**− 6·6**
Grand Totals	**36,477**	**29,442**	**1,943**	**34,181**	**27,044**	**1,936**	**− 7·7**

[1] Offences against females include: abortion, assault against females or wife, indecent assault, carnal knowledge, incest, procuration, rape, attempted rape and seduction.

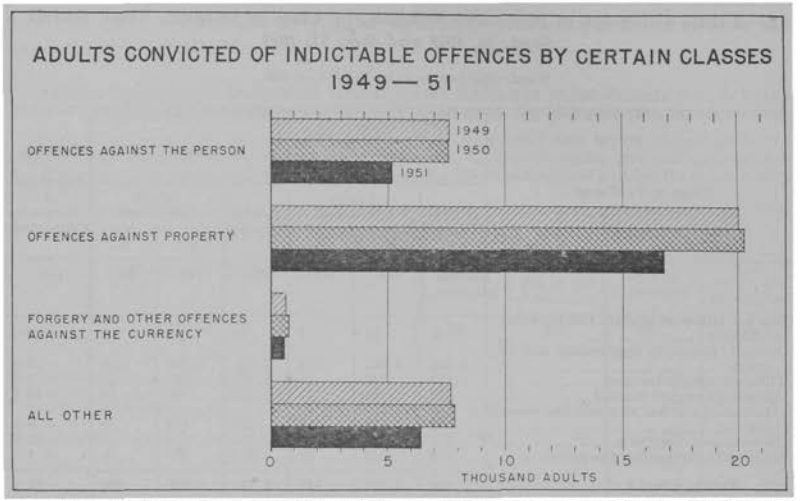


Table 3 shows that, in 1951, 58·7 p.c. of the persons convicted of indictable offences had not gone beyond elementary school grades in education, 40·9 p.c. were 24 years of age or younger, 11·6 p.c. were 45 years of age or over and 74·9 p.c. lived in urban centres. Of these offenders, 93·3 p.c. were males; 89·8 p.c. were born in Canada; 55·6 p.c. were unmarried; 23·7 p.c. were recorded as labourers; and 6·5 p.c. had no remunerative employment.

3.—Persons Convicted of Indictable Offences, classified by Occupation, Marital Status, Sex, Birthplace, etc., Years Ended Sept. 30, 1950 and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280.

Item	1950	1951	Item	1950	1951
	No.	No.		No.	No.
Type of Occupation—			Sex—		
Agriculture	2,014	1,712	Male	29,442	27,044
Armed Services	264	556	Female	1,943	1,936
Clerical	602	838			
Commercial and managerial	2,622	1,790	Educational Status—		
Construction	3,024	3,086	Unable to read or write	1,039	915
Finance and insurance	70	78	Elementary	19,068	17,012
Fishing, trapping and logging	1,497	1,484	High School	8,172	7,781
Labourer	8,166	6,861	Superior	865	696
Manufacturing and mechanical	3,012	3,290	Not given	2,241	2,576
Mining	703	687			
Service—			Age—		
Domestic	474	681	16 to 19 years	6,033	5,537
Personal	1,298	972	20 to 24 years	6,716	6,322
Professional	249	223	25 to 44 years	13,619	12,814
Public and protective	147	186	45 years or over	3,717	3,378
Student	667	527	Not given	1,300	929
Other	138	138			
Transportation and communications	3,328	3,090	Birthplace—		
Unemployed and retired[1]	2,220	1,896	Canada	27,897	26,021
Not given	890	885	British Isles and other Commonwealth	971	885
Totals	**31,385**	**28,980**	United States	497	439
			Europe	1,260	1,082
Marital Status—			Asia	144	110
Single	17,411	16,111	Other foreign countries	13	6
Married	11,535	10,889	Not given	603	437
Widowed	399	378			
Divorced	189	151	Residence—		
Separated	538	579	Urban centres	23,782	21,704
Not given	1,313	872	Rural districts	7,061	7,003
			Not given	542	273

[1] Includes housewives.

Female Offenders.—There were 1,936 female offenders convicted of indictable offences in 1951, 46 of them in Newfoundland. Nova Scotia, Quebec and Alberta were the only provinces showing an increase over the previous reporting period. Nearly 44·8 p.c. of the women convicted in 1951 were found guilty of theft and receiving stolen goods, while 10 p.c. were committed for assualt. Nine women were convicted of manslaughter and one of murder.

4.—Females Convicted of Indictable Offences, by Province, Years Ended Sept. 30, 1949 and 1950, and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280.

Province or Territory	Females Convicted			Females Convicted to Total Convictions		
	1949	1950	1951	1949	1950	1951
	No.	No.	No.	p.c.	p.c.	p.c.
Newfoundland	..	..	46	..	..	9·4
Prince Edward Island	1	3	3	0·8	2·4	2·8
Nova Scotia	50	66	74	3·4	4·5	5·7
New Brunswick	34	33	25	4·5	3·6	3·4
Quebec	359	335	349	5·5	5·2	6·1
Ontario	796	772	742	6·8	6·0	6·3
Manitoba	137	192	167	9·3	10·7	10·7
Saskatchewan	51	64	62	4·7	5·6	5·9
Alberta	154	166	178	7·2	6·9	7·7
British Columbia	253	303	287	7·1	7·3	7·5
Yukon and Northwest Territories	1	9	3	0·9	6·3	4·0
Canada	**1,836**	**1,943**	**1,936**	**6·3**	**6·2**	**6·7**

Persons with Multiple Convictions.—Table 5 shows the number of persons having more than one conviction at a court appearance for the years 1947-51. Multiple convictions occur most often in cases of forgery and uttering, false pretences, theft, receiving stolen goods and burglary.

5.—Persons Convicted of More than One Offence at the Time of Trial compared with Persons Convicted of One Offence, Years Ended Sept. 30, 1947-50 and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280.

Item	1947	1948	1949	1950	1951
	No.	No.	No.	No.	No.
Persons Convicted of—					
2 offences	2,364	2,260	2,593	1,769	1,669
3 "	646	590	814	507	562
4 "	308	332	363	275	248
5 "	157	154	195	174	162
6 "	111	98	120	108	117
7 "	46	56	63	70	75
8 "	47	47	63	50	50
9 "	41	42	46	46	26
10 "	26	27	56	31	32
11 to 20 offences	83	93	107	88	84
21 offences or over	33	25	30	14	28
Totals, Convicted of More than One Offence	3,862	3,724	4,450	3,132	3,053
Totals, Convicted of One Offence	31,271	28,959	26,472	28,253	25,927
Grand Totals	**35,133**	**32,683**	**30,922**	**31,385**	**28,980**

Disposition of Cases and Recidivism.—Of all suspects before the courts for indictable crimes, 84·8 p.c. were adjudged guilty in 1951; the convictions against males (85·2 p.c.) constituted a higher percentage than those against females (79·8 p.c.) and varied greatly as between provinces. Prince Edward Island showed the highest percentage (97·3 p.c.) of convicted persons and Nova Scotia the lowest percentage (74·8 p.c.).

In 1951, 54·8 p.c. of the convicted persons were first offenders, 8·6 p.c. had previously been found guilty of an offence and 20·6 p.c. had two or more earlier convictions. Court records for the remaining 16·0 p.c. were not obtained.

6.—Persons Charged, Acquitted and Convicted of Indictable Offences, Years Ended Sept. 30, 1949 and 1950, and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280.

Item	1949	1950	1951
	No.	No.	No.
Charges	36,134	36,477	34,181
Acquittals[1]	5,212	5,092	5,201
Convictions	30,922	31,385	28,980
Males	29,086	29,442	27,044
Females	1,836	1,943	1,936
First convictions	17,856	18,893	15,881
Second convictions	2,634	2,855	2,502
Reiterated convictions	6,244	6,512	5,975
Not given	4,188	3,125	4,622

[1] Includes dismissals, disagreement of jury, stay of proceeding, no bill, and detained because of insanity.

7.—Persons Charged and Convictions for Indictable Offences, by Province, Years Ended Sept. 30, 1950, and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280.

Province or Territory	1950			1951		
	Charges	Convictions		Charges	Convictions	
	No.	No.	p.c.	No.	No.	p.c.
Newfoundland	..	..	..	565	490	86·7
Prince Edward Island	131	124	94·7	112	109	97·3
Nova Scotia	1,964	1,464	74·5	1,733	1,296	74·8
New Brunswick	946	905	95·7	780	746	95·6
Quebec	7,252	6,417	88·5	6,357	5,726	90·1
Ontario	15,691	12,818	81·7	14,975	11,801	78·8
Manitoba	1,889	1,802	95·4	1,706	1,565	91·7
Saskatchewan	1,213	1,134	93·5	1,116	1,049	94·0
Alberta	2,589	2,401	92·7	2,426	2,302	94·4
British Columbia	4,644	4,178	90·0	4,333	3,821	88·2
Yukon and N.W.T.	158	142	89·9	78	75	96·2
Canada	**36,477**	**31,385**	**86·0**	**34,181**	**28,980**	**84·8**

Sentences.—The types of sentences were in much the same proportion in 1950 and 1951. In the latter year, 30·3 p.c. of the persons convicted of indictable crimes were fined, 37·4 p.c. were sent to gaol without option of fine, 5·9 p.c. were committed to reformatories and 6·5 p.c. to penitentiaries, and 19·8 p.c. were given suspended sentences or put on probation. One habitual criminal was given preventive detention. Six persons received life sentences and 15 were given the death penalty.

8.—Sentences given for Indictable Offences, by Province, Year Ended Dec. 31, 1951, with Totals for Year Ended Sept. 30, 1950

NOTE.—*See* headnote to Table 1, p. 280.

Sentence	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada 1951	Canada 1950
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Option of fine.....	173	22	467	253	1,754	2,902	459	351	706	1,676	13	8,776	9,140
Gaol—													
Under one year..	180	61	404	272	2,203	3,592	445	446	798	935	42	9,378	10,354
One year or over.	20	2	10	6	447	312	113	88	190	285	6	1,479	1,607
Reformatory....	—	—	8	6	60	1,443	53	13	18	104	—	1,705	2,054
Penitentiary—													
Two years and under five.....	10	9	122	72	491	449	82	36	163	165	6	1,605	1,734
Five years or over.....	3	1	5	1	109	90	6	4	12	45	2	278	325
Life.....	—	—	—	—	5	1	—	—	—	—	—	6	5
Preventive detention.....	—	—	—	—	—	1	—	—	—	—	—	1	2
Death.....	—	—	—	—	5	5	1	1	—	3	—	15	19
Suspended sentence or other disposition.....	104	14	280	136	652	3,006	406	110	415	608	6	5,737	6,145
Totals.....	**490**	**109**	**1,296**	**746**	**5,726**	**11,801**	**1,565**	**1,049**	**2,302**	**3,821**	**75**	**28,980**	**31,385**

Court Proceedings.—Figures for 1951 show that 61·5 p.c. of the persons tried by jury were convicted; speedy trials (by court after waiver of jury trial) brought convictions in 76·6 p.c. of the cases so tried and summary trials by magistrates ended in convictions in 86·1 p.c. of the cases.

Of persons charged on indictment, 90·4 p.c. were tried by magistrate or family and juvenile court judge, 2·7 p.c. by judge and jury and 7·0 p.c. by judge.

Tables **9** and **10** summarize court proceedings for the year ended Dec. 31, 1951.

9.—Method of Trial of Persons Charged with Indictable Crimes showing Disposition of Cases, by Province, Year Ended Dec. 31, 1951

Method of Trial		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
By Jury—													
Convicted	M.	4	5	45	17	156	180	32	18	41	52	1	551
	F.	—	—	1	—	12	8	3	—	2	5	—	31
Acquitted	M.	4	—	24	7	68	111	12	10	11	43	—	290
	F.	2	—	—	—	21	14	1	—	1	3	—	42
Detained because of insanity	M.	1	—	—	1	4	2	—	—	—	—	—	8
	F.	—	—	—	—	—	1	—	—	—	—	—	1
Disagreement of Jury / Stay of Proceedings / No Bill and *Nolle Prosequi*	M.	3	—	4	1	2	3	—	—	—	9	—	22
	F.	—	—	—	—	—	1	—	—	—	—	—	1
By Speedy Trial—													
Convicted	M.	1	5	88	21	857	362	85	16	88	225	—	1,748
	F.	—	—	6	2	44	16	5	2	7	16	—	98
Acquitted	M.	—	—	21	1	229	152	21	9	14	68	—	515
	F.	—	—	1	—	23	9	1	—	1	6	—	41
Stay of Proceedings / No Bill and *Nolle Prosequi*	M.	—	—	—	—	—	—	3	—	—	4	—	7
	F.	—	—	—	—	—	—	—	—	—	—	—	—
By Summary Trial—													
Convicted	M.	439	96	1,089	683	4,364	10,517	1,281	953	1,995	3,257	71	24,745
	F.	46	3	67	23	293	718	159	60	169	266	3	1,807
Acquitted	M.	59	3	340	24	237	2,602	68	37	81	314	3	3,768
	F.	5	—	42	—	22	267	7	6	15	28	—	392
Detained because of insanity	M.	—	—	3	—	9	9	—	5	—	—	—	26
	F.	1	—	1	—	1	2	—	—	—	—	—	5
Stay of Proceedings / No Bill and *Nolle Prosequi*	M.	—	—	1	—	15	—	26	—	1	33	—	76
	F.	—	—	—	—	—	1	2	—	—	4	—	7
Totals, Persons Charged		565	112	1,733	780	6,357	14,975	1,706	1,116	2,426	4,333	78	34,181
Totals, Persons Convicted		490	109	1,296	746	5,726	11,801	1,565	1,049	2,302	3,821	75	28,980

10.—Persons Charged and Convicted of Indictable Crimes according to Trial Court, by Province, Year Ended Dec. 31, 1951

Province or Territory		Persons Charged and Convicted by—					Totals
		Police Magistrate or Recorder's Court	Juvenile or Family Court	County Court	Circuit Court	Higher Court	
		No.	No.	No.	No.	No.	No.
Newfoundland	Charged	535	16	—	—	14	565
	Convicted	471	15	—	—	4	490
P.E. Island	Charged	99	3	5	—	5	112
	Convicted	96	3	5	—	5	109
Nova Scotia	Charged	1,544	—	117	—	72	1,733
	Convicted	1,156	—	95	—	45	1,296
New Brunswick	Charged	730	2	22	6	20	780
	Convicted	706	2	21	5	12	746
Quebec	Charged	4,486	458	1,151	—	262	6,357
	Convicted	4,205	455	899	—	167	5,726
Ontario	Charged	14,072	81	562	—	260	14,975
	Convicted	11,187	78	390	—	146	11,801
Manitoba	Charged	1,378	169	107	—	52	1,706
	Convicted	1,274	169	84	—	38	1,565
Saskatchewan	Charged	1,066	2	21	—	27	1,116
	Convicted	1,018	2	12	—	17	1,049
Alberta	Charged	2,103	167	41	—	115	2,426
	Convicted	2,005	167	33	—	97	2,302
British Columbia	Charged	3,558	354	316	—	105	4,333
	Convicted	3,190	340	238	—	53	3,821
Yukon and N.W.T.	Charged	77	—	—	—	1	78
	Convicted	74	—	—	—	1	75
Totals	**Charged**	**29,648**	**1,252**	**2,342**	**6**	**933**	**34,181**
	Convicted	**25,382**	**1,231**	**1,777**	**5**	**585**	**28,980**

Subsection 2.—Young Adult Offenders (16-24 Years)

Young men and women from 16 to 24 years of age formed 40·9 p.c. of the criminal population who committed indictable offences in 1951, although they comprised only 20·3 p.c. of the total population of 16 years of age or over. As this age group includes some of the most daring offenders, who may be already experienced criminals, as well as first offenders likely to profit by further education and training, it seems worth while to give consideration to it as distinct from the older offender groups.

Almost 75 p.c. of the young offenders were tried in three provinces—Ontario (39·4 p.c.), Quebec (21·0 p.c.) and British Columbia (12·5 p.c.); 46·7 p.c. of these offenders were still under 20 years of age.

11.—Young Adult Offenders, by Age Group, Sex and Province, Year Ended Dec. 31, 1951

Age Group and Sex	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No	No.	No.	No.	No.	No.	No.	No.	No.
16–17 years.....M.	51	10	101	59	543	920	134	139	245	389	2	2,593
F.	3	—	5	4	25	54	44	6	20	26	—	187
18–19 " .....M.	54	2	118	50	509	1,052	120	102	211	333	2	2,553
F.	14	—	10	5	35	60	13	10	29	28	—	204
20–24 " .....M.	101	13	251	148	1,308	2,428	257	243	509	645	11	5,914
F.	4	—	14	5	73	155	42	9	47	58	1	408
Totals.....	**227**	**25**	**499**	**271**	**2,493**	**4,669**	**610**	**509**	**1,061**	**1,479**	**16**	**11,859**

Young men aged 16 to 24 years comprised 32·6 p.c. of the male offenders convicted of assault (including obstructing the police); 61 p.c. of the total who attempted and committed rape; 66·1 p.c. of the male robbery and burglary convictions; 45 p.c. of those guilty of damage to property without violence, which includes all thefts; 76·4 p.c. of those who stole motor-vehicles; 53·4 p.c. and 45·7 p.c., respectively, of those who maliciously damaged property and were found with offensive weapons; and 26·2 p.c. of the reckless drivers.

There were, however, 910 fewer male offenders within this age group in 1951 than in the year ended Sept. 30, 1950, and, except for theft of automobiles, the actual number of youths convicted of the offences referred to above was less in each instance in 1951 than in the previous reporting year.

There were 799 young women offenders in 1951, 20 more than in the previous reporting year. They comprised 41·3 p.c. of all women guilty of indictable crimes. Nearly 50 p.c. of them (385) were guilty of thefts and receiving stolen goods. A third (39) of the women offenders under the Opium and Narcotic Drug Act were in this age group, an increase of 16 over the number convicted in 1950.

12.—Young Adult Offenders Convicted of Indictable Offences, by Class of Offence and Sex, Years Ended Sept. 30, 1950 and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280.

Class and Offence	1950		1951	
	Male	Female	Male	Female
	No.	No.	No.	No.
Class I.—Offences against the Person—				
Abduction	3	2	8	—
Assault, common and aggravated	1,314	59	1,076	46
Offences against females[1]	241	4	236	5
Manslaughter and murder	21	4	23	2
Attempted murder; shooting and wounding	48	2	58	5
Non-support, desertion and cruelty to children	21	1	8	8
Other offences against the person	88	15	94	8
Totals, Class I	**1,736**	**87**	**1,503**	**74**

[1] Offences against females include: abortion, assault against females, assault against wife, indecent assault, carnal knowledge, incest, procuration, rape, attempted rape, seduction and wife desertion.

12.—Young Adult Offenders Convicted of Indictable Offences, by Class of Offence and Sex, Years Ended Sept. 30, 1950 and Dec. 31, 1951—concluded

Class and Offence	1950		1951	
	Male	Female	Male	Female
	No.	No.	No.	No.
Class II.—Offences against Property with Violence—				
Burglary and robbery	2,854	29	2,532	30
Totals, Class II	**2,854**	**29**	**2,532**	**30**
Class III.—Offences against Property without Violence—				
Fraud, embezzlement and false pretences	410	53	332	52
Receiving stolen goods	344	25	334	21
Theft	4,564	366	4,463	364
Totals, Class III	**5,318**	**444**	**5,129**	**437**
Class IV.—Malicious Offences against Property—				
Arson	28	—	17	2
Malicious damage to property	274	14	270	16
Totals, Class IV	**302**	**14**	**287**	**18**
Class V.—Forgery and Other Offences against the Currency—				
Offences against currency	4	—	7	—
Forgery and uttering forged documents	206	36	179	35
Totals, Class V	**210**	**36**	**186**	**35**
Class VI.—Other Offences—				
Carrying unlawful weapons	151	2	100	2
Dangerous or reckless driving	435	7	395	7
Driving car while drunk	208	2	284	3
Offences against public morals	38	46	33	41
Opium and Narcotic Drug Act, offences against	30	23	40	39
Gambling and lotteries	61	4	23	7
Keeping bawdy houses and inmates	7	49	3	43
Riots and unlawful assembly	149	1	133	7
Various	471	35	412	56
Totals, Class VI	**1,550**	**169**	**1,423**	**205**
Grand Totals	**11,970**	**779**	**11,060**	**799**

In Table 13 the rates per 100,000 estimated population show the proportions of young offenders in three age groups.

13.—Rates per 100,000 Population of Young Adults Convicted of Indictable Offences, by Age Group, Years Ended Sept. 30, 1950 and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280.

Age Group	1950			1951		
	Offenders	Per 100,000 Population in Respective Group	Change from Preceding Year	Offenders	Per 100,000 Population in Respective Group	Change from Preceding Year
	No.	No.	p.c.	No.	No.	p.c.
16–17 years	2,926	684	+9·1	2,780	659	− 5·0
18–19 "	3,107	718	+6·0	2,757	652	−11·3
20–24 "	6,716	606	−2·1	6,322	581	− 5·9

The sentences meted out to these young people varied somewhat from those given to offenders of over 24 years of age. A higher proportion of them in 1951 were given suspended sentences, put on probation or sent to reformatories while a lower proportion were fined or given gaol or penitentiary sentences.

14.—Disposition of Sentences for Indictable Offences, Year Ended Dec. 31, 1951

Disposition of Sentences	Males		Females	
	16-24 Years	25 Years or Over	16-24 Years	25 Years or Over
	p.c.	p.c.	p.c.	p.c.
Suspended sentence	16·4	10·5	22·4	18·4
Probation	10·3	2·8	17·6	7·8
Fined	23·9	34·5	17·8	35·2
Gaol	34·2	41·2	30·0	32·2
Reformatory	8·6	3·9	10·1	3·1
Penitentiary	6·6	7·0	2·0	3·2
Death	0·01	0·1	—	0·1

Through suspending sentence and probation supervising, many of these young offenders received another chance to make good, while reformatory training gave others an opportunity to better their employment possibilities. In this connection it is interesting to note that 30·3 p.c. of the males were recorded as labourers, which indicates that they had no particular skill by which to earn a living; the proportion of male offenders over 25 years of age recorded as labourers was 21·8 p.c. Four percent of the youths were students and another 5·2 p.c. were unemployed as compared with 2 p.c. of the older men. Three out of four of them lived in urban centres.

Of the young female offenders, 35·3 p.c. were not gainfully employed; domestic or personal service was the occupation of 37·5 p.c. and 83·5 p.c. lived in urban centres.

Since those convicted of non-indictable offences are not reported by age of offender, it is not possible to segregate young people of 16 to 24 years of age who have had summary convictions.

Subsection 3.—Convictions for Non-indictable Offences

Non-indictable offences—those not expressly made indictable—include all offences against provincial statutes and municipal by-laws. Non-indictable offences are triable by magistrate or justice of the peace under Part XV of the Criminal Code or under the provincial summary convictions Acts, as the case may be.

It is debatable how far summary convictions are of a criminal nature and how much their increase indicates an increase in crime. Many are breaches of municipal by-laws and contrary to public safety, health and comfort as, for example, parking violations or exercising callings without licence, but they do not involve violence, cruelty or serious dishonesty. On the other hand, offences as serious as cruelty to animals and contributing to juvenile delinquency are included under this classification and such indictable offences as common assault and driving with ability impaired may be tried on summary conviction.

Summary convictions increased by 10·5 p.c. to 1,308,466 in the calendar year 1951 from 1,183,991 in the year ended Sept. 30, 1950. Increases were general in all provinces except Quebec and Saskatchewan.

15.—Convictions for Non-indictable Offences, by Province, Years Ended Sept. 30, 1942-50 and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280. Figures for 1900-41 are given in the corresponding tables of previous Year Books beginning with the 1933 edition.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1942.....	...	1,521	10,386	8,170	195,672	285,240	32,209	8,541	14,543	24,905	86	91	581,364
1943.....	...	1,033	8,857	7,619	181,425	204,227	21,986	7,810	11,598	20,510	145	105	465,315
1944.....	...	1,287	8,760	9,533	146,593	199,938	22,602	7,788	11,950	21,866	336	74	430,727
1945.....	...	1,394	9,786	9,818	158,580	209,713	22,820	8,996	11,576	22,887	312	36	455,918
1946.....	...	2,715	12,915	13,925	176,996	354,154	36,014	13,985	16,289	32,203	234	242	659,672
1947.....	...	2,806	12,019	14,097	188,835	407,334	47,170	15,263	18,696	45,585	328	325	752,458
1948.....	...	2,696	13,699	12,189	228,502	445,911	52,783	15,488	19,748	85,006	385	238	876,645
1949.....	..	3,118	12,617	13,131	232,132	510,837	72,023	16,465	25,551	94,326	232	57	980,489
1950.....	..	2,095	13,137	21,732	280,868	617,565	79,079	22,717	28,344	117,729	553	172	1,183,991
1951.....	5,022	2,195	14,850	25,660	267,648	671,893	118,217	22,467	39,956	139,304	950	304	1,308,466

It should be remembered that, while the Criminal Code undergoes little change over a period of time, the figures for summary convictions are greatly influenced by the customs of the people and by the application and degree of enforcement of municipal regulations. These differ from place to place and from year to year and affect non-indictable offences more than they do indictable crimes.

In 1951, marked decreases in certain types of offences, such as vagrancy, contributing to juvenile delinquency, offences under the Lord's Day Act, and gambling, were offset by decided increases in convictions for breaches of traffic regulations, which reached an all-time peak, assault and disturbing the peace, drunkenness and non-payment of radio licence fee. There were 1,290 convictions for leaving the scene of an accident against 424 the previous year.

16.—Convictions for Non-indictable Offences, by Type, Years Ended Sept. 30, 1947-50 and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280.

Type of Offence	1947	1948	1949	1950	1951	Increase or Decrease 1950-51
	No.	No.	No.	No.	No.	p.c.
Assault (common)	4,543	4,416	4,607	3,906	4,046	+ 3·6
Disturbing the peace	4,438	7,544	11,018	10,568	12,210	+ 15·5
Drunkenness	70,868	70,542	75,931	75,935	83,898	+ 10·5
Vagrancy	15,904	9,051	8,576	8,967	6,893	− 23·1
Damage to property	1,544	1,537	1,675	1,720	1,678	− 2·4
Gambling Acts, offences against	5,215	5,523	6,360	4,818	3,613	− 25·0
Bawdy houses (frequenting)	373	1,111	586	480	273	− 43·1
Non-support and neglecting children	2,928	4,524	4,217	4,459	4,609	+ 3·4
Contributing to delinquency	1,212	1,272	1,087	1,126	932	− 17·2
Traffic regulations	537,519	649,599	761,467	938,549	1,065,426	+ 13·5
Provincial and Federal Acts—						
Game and Fishing Acts	4,423	4,753	5,854	6,144	5,996	− 2·4
Indian Act	[1]	1,570	2,386	2,426	2,213	− 8·8
Liquor Control and Temperance Acts	28,486	27,744	28,259	31,738	28,405	− 10·5
Lord's Day Act	1,235	1,428	1,014	2,072	749	− 63·8
Radio without a licence	12,477	10,693	12,235	10,642	12,418	+ 16·7
Railway Acts	1,586	1,735	1,827	2,278	1,266	− 44·4
Revenue Laws	2,430	2,690	2,704	3,175	565	− 82·2
Other provincial and federal Acts	15,610	23,006	13,240	20,399	19,168	− 6·0
Municipal by-laws, breaches of	34,354	40,552	30,387	44,349	40,621	− 8·4
Exercising various callings without licence	2,096	1,178	1,359	2,580	2,349	− 9·0
Other offences	5,217	6,177	5,700	7,660	11,138	+ 45·4
Totals, Convictions	**752,458**	**876,645**	**980,489**	**1,183,991**	**1,308,466**	**+ 10·5**

[1] Included with Liquor Control and Temperance Acts, and Drunkenness.

Breaches of Traffic Regulations.—Each year breaches of traffic regulations constitute a greater proportion of the total convictions for non-indictable offences. In 1951 they amounted to 81·4 p.c., an increase of 13·5 p.c. over 1950, which alone would account for the increase in summary convictions; 98·9 p.c. of them were offences under provincial highway traffic Acts and municipal by-laws.

17.—Convictions for Breaches of Traffic Regulations, by Province, Years Ended Sept. 30, 1942-50 and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280. Figures for 1900-41 are given in the corresponding tables of previous Year Books beginning with the 1933 edition.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1942.....	...	331	2,594	1,765	110,579	232,646	25,522	4,034	7,779	14,705	2	399,957
1943.....	...	209	2,772	1,722	82,884	152,557	16,074	2,961	4,745	10,628	21	274,573
1944.....	...	326	1,591	1,838	85,134	146,849	16,268	2,864	4,754	10,387	10	270,021
1945.....	...	157	1,359	2,211	100,708	149,903	14,886	2,838	3,774	10,985	4	286,825
1946.....	...	327	1,707	2,014	123,915	271,379	26,266	5,253	5,574	17,193	2	453,630
1947.....	...	556	2,370	2,667	138,321	315,412	36,526	6,141	7,476	28,043	7	537,519
1948.....	...	393	4,607	2,469	174,021	352,253	41,074	6,300	7,984	60,493	5	649,599
1949.....	..	519	4,084	3,729	188,003	417,016	60,127	7,274	11,112	69,545	58	761,467
1950.....	..	366	4,265	11,909	227,857	508,010	67,832	12,362	13,772	92,038	138	938,549
1951.....	1,773	580	5,802	15,641	215,222	570,895	106,262	13,325	22,923	112,738	265	1,065,426

For the year 1951, Ontario, with 42·0 p.c. of the registrations of motor-vehicles in Canada, had 53·6 p.c. of the total convictions for breaches of traffic regulations; Quebec in the same year had 17·4 p.c. of the motor-vehicles and 20·2 p.c. of the convictions. In interpreting the figures in this way, however, it should be pointed out that traffic regulations are by no means uniform throughout Canada and no account is taken of the differences in the degrees of urbanization in the provinces. These two provinces have large urban centres, while in provinces with lower degrees of urbanization, such as the Atlantic Provinces, Saskatchewan and Alberta, convictions are lower when considered in proportion to the number of motor-vehicles registered.

Convictions for Drunkenness and Offences against the Liquor Acts.—In considering Table 18, it should be noted that the same person may and often does appear before the courts on such charges more than once within a year and that the number of convictions may thus be well above the number of persons convicted.

18.—Convictions for Drunkenness, by Province, Years Ended Sept. 30, 1942-50 and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280. Figures for 1900-41 are given in the corresponding tables of previous Year Books beginning with the 1933 edition.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N. W. T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1942.....	...	606	4,387	4,217	10,400	17,622	1,580	570	1,393	3,964	43	19	44,801
1943.....	...	332	2,380	3,489	10,363	17,482	1,885	778	1,462	4,055	51	15	42,292
1944.....	...	395	2,068	4,292	8,843	17,258	1,451	864	1,539	4,744	54	13	41,521
1945.....	...	612	3,064	4,158	10,336	19,573	2,040	1,010	1,515	4,342	85	10	46,745
1946.....	...	1,478	4,754	7,754	7,167	29,698	2,685	1,847	2,596	5,974	85	38	64,076
1947.....	...	1,187	4,907	6,584	11,006	31,218	2,510	1,802	2,632	8,801	184	37	70,868
1948.....	...	969	4,151	4,900	11,015	33,446	2,829	1,392	2,580	9,135	101	24	70,542
1949.....	..	1,089	4,363	5,125	10,419	33,797	3,613	1,497	4,656	11,237	126	9	75,931
1950.....	..	907	3,931	4,980	10,942	35,356	2,984	1,503	3,849	11,180	240	63	75,935
1951.....	844	759	4,432	6,036	10,222	38,577	3,098	1,915	4,691	13,007	213	104	83,898

There is general interest in the relation of alcoholism to crime but when examining statistics to support the assumption that some crimes are associated with the consumption of liquor it should be observed that accurate interpretation would necessitate allowance for population variables such as age and sex distribution and other classifications according to social and economic status, etc.

19.—Convictions for Offences against the Liquor Acts, by Province, Years Ended Sept. 30, 1942-50 and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280. Figures for 1900-41 are given in the corresponding tables of previous Year Books beginning with the 1933 edition.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N. W. T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1942.....	...	188	1,323	477	3,037	6,901	1,130	982	1,294	1,508	24	34	16,898
1943.....	...	118	1,369	473	2,070	6,751	1,086	1,099	1,106	944	47	36	15,099
1944.....	...	56	2,240	814	1,287	8,332	1,057	1,010	1,108	1,047	119	23	17,093
1945.....	...	155	2,324	911	2,626	10,655	1,429	1,416	1,454	1,215	39	13	22,237
1946.....	...	374	3,436	1,411	2,274	15,779	2,059	2,697	2,514	2,615	57	146	33,362
1947.....	...	354	2,503	1,742	1,494	12,889	2,229	2,712	2,623	1,741	46	153	28,486
1948.....	...	329	2,274	1,274	1,519	13,891	1,921	2,311	2,670	1,443	39	73	27,744
1949.....	..	439	2,053	1,278	1,969	14,339	1,574	2,418	3,081	1,098	—	10	28,259
1950.....	..	268	2,192	1,172	3,121	15,761	1,980	2,478	3,504	1,164	64	34	31,738
1951.....	371	266	2,273	818	1,467	14,104	1,961	2,005	3,757	1,251	88	44	28,405

20.—Convictions of Females for Non-indictable Offences, by Province, Years Ended Sept. 30, 1947-50 and Dec. 31, 1951

NOTE.—*See* headnote to Table 1, p. 280.

Province or Territory	Numbers of Convictions					Percentages of Convictions of Females to Total Convictions				
	1947	1948	1949	1950	1951	1947	1948	1949	1950	1951
Newfoundland.....	...	...	..	..	206	...	...	..	..	4·1
Prince Edward Island.....	43	65	66	67	40	1·5	2·5	2·1	3·2	1·8
Nova Scotia.....	383	469	349	389	471	3·2	3·5	2·8	3·0	3·2
New Brunswick.....	480	348	373	446	501	3·4	2·9	2·8	2·1	2·0
Quebec.....	6,738	6,803	7,404	10,398	9,056	3·6	3·7	3·2	3·7	3·4
Ontario.....	20,581	33,360	42,022	56,225	57,135	5·1	8·1	8·2	9·1	8·5
Manitoba.....	1,715	1,812	2,135	1,684	1,745	3·6	3·6	3·0	2·1	1·5
Saskatchewan.....	526	513	476	595	592	3·5	3·4	2·9	2·6	2·6
Alberta.....	1,057	1,156	1,224	1,194	1,208	5·7	6·2	4·8	4·2	3·0
British Columbia.....	2,936	7,254	7,216	9,972	13,596	6·4	9·3	7·7	8·5	9·8
Yukon and N.W.T.....	49	76	16	42	51	7·5	13·9	5·5	5·8	4·1
Canada.....	**34,508**	**51,856**	**61,281**	**81,012**	**84,601**	**4·6**	**6·3**	**6·3**	**6·8**	**6·5**

Conviction of Females.—The number of convictions against females for non-indictable offences has increased steadily each year since 1944; the increase in the calendar year 1951 over the year ended Sept. 30, 1950, amounted to 4·4 p.c. Only three provinces, Prince Edward Island, Quebec and Saskatchewan recorded decreases in 1951 from the previous reporting year. British Columbia, Nova Scotia and New Brunswick showed the largest percentage increases in summary convictions against females—36·3 p.c., 21·1 p.c. and 12·3 p.c., respectively.

Total traffic offences for which women were responsible increased in 1951 over 1950 by 9·5 p.c. and were the cause of 82·7 p.c. of the summary convictions against them.

Subsection 4.—Appeals

In the calendar year 1951, the Supreme Court of Canada and the provincial supreme courts dealt with 839 appeals of criminal cases as compared with 895 in the year ended Sept. 30, 1950. The Crown was the appellant in 66 of these cases and the accused in 773 cases. The original conviction or orders were affirmed in 511 cases (60·9 p.c.); sentence was varied or the verdict changed or substituted in 166 cases (19·7 p.c.); 115 convictions (13·7 p.c.) were quashed, and 47 new trials (5·6 p.c.) were ordered.

The returns from the county and district courts showed that 810 appeals against summary convictions were disposed of in 1951, as against 747 in the previous reporting year. Of that number the informant was the appellant in 105 cases and the accused in 705 cases. The appeals against convictions and orders were dismissed in 439 cases (54·2 p.c.); sentence was varied and the verdict changed or substituted in 159 cases (19·6 p.c.), and there were 212 acquittals (26·2 p.c.). More than a third (38·0 p.c.) of the appeals in all the courts were heard in Ontario, 15·1 p.c. in British Columbia, 17·4 p.c. in Alberta, 13·1 p.c. in Nova Scotia and 6·3 p.c. in Quebec.

21.—Appeals in Indictable and Summary Conviction Cases, by Province, 1951

Province or Court	Indictable Offences											
	Appeals Disposed of by Courts	Crown Appeal					Appeal of Accused					
		From Acquittal			From Sentence		From Conviction				From Sentence	
		Dismissed	New Trial	Conviction	Dismissed	Varied	Dismissed	Acquitted	New Trial	Substituted Verdict	Dismissed	Varied
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
N'f'ld	—	—	—	—	—	—	—	—	—	—	—	—
P.E.I.	2	—	—	—	—	—	2	—	—	—	—	—
N.S.	21	2	1	1	—	—	9	—	2	—	3	3
N.B.	7	—	1	1	—	—	2	1	1	—	—	1
Que.	69	2	—	2	1	1	37	11	8	—	2	5
Ont.	323	4	1	—	4	12	154	66	13	22	23	24
Man.	44	—	—	3	—	—	24	1	1	—	13	2
Sask.	19	—	—	—	4	—	3	2	—	—	3	7
Alta.	110	2	1	—	6	—	21	4	7	—	41	28
B.C.	232	2	1	1	3	4	77	29	10	7	61	37
Supreme Court of Canada	12	1	—	5	—	—	5	1	—	—	—	—
Totals	**839**	**13**	**5**	**13**	**18**	**17**	**334**	**115**	**42**	**29**	**146**	**107**

Province	Summary Conviction Cases									
	Appeals Disposed of by Courts	Appeal of Informant				Appeal of Accused				
		From Acquittal		From Sentence		From Conviction			From Sentence	
		Dismissed	Conviction	Dismissed	Varied	Dismissed	Acquitted	Substituted Verdict	Dismissed	Varied
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
N'f'ld	4	—	—	—	—	2	—	—	—	2
P.E.I.	25	—	—	—	—	24	—	—	—	1
N.S.	106	14	6	2	1	50	29	2	—	2
N.B.	16	—	2	—	—	6	7	—	—	1
Que.	51	2	15	1	2	27	3	—	—	1
Ont.	307	15	18	2	5	133	88	18	20	8
Man.	11	—	—	—	1	4	3	1	1	1
Sask.	27	3	1	2	—	8	9	2	—	2
Alta.	141	1	2	—	2	29	43	4	18	42
B.C.	122	4	2	1	1	59	30	6	11	8
Totals	**810**	**39**	**46**	**8**	**12**	**342**	**212**	**33**	**50**	**68**

Section 3.—Juvenile Delinquents

The Juvenile Delinquents Act defines a child as "any boy or girl apparently or actually under the age of 16 years" Provision is made, however, by which the Governor General in Council may proclaim that in a province the definition of a child be a "person under the age of 18 years". This has been done in British Columbia, Alberta, Manitoba and Quebec. For uniformity, the figures relating to juveniles compiled by the Dominion Bureau of Statistics refer to the younger ages of under 16 years only and deal primarily with cases disposed of by the courts.

In 1950, the practice was abandoned of dividing delinquents into major and minor offences. This division has always been arbitrary and open to question depending on the standards of behaviour in different communities, as a minor delinquency in one locality may be judged a major delinquency in another.

However, in August 1951, Alberta reduced the age of juvenile boys to under 16 years. Newfoundland considers a juvenile to be a girl or a boy of under 17 years of age.

The fact that juvenile court statistics furnish the most comprehensive figures collected on a country-wide basis makes it important that their possibilities and limitations be understood. This Section gives an account of juvenile delinquency in Canada from the viewpoint of legal action taken, for in the eyes of the law a *child is a delinquent only when he or she is adjudged before the court to have committed a delinquency.* To many people the term 'juvenile delinquent' has a broader interpretation but that adopted in this Section does not include those boys and girls whose misdemeanours have not been reported to the courts or who have been given the necessary advice and aid from their parents, their school, the police or a child-caring agency. Moreover, it does not include those cases that are handled unofficially by the court, where the judge or probation officer makes an adjustment without filing a legal record of the offence. The tendency to follow this practice and thus keep children's names from court records is growing and may account to some extent for the almost steady decrease in the number of recorded court cases in the past eight years. In 1950, approximately 9,482 cases were disposed of in this way.

These statistics represent cases of delinquency reported to the courts from the most trivial infractions to the most serious, that of murder. The number of cases brought before the courts is influenced by such factors as personnel and facilities of the court, community interest in and understanding of the function of a juvenile court, and by variations in the policies of the courts in the disposition of cases. As more courts are established, the additional returns may exaggerate an apparent increase in delinquency or may under-estimate a decrease. In some communities, the juvenile court is the only available agency to provide services to children; in others, there are well-established agencies serving children, of which the juvenile court is only one.

It should be noted, too, that the total figures do not represent the actual number of children charged and found guilty, but rather tend to exaggerate them, for a child referred to the court two or more times during the year for different offences is counted as a different case each time. Neither do the figures represent the number of offences committed by offenders, as, when a child is charged with more than one delinquency at a hearing, only the most serious offence is counted.

Reports of juvenile delinquents were received in 1951 from 154 of the 156 judicial districts. Nine of these had no cases to report. Separate reports were received in 1951 from 156 incorporated urban centres of 4,000 population or more.

Juveniles before the Courts.—The number of cases of juveniles brought before the courts declined steadily each year from 1943 to 1949 and, although there was an increase of 4 p.c. in the number of children brought before the courts in 1950 over 1949 and of 3 p.c. in 1951 over 1950 (the increase in the latter year being mainly accounted for by the addition of 194 cases in Newfoundland), the figures for these years were lower than any year except 1949 in a 25-year period.

22.—Juveniles brought before the Courts, by Province, 1947-51

NOTE.—Statistics for years prior to 1950 are for the fiscal years ended Sept. 30; figures for 1950 and 1951 are given on a calendar-year basis. Statistics for the three intervening months, October-December 1949, are given in DBS report *Juvenile Delinquents, 1950*. Figures for Newfoundland are included for the first time in 1951.

Province or Territory	1947	1948	1949	1950	1951	Percentage Change, 1950-51
	No.	No.	No.	No.	No.	
Newfoundland	...	...	..	..	194	...
Prince Edward Island	30	28	49	10	55	+450·0
Nova Scotia	513	518	485	411	554	+ 34·8
New Brunswick	342	277	218	281	275	− 2·1
Quebec	1,908	1,889	1,490	1,555	1,348	− 13·3
Ontario	3,262	3,256	2,983	3,550	3,441	− 3·1
Manitoba	490	422	490	417	404	− 3·1
Saskatchewan	222	193	178	80	71	− 11·3
Alberta	300	269	292	272	285	+ 4·8
British Columbia	1,181	1,015	852	722	893	+ 23·7
Yukon Territory	4	3	1	5	1	− 20·0
Northwest Territories	13	8	—	1	—	- -
Canada	**8,265**	**7,878**	**7,038**	**7,304**	**7,521**	**+ 3·0**

Increases in the number of court appearances were shown in four provinces and decreases in five, with Quebec showing the greatest percentage decrease. The peak in the number of girls appearing before the courts was reached in 1943, a year later than for boys, followed by a decline each year until 1949. The number of girls appearing in 1950 at 756 was higher than in 1949 but dropped to 716 in 1951.

23.—Percentage Change in the Number of Boys and Girls brought before the Courts, 1942-51

NOTE.—*See* headnote to Table 22.

Year	Percentage Change from Preceding Year			Percentage Change from 1941		
	Boys' Cases	Girls' Cases	All Cases	Boys' Cases	Girls' Cases	All Cases
1942	+14·6	+ 6·7	+13·7	+14·6	+ 6·7	+13·7
1943	−12·9	+ 1·1	−11·4	− 0·2	+ 7·9	− 0·7
1944	− 4·8	−10·5	− 5·5	− 5·0	− 3·4	− 4·8
1945	−16·3	− 9·6	−15·6	−20·5	−12·7	−19·6
1946	−11·4	− 5·8	−10·8	−29·6	−17·7	−28·3
1947	− 3·3	−17·3	− 5·1	−31·9	−31·9	−31·9
1948	− 5·1	− 1·3	− 4·7	−35·4	−32·8	−35·1
1949	− 9·0	−24·0	−10·7	−41·2	−49·0	−42·0
1950	+ 2·9	+11·8	+ 3·8	−39·4	−42·9	−39·8
1951	+ 3·9	− 5·3	+ 3·0	−37·1	−46·0	−38·0

Reasons for Court Appearances.—The number of children adjudged delinquent by the courts of the 10 provinces in 1951 was 6,644. This was an increase of 93 boys and a decrease of 42 girls over the year 1950, not including the Newfoundland figures.

24.—Juvenile Delinquents, by Province, 1942-51

NOTE.—*See* headnote to Table 22, p. 296.

Year	N'T'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1942.....	...	101	353	350	4,044	4,394	602	466	835	613	—	11,758
1943.....	...	89	488	429	3,196	4,178	438	421	447	610	—	10,296
1944.....	...	109	475	474	2,259	4,428	416	422	565	769	—	9,917
1945.....	...	115	493	338	2,387	3,531	342	334	531	838	—	8,909
1946.....	...	55	384	382	2,155	3,104	298	195	405	878	—	7,856
1947.....	...	30	412	334	1,842	2,830	424	212	277	1,167	17	7,545
1948.....	...	28	421	263	1,864	2,799	364	169	237	999	11	7,155
1949.....	..	49	433	198	1,323	2,541	403	171	246	833	1	6,198
1950.....	..	10	351	258	1,369	3,056	400	76	204	688	6	6,418
1951.....	175	52	483	261	1,180	3,024	347	64	242	815	1	6,644

Thieving is the most prevalent delinquency among the boys and, together with receiving stolen goods, was the reason for court appearance in more than one-third of the cases (38·4 p.c.) in 1951. Burglaries, robberies, house- and shop-breaking were committed by 25·2 p.c. of them and another 12·4 p.c. committed wilful acts against property. Only 2·9 p.c. of the boys were guilty of offences against the person and almost 46 p.c. of these were charged with common assault.

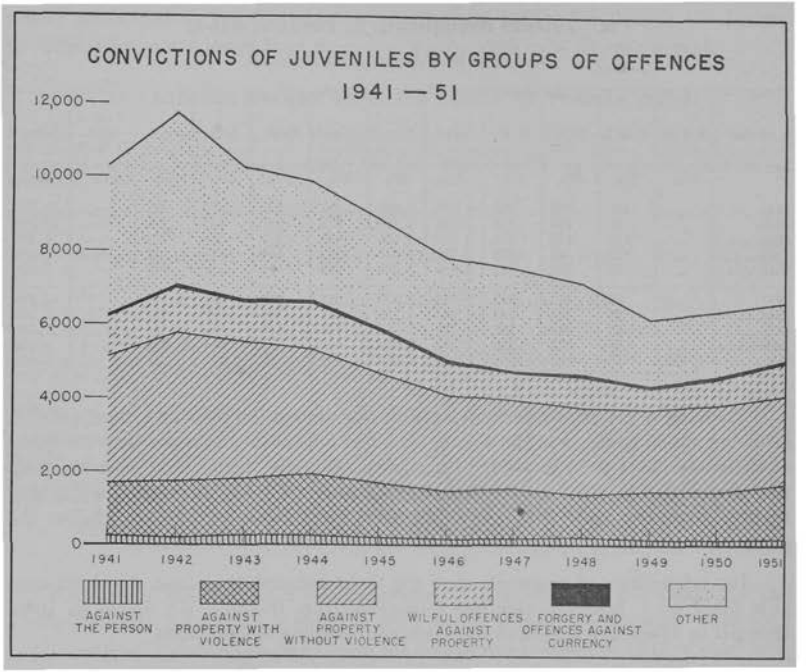
Incorrigibility and vagrancy were the main complaints against the delinquent girls (33·7 p.c.); however, this was a decrease from the 40·7 p.c. shown in 1950. One girl in every five appeared for theft and securing stolen goods.

25.—Juvenile Delinquents, by Group of Offence and Ratio per 100,000 Population 7-16 Years of Age, 1942-51

NOTE.—*See* headnote to Table 22, p. 296.

Year	Offences against the Person		Offences against Property with Violence		Offences against Property without Violence		Wilful Offences against Property		Forgery and Offences against Currency		Other Offences		Total Convictions	
	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population
1942.....	206	11	1,536	79	4,039	208	1,228	63	11	1	4,738	244	11,758	606
1943.....	260	14	1,550	81	3,658	190	1,140	59	21	1	3,667	190	10,296	535
1944.....	216	11	1,739	91	3,393	178	1,269	67	22	1	3,278	172	9,917	520
1945.....	220	12	1,513	80	2,964	157	1,190	63	29	2	2,993	159	8,909	473
1946.....	173	9	1,353	71	2,594	137	887	47	23	1	2,826	149	7,856	414
1947.....	189	10	1,389	72	2,449	127	677	35	23	1	2,818	147	7,545	392
1948.....	204	10	1,229	64	2,400	124	729	38	15	1	2,578	134	7,155	371
1949.....	176	9	1,346	67	2,244	113	600	30	15	1	1,817	91	6,198	311
1950.....	151	7	1,337	65	2,394	116	667	32	16	1	1,853	90	6,418	311
1951.....	188	9	1,542	72	2,563	119	765	36	20	1	1,566	73	6,644	310

In the past five years there has been an increase in the number of juveniles guilty of aggravated assault and wounding, breaking and entering and burglary, thefts and receiving stolen goods and wilful damage to property.



26.—Juvenile Delinquents, classified by Offence, 1947-51

NOTE.—*See* headnote to Table 22, p. 296.

Offence	1947	1948	1949	1950	1951
	No.	No.	No.	No.	No.
Manslaughter and murder	1	1	4	—	—
Rape, carnal knowledge and incest	12	3	7	4	3
Indecent assault	41	44	37	36	31
Aggravated assault and wounding	14	34	12	26	31
Common assault	93	95	81	59	89
Endangering life on railway	14	8	11	12	9
Other offences against the person	13	17	23	14	25
Burglary, breaking and entering	1,354	1,216	1,318	1,310	1,520
Robbery	35	13	28	27	22
Theft and receiving stolen goods	2,428	2,388	2,227	2,373	2,553
Embezzlement, false pretences and fraud	21	12	17	21	10
Arson	31	22	16	49	28
Wilful damage to property	484	618	536	618	646
Forgery and offences against currency	23	15	15	16	20
Incorrigibility and vagrancy	754	737	515	660	484
Immorality	44	63	97	126	111
Various other offences	2,183	1,869	1,254	1,067	1,062
Totals	**7,545**	**7,155**	**6,198**	**6,418**	**6,644**

Sex and Age of Delinquents.—Juvenile delinquents are predominantly boys. The ratio between boys and girls has remained much the same over a long period and for all offences in 1951 it was approximately one girl to nine boys. Juveniles of 13 to 15 years of age comprised the majority of delinquents, 70·2 p.c. in the case of boys and 86·4 p.c. in the case of girls. However, 592 boys (9·8 p.c.) and 19 girls (3·1 p.c.) were under 11 years of age. There were no delinquent girls under 11 years of age in Nova Scotia, none under 12 years in Alberta and none under 13 years in Prince Edward Island and Saskatchewan.

27.—Percentages of Delinquent Boys and Girls, by Age Group, 1950 and 1951

NOTE.—*See* headnote to Table 22, p. 296.

Age Group	1950			1951		
	Boys	Girls	Both Sexes	Boys	Girls	Both Sexes
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
7-12 years	31·6	17·5	30·2	29·0	13·2	27·6
13-15 years	67·3	81·7	68·7	70·2	86·5	71·7
Not given	1·1	0·8	1·1	0·8	0·3	0·7
Totals	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**

Education and Employment.—Many causes contribute to backwardness in school work. The retarding influence may be illness, over-crowding in the home, disturbed family situations or dull mentality. Presuming that six years is the usual age for entering Grade I, nearly 50 p.c. of the juvenile delinquents (48 p.c. of the boys and 49·7 p.c. of the girls) in 1951, were reported to be two or more years below the normal grade for their years and 3·2 p.c. of the boys and girls were a year or more above it.

Well over 50 p.c. of the boys attained Grades V to VIII, the highest grades attained by the majority of boys who had left school. More than 50 p.c. of the girls had reached Grades VII to VIII, and these were the grades from which the girls left school. Some high school education had been achieved by 14·8 p.c. of the boys and girls.

28.—Age, Sex and School Grade of Delinquent Boys and Girls, 1951

(B=Boys; G=Girls)

Age	School Grades																		Total Delinquents	
	Elementary										Secondary		Auxiliary		Not Given					
	I-IV		V		VI		VII		VIII											
	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G			B	G
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.			No.	No.
7 years	14	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—			15	—
8 "	75	1	—	—	—	—	—	—	—	—	—	—	2	—	8	—			85	1
9 "	170	2	15	—	2	—	—	—	1	1	—	—	—	—	6	—			194	3
10 "	179	9	78	3	18	2	—	—	1	—	—	—	6	—	16	1			298	15
11 "	168	8	149	11	103	6	14	1	1	—	1	—	3	1	25	2			464	29
12 "	128	8	155	6	200	8	138	9	26	—	4	1	5	—	38	1			694	33
13 "	92	9	172	12	193	16	265	28	172	17	39	9	20	3	64	5			1,017	99
14 "	69	8	121	8	205	31	329	29	333	45	250	32	35	8	100	13			1,442	174
15 "	80	7	88	13	189	21	290	37	373	72	566	78	37	4	154	24			1,777	256
Not given	7	—	5	—	7	—	3	—	2	—	6	—	1	1	15	1			46	2
Totals	**982**	**52**	**783**	**53**	**917**	**84**	**1,039**	**104**	**909**	**135**	**866**	**120**	**109**	**17**	**427**	**47**			**6,032**	**612**

In 1951, 13·3 p.c. of the delinquent boys and 17 p.c. of the delinquent girls were not attending school. At the time of leaving school their ages ranged from 10 to 15 years with the majority being 14 and 15 years of age. Nearly one-third (31·0 p.c.) of these boys were unemployed. The largest group of wage-earners (108) were in occupations concerned with transportation, such as messengers, helpers on milk-delivery routes, truck drivers' assistants, etc. The next largest group (72) were recorded as day labourers. A large percentage of the girls (42·3 p.c.) were idle after leaving school. Factory work, domestic and personal service were the main occupations of those who were employed.

Birthplaces of Juvenile Delinquents and their Parents.—Canada was the country of birth of 95·8 p.c. of the juvenile delinquents in 1951 (the place of birth was not recorded in 2·6 p.c. of the cases). One hundred and seven (1·6 p.c.) were born in the British Isles, Europe, the United States and China. Ontario was the province of residence of 67·3 p.c. of those born outside Canada.

Both parents of 70·7 p.c. of the delinquent children in 1951 were born in Canada and another 13·6 p.c. had one parent born in this country. To evaluate these figures, comparison should be made of population ratio of children from 7-16 years of age whose parents were Canadian-born with those whose parents were born elsewhere.

Home Circumstances.—The type of home in which he lives and the amount and quality of supervision he receives are important factors in a child's behaviour. The statistics of the marital status of the parents and the place and type of residence of the child reflect home conditions and are worth recording as possible reasons for social or emotional maladjustment. The parents of 76·7 p.c. of the delinquent children were reported to be living together in 1951. Homes broken by separated parents, divorce or death was the background from which 18·4 p.c. of these boys and girls came. The mothers of 8·5 p.c. of the juvenile delinquents were employed other than in the home and, in the cases of another 3·3 p.c. the mothers were dead. The fathers of 7·6 p.c. of the cases were deceased. For every five juveniles who appeared in court, four resided in an urban centre and one in a rural district. Of these boys and girls 86·5 p.c. were living in their own homes at the time they got into difficulties; 3·8 p.c. of them were in foster homes, either with a relative or some other person, and institutions were the homes of 2·2 p.c. of them.

Sources of Complaint.—The police were the complainants in the majority of juvenile cases, 76·3 p.c. of the boys having been so charged. Probation officers were responsible for 3·6 p.c. and parents for 3·2 p.c. of those charged. School authorities referred 2·6 p.c. of the boys to the courts.

The proportion (41·9 p.c.) of girls charged by the police was considerably less than in the case of the boys while parents made more use of the courts for girls than for boys (19·6 p.c.). School authorities laid complaints in 11·9 p.c. and probation officers in 9·9 p.c. of the girls' cases.

Repeaters.—Experience, which dispels or increases resentment to authority, may be a factor in encouraging or deterring repeaters. Some of the responsibility for the attitude that is built up, be it good or bad, rests with the police, the probation officer, the staff of the detention home and the judge. The recollection of how he was charged the first time, how he was handled while awaiting hearing, the opinion of those in whose care he was placed during the process of readjustment, all make an impression on a child.

In 1951, approximately one in every four children brought before the courts failed to heed the first warning and made at least a second appearance. In 1951, 77·4 p.c. of the delinquent children appeared before the courts for the first time, 13·7 p.c. were second offenders, 4·9 p.c. third, while 4 p.c. were dealt with by the courts four or more times.

29.—First Offenders and Repeaters of Major Offences, 1942-51

NOTE.—*See* headnote to Table 22, p. 296.

Year	Total Delinquents	First Offenders	Repeaters					
			Second	Third	Fourth	Fifth or More	Total	Percentage of Total Delinquents
	No.	No.	No.	No.	No.	No.	No.	
1942	6,920	5,577	660	348	144	182	1,343	19·4
1943	6,494	4,831	865	386	183	229	1,663	25·6
1944	6,529	4,665	943	429	221	271	1,864	28·6
1945	5,758	4,231	812	337	137	241	1,527	26·5
1946	4,949	3,430	799	344	155	221	1,519	30·7
1947	4,683	3,376	673	329	138	167	1,307	27·9
1948	4,591	3,340	674	266	147	164	1,251	27·3
1949[1]	6,198	5,195	603	208	109	83	1,003	16·2
1950[1]	6,418	5,039	892	314	140	33	1,379	21·5
1951[1]	6,644	5,141	909	324	132	138	1,503	22·6

[1] Includes minor offences.

Disposition of Cases.—In 1951, not quite one-half of the children's cases (46·3 p.c.) were heard within four days of the charge and slightly over two-thirds (67·5 p.c.) within nine days. However, nearly a quarter (23·2 p.c.) of the boys and girls had to wait at least two weeks and 12·8 p.c. waited a month or more before the first hearing. These waiting periods may be explained in various ways.

Some county courts sit only twice or even once a month. Hearings may be deferred because of sickness in the family, school examinations, stormy weather, or long distances. The chief cause for delay, however, is the time it takes to investigate the facts properly. The probation officer, and frequently there is only one to a court, has to find out what occurred at the time of the delinquency; he must contact the parents and the school, learn something of the home situation, perhaps arrange medical or psychiatric examinations and explore community resources. The disadvantage of a long waiting period is outweighed by the assistance the court receives in deciding the form of treatment best suited to the child's needs and the type of care that will be the most economical for the community. For these intervening days or weeks most children are left in their own homes while a minority are placed in detention homes and, in the long run, whether the effect of the waiting period is good or bad is determined by the care given the youngster during that time.

Juvenile court judges heard 89·8 p.c. and magistrates 9·8 p.c. of the juvenile cases before the courts. The balance were heard in the higher courts or by justices of the peace. The proportion of those declared delinquent (93·9 p.c.) in the magistrate's courts was greater than in the juvenile courts (87·7 p.c.). In the former court 4·5 p.c. of the cases were dismissed and 1·6 p.c. adjourned *sine die* while in the juvenile courts only 2·4 p.c. were dismissed but 9·9 p.c. were adjourned *sine die.*

Some courts consider children whose hearings are adjourned *sine die* as delinquent while others do not and, for the sake of uniformity in this report, the latter point of view is maintained by the Dominion Bureau of Statistics. In assessing the total problem of juvenile delinquency, however, cases adjourned *sine die* have to be taken into account for, when the proportion of cases dealt with in this way increases, the proportion of those declared delinquent declines.

30.—Juveniles before the Courts, Dismissed and Delinquent, 1947-51

NOTE.—*See* headnote to Table 22, p. 296.

Item	1947		1948		1949		1950		1951	
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Before the courts	8,265	100·0	7,878	100·0	7,033	100·0	7,304	100·0	7,521	100·0
Dismissed	197	2·4	190	2·4	166	2·4	197	2·7	195	2·6
Adjourned *sine die*	523	6·3	533	6·8	674	9·6	689	9·4	682	9·1
Delinquent	7,545	91·3	7,155	90·8	6,198	88·0	6,418	87·9	6,644	88·3

The disposition of cases in 1951 differed as between boys and girls and was most marked in the proportion of those put on probation which was 36·5 p.c. for the boys and 43·0 p.c. for the girls. Fines or restitution were meted out to 22·9 p.c. of the boys but to only 8·0 p.c. of the girls. This is because damage to property, for which restitution seems a reasonable adjustment, is committed relatively more often by boys than by girls. A much larger proportion of girls (34·5 p.c.) than boys (15·4 p.c.) were sent to training schools. Final disposition of case was postponed in 11·1 p.c. of the girls' cases while 19·5 p.c. of the boys were given suspended sentences. Corporal punishment was resorted to in only two cases.

31.—Disposition of Delinquents, by Type of Sentence, 1942-51

NOTE.—*See* headnote to Table 22, p. 296.

Year	Reprimanded		Probation of Court		Protection of Parents		Fined or Made Restitution		Detained Indefinitely		Sent to Training School		Final Disposition Suspended		Corporal Punishment	
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
1942	432	3·7	3,069	26·1	83	0·7	2,303	19·6	117	1·0	1,454	12·4	4,249	36·1	51	0·4
1943	464	4·5	2,854	27·7	140	1·4	1,962	19·0	101	1·0	1,401	13·6	3,322	32·3	52	0·5
1944	395	4·0	2,780	28·0	112	1·1	2,547	25·7	92	1·0	1,376	13·9	2,551	25·7	64	0·6
1945	352	3·9	2,698	30·3	109	1·2	2,367	26·6	65	0·7	1,348	15·1	1,947	21·9	23	0·3
1946	233	3·0	2,291	29·2	67	0·8	1,854	23·6	53	0·7	1,180	15·0	2,150	27·4	28	0·3
1947	182	2·4	2,273	30·1	69	0·9	2,116	28·1	40	0·5	1,108	14·7	1,733	23·0	24	0·3
1948	248	3·4	2,201	30·8	55	0·8	1,850	25·8	47	0·7	1,120	15·6	1,622	22·7	12	0·2
1949	196	3·2	2,141	34·5	98	1·6	1,655	26·7	39	0·6	1,036	16·7	1,029	16·6	4	0·1
1950	354	5·5	2,392	37·3	94	1·4	1,148	17·9	26	0·4	1,144	17·8	1,257	19·6	3	0·1
1951	309	4·6	2,313	34·8	154	2·3	1,433	21·6	45	0·7	1,141	17·2	1,247	18·7	2	0·1

Section 4.—Police Forces

The Police Forces operating in Canada are organized under three groups: (1) the Federal Force, which is the Royal Canadian Mounted Police whose operations cover a very wide field in addition to purely police work; (2) Provincial Police Forces—the Provinces of Ontario and Quebec have organized their own Provincial Forces, but the other provinces engage the services of the Royal Canadian

Mounted Police to perform parallel functions within their boundaries; (3) Municipal Police—every city of reasonable size has its own police organization which is paid for by the local taxpayers and which attends to purely police matters within the borders of the municipality concerned.

Subsection 1.—The Royal Canadian Mounted Police*

The Royal Canadian Mounted Police is a Civil Force maintained by the Federal Government. It was organized in 1873 as the North West Mounted Police, whose duties were confined to what was then known as the North West Territories. By 1904, the work of the Force received signal recognition when the prefix "Royal" was bestowed upon it by King Edward VII. In 1905, when Alberta and Saskatchewan were constituted Provinces, an arrangement was made whereby the Force continued to discharge its duties as formerly, each province making a contribution towards defraying the cost. This was continued until 1917.

In 1918, the Royal North West Mounted Police was assigned the duty of enforcing Dominion legislation for the whole of Canada west of Port Arthur and Fort William. Soon after the end of World War I an extension of governmental activities made it obvious that the enforcement of Dominion statutes throughout Canada must be the responsibility of a Dominion Force and, therefore, the jurisdiction of the Royal North West Mounted Police was extended to the whole of Canada early in 1920. In that year, the name of the Force was changed to the Royal Canadian Mounted Police and the former Dominion Police with Headquarters at Ottawa, whose duties were largely connected with guarding public buildings in that city and Canadian Government dockyards at Halifax, N.S., and Esquimalt, B.C., were absorbed by the Royal Canadian Mounted Police.

Organization.—The Force is controlled and administered by a Minister of the Crown (the Minister of Justice). Its Commissioner has the rank and status of a Deputy Minister. Officers are commissioned by the Crown and for many years have been selected from serving non-commissioned officers. The Force is divided into 15 Divisions, including the Marine Division with Headquarters at Halifax, N.S. There are 602 detachments distributed over the entire country. Its land force transportation consists of 1,023 motor-vehicles, most of which are fitted with two-way radio sets connecting with wireless stations operated by the Force. Such stations operate in both Western and Eastern Canada, including the Quebec-United States boundary area. The Aviation Section of the Force operates eight aircraft of various types. The strength of the Force is approximately 4,500 officers and men, with a reserve strength of about 350. The reserve strength is located chiefly in the larger cities where men can be congregated easily and where instruction can be given in the evenings.

The Marine Division has a strength of about 200 officers and men and operates 26 ships of various kinds, the majority of which are located on the Atlantic Coast and on the Great Lakes. The RCMP schooner *St. Roch*, which has been used as a floating detachment in the Far North and as a supply ship to isolated detachments, is the only ship to navigate the Northwest Passage from east to west and from west to east and is also the only vessel to have circumnavigated the North American Continent.

The Personnel Branch of the RCMP has officers in each Division across the country. Great care is taken in the selection of recruits.

* Revised by Commissioner L. H. Nicholson, M.B.E., of the Royal Canadian Mounted Police, Ottawa.

Duties.—The Royal Canadian Mounted Police is responsible for enforcing federal laws throughout Canada and is specially empowered to deal with infractions against smuggling by sea, land and air. It also enforces the provisions of the Excise Act, and is responsible for the suppression of traffic in narcotic drugs. In all, the Force has responsibility in over 50 Federal Government Acts, including the Indian Act. It also assists many departments of the Federal Government in administrative duties and is responsible for the protection of government buildings and property. It is the sole police force operating in the Northwest and Yukon Territories. Furthermore, it undertakes secret and security services for the Federal Government. In addition to its federal duties, agreements have been made with the Provinces of Alberta, Saskatchewan, Manitoba, Nova Scotia New Brunswick, Prince Edward Island, Newfoundland and British Columbia whereby the services of the Royal Canadian Mounted Police can be secured to enforce provincial laws and the Criminal Code in rural districts upon payment for such services. The agreement with Saskatchewan has been in existence for 23 years and those with the Provinces of Alberta, Manitoba, New Brunswick, Nova Scotia and Prince Edward Island for 19 years. The agreements were entered into with the Provinces of Newfoundland and British Columbia in August 1950, and the police forces of those provinces were absorbed by the Royal Canadian Mounted Police. The Force has agreements also for policing more than 120 urban centres within the provinces mentioned.

Other Services.—The services of RCMP experts in fingerprints, crime-index information, examination of firearms and questioned documents are available to all other police forces in Canada. A *Police Gazette*, issued monthly and containing instructional articles on police work as well as the latest information on wanted or missing persons, is sent to all police forces across the country. The RCMP has two Police Colleges that are open to selected personnel from other police forces in Canada and to a more limited number of those outside its boundaries.

In recent years the Force has given special attention to crime prevention, as well as detection, and has done much to assist the youth of Canada in developing a healthful outlook towards the police, law, order and responsible citizenship. Personal contacts with over a million young people have been made through school and youth groups supervised by churches and service clubs.

A book entitled *Law and Order in Canadian Democracy*, containing twenty essays, has been issued by the Force and is available through the Queen's Printer, Ottawa.

Subsection 2.—Provincial Police Forces*

Quebec Provincial Police Force.—The Quebec Provincial Police Force is responsible for upholding law and order over the whole territory of the Province, from the provincial boundary between Ontario and Quebec to the Magdalen Islands in the Gulf of St. Lawrence. The Force, composed of about 800 men, is in charge of a Director, who acts under direct orders from and is responsible to the Attorney-General of the Province.

To facilitate operations, the territory is divided into two almost equal parts designated as the District of Montreal and the District of Quebec. The Director has his office at Montreal and an Assistant Director at the city of Quebec. Working

* Revised by Geo. A. Shea, O.B.E., Secretary-Treasurer, Chief Constables' Association of Canada, Montreal, Que.

under these Directors are two Deputies and an Inspector General. In each District the Police Force is divided into three sections: the detective corps, the constabulary and the traffic officers; each section is in charge of a captain supported by a number of lieutenants and sergeants.

A province-wide frequency modulation radio-communication system has been established at Montreal. A main station, operating on the top of Mount Royal, directs radio-equipped cars within a radius of between 60 and 80 miles around Montreal, and similar stations operating from the cities of Quebec and Three Rivers direct the mobile units operating in their respective areas. Substations operate at each of the eight bridges giving access to or exit from the city of Montreal and a number of cars, all equipped with frequency modulation three-way radio units, patrol the surrounding country day and night.

Ontario Provincial Police.—The Ontario Provincial Police is maintained by the Ontario Government under the Attorney-General's Department. The Force is responsible for law enforcement in the rural and unorganized parts of the Province and in certain municipalities by contract.

The development of the Force from its beginning in the early years of Confederation to the passing of the Police Act in 1946, is outlined in the 1950 Year Book, pp. 332-333.

The Force with a strength of approximately 1,385 in 1952 consists of a General Headquarters at Toronto and 16 districts with headquarters at Chatham, London, Dundas, Niagara Falls, Newmarket, Mount Forest, Barrie, Peterborough, Belleville, Perth, Cornwall, Haileybury, Sudbury, Timmins, Port Arthur and Kenora. Each district has detachments adequate to meet law-enforcement requirements. A Criminal Investigation Branch, under the command of a Chief Inspector, is maintained at Toronto to handle crimes of a major nature.

The installation of one of the largest police frequency-modulation radio systems in the world has placed at the command of the police a most efficient method of combating every type of lawlessness. There are in operation 55 fixed stations and 402 two-way radio cruisers and one cabin-cruiser on Lake Temagami. The 250-watt stations at District Headquarters are open 24 hours daily and many of the cars are on continuous round-the-clock patrols.

Up to December 1952, 88 municipalities had availed themselves of the provisions of the Police Act for the policing of their municipalities by the Ontario Provincial Police.

Subsection 3.—Municipal Police Statistics

Police statistics were submitted for the year 1951 by Chiefs of Police in 236 urban centres, 13 district communities, 11 townships and one unorganized district, of 4,000 population or over.

Criminologists generally agree that the number of offences known to the police is the closest indication of the volume and nature of crime in a country. The number of offences reported as known to the police was 11·9 p.c. lower in 1951 than in the previous year. Of these known offences, 60·7 p.c. were cleared by arrest.

Of the total prosecutions, 5·9 p.c. were for crimes under the Criminal Code and federal statutes, 24·5 p.c. were for offences under provincial statutes; and 70 p.c. were for municipal law infractions. Traffic offences accounted for 86·7 p.c. of the prosecutions.

32.—Summary Police Statistics, by Incorporated Centres of 10,000 Population or Over, with Totals for Incorporated Centres of 4,000 Population or Over, 1951

Province and Urban Centre	Population 1951	Police on Force	Offences Known to the Police	Prosecutions	Arrests	Summonses
	No.	No.	No.	No.	No.	No.
Newfoundland—						
St. John's	52,873	156	2,401	4,920	1,130	1,271
Totals, 10,000 Population or Over	**52,873**	**156**	**2,401**	**4,920**	**1,130**	**1,271**
Totals, 4,000 Population or Over	**66,164**	**181**	**3,785**	**5,943**	**1,446**	**2,181**
Prince Edward Island—						
Charlottetown	15,887	14	1,014	891	820	71
Totals, 10,000 Population or Over	**15,887**	**14**	**1,014**	**891**	**820**	**71**
Totals, 4,000 Population or Over	**22,434**	**20**	**1,367**	**1,472**	**1,069**	**182**
Nova Scotia—						
Dartmouth	15,037	13	680	538	318	220
Glace Bay	25,586	21	849	1,585	610	166
Halifax	85,589	136	4,607	9,145	2,686	603
New Waterford	10,423	7	..	..	..	..
Sydney	31,317	36	2,940	2,531	1,748	100
Truro	10,756	9	40	1,269	565	214
Totals, 10,000 Population or Over	**178,708**	**222**	**9,116**	**15,068**	**5,927**	**1,303**
Totals, 4,000 Population or Over	**251,904**	**263**	**11,866**	**18,035**	**7,659**	**2,144**
New Brunswick—						
Edmundston	10,753	9	277	266	170	20
Fredericton	16,018	23	760	2,109	664	288
Moncton	27,334	39	2,911	1,807	1,248	566
Saint John	50,779	76	7,235	7,062	2,275	4,929
Totals, 10,000 Population or Over	**104,884**	**147**	**11,183**	**11,244**	**4,357**	**5,803**
Totals, 4,000 Population or Over	**131,501**	**173**	**13,965**	**14,178**	**5,922**	**6,990**
Quebec—						
Arvida	11,078	15	258	150	27	123
Cap de la Madeleine	18,667	19	797	104	201	9
Chicoutimi	23,216	22	187	1,000	..	161
Drummondville	14,341	17	..	1,046	137	49
Granby	21,989	19	288	303	10	10
Grand'Mère	11,089	12	345	450	345	339
Hull	43,483	41	6,848	5,721	1,047	..
Jacques-Cartier	22,450	10	2,393	2,995	143	143
Joliette	16,064	24	91	47	40	1
Jonquière	21,618	16	902	541	379	..
Lachine	27,773	23	427	1,256	250	165
Lasalle	11,633	16	71	849	67	57
Lévis	13,162	16	165	901	173	14
Longueuil	11,103	10	1,137	1,047	141	135
Magog	12,423	8	66	58	43	6
Montreal	1,021,520	1,924	290,872	254,746	22,852	196,765
Montreal North	14,081	19	1,984	2,088	1,891	1,507
Mount Royal	11,352	18	3,987	3,792	5	3,791
Outremont	30,057	45	3,836	9,330	277	26
Quebec	164,016	282	21,302	8,465	2,907	..
Rimouski	11,565	6	65	405	.	53
Rouyn	14,633	12	517	2,078	319	16
St. Hyacinthe	20,236	26	337	399	297	3
St. Jean	19,305	16	147	25	12	20
St. Jérôme (Terrebonne Co.)	17,685	17	..	324	207	77
St. Laurent	20,426	28	2,472	2,248	2,339	2,282
St. Michel (Montreal Is.)	10,539	12	3,138	3,609	3,107	..
Shawinigan Falls	26,903	36	..	927	149	43
Sherbrooke	50,543	77	397	4,134	545	3,626
Sillery	10,376	8	49	4	6	—

32.—Summary Police Statistics, by Incorporated Centres of 10,000 Population or Over, with Totals for Incorporated Centres of 4,000 Population or Over, 1951—con.

Province and Urban Centre	Population 1951	Police on Force	Offences Known to the Police	Prosecutions	Arrests	Summonses
	No.	No.	No.	No.	No.	No.
Quebec—concl.						
Sorel	14,961	18	461	623	43	43
Thetford Mines	15,095	19	2,364	2,321	108	260
Three Rivers	46,074	86	2,374	1,602	1,485	117
Valleyfield (Salaberry-de-)	22,414	31	357	293	30	17
Verdun	77,391	68	447	7,517	1,961	1,270
Victoriaville	13,124	11	1,099	38	250	1,066
Westmount	25,222	42	652	5,782	240	8
Totals, 10,000 Population or Over	**1,937,607**	**3,069**	**350,832**	**327,218**	**42,033**	**212,202**
Totals, 4,000 Population or Over	**2,274,612**	**3,298**	**357,065**	**341,209**	**45,846**	**214,907**
Ontario—						
Barrie	12,514	12	2,781	733	368	365
Belleville	19,519	23	2,279	1,790	592	1,007
Brantford	36,727	38	1,578	7,609	653	3,665
Brockville	12,301	16	2,672	1,946	453	252
Chatham	21,218	32	2,988	2,491	617	1,695
Cornwall	16,899	20	1,111	887	305	624
Eastview	13,799	6	683	513	42	471
Forest Hill	15,305	24	492	1,142	73	24
Fort William	34,947	43	3,078	3,818	948	1,382
Galt	19,207	15	517	826	300	531
Guelph	27,386	30	8,825	8,804	655	3,534
Hamilton	208,321	302	95,312	96,942	5,768	28,464
Kingston	33,459	45	8,172	7,942	874	7,298
Kitchener	44,867	51	9,388	5,169	1,033	4,317
Leaside	16,233	14	211	6,123	56	2
London	95,343	128	13,047	7,668	2,449	5,267
Mimico	11,342	8	2,311	1,985	103	1,996
New Toronto	11,194	14	300	1,617	301	1,316
Niagara Falls	22,874	37	2,749	2,134	2,173	..
North Bay	17,944	17	2,566	2,267	1,082	1,185
Orillia	12,110	8	4,426	2,155	..	..
Oshawa	41,545	36	3,704	3,511	815	2,432
Ottawa	202,045	268	7,854	17,795	3,036	16,595
Owen Sound	16,423	15	1,407	1,257	196	969
Pembroke	12,704	11	1,929	1,619	769	240
Peterborough	38,272	39	4,004	4,087	667	3,357
Port Arthur	31,161	36	3,647	10,817	2,676	368
St. Catharines	37,984	46	9,729	8,327	789	7,472
St. Thomas	18,173	20	1,482	865	358	611
Sarnia	34,697	35	2,909	2,612	629	1,375
Sault Ste. Marie	32,452	33	3,071	2,898	1,444	1,953
Stratford	18,785	17	1,083	1,759	114	641
Sudbury	42,410	44	9,311	7,603	2,639	4,923
Timmins	27,743	26	2,763	2,233	1,098	504
Toronto	675,754	1,258	436,680	420,873	28,326	394,373
Trenton	10,085	12	1,949	1,293	315	964
Waterloo	11,991	9	2,786	1,374	97	1,339
Welland	15,382	22	3,763	3,201	288	2,986
Windsor	120,049	205	11,906	9,994	3,906	7,720
Woodstock	15,544	19	4,655	4,468	439	1,629
Totals, 10,000 Population or Over	**2,106,708**	**3,034**	**680,118**	**671,147**	**67,446**	**513,846**
Totals, 4,000 Population or Over	**2,395,575**	**3,277**	**701,092**	**699,707**	**72,201**	**529,371**
Manitoba—						
Brandon	20,598	18	1,109	758	296	462
St. Boniface	26,342	19	2,097	1,458	274	1,000
Winnipeg	235,710	329	5,988	107,972	5,622	102,837
Totals, 10,000 Population or Over	**282,650**	**366**	**9,194**	**110,188**	**6,192**	**104,299**
Totals, 4,000 Population or Over	**320,037**	**395**	**11,193**	**112,783**	**6,737**	**105,438**

32.—Summary Police Statistics, by Incorporated Centres of 10,000 Population or Over, with Totals for Incorporated Centres of 4,000 Population or Over, 1951—concl.

Province and Urban Centre	Population 1951	Police on Force	Offences Known to the Police	Prosecutions	Arrests	Summonses
	No.	No.	No.	No.	No.	No.
Saskatchewan—						
Moose Jaw	24,355	23	1,714	984	353	618
Prince Albert	17,149	17	1,447	2,613	524	466
Regina	71,319	72	5,397	7,020	..	237
Saskatoon	53,268	53	3,527	9,035	799	1,851
Totals, 10,000 Population or Over	**166,091**	**165**	**12,085**	**19,652**	**1,676**	**3,172**
Totals, 4,000 Population or Over	**199,702**	**198**	**14,883**	**21,936**	**2,128**	**4,051**
Alberta—						
Calgary	129,060	168	13,551	11,607	5,025	5,034
Edmonton	159,631	168	17,609	15,938	4,405	4,575
Lethbridge	22,947	23	4,819	3,896	495	3,245
Medicine Hat	16,364	20	758	758	259	305
Totals, 10,000 Population or Over	**328,002**	**379**	**36,737**	**32,199**	**10,184**	**13,159**
Totals, 4,000 Population or Over	**348,847**	**393**	**38,020**	**33,964**	**10,436**	**14,394**
British Columbia—						
New Westminster	28,639	37	8,168	6,934	1,099	414
North Vancouver	15,687	17	3,739	960	188	799
Penticton	10,548	8	863	863	169	694
Trail	11,430	10	1,618	1,562	116	1,337
Vancouver	344,833	629	27,937	85,968	13,676	4,593
Victoria	51,331	91	1,899	16,894	1,004	16,009
Totals, 10,000 Population or Over	**462,468**	**792**	**44,224**	**113,181**	**16,252**	**23,846**
Totals, 4,000 Population or Over	**538,168**	**886**	**55,339**	**123,328**	**21,247**	**28,532**
Grand Totals, Incorporated Centres of 10,000 Population or Over	**5,635,878**	**8,344**	**1,156,904**	**1,305,708**	**156,017**	**878,972**
Grand Totals, Incorporated Centres of 4,000 Population or Over	**6,548,944**	**9,084**	**1,208,575**	**1,372,555**	**174,691**	**908,190**

Section 5.—Penal Institutions and Training Schools

Penal institutions may be classified under three headings: (1) penitentiaries, where prisoners have long sentences and the turnover is slow; (2) reformatories, where the turnover is also rather slow; and (3) common gaols, where the turnover is extremely rapid.

If the average of the figures for inmates at the beginning and at the end of the year be considered the average population for the year, and the number of discharged as the turnover, the turnover in the years 1950 and 1951 was: in penitentiaries, 44 and 47 p.c.; in reformatories, 286 and 296 p.c.; and in gaols, no less than 1,458 and 1,549 p.c., respectively.

In considering these figures it should be borne in mind that the common gaol population changes from day to day and is made up partly of accused persons awaiting trial who may be either liberated or sent to a penitentiary or reformatory.

33.—Movement of Population in Penitentiaries, Reformatories and Gaols, 1948-51

Type of Institution and Item	1948	1949	1950[1]	1951
	No.	No.	No.	No.
Penitentiaries—				
Inmates in custody at beginning of year	3,752	3,851	4,260	4,740
Admitted during the year	1,867	2,382	2,445	2,334
Discharged during the year	1,768	2,008	1,965	2,257
In custody at end of year	3,851	4,225	4,740	4,817
Reformatories for Men—				
Inmates in custody at beginning of year	2,612	2,939	2,556	2,728
Admitted during the year	11,230	12,199	7,937	7,794
Discharged during the year	10,903	11,989	7,765	7,953
In custody at end of year	2,939	3,149	2,728	2,569
Reformatories for Women—				
Inmates in custody at beginning of year	248	264	230	197
Admitted during the year	832	861	367	379
Discharged during the year	816	873	400	416
In custody at end of year	264	252	197	160
Common Gaols—				
Inmates in custody at beginning of year	4,171	4,530	5,625	6,102
Admitted during the year	69,463	77,729	85,062	88,555
Discharged during the year	69,115	77,295	84,697	89,235
In custody at end of year	4,519	4,964	5,990	5,422
Totals—				
Inmates in custody at beginning of year	**10,783**	**11,584**	**12,671**	**13,767**
Admitted during the year	**83,392**	**93,171**	**95,811**	**99,062**
Discharged during the year	**82,602**	**92,165**	**94,827**	**99,861**
In custody at end of year	**11,573**	**12,590**	**13,655**	**12,968**

[1] In 1950, Newfoundland Penitentiary reported for the first time and Oakalla Prison Farm, B.C., previously classed as a reformatory for men, was changed to a gaol.

Subsection 1.—Penitentiaries*

The Penitentiaries Branch of the Department of Justice is charged with the administration of the various penitentiaries of Canada. Eight institutions are included in the system, the two largest being at Kingston, Ont., and St. Vincent de Paul, Que. Others are at Dorchester, N.B., Prince Albert, Sask., Stony Mountain, Man., New Westminster, B.C., Collin's Bay, Ont, and St. John's, N'f'ld.; the latter is operated under provincial authority and the figures for inmates of that institution serving sentences of two years or more are included for 1950-52 in Tables 34 and 35. A Federal Training Centre was opened at St. Vincent de Paul in April 1952 for the treatment and training of offenders under 25 years of age. A Penitentiary Staff College was also set up at Kingston for the training of penitentiary officers through courses of instruction and training conferences. During the year ended Mar. 31, 1952, the average daily population of the penitentiaries was 4,721 and the total net cash outlay for maintenance for the year was $6,955,970 or $4.02 per inmate per day.

Females given penitentiary sentences in the various provinces are sent to the Prison for Women at Kingston where special quarters and staff are maintained for their detention and supervision. Female inmates in custody on Mar. 31, 1952, numbered 125.

* Revised by the Commissioner of Penitentiaries, Department of Justice, Ottawa.

34.—Movement of Convicts in Penitentiaries, Years Ended Mar. 31, 1949-52

Item	1949	1950[1]	1951[1]	1952[1]
	No.	No.	No.	No.
In Custody, Apr. 1	**3,851**	**4,260**	**4,740**	**4,817**
Received—				
From gaols	1,874	2,017	1,981	1,847
By transfer	504	419	338	323
By cancellation of ticket-of-leave	4	9	15	12
Totals, Received	2,382	2,445	2,334	2,182
Discharged by—				
Expiry of sentence	1,135	1,142	1,391	1,554
Transfer	504	419	339	322
Ticket-of-leave	285	331	459	373
Deportation	—	—	—	—
Death	21	15	5	24
Pardon	44	40	49	25
Release to military authorities	—	—	—	1
Release on order of court	16	5	7	13
Return to provincial authorities	—	4	1	—
Instructions from Immigration Department	—	9	—	—
Sentence quashed	3	—	6	—
Totals, Discharged	2,008	1,965	2,257	2,312
In Custody, Mar. 31	**4,225**	**4,740**	**4,817**	**4,687**

[1] Includes Newfoundland.

35.—Summary Statistics *re* Convicts in Penitentiaries, at Mar. 31, 1949-52

Item	1949	1950[1]	1951[1]	1952[1]
	No.	No.	No.	No.
Place of Birth—				
Canada	3,736	4,264	4,358	4,272
British Isles and possessions	173	157	144	121
Austria and Hungary	23	21	22	20
Italy	9	11	9	9
Poland	39	42	34	33
U.S.S.R.	68	60	64	53
Other Europe	58	63	65	63
United States	99	110	110	95
Other countries	20	12	11	21
Marital Status—				
Single	2,568	2,863	2,937	2,776
Married	1,378	1,573	1,560	1,575
Widowed	133	130	135	133
Divorced	65	103	108	84
Separated	81	71	77	119
Sex—				
Male	4,140	4,650	4,713	4,562
Female	85	90	104	125
Age—				
Under 21 years	481	551	520	485
21 to 30 "	1,919	2,147	2,209	2,091
31 to 40 "	1,060	1,148	1,176	1,245
41 to 50 "	481	575	575	543
51 to 60 "	181	210	227	212
Over 60 "	102	109	110	111
Not stated	1	—	—	—
Totals	**4,225**	**4,740**	**4,817**	**4,687**

[1] Includes Newfoundland.

The Ticket-of-Leave System.—The parole system in Canada is legalized under the Ticket-of-Leave Act (R.S.C. 1952, c. 264) and is administered by the Minister of Justice. It is described in detail in the 1948-49 Year Book, pp. 305-308.

Subsection 2.—Reformatories and Industrial Farms

Reports on movement of population in reformatories and industrial farms are received yearly and the statistics in Table 36 relate to returns received from nine reformatories and industrial farms for men and four reformatories for women. The revenue for the support of the institutions for men was derived chiefly from provincial funds (56·0 p.c.) and from the sale by the institutions of farm and industrial products (41·3 p.c.). In the case of the institutions for women, income was received from provincial funds (31·0 p.c.), municipalities (1·8 p.c.), sale of products (53·4 p.c.) and donations and bequests (4·6 p.c.).

36.—Movement of Population in Reformatories and Industrial Farms, Year Ended Mar. 31, 1951

Item	Male	Female	Total
	No.	No.	No.
In Custody, Apr. 1, 1950	**2,614**	**188**	**2,802**
Received—			
Committed	7,742	336	8,078
Transferred from other penal institutions	52	14	66
Transferred from hospitals, etc.	4	2	6
Ticket-of-leave and parole violators	50	12	62
Other	53	3	56
Totals, Received	7,901	367	8,268
Discharged by—			
Expiry of sentence	6,230	338	6,568
Ticket-of-leave and parole	726	34	760
Payment of fine	439	34	473
Remission of sentence	43	6	49
Transferred to other penal institutions	392	2	394
Other reasons	116	12	128
Totals, Discharged	7,946	426	8,372
In Custody, Mar. 31, 1951	**2,569**	**129**	**2,698**

Census of Reformatories and Corrective Institutions, 1951.—A Census of reformatories and of training schools (*see* pp. 314-316) is taken at five-year intervals, the latest being June 1, 1951. At that date, there were 13 reformative and corrective institutions, four of which were for women. Enumeration cards were completed for 2,551 men and 141 women on June 1, 1951. In these institutions for adults 29 p.c. of the inmates were under 21 years of age at the time of admission and almost 50 p.c. were between the ages of 21 and 39 years. The proportion of single men was 63 p.c. and three out of four of the men whose residence was known lived in urban centres. More than one-half of the women (53·2 p.c.) were single and the majority (91·0 p.c.) of those whose residence was known lived in urban centres.

From five to eight years of elementary school education was recorded for about one-half of the male and female inmates. Only 6·7 p.c. of the men were unemployed at the time of admission. On the other hand, 20·6 p.c. of the women were unemployed and another 34·0 p.c. had never worked.

37.—Summary Statistics *re* Inmates of Reformative and Corrective Institutions, by Age on Admission and Sex, as at June 1, 1951

Item	Inmates			Age Group													
				15-20		21-24		25-34		35-44		45-54		55 or over		Not Stated	
	M.	F.	Total	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Marital Status—																	
Single	1,622	75	1,697	681	46	321	17	271	4	134	5	126	1	80	—	9	2
Married	817	56	873	41	3	126	9	274	25	187	11	141	7	46	1	2	—
Widowed	49	3	52	1	—	1	—	7	—	2	1	11	2	27	—	—	—
Divorced	37	4	41	—	—	3	—	13	3	9	—	11	—	1	1	—	—
Separated	3	—	3	—	—	—	—	1	—	1	—	1	—	—	—	—	—
Not stated	23	3	26	7	1	2	—	5	2	5	—	1	—	3	—	—	—
Dependants—																	
Without dependants	1,651	73	1,724	673	32	318	12	279	12	144	6	155	8	74	2	8	1
With dependants	578	50	628	42	8	107	9	235	21	132	10	52	2	7	—	3	—
Not stated	322	18	340	15	10	28	5	57	1	62	1	84	—	76	—	—	1
Residence—																	
Rural	350	8	358	160	5	59	2	65	1	34	—	22	—	8	—	2	—
Urban	1,703	122	1,825	550	42	342	22	378	30	205	14	158	10	62	2	8	2
Transient	175	4	179	14	—	25	1	45	2	40	1	31	—	19	—	1	—
Not stated	323	7	330	6	3	27	1	83	1	59	2	80	—	68	—	—	—
School Attendance—																	
Illiterate	56	4	60	8	—	4	—	6	1	13	2	11	1	14	—	—	—
1 to 4 years	134	4	138	27	2	18	1	34	1	17	—	24	—	12	—	2	—
5 to 8 years	1,221	72	1,293	418	22	242	11	246	19	137	11	116	8	56	1	6	—
9 to 12 years	890	55	945	270	24	175	13	224	12	113	3	76	1	29	1	3	1
12 years or over	77	2	79	3	—	8	1	26	1	17	—	14	—	9	—	—	—
Not stated	173	4	177	4	2	6	—	35	—	41	1	50	—	37	—	—	1
Occupation—																	
Agriculture	132	—	132	55	—	20	—	26	—	15	—	6	—	9	—	1	—
Clerical	78	2	80	19	—	13	1	22	1	11	—	11	—	2	—	—	—
Commercial	138	4	142	22	—	20	—	44	3	27	—	19	1	6	—	—	—
Communication	36	1	37	4	—	3	—	12	1	7	—	4	—	6	—	—	—
Construction	374	—	374	105	—	67	—	92	—	46	—	46	—	17	—	1	—
Engineering	8	—	8	1	—	2	—	2	—	2	—	1	—	—	—	—	—
Finance	8	—	8	—	—	1	—	5	—	—	—	2	—	—	—	—	—
Fishing, trapping, logging	56	—	56	6	—	5	—	20	—	10	—	8	—	7	—	—	—
Labourer	449	—	449	82	—	62	—	112	—	74	—	66	—	53	—	—	—
Manufacturing	415	3	418	187	2	65	1	60	—	43	—	40	—	16	—	4	—
Mining	50	—	50	6	—	3	—	21	—	12	—	7	—	1	—	—	—
Professional	21	—	21	2	—	3	—	7	—	2	—	4	—	3	—	—	—
Service, domestic	96	22	118	8	6	14	4	20	10	20	2	27	—	6	—	1	—
personal	98	8	106	23	1	19	4	22	1	13	1	16	1	5	—	—	—
protective	62	—	62	22	—	21	—	9	—	5	—	3	—	1	—	1	—
other	23	1	24	5	1	7	—	6	—	2	—	1	—	2	—	—	—
Transportation	301	—	301	105	—	78	—	63	—	32	—	12	—	9	—	2	—
Housewife	—	16	16	—	1	—	1	—	5	—	6	—	2	—	1	—	—
Student	23	2	25	23	2	—	—	—	—	—	—	—	—	—	—	—	—
Never worked	2	48	50	—	23	2	9	—	7	—	5	—	4	—	—	—	—
Unemployed	170	29	199	55	11	48	5	27	6	15	3	18	2	6	1	1	1
Retired and pensioned	9	—	9	—	—	—	—	1	—	1	—	—	—	7	—	—	—
Not stated	2	5	7	—	3	—	1	—	—	1	—	—	—	1	—	—	1
Totals, Inmates	**2,551**	**141**	**2,692**	**730**	**50**	**453**	**26**	**571**	**34**	**338**	**17**	**291**	**10**	**157**	**2**	**11**	**2**

More than two-thirds of the men (68·1 p.c.) were committed for offences against rights and property and more than 50 p.c. were guilty of theft, breaking and entering, burglary and robbery. Incorrigibility, vagrancy, theft and breaches of the Liquor Control Act were the reasons for 50 p.c. of the women being institutionalized.

Nearly one-half of the men (48·0 p.c.) were confined for less than one year and 51·7 p.c. for one year to two years less a day. More than one-half of them (51·2 p.c.) had been previously committed to a penal institution. The median length of

sentence for the women was between 12 and 18 months. Of those women whose penal record was known, 92·3 p.c. had had earlier commitments to a reformatory.

38.—Term of Sentence and Penal Record of Inmates in Reformative and Corrective Institutions, as at June 1, 1951

Offence and Record	Under 3 Months		3 and Under 6 Months		6 and Under 12 Months		12 and Under 18 Months		18 Months and Under 2 Years		Indeterminate		Not Stated		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Nature of Offence																
Against public order and peace	285	16	102	2	21	—	12	1	5	1	—	—	1	—	426	20
Against administration and justice	4	—	8	—	4	—	5	—	3	2	—	—	—	—	24	2
Against religion, morals and public convenience	12	1	47	2	39	12	28	9	37	27	—	8	—	11	163	70
Against the person and reputation	11	—	36	—	58	3	42	—	47	2	—	—	—	—	194	5
Against right and property	39	1	161	1	392	7	574	17	565	16	5	2	1	—	1,737	44
Not stated	1	—	3	—	—	—	1	—	2	—	—	—	—	—	7	—
Totals, Inmates	**352**	**18**	**357**	**5**	**514**	**22**	**662**	**27**	**659**	**48**	**5**	**10**	**2**	**11**	**2,551**	**141**
Penal Record																
First commitment	12	—	74	—	153	—	253	1	174	4	2	1	—	—	668	6
Recidivists—																
Gaol	8	—	24	—	55	1	68	—	62	—	1	1	1	—	219	2
Reformatory	9	15	47	4	93	18	139	23	185	34	2	5	—	11	475	110
Penitentiary	—	—	3	—	2	—	5	—	5	—	—	1	—	—	15	1
Gaol and reformatory	17	2	56	—	98	3	123	—	134	1	—	2	—	—	428	8
Gaol and penitentiary	—	—	—	—	3	—	5	—	7	—	—	—	—	—	15	—
Reformatory and penitentiary	—	1	1	1	9	—	11	—	19	2	—	—	1	—	41	4
Gaol, reformatory and penitentiary	3	—	9	—	25	—	26	—	51	—	—	—	—	—	114	—
Not stated	303	—	143	—	76	—	32	3	22	7	—	—	—	—	576	10

Canada was the country of birth of 88·7 p.c. of the male inmates and of all but 13 of the females. In all, 272 men were born outside Canada but the majority of them (76·8 p.c.) had lived in this country for 15 years or more. Of those cases in which citizenship was known, all but 40 of the men and all the women were recorded as Canadian citizens. The men came from every province except Newfoundland while the women, with the exception of one, resided in the Maritimes and Ontario, the provinces in which the institutions for women were located.

39.—Origin, Birthplace, Citizenship and Residence of Inmates in Reformative and Corrective Institutions, by Sex, as at June 1, 1951

Item	Male	Female	Item	Male	Female
	No.	No.		No.	No.
Origin—			Citizenship—		
British	1,282	78	Canadian	2,425	137
European	585	47	Other countries	40	—
Asiatic	5	—	Not stated	86	4
Indian (North American)	46	10			
Negro	26	3	Residence—		
Not stated	607	3	Prince Edward Island	30	2
			Nova Scotia	16	6
			New Brunswick	10	12
Birthplace—			Quebec	78	—
Canada	2,264	128	Ontario	2,043	118
British Isles and Commonwealth	154	6	Manitoba	22	1
United States	53	1	Saskatchewan	2	—
Europe	63	3	Alberta	5	—
Other	2	—	British Columbia	38	—
Not stated	15	3	Northwest Territories	3	—
			Other country	6	—
			Not stated	298	2

Subsection 3.—Training Schools

Reports on movement of population are received yearly from training schools and figures compiled therefrom are shown in Table 40 for the years 1947 to 1951.

40.—Movement of Population in Training Schools, Years Ended Mar. 31, 1947-51

Item	1947	1948	1949	1950	1951
Training Schools for Boys—					
Pupils in residence at beginning of year	1,340	1,308	1,365	1,614	1,662
Admitted during the year	1,336	1,391	1,189	1,220	1,393
Discharged during the year	1,368	1,334	1,158	1,172	1,402
In residence at end of year	1,308	1,365	1,396	1,662	1,653
Training Schools for Girls—					
Pupils in residence at beginning of year	508	491	516	680	695
Admitted during the year	502	431	595	493	473
Discharged during the year	517	406	559	478	494
In residence at end of year	493	516	552	695	674
Totals—					
Pupils in residence at beginning of year	**1,848**	**1,799**	**1,881**	**2,294**	**2,357**
Admitted during the year	**1,838**	**1,822**	**1,784**	**1,713**	**1,866**
Discharged during the year	**1,885**	**1,740**	**1,717**	**1,650**	**1,896**
In residence at end of year	**1,801**	**1,881**	**1,948**	**2,357**	**2,327**

The period of the financial year varied among the training schools. The last complete financial year before June 1, 1951, showed that the province concerned supplied about three-quarters of the funds for the support of such schools (77·2 p.c. for boys' schools and 70·6 p.c. for girls' schools) and the municipalities a little more than a tenth (12·5 p.c. for boys' schools, 10·2 p.c. for girls' schools). Other financial resources included fees paid by parents, donations, bequests, sale of farm and industrial products and laundry work. Nine of the schools for boys were provincially administered, five were administered by religious orders and one by a board of directors; eight of the schools for girls were administered by religious orders and four were under provincial authority.

Census of Training Schools, 1951.—Returns of the Census of Training Schools of June 1, 1951, were received for 15 training schools for boys and 12 for girls, located in nine provinces; the Census enumerated 2,390 pupils (1,713 boys and 677 girls). The age of admission ranged from 4 to 18 years but those younger than seven years were protection cases. Boys of 14 years of age and girls of 15 years at the time of admission were predominant. More than 50 p.c. of the pupils were in the age group 14 to 16 years; only 2·8 p.c. of the boys and 9·9 p.c. of the girls were 17 years of age or over.

Family neglect and a need for protection brought 5·1 p.c. of the boys and 29·4 per cent of the girls to these training schools. The remainder were committed by the courts for some delinquency. More than 75 p.c. of the boys were charged with theft, burglary, house- and shop-breaking, and incorrigibility. Almost half of the delinquent girls were incorrigible, a term which covers a variety of misdemeanours.

Presuming that six years is the usual age for entering school (Grade I), at the time of admission to training school only one of five boys and one of four girls had the corresponding standard for their age. When admitted, 8·8 p.c. of the boys were unemployed; they had left school mainly from Grades IV to VII; the majority were

14 or 15 years of age. Nearly one-half of the girls (48·9 p.c.) had left school, chiefly from Grades V to VIII, and, like the boys, the majority were 14 or 15 years of age. No occupation was recorded for 28·4 p.c. of the girls from which it may be inferred that they were not gainfully employed.

41.—Summary Statistics *re* Pupils in Training Schools, by Age on Admission and by Sex, as at June 1, 1951

Item	8 and Under		9-10		11-12		13-14		15-16		17 or Over		Total[1]	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Reason for Commitment—														
Neglect and protection	3	12	7	10	17	38	41	64	14	49	2	26	87	199
Offences against the person	—	—	—	—	4	—	12	1	19	1	3	—	38	2
Offences against property—														
Burglary, house- and shop-breaking	—	—	15	—	42	—	110	—	91	2	7	—	267	2
Theft	7	1	38	2	120	6	238	18	217	14	24	2	648	43
Theft of automobiles	—	—	1	—	—	—	15	—	17	—	2	—	35	—
Wilful damage	1	—	2	—	4	—	6	—	6	—	—	—	19	—
Other	1	—	4	—	7	1	6	—	12	5	1	—	31	6
Other Offences—														
Incorrigibility	7	3	49	12	84	13	143	139	71	132	4	30	360	329
Immorality	—	1	1	—	3	2	6	14	8	14	2	5	20	36
Truancy	4	2	19	—	42	10	50	11	14	12	—	—	130	35
Vagrancy	—	—	2	—	4	1	8	3	22	7	2	4	39	15
Other	—	—	—	—	6	—	12	5	19	5	1	—	39	10
School Grade Last Attended—														
Grades I to IV	21	12	125	16	183	33	117	54	66	25	12	10	531	150
Grades V to VIII	—	2	10	6	147	35	498	177	364	158	29	39	1,055	417
Grades IX to XIII	—	—	—	—	—	—	23	15	72	47	7	16	102	78
Auxiliary class	1	1	3	1	1	—	8	2	5	3	—	1	18	8
Grade not stated	1	4	—	1	2	3	1	7	3	8	—	1	7	24
Province of Residence—														
Newfoundland	—	—	3	1	19	3	16	6	14	2	—	—	52	12
Nova Scotia	4	4	20	5	24	16	48	43	33	38	—	—	131	106
New Brunswick	—	3	10	1	21	6	17	19	2	7	—	8	50	44
Quebec	5	7	27	11	99	32	206	68	215	78	33	40	587	236
Ontario	14	5	77	6	145	13	276	99	146	73	2	2	670	198
Manitoba	—	—	1	—	14	1	36	10	39	23	6	8	96	42
Saskatchewan	—	—	—	—	2	—	12	—	8	—	—	—	22	—
Alberta	—	—	—	—	—	—	—	4	—	4	—	2	—	10
British Columbia	—	—	—	—	9	—	36	6	53	16	7	7	105	29
Totals, Pupils	23	19	138	24	333	71	647	255	510	241	48	67	1,713	677

[1] Includes 'not stated'.

Of those whose birthplace was recorded, all but 20 were born in Canada and all but five had lived in Canada for more than five years. A large majority of the parents were Canadian born but, of those whose place of birth was recorded, 10·7 p.c. of the pupils had a father and 8·9 p.c. a mother born in another country; 16·3 p.c. of the boys and 24·4 p.c. of the girls were wards of either a children's aid society or a provincial authority. Almost one-half of these boys (48·4 p.c.) and more than a third of these girls (37·0 p.c.) were permanent wards so that their natural parents, if they were still alive, no longer had any authority over them.

Nine out of ten of both the boys and girls were in commitment for the first time. In many cases no length of stay was specified and pupils were supervised until they were ready to take their place in their community or until home circumstances were such as to afford more satisfactory living conditions. The usual length of residence, at the date of the Census, was between a year and a year and a half; however, at least 26·7 p.c. of the girls and 14·8 p.c. of the boys had been institutionalized for over two years.

42.—Previous Commitments, classified by Length of Time and by Sex, as at June 1, 1951

Previous Commitments	Length of Time in Training Schools																			
	Under 3 Months		3 and Under 6 Months		6 and Under 12 Months		12 and Under 18 Months		18 Months and Under 2 Years		2 and Under 3 Years		3 and Under 5 Years		5 Years or Over		Unstated Time		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
None	209	78	183	71	268	140	203	115	84	65	101	85	54	50	15	20	409	1	1,526	625
One	1	3	6	1	26	5	31	6	24	2	37	3	16	9	7	3	3	2	151	34
Two or more	–	–	1	–	1	1	3	2	5	1	13	1	9	5	2	5	–	–	34	15
Not stated	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	1	3	2	3
Totals, Pupils	**210**	**81**	**191**	**72**	**295**	**146**	**237**	**123**	**113**	**68**	**151**	**89**	**79**	**64**	**24**	**28**	**413**	**6**	**1,713**	**677**

Table 43, showing marital status of the parents and home conditions at the time of admission, gives some indication of the background from which these children came.

43.—Marital Status of Parents and Living Conditions of Pupils at Time of Admission, by Sex, as at June 1, 1951

Marital Status of Parents	Boys	Girls	Total	Living Conditions at Time of Admission	Boys	Girls	Total
	No.	No.	No.		No.	No.	No.
Married	1,036	286	1,322	With own parents	1,386	420	1,806
Separated	334	147	481	With other relations	98	84	182
Divorced	28	17	45	In foster home	101	61	162
Widowed	230	161	391	In institution	92	64	156
One unknown	35	32	67	Other conditions	13	35	48
Both unknown	23	13	36	Not stated	23	13	36
Both deceased	25	18	43				
Not stated	2	3	5				
Totals, Pupils	**1,713**	**677**	**2,390**	**Totals, Pupils**	**1,713**	**677**	**2,390**

CHAPTER VIII.—EDUCATION AND RESEARCH

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—FORMAL EDUCATION*

Section 1.—Education in the Provinces

Education in Canada is generally the responsibility of the provinces.† Each province has its own system, that of Quebec being a dual one. However, there are two clearly defined types: (1) the English tradition carried on in nine provinces and in the Protestant schools of Quebec and (2) the French tradition followed in the Roman Catholic schools of Quebec.

The English Tradition.—The system of education in each province is established by legislation and administered by a Department of the Provincial Government under a Minister of Education who is a member of the Cabinet and is responsible to the Legislature.

Each of the Atlantic Provinces has a Council of Public Instruction or Board of Education, an advisory group composed of the Premier, Minister of Education, Deputy Minister or Superintendent and certain other appointees. The Council in Newfoundland is made up of the Minister, the Deputy Minister and the Superintendent of Education of each of the four leading religious denominations.

Each Department of Education is concerned with the general administration of the public schools, the conduct of examinations, the certification of teachers, the registration of private schools and trade schools, public and travelling libraries, correspondence courses and also the direct management and control of teacher-training schools, vocational institutes and schools for the blind and the deaf.

* Except where otherwise indicated, this Part has been prepared in the Education Division, Dominion Bureau of Statistics.

†The education of Indian children on reserves is under the jurisdiction of the Federal Government. *See* pp. 150-151.

Direct control and operation of the public schools is in the hands of local boards of school trustees, usually elected for terms of two or three years. They employ the teachers and administer the revenues received from provincial grants, local taxation and other minor sources. Any fees charged are for secondary education and are merely nominal, except in Newfoundland where they take the place of taxation.

Elementary and secondary education extends over 12 or 13 years or grades depending on the province. The elementary grades terminate with Grade VIII and the secondary grades begin with Grade IX though there is a practical as well as a theoretical separation into three divisions—Primary (Grades I to VI), Intermediate (Grades VII to X), and Senior (Grades XI and XII or XIII). The elementary schools are known as public schools, the secondary schools as high schools. However, many public schools teach some secondary grades and in Prince Edward Island and Newfoundland all grades are taught in the public schools.

In the cities and in some smaller centres there are kindergarten classes for five-year-olds and a few for four-year-olds as part of elementary education. Most children begin Grade I at age six or early seven and many complete the eight grades in seven years. Attendance is compulsory from age seven or eight to age 14 with attendance to age 16 required of urban pupils in some provinces. Emphasis is on the fundamental subjects—reading, writing, arithmetic, health and social studies—with varying additions of science, arts and crafts, music, home economics and shopwork. Many pupils, particularly in rural areas, leave school at the end of elementary schooling and enter employment in agriculture or unskilled occupations.

Secondary education may extend over a period of four or five years. Courses and subjects of study are diversified. A student may choose the academic course leading to university entrance or select courses or subjects preparing for employment in agriculture, commerce or industry. A student may pass from secondary school into commerce or industry at any time during this period provided he or she is over the compulsory age limit.

Further education is available to the high-school graduate through teacher-training school courses of one year for elementary school teachers; specialized technical training extending up to two years in a technical institute—there is at least one such institute in every province; nurse-training school where training extends over three years; or university. University courses are available in all branches of arts, commerce, science, education, philosophy, medicine, theology, etc. Graduation with a first degree (B.A., B.Sc., etc.) requires four years, medicine requires six years and theology seven years. Post-graduate courses require another two or more years.

The French Tradition.—The Quebec Department of Public Instruction is represented in the Cabinet by the Provincial Secretary. Although the Superintendent of Public Instruction is the head of the Department, a Roman Catholic Committee and a Protestant Committee, in charge of the education of Roman Catholics and Protestants, respectively, constitute the Council of Education which formulates policy and superintends the administration of all educational matters. The Council, however, has no authority over many special and technical schools that come directly under various government departments. The Protestant schools follow the English tradition already described; the Roman Catholic schools follow the French tradition.

From the very beginning boys are separated from girls. Both sexes follow through the Primary Grades, I to VII. The girls may then take the Intermediate Grades, VIII and IX, and thence enter a regional household science school, begin a four-year course in a teacher-training school or enter a superior school where a two-year course leads to a school of fine arts, a commercial course or a nurse-training course.

At the end of the fifth year a boy may enter a classical college for an eight-year course ending with a baccalaureate degree, which is prerequisite for entrance to a professional course in university, or he may continue on to the end of the primary course and then spend two years in the complementary course. From this point he may enter a technical school or any one of four sections of the two-year superior course—commercial, scientific, agriculture, technical or pre-teacher-training school. The latter leads to entrance to a teacher-training school, the others lead to specialized schools and advanced courses in technical schools or, after another year of preparatory work, to the higher schools of applied science, commerce and agriculture affiliated with the universities.

The boy who neither enters the classical college nor goes on to the complementary course may go directly from the primary course to a trade school or one of the regional agriculture schools. These schools offer two-year terminal courses.

Section 2.—Education in the Territories*

The Northwest Territories.—Education in the Northwest Territories is carried on under authority of the Northwest Territories Act, the School Ordinance and the Regulations thereunder, and the Indian Act and the Regulations thereunder. Day schools for non-Indian children are operated by the Northern Administration and Lands Branch of the Department of Resources and Development at Fort Smith, Hay River, Fort Resolution and Fort Simpson where the inhabitants are predominantly white and of mixed blood. Day schools for the education of Eskimos are also operated by that Branch at Aklavik, Tuktoyaktuk, Coppermine, Chesterfield Inlet, Cape Dorset and Coral Harbour in the Northwest Territories, and at Fort Chimo and Port Harrison in the Province of Quebec.

The Roman Catholic Church operates residential schools at Aklavik, Fort Providence and Fort Resolution, and Mission day schools at Fort Simpson and Fort Smith; the Church of England operates a residential school at Aklavik. These churches and other mission organizations also conduct schools for Eskimos at a number of points in the Eastern Arctic and northern Quebec. Eldorado Mining and Refining Limited at Port Radium and the Discovery Yellowknife Mine in the Mackenzie District also operate day schools.

The only organized school districts are the Yellowknife Public School District No. 1 and the Yellowknife Roman Catholic Separate School District No. 2. The Public School District, established in 1939, operates a modern eleven-classroom elementary and high school which was opened in 1947. The Separate School District was established in 1951 and has under construction a four-classroom school. Meanwhile provision has been made for the attendance of the pupils of this District at the public school.

A Superintendent of Schools, with headquarters at Fort Smith, periodically inspects the schools of the Mackenzie District. These schools follow the program of studies for elementary and secondary schools authorized by the Alberta

*Prepared by the Department of Resources and Development, Ottawa.

Department of Education. In remote areas, elementary and high-school students have access to correspondence-course studies issued by the educational authorities of Alberta and the cost is borne by the Territorial Administration.

A modified elementary school curriculum is followed by some of the federal schools for Eskimos by way of meeting the unique needs in the Arctic regions and a suitable curriculum for teaching Eskimo children in Mission schools is being considered. Because of their nomadic way of life, Eskimos seldom remain long at the settlements and the periods available to the Missions for teaching the children are comparatively short. The Eskimos of the Eastern Arctic have long had a system of syllabic writing (expressed as geometric phonetic characters) which most of them can now read and write proficiently. Syllabic writing has been used successfully to provide educational material in the Eskimo language on health matters, hygiene and native economics for the benefit of both children and adults. It is hoped that the establishment of schools in Eskimo territory will be influential in teaching the Eskimos to understand, speak and read simple English.

A program designed to improve education and welfare facilities generally has been initiated in the Northwest Territories. The program includes regular distribution of educational films, special radio broadcasts to classrooms, the provision of additional equipment and supplies, and increased attention to methods of instruction. Schools are usually staffed by a particular classification of welfare teachers, who carry on welfare work in the communities in addition to regular teaching duties.

Yukon Territory.—Public schools in the Yukon Territory are operated by the Territorial Government at Dawson, Mayo, Whitehorse, Carcross, Teslin, Watson Lake, Haines Junction, Kluane Lake, Brook's Brook, Destruction Bay and Swift River. The Roman Catholic Church operates a day school at Dawson and a residential school at Whitehorse.

The schools in the Territory follow the program of studies of the British Columbia Department of Education. The public schools at Dawson and Whitehorse have high-school departments providing education leading to university entrance. University entrance (junior matriculation) examinations are held in June at Dawson and Whitehorse by authority of the British Columbia Department of Education. The examination papers are forwarded from Victoria and are returned there for grading. In outlying districts, correspondence courses are provided at a nominal fee by the British Columbia Department of Education.

Educational matters in the Yukon Territory are in charge of a Superintendent of Schools, resident at Whitehorse, who is responsible to the Commissioner. Inspections of all schools are made periodically by the Superintendent.

The education of Indian children is carried on in day schools operated by the Indian Affairs Branch of the Department of Citizenship and Immigration and in residential schools operated by religious denominations. Full-time day schools are maintained at Whitehorse, Carmacks, Mayo, Moosehide and Old Crow, and seasonal schools at Burwash Landing, Ross River and at other points as required. A residential school is conducted under the auspices of the Church of England at Carcross. Close to the southern boundary of Yukon Territory at Lower Post in British Columbia, an Indian residential school is conducted under the auspices of the Roman Catholic Church. Residential schools in Yukon receive a per capita grant for Indian children registered therein.

Section 3.—Statistics of Schools, Universities and Colleges

Educational institutions in Canada are classified into four types: provincially controlled schools, privately controlled schools, universities and colleges, and federal Indian schools. The first three types are dealt with in this Section, while information on Indian schools, with the exception of enrolment figures shown in Table 1, is included with the general material on the Indians of Canada given in the Population Chapter, pp. 150-151.

1.—Enrolment in Educational Institutions, classified by Type of School and by Province, School Year 1950-51

Type of School	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	No.	No.	No.	No.	No.	No.
Provincially Controlled Schools—						
Ordinary and technical day schools	79,328	18,863	134,483	105,690	646,200[1]	764,198
Evening schools	1,397	—	4,939	1,809	18,000[1]	70,000[1]
Correspondence schools	18	68	987	367	1,000[1]	1,446
Special schools[2]	—	—	333[1]	—	770[1]	521
Teacher-training schools—						
Full time[3]	144	91	309	199	5,806	1,704
Accelerated courses[3]	312	—	52	—	—	470
Privately Controlled Schools—						
Ordinary day schools	—	969	4,709	2,129	66,400[1]	20,141
Business training schools—						
Day classes	—	76	577	624	5,800[1]	5,942
Evening classes	—	76	248	334	2,600[1]	5,159
Universities and Colleges—						
Preparatory courses	—	446	434	1,842	19,406	3,753
Courses of university standard	749	275	4,289	2,371	25,918	34,178
Other courses at university	—	56	169	611	17,910	10,810
Indian schools and schools in the Territories	—	51	591	416	2,208	5,736
Totals	**81,948**	**20,971**	**152,120**	**116,392**	**812,018**	**924,058**
Population (June 1, 1951)	361,416	98,429	642,584	515,697	4,055,681	4,597,542

Type of School	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.
Provincially Controlled Schools—						
Ordinary and technical day schools	128,868	167,485	173,969	173,354	1,000[1]	2,393,438
Evening schools	7,728	2,349	826	17,045	—	124,093
Correspondence schools	1,000[1]	3,400	8,296	4,956	—	21,538
Special schools[2]	16	175	—	141	—	1,956
Teacher-training schools—						
Full time[3]	361	656	418	623	—	10,311
Accelerated courses[3]	358	—	—	—	—	1,192
Privately Controlled Schools—						
Ordinary day schools	6,226	3,138	3,527	6,170	—	113,409
Business training schools—						
Day classes	1,305	740	1,453	1,422	—	17,939
Evening classes	1,779	855	1,241	1,986	—	14,278
Universities and Colleges—						
Preparatory courses	1,850	849	779	—	—	29,359
Courses of university standard	5,954	6,086	5,292	8,383	—	93,495
Other courses at university	2,641	378	1,095	494	—	34,164
Indian schools and schools in the Territories	3,205	3,423	3,141	5,094	1,006	24,871
Totals	**161,291**	**189,534**	**200,037**	**219,668**	**2,006**	**2,880,043**
Population (June 1, 1951)	776,541	831,728	939,501	1,165,210	25,100	14,009,429

[1] Estimated. [2] Schools for the blind and deaf; these are boarding schools and many of the pupils are from provinces other than the one in which the school is situated. [3] Courses for elementary teachers only; those for secondary teachers are included in university enrolment.

The provincially controlled schools are the most important group and account for about 90 p.c. of the total enrolment shown in Table 1. These systems of public elementary and secondary education are financed mainly by local school authorities, assisted by provincial grants. There are private schools in all provinces (i.e., schools that are not conducted by publicly elected or publicly appointed boards and are not financed out of public money) but their enrolment is not large in comparison with that of the public schools. At the level of higher education, there is a provincial university in each of six provinces and one or more colleges supported out of provincial funds in the other provinces. In addition, there are 16 private universities most of which receive provincial aid and 163 colleges giving degree credit courses. Universities and colleges also receive grants from the Federal Government. The number of agricultural colleges and schools, by province, with type and length of course offered, is given in the Agriculture Chapter, pp. 384-387.

Subsection 1.—Provincially Controlled Elementary and Secondary Schools*

Enrolment and Attendance.—At the elementary-school level, enrolments have been increasing since the school year 1944-45, except in Saskatchewan. Birth registrations of the past few years indicate that by 1953-54 the enrolment in Grades I to VIII will have increased from 1,712,662 to over 2,307,000, a total of 595,000, and there is every indication that the increase may amount to 800,000 by 1960. A decline may set in shortly after that. An increase of 800,000 is equal to over 45 p.c. of the 1944-45 enrolment in the elementary schools of Canada. Grades above Grade VIII will begin to feel the effects between 1953 and 1955 and by 1965 secondary school enrolment may be close to double the 1951 total.

Other factors operating to increase enrolment include: the introduction of family allowances in 1945 which, while showing its effects on schools most clearly in improved attendance, is also keeping in school to the legal age limit many pupils who might otherwise leave from a few months to two years before they are lawfully entitled to leave; increased emphasis on the holding power of schools; increased transportation facilities at public expense; the building of dormitories in some provinces; the larger unit of administration; the establishment of junior high schools and composite schools; and the wave of post-war immigration. Enrolment in provincially controlled schools is given for the latest school year available in Table 1 and average daily attendance is shown in Table 2. The average daily attendance figures are more comparable, as between provinces, and for most purposes are probably more significant than those of enrolment.

* Academic and vocational day schools only.

2.—Average Daily Attendance in Provincially Controlled Schools, by Province, School Years Ended 1942-51

NOTE.—Comparable figures for earlier years will be found in previous editions of the Year Book, beginning with the 1932 edition.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1942...	...	12,975	89,915	72,119	532,759	576,711	106,631	152,354	139,886	102,085	1,785,435
1943...	...	12,759	86,630	69,814	515,140	553,954	100,169	138,019	127,214	93,473	1,697,172
1944...	...	12,621	89,490	69,523	518,896	559,796	99,471	136,752	128,051	102,999	1,717,599
1945...	...	12,984	93,831	70,746	523,741	571,625	100,971	135,336	130,095	107,599	1,746,928
1946...	...	14,321	99,367	74,529	529,613	590,801	104,666	138,267	133,162	114,590	1,799,316
1947...	...	14,850	102,099	78,129	533,765	597,400	103,739	135,038	131,011	121,334	1,817,365
1948...	...	14,774	103,858	81,057	544,000[1]	613,627	103,744	135,927	133,410	129,859	1,860,256[1]
1949...	59,520	14,727	107,914	82,168	560,000[1]	638,733	105,240	135,872	136,690	138,941	1,979,805[1]
1950...	66,727	15,043	111,813	87,158	585,000[1]	668,000[1]	106,008	136,991	146,388	147,584	2,070,712[1]
1951...	67,638	15,310	113,952	84,923	612,250[1]	674,666	112,749	137,606	150,013	154,077	2,123,184[1]

[1] Estimated.

Grade Distribution.—A record of the grade distribution of pupils in the provincially controlled schools of all provinces is presented in Table 3. The grades of boys and girls cannot be shown separately.

3.—Grade Distribution of Pupils Enrolled in Provincially Controlled Schools, by Province, School Year 1950-51

Grade	N'f'ld.	P.E.I.	N.S.	N.B.	Que.[1]	Ont.	Man.	Sask.	Alta.	B.C.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Kindergarten	—	—	—	—	4,009	39,797	—	—	—	1,215
Grade I	17,212	2,552	25,559	15,023	99,537		20,659	21,961	21,900	20,922
" II	10,417	2,163	15,186	13,376	91,631	254,518	15,381	18,876	20,085	20,246
" III	9,572	2,067	15,134	13,030	88,582		14,416	18,283	18,730	19,011
" IV	8,474	1,858	14,075	12,123	84,111		13,584	17,191	17,668	17,585
" V	7,774	2,003	13,415	11,453	74,139	210,011	13,096	17,508	16,884	16,297
" VI	6,809	1,988	12,580	10,206	65,044		11,523	15,864	15,770	15,087
" VII	5,905	1,686	11,359	9,104	49,532	61,281	10,860	14,874	15,245	14,656
" VIII	4,185	1,563	9,274	7,540	25,939	56,581	9,106	13,388	13,786	13,341
" IX	3,931	1,190	7,444	4,818	18,108	50,121	7,637	10,792	11,713	11,929
" X	2,734	1,076	5,450	3,773	8,798	36,121	6,234	8,083	9,084	9,554
" XI	1,849	563[2]	3,729	2,724	5,584	22,678	4,923	6,068	6,865	7,197
" XII	49	97[2]	1,278	141	1,860	16,410	1,449	4,273	6,239	5,426
" XIII	—	—	—	—	—	10,125	—	—	—	888
Special	417	—	—	693	1,815	6,555	—	—	—	—
Unclassified	—	57	—	1,686	495	—	—	324	—	—
Totals	**79,328**	**18,863**	**134,483**	**105,690**	**619,184**	**764,198**	**128,868**	**167,485**	**173,969**	**173,354**

[1] Quebec figures are for 1949-50. [2] Includes 389 Grade XI students and 79 Grade XII students enrolled in Prince of Wales College.

Teaching Staffs.—In 1951, the teaching staffs of the publicly controlled elementary and secondary schools comprised 23,995 men and 65,539 women, a total of 89,534. Omitting Quebec for which comparable data are not available, 35 p.c. of the teachers were in cities, 27 p.c. were in towns and villages, 25 p.c. were in one-room rural schools, and the remaining 13 p.c. in schools of two or more rooms outside of urban centres. Again omitting Quebec where 36 p.c. of the teachers are members of religious orders, approximately 25 p.c. of the women teachers are married. Of the total number of teachers in the other nine provinces, at least 10 p.c. are only partially trained or are untrained; also about 10 p.c. of the total staff leave the profession each year.

4.—Teachers in Provincially Controlled Schools, classified according to Salary, by Province, School Year 1949-50

NOTE.—Comparable figures for Quebec are not available.

Salary	N'f'ld.	P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
$ 525 -$1,024	1,266	253	600	736	1,255	281	82	39	—
$1,025 - 1,524	517	366	1,423	1,559	1,556	1,103	2,733	518	103
$1,525 - 2,024	324	66	1,155	571	8,827	1,651	2,778	1,461	1,182
$2,025 - 2,524	148	19	563	337	4,851	651	881	2,080	1,303
$2,525 - 3,024	79	3	290	127	3,294	384	367	945	1,376
$3,025 - 3,524	22	4	165	99	2,688	233	220	537	730
$3,525 - 4,024	5	—	62	32	1,308	115	110	288	579
$4,025 or over	—	—	21	5	1,339	107	36	175	478
Unspecified	14	—	—	11	10	304	3	28	11
Totals	**2,375**	**711**	**4,279**	**3,477**	**25,128**	**4,829**	**7,210**	**6,071**	**5,762**
Median salaries $	966	1,083	1,569	1,341	2,109	1,689	1,580	2,279	2,668

Financial Support.—The income required to support the public elementary and secondary schools is derived almost wholly from local taxation and provincial grants. Fees for elementary schooling may be charged in Quebec. In some of the other provinces fees are charged for secondary grades but, except where in lieu of taxation, they are quite nominal.

In general, school boards submit their budgets to the local municipal councils which levy for and collect the required amounts. School boards in Quebec and some boards in other provinces have the power to levy and collect taxes for school purposes. Assessment, on which taxes for school purposes are levied, is the valuation of land and buildings (or improvements in some cases) and usually some other factor such as personal property or business income.

Each province has its own method of apportioning grants to local school boards. These grants are of two types. (1) The basic grant may be calculated on a basic minimum cost, an amount per classroom, salary and qualifications of teacher, average attendance, etc. All provinces adopt some means of increasing equality of opportunity by favouring poorer areas over richer ones. (2) Special grants are paid for such features as transportation, music, arts and crafts, special classes, equipment, building costs, night classes, etc. Special grants are largest in Quebec where there is marked emphasis on training for home industries, arts and crafts.

Newfoundland schools are financed largely from provincial funds. Tuition fees may be charged for Grades I to VIII only, except in the 'colleges' (St. John's) where fees may be charged for Grades I to XI. Fees may be charged also to provide for fuel and cleaning or these may be provided in kind. There is no local taxation for school purposes. Provincial grants are mainly for teachers' salaries, school plant maintenance and repairs, and the erection of buildings.

Table 5 presents a comparable statement of the finances of school boards operating publicly controlled schools so far as this can be done with existing records.

5.—Financial Support of Provincially Controlled Elementary and Secondary Schools, by Province, for Provincial Fiscal Years Ended 1939, 1949 and 1950

NOTE.—The receipts shown in this table do not include any amounts raised by loans or the sale of bonds or debentures, as all revenue of this nature must be repaid ultimately with money raised by local taxation. Figures from 1914 are given in the corresponding tables of previous Year Books beginning with the 1936 edition. The fiscal years of all provinces end Mar. 31, except Nova Scotia (Nov. 30) and New Brunswick (Oct. 31).

Province and Year	Provincial Government Grants	Local Taxation	Other Sources	Total Current Revenue Recorded	Debenture Indebtedness[1]	Administrative Units Operating Schools
	$	$	$	$	$	No.
Newfoundland—						
1949	3,200,302	—	660,000[2]	3,860,302[2]	..	274
1950	3,557,275	—	1,009,725[2]	4,567,000[2]	..	..
Prince Edward Island—						
1939	274,323[3]	175,244	..	449,567	..	474
1949	524,783[3]	438,164	32,374	995,321	..	457
1950	570,908[3]	488,714	62,020	1,121,642	..	..
Nova Scotia—						
1939	718,546[3]	3,341,689[3]		4,060,235	..	1,775
1949	5,291,871[3]	5,401,966[3]		10,693,837	..	1,762
1950	6,548,846[3]	5,584,318[3]	..	12,133,164	..	..

For footnotes, *see* end of table.

5.—Financial Support of Provincially Controlled Elementary and Secondary Schools, by Province, for Provincial Fiscal Years Ended 1939, 1949 and 1950—concluded

Province and Year	Provincial Government Grants	Local Taxation	Other Sources	Total Current Revenue Recorded	Debenture Indebtedness[1]	Administrative Units Operating Schools
	$	$	$	$	$	No.
New Brunswick—						
1939	534,315[3]	2,637,820[3]	..	3,172,135	4,659,650	1,553
1949	4,454,345[3]	5,918,000[3]	310,000	10,682,345	..	1,323
1950	4,946,402[3]	6,563,000[3]	400,000	11,909,402	..	
Quebec—						
1939	2,386,965	19,716,324	1,572,832	23,676,121	68,043,977	1,905
1944[4]	6,768,395	23,554,568	2,015,294	32,338,257	72,618,071	1,966
Ontario—						
1939	7,015,225	41,638,332[5]	..	48,653,557	59,499,543	6,600
1949	37,558,062	61,646,259[5]	3,516,346	102,720,667	83,877,272	4,315
1950	42,661,144	73,195,577[5]	2,906,755	118,763,476	108,830,392	
Manitoba—						
1939	1,172,783	6,850,783	139,756	8,163,322	8,045,764	1,889
1949	4,206,665	11,442,422	588,611	16,237,698	6,440,174	1,729
1950	4,086,810	12,875,011	343,165	17,304,986	10,265,632	..
Saskatchewan—						
1939	2,305,375	7,254,500	451,143	10,011,018	12,936,569	4,933
1949	5,825,433	15,751,617	340,594	21,917,644	4,382,943	1,164[6]
1950	6,919,369	16,372,024	367,659	23,659,052	5,212,399	..
Alberta—						
1939	1,809,392	8,387,514	253,252	10,450,158	7,653,468	3,592
1949	6,445,559	17,781,887	421,073	24,648,519	15,804,214	246[6]
1950	7,794,234	19,619,264	481,376	27,894,874	5,844,102	..
British Columbia—						
1939	2,722,702	7,009,070	..	9,731,772	14,379,553	721
1949	13,450,668	14,451,889	1,631,715	29,534,272	..	97
1950	14,794,397	16,683,852	874,219	32,352,468	..	..

[1] Net figures, after deduction of sinking funds, except for British Columbia in 1939, for which the gross figure is given. [2] Estimated. [3] Includes contributions to teachers' salaries and, in New Brunswick, grants made to schools by the Vocational Education Board. [4] Latest available figures. [5] Includes amounts raised by counties and the township grants on salaries of rural public school teachers. [6] Excludes local boards within larger units.

Subsection 2.—Private Elementary and Secondary Schools

Private schools include all those not operated by publicly elected or appointed boards. Except in Quebec, they receive no support from public funds. Instruction is similar to that given in public schools except that more opportunities may be given for music, art, etc., and in schools under religious control there is greater emphasis on religious instruction. In most provinces there is some form of inspection or regulation by the provincial Department of Education.

Of the 828 private schools reporting in 1951, 505 were in Quebec, 122 in Ontario, 120 in the Prairie Provinces, 43 in British Columbia and 38 in the Maritimes. There were 6,455 full-time teachers of whom 1,334 were men. Outside of Quebec, the salaries for lay teachers ranged from $900 to $5,000 with a median of $1,862 for women, and from $1,150 to $8,000 with a median of $2,905 for men.

In these schools, about 66 p.c. of the pupils, including 46,000 girls and 29,000 boys, were in the elementary grades. At the secondary level there were 24,000 girls and 13,000 boys.

The private schools are financed largely from fees, legacies, gifts, or by religious orders. The annual fees range from very little to upwards of $1,000; in 1951 they averaged $100 for day students and $500 for boarders and expenditures amounted to over $17,681,000. Of that amount $5,338,000 was paid out in teachers' salaries.

6.—Enrolment in Private Elementary and Secondary Schools, by Province, Specified School Years Ended 1921-51

NOTE.—Figures for intervening years will be found in the corresponding tables of the 1937, 1942 and 1946 Year Books.

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
1921	682	3,047	2,607	54,671	9,961	3,149	1,608	2,274	3,159	81,158
1926	580	2,956	3,528	54,767	10,126	4,534	2,358	2,281	4,624	85,754
1931	570	2,746	3,625	57,320	12,214	5,864	2,853	2,944	5,276	93,412
1941	638	2,986	2,935	55,847	13,458	4,509	1,985	3,813	5,003	91,174
1946	804	3,362	2,903	..	16,336	4,643	3,682	2,852	5,576	40,158[1]
1947	803	3,109	2,841	..	15,694	4,125	3,721	2,507	5,195	37,995[1]
1948	877	3,414	2,341	59,020	16,586	4,653	2,710	2,519	5,983	98,103
1949	951	3,894	2,504	61,200	18,251	5,348	2,625	3,630	6,334	104,737[2]
1950	971	4,217	2,306	63,600	18,823	5,271	2,630	3,539	6,256	107,613[2]
1951	969	4,709	2,129	66,400	20,141	6,226	3,138	3,527	6,170	113,409[2]

[1] Exclusive of Quebec. [2] Exclusive of Newfoundland.

Business Colleges.—Of the 141 business schools reporting in 1951 in eight provinces (exclusive of Quebec and Newfoundland), 15 were in the Maritimes, 78 in Ontario, 27 in the Prairie Provinces and 21 in British Columbia. There were 199 men and 438 women employed as full-time teachers and 46 men and 135 women as part-time teachers.

Girls predominated in the student body and the enrolment in evening classes was almost equal to the full-time day enrolment. The 1951 enrolment was: full-time day classes, 2,289 boys and 12,868 girls; part-time classes, 446 boys and 2,336 girls; evening classes, 3,239 boys and 11,039 girls. The total for the year was about 3,600 lower than for 1950. About 58 p.c. of the students were 17 to 19 years of age.

Monthly fees ranged from $10 to $35 for day classes and from $6 to $20 for evening classes. Total operating expenditures for these schools amounted to over $2,600,000 in 1951 of which $1,125,000 was for teachers' salaries.

7.—Enrolment in Private Business and Commercial Schools (Business Colleges), by Province, Specified School Years Ended 1921-51

NOTE.—Figures include day and evening classes. Those for intervening years will be found in the corresponding tables of the 1937, 1942 and 1946 Year Books.

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
1921	85	1,280	740	4,319	14,537	3,538	1,333	2,216	1,986	30,034
1926	114	766	722	2,743	10,314	3,502	1,436	2,739	2,230	24,566
1931	140	775	671	2,807	9,732	3,087	1,400	1,629	2,180	22,421
1941	168	1,019	329	3,707	9,119	1,782	1,431	2,145	2,010	21,710
1946	181	1,080	805	.	14,901	4,099	1,568	3,482	4,021	30,137[1]
1947	212	1,106	1,119		15,024	3,721	1,904	3,855	4,009	30,950[1]
1948	227	1,011	958	..	13,917	3,493	1,533	3,731	3,674	28,544[1]
1949	214	1,070	916	9,000[2]	12,938	3,449	1,554	2,969	3,932	36,042[1,3]
1950	185	1,053	1,099	9,100[2]	11,999	3,648	1,662	2,700	4,356	35,802[1,3]
1951	152	825	958	8,400[2]	11,101	3,084	1,595	2,694	3,408	32,217[1,3]

[1] Exclusive of Quebec. [2] Estimated. [3] There are no schools of this type in Newfoundland.

Subsection 3.—Universities and Colleges

The most recent statistics on enrolment in the universities and colleges of Canada (Dec. 1, 1952) show a downward trend owing to the decrease in the number of student war veterans. This trend is expected to continue for another two years. Total registration of full-time university-grade students, including post-graduate students, for the academic year 1949-50 was 74,273 students; for 1950-51, 68,358 students; and for 1951-52, 59,802[p] students. A return to the pre-war proportions of men to women in the undergraduate enrolment is evident from the following statement:—

Academic Year Ended—	*Undergraduate Enrolment*	*Women Students*	*War Veterans*
	No.	p.c.	p.c.
1931	31,576	23·52	—
1941	34,750	23·47	—
1946	61,861	20·80	32·33
1948	79,346	18·42	37·30
1950	69,011	20·41	11·89
1951	64,088	21·66	10·92
1952[p]	56,589	22·45	5·85

Table 8 shows the total number of students registered in universities and colleges in the academic year 1950-51.

8.—Total Registration in Universities and Colleges, by Province, Academic Year Ended 1951

Province and Item	Under-graduate	Post-graduate	Pre-Matric-ulation	Others	Total
Newfoundland—					
Full-time	380	—	—	—	380
Other	369	—	—	—	369
Prince Edward Island—					
Full-time	270	—	446	56	772
Other	5	—	—	—	5
Nova Scotia—					
Full-time	3,869	106	277	114	4,366
Other	251	63	157	55	526
New Brunswick—					
Full-time	2,020	32	1,506	44	3,602
Other	249	70	336	567	1,222
Quebec—					
Full-time	19,673	1,336	17,963	1,983	40,955
Other	4,727	182	1,443	15,927	22,279
Ontario—					
Full-time	21,345	1,793	3,497	409	27,044
Other	10,176	864	256	10,401	21,697
Manitoba—					
Full-time	4,411	173	702	295	5,581
Other	1,369	1	1,148	2,346	4,864
Saskatchewan—					
Full-time	2,575	168	849	138	3,730
Other	3,343	—	—	240	3,583
Alberta—					
Full-time	3,146	239	653	418	4,456
Other	1,907	—	126	677	2,710
British Columbia—					
Full-time	6,399	423	—	16	6,838
Other	1,379	182	—	978	2,539
Totals—					
Regular Session, Full-time	**64,088**	**4,270**	**25,893**	**3,473**	**97,724**
Regular Session, Part-time	**2,771**	**289**	**1,397**	**5,459**	**9,916**
Summer Schools and Extra-mural Courses	**21,004**	**1,073**	**2,069**	**25,732**	**49,878**

Post-war programs of international co-operation in the field of education have led to an increase in the number of foreign students in Canadian universities. The proportion of students from the United States and the United Kingdom has decreased in favour of students from other countries. In 1951, the latest year for which data are available, there were 3,188 students registered from outside of Canada; in 1938-39, the year preceding the decrease in foreign students because of war restrictions, there were 2,231 students from outside of Canada. The proportion of students from the United States in the foreign student body represented 82 p.c. of the total under pre-war conditions and 55 p.c. in 1951. Students from countries other than the United States and the United Kingdom, who represented only 12 p.c. of the foreign student population in 1938-39, made up 31 p.c. of that population in 1951. This increase was largely the result of the scholarship program of the United Nations agencies and the Colombo Plan, in which Canada participates.

University Graduates.—A total of 16,045 bachelor and first professional degrees was awarded in 1951 as compared with 19,669 in 1950. Degrees in Arts and Pure Science, including Commerce, represented 49 p.c. of the total in 1951, Engineering and Applied Science 17 p.c., and the Medical Sciences 13 p.c. Women students received 22 p.c. of the awards in 1951 as compared with 19 p.c. in 1950.

Degrees conferred in 1951 for post-graduate study and research, other than in Theology, included 352 licences, 1,280 Masterships and 202 Doctorates in Course. The results of a survey on the subjects chosen for theses by candidates for advanced degrees (National Conference of Canadian Universities, June 1952) shows the following classification by broad fields of study and research:—

Item	*Master's Degree*	*Doctorate*
	No.	No.
Applied Science	319	44
Pure Science	311	86
Social Sciences	302	32
Humanities	191	36
Unclassified	157	4
TOTALS	1,280	202

9.—Graduates from Universities and Colleges, School Years Ended 1948-51

NOTE.—Figures for 1920-36 are given in the 1938 Year Book, pp. 993-997, and for 1937-47 in the corresponding tables of subsequent editions.

Course	1948		1949		1950		1951	
	Total	Female	Total	Female	Total	Female	Total	Female
	No.	No.	No.	No.	No.	No.	No.	No.
Graduates in Arts, Pure Science and Commerce—								
Bachelors of Arts[1]	6,293	2,003	7,043	2,078	6,791	1,987	6,059	1,869
Bachelors of Science (in Arts)	1,003	173	1,324	175	1,242	129	1,067	152
Bachelors of Commerce[2]	1,127	56	1,362	71	950	42	708	47
Totals	8,423	2,232	9,729	2,324	8,983	2,158	7,834	2,068
Graduates in Applied Science—								
Bachelors of Applied Science								
Engineering	1,690	8	2,999	6	3,598	2	2,427	3
Bachelors of Architecture[3]	55	7	84	4	165	6	164	1
Bachelors of Forestry	104	1	271	—	319	—	157	—
Totals	1,849	16	3,354	10	4,082	8	2,748	4

For footnotes, *see* end of table.

9.—Graduates from Universities and Colleges, School Years Ended 1948-51—concluded

Course	1948		1949		1950		1951	
	Total	Female	Total	Female	Total	Female	Total	Female
	No.	No.	No.	No.	No.	No.	No.	No.
Graduates in Agriculture, Veterinary Science and Household Science—								
Bachelors of Agricultural Science	384	24	893	30	804	23	556	17
Graduates in Veterinary Science	84	2	139	2	150	3	175	16
Bachelors of Household Science	258	258	299	299	275	275	277	277
Totals	726	284	1,331	331	1,229	301	1,008	310
Teacher Diplomas and Graduates in Education and Social Service—								
Teacher diplomas	804	..	774	..	858	.	836	
Degrees in education or pedagogy	481	103	632	152	531	138	577	155
Librarian degrees and diplomas	79	68	95	72	117	88	122	99
Physical training degrees and diplomas	146	62	170	63	151	61	129	60
Social service degrees and diplomas	241	160	268	174	268	162	265	164
Totals	1,751	393[4]	1,939	461	1,925	449	1,929	478
Graduates in Medicine and Related Studies—								
Medical doctors	651	54	684	56	817	42	867	61
Dentists	177	5	178	2	329	4	294	2
Pharmacists	426	80	374	51	422	65	406	46
Degrees and diplomas in nursing	318	318	470	470	538	538	490	490
Physio-therapy and occupational therapy	47	47	154	154	73	73	60	60
Totals	1,619	504	1,860	733	2,179	722	2,117	659
Graduates in Law and Theology—								
Law schools	438	11	713	17	764	28	712	20
Roman Catholic theological colleges	357	—	335	—	326	—	345	—
Protestant theological colleges	135	24	155	27	181	21	189	17
Totals	930	35	1,203	44	1,271	49	1,246	37
Post-Graduate and Honorary Degrees—								
Honorary doctorates	173	11	227	8	198	8	186	11
Doctorates in courses	134	10	194	19	220	21	202	11
Masters of Arts[5]	474	128	646	180	769	175	704	156
Masters of Science[6]	279	20	324	23	417	33	508	28
Bachelors of Divinity	52	—	47	—	73	3	137	6
Licentiates (except in theology)	336	23	417	29	335	34	352	36
Other post-graduate degrees and diplomas[7]	611	121	469	155	611	198	470	162
Totals	2,059	313	2,324	414	2,623	472	2,559	410

[1] Includes Bachelors of Letters and of Social Science. [2] Includes Bachelors of Accountancy and Secretarial Science. [3] Includes diplomas in Architecture from the Schools of Fine Arts of Montreal and Quebec. [4] Excludes teacher diplomas. [5] Includes M. Com., M. Ed., M. Paed., M.S.W. [6] Includes M.A.Sc., M.S.A., M.Sc.F., M.Arch., M.V.Sc., M.Sc. Dent., M. Surgery (where conferred separately). [7] Except diplomas for teachers and theologians.

Academic Staff.—The total teaching staff, including part-time staff, increased from 9,373 to 9,441 between 1950 and 1951. This increase, in conjunction with the decreased enrolment, brought the ratio of teachers to staff more in line with the experience of pre-war years. By the addition of one-half of the part-time staff to the full-time staff, on the basis of equivalence in instruction, there were eight students for each teacher in the pre-war years while the present teaching load represents nine students to one teacher.

10.—Teaching Complement in Universities and Colleges, Selected School Years Ended 1921-51

School Year Ended—	Faculties of Arts and Science		Professional Schools		Totals[1]	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
	No.	No.	No.	No.	No.	No.
1921	1,191	242	942	1,179	2,133	1,352
1931	1,776	519	1,127	1,705	2,903	2,077
1941	2,037	579	1,707	2,420	3,452	2,185
1946	2,466	1,010	2,645	2,440	4,937	2,797
1947	2,814	1,002	3,078	2,478	5,246	3,441
1948	3,042	1,119	3,257	2,667	5,447	3,591
1949	2,871	1,202	3,051	2,755	5,339	3,887
1950	2,890	1,153	3,078	3,036	5,246	4,127
1951	3,126	1,260	2,557	2,826	5,539	3,902

[1] Excludes duplication.

Salaries for full-time staff were considerably higher in 1951 and 1952 than in the pre-war years as indicated by the median salaries:—

Classification of Position	*Median Salaries*		
	1952	*1951*	*1939*
	$	$	$
Dean	7,271	6,950	5,006
Professor	6,313	5,685	4,345
Associate professor	5,227	4,613	3,469
Assistant professor	4,381	3,834	2,708
Lecturer	3,329	2,847	1,035

Income and Expenditure.—A record of the sources of annual income for a representative group of universities is given in Table **11** for certain years from 1921 to 1951. The distribution of income by source for 1951 was as follows: Government grants, 46 p.c.; fees, 35 p.c.; revenue from endowments, 8 p.c.; other sources, 11 p.c. Expenditure in 1951 amounted to $670 for each student. A total expenditure amounting to $40,791,521 was reported by institutions responsible for 80 p.c. of the total enrolment.

11.—Income and Capital Resources of Universities and Colleges, Selected School Years Ended 1921-51

NOTE.—The larger universities and many of the colleges in Canada are included and represent an enrolment of approximately 80 p.c. of the full-time students of university grade throughout the period. The institutions omitted are mainly those conducted by religious orders where teachers receive little or no salary and the financial returns are, consequently, not comparable.

School Year Ended—	Current Income					Deficit[2]	Surplus[2]	Capital Resources		
	From Endowments	Government Grants	Student Fees[1]	Miscellaneous	Total			Land, Buildings and Equipment	Endowments	Trust Funds
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
1921	1,497	4,522	1,826	1,244	9,089	80	194	48,124	28,328	..
1931	2,258	6,925	3,323	1,455	13,961	600	126	82,403	48,459	..
1941	2,046	6,804	5,143	2,054	16,047	244	116	95,680	55,082	17,422
1946	2,397	10,485	9,779	3,153	25,815	75	532	102,627	56,975	28,999
1947	2,314	13,768	13,636	3,203	32,921	350	382	112,409	59,208	34,397
1948	2 387	14,863	14,903	4,689	36,842	169	347	123,248	63,724	42,302
1949	2,568	16,218	15,959	4,845	39,590	542	935	139,779	69,012	43,093
1950	2,950	16,959	15,409	5,140	40,459	601	413	150,178	84,410	37,821
1951	3,127	18,733	14,025	4,647	40,532	1,037	778	162,372	82,702	34,686

[1] Board and lodging not included. [2] Combined deficits or surpluses of schools reporting.

PART II.—CULTURAL ACTIVITIES RELATED TO EDUCATION

An outline of the Report of the Royal Commission on National Development in the Arts, Letters and Sciences,* which was tabled in Parliament on June 1, 1951, is given in the 1952-53 Year Book, pp. 342-345.

Section 1.—The Relationship of Art to Education†

Fine Art Schools, Galleries and Museums.—Fine art appears as an elective subject in the curricula of the faculties of arts in a number of universities, where it may be taken as one subject among five for a year or two; in some, e.g., Acadia University, N.S., there are six or more elective courses. In Mount Allison University, N.B., and in the University of Saskatchewan, there is a sufficient number of courses to allow the taking of a Bachelor's degree with specialization in fine art. At the University of Toronto, Ont., an Honour B.A. in art and archæology is offered, as well as graduate work in this field. Departments of fine arts were opened by McGill University (1948-49), the University of British Columbia (1949-50) and the University of Alberta (1953-54) and re-opened by McMaster University (1951).

There are also schools of art not requiring any fixed academic standing for admission, which are concerned more with the technical development of the artist. The most widely known of these are:—

Nova Scotia College of Art, Halifax, N.S.
École des Beaux-Arts, Quebec, Que.
École des Beaux-Arts, Montreal, Que.
School of Art and Design, Montreal Museum of Fine Arts, Montreal, Que.
Ontario College of Art, Toronto, Ont.
University of Manitoba School of Art, Winnipeg, Man.
Provincial Institute of Technology and Art, affiliated with the University of Alberta, Calgary, Alta. (Summer session at Banff, Alta.)
Vancouver School of Art, Vancouver, B.C.

Courses in these schools vary in length with the requirements of the individual student, but may extend over as many as four years. Summer schools of art are sponsored by some of the foregoing institutions, by universities, and by various independent groups.

Public art galleries and museums in the principal cities perform valuable educational services among adults and children. Children's Saturday classes, conducted tours for school pupils and adults, radio talks, lectures and often concerts are features of the programs of the various galleries. In many cases these institutions supply their surrounding areas with travelling exhibitions, while organizations such as the Maritime Art Association, the Western Canada Art Circuit, the Saskatchewan Arts Board and the Art Institute of Ontario, have been founded to carry on the work on a regional basis. The National Gallery of Canada has a nation-wide program of this nature.

* Ottawa, Queen's Printer, 1951.
† Revised under the direction of Dr. H. O. McCurry, Director, National Gallery of Canada, Ottawa.

The principal art galleries and museums* are:—

New Brunswick Museum, Saint John, N.B.
Museum of the Province of Quebec, Quebec, Que.
Montreal Museum of Fine Arts, Montreal, Que.
National Gallery of Canada, Ottawa, Ont.
London Public Library and Art Museum, London, Ont.
Art Gallery of Toronto, Toronto, Ont.
Royal Ontario Museum of Archæology, Toronto, Ont.
Art Gallery of Hamilton, Hamilton, Ont.
Willistead Library and Art Gallery, Windsor, Ont.
Winnipeg Art Gallery, Winnipeg, Man.
Regina College Gallery, Regina, Sask.
Edmonton Museum of Arts, Edmonton, Alta.
Vancouver Art Gallery, Vancouver, B.C.
Arts Centre of Greater Victoria, Victoria, B.C.

The National Gallery of Canada.—Founded in 1880 by the Marquis of Lorne, the National Gallery at first served only as an exhibition gallery. Provided with an Advisory Arts Council in 1907, and first incorporated under a Board of Trustees in 1913, it has assembled its permanent collection mainly during the past 40 years. This collection of pictures and sculpture, prints and drawings, representing the styles of past and present of various parts of the world, was assembled for public enjoyment, study, and the improvement of arts and industrial products, and as the necessary basis for any program of art education. The National Gallery Act was amended in 1951 to give the institution a larger Board of Trustees and other advantages.

The collection of the National Gallery to-day is of international repute and is accessible to the whole country by means of catalogues, photographs, colour reproductions and, to a limited extent, by loans. The Canadian section, naturally the most inclusive, is the best available source for the study of Canadian art. Each year, examples of the best contemporary work are added, along with those of earlier periods. Recent additions to the European section include important examples of the various schools. Two panels of the *Life of Esther* series by Filippino Lippi and *Bathsheba at her Toilet* by Rembrandt, from one of the great collections of Europe, are among the few really great masterpieces to come into Canada up to the present. Between 1951 and 1953, paintings by Benozzo Gozzoli of the Italian school; Stefan Lochner and Lucas Cranach of the German school; Turner and Graham Sutherland of the British; and a group of French paintings by Degas, Sisley, Van Gogh, Bonnard, Braque, Derain and others have been acquired by the Trustees. A sculpture by Maillol has also been added. The Massey Foundation presented paintings by Paul Nash and Duncan Grant as additions to the Massey Collection of English Painting. Drawings by Tiepolo, Rubens, Lancret, Cotman, Wilson, Picasso, Henry Moore and others have also been added. Prints acquired include examples by Rembrandt, Pollaiuolo, Dürer, Schongauer, Gauguin, Toulouse-Lautrec and others.

In 1952 and 1953, exhibitions of the art of other countries included: *Five Contemporary British Painters, Ivan Mestrovic, Toulouse-Lautrec,* and *Finnish Art.* Among the Canadian exhibitions held were the special exhibition of Canadian art in honour of the Coronation, Eskimo art, and the designs submitted for the Massey Medals for architecture. Canadian exhibitions were also sent abroad to São Paulo, Brazil; the Venice Biennial; Ceylon and India; and to Germany, Switzerland and the United States.

* A complete list of Canadian art museums, societies and schools is included in the Canadian section of the current issue of the *American Art Directory* (New York, R. R. Bowker Co.).

The National Gallery conducts a program of extension work thoughout the country. The majority of the exhibitions mentioned above, as well as the annual offerings of the chartered art societies and a variety of smaller collections, are available to the entire country and are widely circulated. About 30 such exhibitions are toured and as many as 200 separate showings have been held annually under the auspices of the National Gallery of Canada. In addition, individual loans of material from the collection are made to a number of centres in all parts of the country each year. In this way, actual works of art are constantly being brought to the attention of the public. Sets of reproductions are also sent on tour of localities that have not the facilities for handling original works of art.

The latest major development in the general educational work of the National Gallery was established in 1948—an Industrial Design Section set up as the result of public interest in bringing the design of Canadian goods up to the best international standards and in fostering distinctive Canadian designs. A number of exhibitions on Canadian industrial art have been held in various parts of the country. In 1953, the Design Centre was opened in the Laurentian Building, Ottawa, to serve as an exhibition centre and as headquarters for the national program in industrial design sponsored by the National Gallery.

Other methods of education in the arts apply more specifically to young people and are designed, in part, to supplement regular school work. The Gallery provides written lectures illustrated by lantern slides on all aspects of art history, reproductions of paintings with introductory texts for art appreciation, school broadcasts, classes for school children at the Gallery, exhibitions of children's art, conducted tours of the Gallery's collections and educational demonstrations, public lectures at Ottawa, and lecture tours throughout Canada.

The National Gallery also maintains an art film library. Silk screen prints by Canadian artists, already famous in many parts of the world as the result of their distribution during the War, are available to schools and to the public generally. These and the facsimile colour reproductions published by the National Gallery are listed in the free leaflet, *Reproductions, Publications, and Educational Material.* In connection with the CBC school broadcasts on Canadian artists, the National Gallery in 1953 distributed 250,000 small colour reproductions to school children in all parts of the country. The magazine *Canadian Art,* in the publication of which the National Gallery has taken a leading part, has doubled its circulation since 1945.

Speaking highly of the Gallery's work over many years despite serious difficulties, the Report of the Royal Commission on National Development in the Arts, Letters and Sciences* made recommendations for the extension and improvement of its exhibition and education services; increases in funds, staff and facilities; maintenance and increase where possible of present appropriations for acquisitions; and, as soon as possible, a new building containing adequate facilities for display, storage, circulation of exhibitions, repair and restoration of paintings. During 1952 and 1953 a national competition was held to select an architect for the new building.

* Ottawa, Queen's Printer, 1951. *See* also *Royal Commission Studies, a Selection of Essays prepared for the Royal Commission.* Ottawa, Queen's Printer, 1951.

Other Art Organizations.—The leading art organizations of national scope, exclusive of museums and art galleries, include the following:—

Association of Canadian Industrial Designers
Canadian Arts Council*
Canadian Group of Painters
Canadian Guild of Potters
Canadian Handicrafts Guild
Canadian Museums Association†
Canadian Society of Graphic Arts
Canadian Society of Painter-Etchers and Engravers
Canadian Society of Painters in Water Colour
Canadian Society of Landscape Architects and Townplanners
Community Planning Association of Canada
Federation of Canadian Artists
Royal Canadian Academy of Arts
Royal Architectural Institute of Canada
Sculptors Society of Canada.

Section 2.—The Educational and Cultural Functions of the National Film Board‡

The National Film Board is a Federal Government agency established by Act of Parliament and reporting to Parliament through the Minister of Citizenship and Immigration. It produces and distributes films, filmstrips and still photos "designed to interpret Canada to Canadians and other nations". Films and filmstrips, produced generally in both English and French and frequently in other languages, are distributed in Canada and abroad. The majority of the Board's films are informative and educational and the Board's long-range program is drawn up after consideration of the requests and needs of many groups and individuals across the country.

In the cultural and educational field, the result has been a series of films on Canadian artists and their work and a number of films on ballet, music, sculpture and stagecraft as well as film and film-strip treatment of Canadian historical and geographical subjects. The Board also makes films on special subjects for government departments. The Board helps to stimulate creative activity by offering a means of artistic expression, by recording cultural and educational progress and by bringing the record of this achievement to millions of Canadians who otherwise would not know of it. The Board also participates directly in cultural development by offering employment to talented musicians, artists, writers, actors and others in the creative field, in addition, of course, to film producers and directors, who themselves are creative artists. A recent example of direct participation in the cultural field was a Board film on the Canadian ballet, *Shadow on the Prairie*. The original score for both the ballet and the film were the work of a National Film Board composer.

In the general cultural sphere, of which film-making is an important branch—combining and harmonizing, as it does, so many of the arts—Board achievement recently has been recognized by two major awards, the American Academy of Motion Picture Arts and Sciences "Oscar" to *Neighbours* for outstanding achievement in

* An account of the Canadian Arts Council and a list of its constituent bodies appears in the 1951 Year Book, p. 308.

† Formed in 1947 with the object of improving the services of museums as educational institutions by promoting co-operation among themselves, by exchange with other countries and by the training and securing of expert staffs.

‡ Prepared under the direction of the Government Film Commissioner, National Film Board. Other aspects of NFB services are outlined in Chapter XXVIII. *See* also Chapter II, p. 85.

the short documentary field and the British Film Academy award for the best documentary of the year, which went to the Board's full-length colour feature, *Royal Journey*. In the year ended Mar. 31, 1953, Board productions won 27 international and national awards.

The Board has done experimental work in third-dimension films, animated sound and live-actor animation. Another technical development is an adaptor for projectors which permits switching the sound track of the same print of a film from one language to another.

Co-operation with cultural and educational groups is an important factor in the Board's non-theatrical distribution, which is organized through a system of voluntary film councils, libraries and circuits. Some 8,000 organizations take part, reaching an annual audience total of almost 13,000,000. In this type of distribution the Board works closely with educational organizations and with branches of provincial government departments. Organizing film festivals and seminars is one practical form of such co-operation.

Board films are also distributed in Canadian theatres at the current rate of 9,000 bookings annually. Such distribution includes the *Canada Carries On* and *Eye Witness* series (*En Avant Canada* and *Coup d'Oeil* in French) and a number of special theatrical releases like *L' Homme aux Oiseaux*, *Neighbours* and *Royal Journey*.

Non-theatrical distribution abroad is effected through 61 posts of the Department of External Affairs and the Department of Trade and Commerce, foreign distribution agencies, commercial 16mm distributors and a special travel program in the United States. The non theatrical audience total is about 11,000,000 a year. Board films are also shown in theatres abroad and bookings average 770 a month.

Newsreel stories about Canada, produced by the Board, appeared in 451 editions in Canada and abroad during the fiscal year 1952-53. Television bookings for Board films in the first seven months of Canadian operation numbered 229; abroad the total is about 1,700 a year.

Section 3.—The Educational and Cultural Functions of the Canadian Broadcasting Corporation*

Many hours of educational or semi-educational programs are broadcast annually by the Canadian Broadcasting Corporation in the English and the French languages. Whether these programs are directed to children or adults, entertainment is combined with information whenever possible. Spoken-word programs cover a very wide range of interests and are presented as readings, talks, discussions, documentary programs, dramatizations or in forms combined with music.

Pre-school Broadcasts.—While many story programs for pre-school-age children are broadcast purely as entertainment, a special series has been developed to give young children, particularly in remote areas, many of the benefits of kindergarten training. This series, *Kindergarten of the Air*, is broadcast Monday to Friday for children of from two and a half to six years of age. Planned with the advice of kindergarten experts and representatives of the Canadian Home and School Federation, the Federation of Women's Institutes and the Junior League, it includes stories, songs, mental games, keeping-fit exercises, information about

* Prepared under the direction of J. Alphonse Ouimet, General Manager, Canadian Broadcasting Corporation, Ottawa. Other aspects of CBC services are outlined in the Transportation and Communications Chapter. *See* also Chapter II, pp. 82-83.

animal life and nature study, and encourages good habits of hygiene, eating and relaxation. The program is intended primarily for home listening but has been found useful in many organized kindergarten groups and classes.

School Broadcasts.—In an average school year, more than 1,000 school programs, mostly in dramatized form, are broadcast to all parts of Canada. The CBC also provides upwards of 30 minutes daily broadcasting of specifically planned programs by departments of education to meet classroom requirements. These supplementary aids help teachers to stimulate student imagination and strengthen motives for study. The National School Broadcasts series are planned by the National Advisory Council on School Broadcasting to promote among students a stronger consciousness of Canada and its achievements. During the 1952-53 season, six such series were planned for students from Grade III to senior high school. These were: *Voices of the Wild*, on Canadian wildlife; *I Was There*, a series dramatizing outstanding events in Canadian history through the eyes of someone who saw them happen; *Our Canadian Painters*, a series on the lives and works of well-known artists, presented in co-operation with the National Gallery of Canada; *Life in Canada Today*, a series of documentaries; *Macbeth*, a full-length performance of Shakespearean drama; and *Things We Are Proud Of*, comprising five programs contributed by broadcasting organizations in the United Kingdom, Australia, New Zealand, South Africa and Ceylon, relating to outstanding features in the development of those countries.

The Department of Transport issued nearly 10,000 free receiving licences to schools throughout Canada in 1951-52, indicating that over 45 p.c. of all English-language schools were radio-equipped and using school broadcasts.

In the Province of Quebec, the CBC's French network broadcasts *Radio-Collège*, a series of weekly programs dealing especially with the fine arts, music, literature, theatrical arts, sciences, religion and philosophy. These broadcasts are not designed for classroom use, being of a more adult nature than those on the English-language networks and scheduled, in the main, for other than school hours.

Particulars of school broadcasts are contained in the manual, *Young Canada Listens*, and details of the French network series in the manual, *Radio-Collège*. Both are published annually by the CBC.

Adult Education.—Programs of an adult-education nature take many forms. Issues of the day are discussed on such round-table programs as *Citizens' Forum*, which has just concluded its first decade of broadcasts, and its French counterpart, *Les Idées en Marche*. Both are produced in co-operation with the Canadian Association for Adult Education and organized listening groups, which form part of the audience, carry on their own discussions of the topic following the broadcast. The Association co-operates with the Canadian Federation of Agriculture in the presentation of *National Farm Radio Forum*, a broadcast concerned primarily with discussion of topics of interest to Canadian farmers. This program has developed into the largest listening-group project of its type in the world. *Cross Section*, a series dealing with economic and social issues—a look at Canada through the eyes of business, labour and the consumer—is typical of the dramatized documentary form in which many programs of an adult-education nature are presented. Understanding of human relationships is fostered by such series as: *In Search of Ourselves*, presenting stories of people with mild emotional disturbances; and a commentary

by a psychiatrist, psychologist or sociologist; *Return Journey*, a sensitive study of alcoholism; *Down Our Street*, a dramatized series concerning many problems faced by to-day's Canadian family; and *The Way of Children*, a series of reports on the work of child-guidance clinics and the psychiatric departments of children's hospitals. On the French network, *Radio-Parents* presents broadcasts designed to help parents solve their problems, and general questions sent in by parents on the subject of child care are answered by psychologists in the series *Le Courrier de Radio-Parents*.

More than 2,600 hours are devoted annually to informative talks on a very wide range of topics including international affairs, consumer information, politics, business and labour interests, community activities and social problems, literature and creative writing, science, nature and sports.

The CBC maintains an office and a resident correspondent at United Nations Headquarters at New York, and an overseas bureau with headquarters at London, England. For programs such as *CBC News Roundup*, voice reports are brought in from many parts of the world.

Television.—Regular CBC television broadcasting was begun from Toronto (CBLT) and Montreal (CBFT) in September 1952, both stations offering a program service of about six hours each evening. The Toronto station programs only in English while CBFT Montreal divides its time equally between French and English programs, with a few bilingual. It is planned to add another television transmitter at Montreal so that separate complete schedules of English and French programs can be broadcast.

CBC television programs cover a wide range of interests—popular variety shows and light music and comedy programs interspersed with sports, panel discussions, news programs, films, special features for children and noteworthy drama periods including a 90-minute play each week. Both production centres now in operation are equipped with two studios, scenery shops, film equipment, and all associated technical gear for the production of Canadian television programs. Each centre operates a mobile unit, a specially equipped van staffed by a crew of ten and having three television cameras and a transmitter for beaming 'outside' broadcasts back to the studios for regular transmission.

Section 4.—Public Libraries

Currently the subject of major interest to Canadians in the field of library service is the prospective National Library of Canada, authorized by the National Library Act of June 18, 1952 (1 Eliz. II, c. 31).

National Library Act.—The brief, concise terms of the Act authorize the establishment of an Advisory Council, with representatives from each province in Canada; the appointment of a National Librarian, an Assistant National Librarian, and staff; and prescribe the duties and responsibilities of the National Librarian which include the procurement of book stock, the preparation and maintenance of a National Union Catalogue listing the important holdings of the principal libraries of Canada, and the publication of a National Bibliography in which shall be listed and annotated books produced in Canada, written and prepared by Canadians or of special interest to Canadians. The Act further requires that two copies of each book published in Canada shall be deposited with the National Librarian within one month of its release for distribution or sale, except in the case of expensive books in which case one copy must be deposited.

Preparatory work for the new library is well advanced. The Advisory Council has been established and the National Librarian and his assistant have been appointed. Work on the National Union Catalogue has progressed to the point where the catalogues of about 30 libraries in Canada have been reproduced to provide a key to some 2,500,000 books. The Canadian Bibliographic Centre issues a bi-monthly publication, *Canadiana*, that is distributed on a national and international scale. The removal of the books from the Parliamentary Library, preparatory to the renovations required following the fire of 1952, provides an opportunity for the discretionary selection of material from this source that eventually will be deposited in the National Library. More recently a site has been reserved, in close proximity to the Parliamentary Library and the Houses of Parliament at Ottawa, for the National Library building.

Regional Library Service.—Second in importance to the National Library is the concerted efforts of the provinces to provide library service for residents in rural areas including the more isolated areas of Canada. Regional library service, or an adaptation thereof, now functions in Newfoundland, Prince Edward Island, Nova Scotia, Ontario, Saskatchewan, Alberta and British Columbia. In 1952, New Brunswick and Manitoba each made a survey of existing library facilities and studied the population distribution and the local municipal areas preparatory to the establishment of regional libraries.

1.—Summary Statistics of Libraries Organized for Regional Collaboration, 1951

Regional Organization	Volumes	Circulation	Expenditure		
			Book Stock	Salaries	Total
	No.	No.	$	$	$
Newfoundland Regional Libraries	76,000	179,000	29,052	7,135	52,755
Prince Edward Island Libraries	77,417	218,635	10,892	17,076	35,033
Nova Scotia Regional Libraries—					
Annapolis Valley	16,000	110,170	5,234	8,242	18,769
Cape Breton Island	22,160	186,900	17,799	29,779	50,847
Colchester—East Hants	26,000	94,261	5,102	9,962	18,419
Pictou County	11,951	46,770	10,524	9,666	30,431
Ontario County Library Co-operatives—					
Bruce	7,563	55,040	2,824	1,737	5,440
Elgin	15,175	89,288	5,551	3,850	10,603
Essex	12,003	150,992	4,133	4,777	12,426
Huron	14,181	117,275	3,563	5,004	13,481
Kent	12,580	136,493	4,133	2,953	11,996
Lambton	20,271	168,100	2,897	3,071	13,176
Middlesex	16,042	100,019	5,236	5,586	12,565
Oxford	7,087	70,924	3,982	3,571	10,030
Peel	5,895	32,925	2,479	840	3,934
Simcoe	12,325	110,176	2,172	2,800	8,827
Victoria	2,773	13,895	4,668	2,068	7,943
Welland	9,226	79,329	3,641	3,851	10,919
Wentworth	10,493	144,959	3,969	5,831	12,606
Saskatchewan Regional Libraries—					
North-Central Saskatchewan	12,378	42,946	15,324	7,373	27,624
Alberta Regional Libraries—					
Barrhead	..	..	..	..	..
Lacombe		..	..	..	..
British Columbia Union Libraries—					
Fraser Valley	62,281	393,621	15,093	31,179	56,093
Okanagan Valley	50,074	292,393	15,661	16,064	49,886
Vancouver Island	29,630	204,529	9,420	23,128	42,082

1.—Summary Statistics of Libraries Organized for Regional Collaboration, 1951—concl.

Regional Organization	Participating Libraries	School Deposits	Other Agencies	Population Served	Borrowers
	No.	No.	No.	No.	No.
Newfoundland Regional Libraries	26	..	52	62,018	16,243
Prince Edward Island Libraries	25	420	..	98,700	..
Nova Scotia Regional Libraries—					
Annapolis Valley	7	2	125	33,000	..
Cape Breton Island	9	18	110	111,488	18,799
Colchester—East Hants	4	7	122	48,000	..
Pictou County	4	—	135	40,000	
Ontario County Library Co-operatives—					
Bruce	20	82	—	40,331	
Elgin	13	112	—	32,541	
Essex	10	193	2	216,045	
Huron	35	189	7	49,280	
Kent	10	157	11	57,028	
Lambton	—	145	3	38,000	
Middlesex	28	111	27	64,000	..
Oxford	18	118	2	40,225	..
Peel	15	39	—	47,608	..
Simcoe	19	171	14	100,000	..
Victoria	10	58	2	16,000	..
Welland	9	125	10	122,745	..
Wentworth	4	84	25	53,104	..
Saskatchewan Regional Libraries—					
North-Central Saskatchewan	12	—	—	25,345	3,427
Alberta Regional Libraries—					
Barrhead	..	..		..	..
Lacombe	..	..		..	..
British Columbia Union Libraries—					
Fraser Valley	11	113	134	111,667	22,042
Okanagan Valley	54	52	—	67,877	19,675
Vancouver Island	1	63	151	67,000	13,600

In January 1953, Ontario inaugurated the Thunder Bay District Library to serve residents of northwestern Ontario; its headquarters are at Fort William. This library deviates from the usual form of organization for a regional library in that it includes incorporated communities and non-incorporated areas. With generous assistance from the Province, a mobile service will be provided which will distribute books to the community libraries in the area, to the schools and to special deposit stations. Service to isolated residents will be provided by mail.

Public Libraries.—The survey of libraries in Canada (1950-52) covers 798 public libraries including the regional libraries listed above, 307 free public libraries and 444 association libraries. Statistics relating to the libraries of Newfoundland are included for the first time in the summarized data for Canada.

Excluding Newfoundland for purposes of comparison, book stock in public libraries in 1951 increased about 20 p.c. over 1949. Circulation increased 11 p.c. and expenditures for current purposes 28 p.c. in the two-year period. The per capita expenditure on public library service for Canada was 44 cents in 1951 as compared with 38 cents in 1949. The proportion spent on new book stock dropped from 20 p.c. in 1949 to 19 p.c. in 1951; the salary quota was unchanged at 51 p.c. of the total for each year. Grants-in-aid from provincial sources increased from 11 p.c. of the revenue in 1949 to 13 p.c. in 1951.

Summarized statistics on the book stock, loans, expenditure and staff for 1951 are recorded in Table 2. Detailed statistics are available in the DBS report *Survey of Libraries in Canada*, 1950-52.

2.—Summary Statistics of Public Libraries, by Province, 1951

Province	Volumes	Circulation	Borrowers	Expenditure	Full-Time Staff
	No.	No.	No.	$	No.
Newfoundland	41,649	264,837	24,209	114,489	17
Prince Edward Island	77,417	218,635	27,213	35,033	6
Nova Scotia	144,114	505,793	42,539	189,583	40
New Brunswick	91,032	172,283	14,048	40,238	12
Quebec	1,079,172	1,484,468	86,564	652,557	152
Ontario	4,523,640	15,696,486	839,423	3,662,369	770
Manitoba	179,326	874,313	48,034	207,349	60
Saskatchewan	323,445	938,133	50,673	256,791	51
Alberta	402,563	1,765,593	76,191	352,987	81
British Columbia	603,690	3,179,379	181,713	936,617	208
Totals	**7,466,048**	**25,099,920**	**1,390,607**	**6,448,013**	**1,397**

The growth in area and population of the cities of Canada has made necessary the extension of library service to schools and residents in recently annexed areas. Several cities have adopted a system of regular service by bookmobile in preference to the construction of additional branch libraries. As an alternative, where space permits, deposit libraries in the schools of new areas are used.

The service of municipal libraries in Canada extends beyond the provision of books for reading and reference work. In many communities the municipal library plays a leading role in the development of appreciation of art and music, and is a depository for films used in formal and informal educational programs. In 1952, the Canadian Library Association published a directory of member libraries engaged in audio-visual educational activities. The directory lists 30 public libraries with film collections, including microfilms and film strips. About two-thirds of this number lend film projectors and all of them rent films to responsible community organizations. About 20 public libraries report holdings of more than 20,000 recordings which are rented at from two to ten cents a day depending on the playing time of the record. Seven of the libraries in the group report a stock of 33,000 books for circulation and reference relating to the general field of music. Almost a dozen report musical scores for study and lending and about six report collections of pictures (originals and prints) for lending. The usual rental charged is 1 p.c. of the value of the picture.

A recent project inaugurated by the Willistead Library, Windsor, Ont., has attracted wide-spread attention and a degree of community co-operation unusual in its scope and purpose. Classes in conversational and engineering English, Canadian geography and history are conducted on an informal basis for new Canadians in the district. About 300 adults from foreign countries have received assistance under the project and have been introduced to Canadian customs and forms of government under conditions that have induced mutual respect and friendship.

Section 5.—Canada and the United Nations Educational, Scientific and Cultural Organization

Liaison between governmental and voluntary organizations in Canada and the United Nations Educational, Scientific and Cultural Organization is the responsibility of the Department of External Affairs. Canadian participation in UNESCO includes representation at the Sessions of the General Conference; the supplying of advice and information on Canadian matters to the Secretariat of UNESCO; co-operation in projects undertaken by the Organization; the sending of Canadian representatives to international seminars sponsored by UNESCO; the administration of UNESCO fellowships and scholarships tenable in this country; and the promotion of UNESCO publications.

The Seventh Session of the General Conference of UNESCO was held at Paris, France, late in 1952. It witnessed the admission of three new states—Spain, the United Kingdom of Libya and the State of Nepal—bringing the Organization's membership to sixty-eight.

The Session made administrative decisions which will have important bearing on the future policy of the Organization. A Working Party on the future program and development of UNESCO was established for the purpose of assigning priorities to various projects to be carried out in the fields of education and culture. Among these projects, fundamental education and technical assistance will be retained at the top of the list. The Exchange of Persons program has been increased considerably in scope and international scientific research, aimed at improving the living conditions of mankind, will be developed further. New projects have been initiated in the realm of cultural co-operation and the improvement of the means of communication among the people of the world.

In addition to its regular annual contribution ($298,065 U.S. in 1953), the Canadian Government, in 1947, made available to the Canadian Council for Reconstruction through UNESCO a sum of $200,000 for the purchase of materials "for the purposes of educational, scientific and cultural reconstruction". An additional amount of $939,250 was obtained by CCRU through public subscription. After completing its program, the CCRU surrendered its charter to the Department of External Affairs in April 1953. The co-operation between the Government and more than 50 voluntary associations, which was encouraged by the CCRU, continues in regard to UNESCO activities.

Canada has tried to maintain a well-balanced contribution to UNESCO. Support given the agency is considered an integral part of Canadian support of the United Nations general program of peace through international understanding.

PART III.—SCIENTIFIC AND INDUSTRIAL RESEARCH*

Section 1.—The National Research Council

Organized research in Canada on a national basis dates from 1916 when the Government of Canada established the Honorary Advisory Council for Scientific and Industrial Research under a Committee of the Privy Council. Provision was made thereby for the planning and integration of research work, the organization of co-operative investigations, post-graduate training of research workers, and the prosecution of research through grants-in-aid to university professors. This was the basis of the Council's work from 1916 to 1924.

* Sections 1 and 3 of this Part were prepared under the direction of Dr. E. W. R. Steacie, O.B.E., President, National Research Council, Ottawa.

A Special Committee of Parliament, appointed to study a recommendation for the establishment of national laboratories, endorsed the proposal and the Research Council Act was revised by Parliament in 1924. Temporary laboratories were secured and research on the utilization of magnesian limestones for refractories was carried out so successfully that a wartime industry, established during World War I, was re-established on a large scale. As a result, in 1929-30 the Government provided funds for new laboratories.

The National Research Building on Sussex Street, Ottawa, was opened in 1932 and in 1939 construction was begun of the aerodynamics building on a 130-acre site adjacent to the Rockcliffe Airport of the Royal Canadian Air Force. Later, several other buildings were erected on this site, including separate laboratories for research on engines, gas and oil, hydraulics, structures, and wood-working and metal-working shops. Since then, these facilities have been enlarged and extended and new buildings have been provided for engineering, low-temperature studies and high-speed aerodynamics. In 1952, further construction included the applied chemistry laboratories, a thermodynamics building and initiation of work on offices and laboratories for the Division of Building Research, and an extensive laboratory building for the Division of Radio and Electrical Engineering, the latter being on a new 250-acre site on the opposite side of the road. A clover-leaf by-pass provides access from the highway to both sections of the Montreal Road site.

A Prairie Regional Laboratory, constructed on the campus of the University of Saskatchewan, has been in operation since June 1948. A Maritime Regional Laboratory, built on Dalhousie University campus at Halifax, N.S., was opened in June 1952.

The National Research Council consists of the President, two Vice-Presidents (Scientific), one Vice-President (Administration) and 17 other members, each of the latter group being appointed for a term of three years and chosen to represent industry, labour or research in one of the basic natural sciences. Many of the members are drawn from the science departments of Canadian universities.

The Council's scientific and engineering activities are organized in nine Divisions and two regional laboratories, each with its own Director. Four laboratory Divisions are concerned with fundamental and applied studies in the natural sciences: applied biology, pure and applied chemistry, and physics. Three others are devoted chiefly to engineering work—building research, radio and electrical engineering, and mechanical engineering which includes aeronautics and hydraulics. The Division of Medical Research has no laboratories of its own but awards grants-in-aid and fellowships tenable chiefly in the medical schools of Canadian universities.

In addition to its basic research functions, the Council operates an Information Service with a field staff of technical officers who assist the smaller industries across Canada by bringing their operating problems to the attention of the Council. With a trained research staff, using the extensive library facilities available to the Council, it is usually possible to provide the required information at very short notice.

The Council aids industry in two other important ways. A free and constant flow of personnel and information is maintained between the Council laboratories and industrial laboratories, the aim being to have Canadian industry use the Council's laboratories just as the units of a large company use their own laboratories as sources of scientific information and assistance. The Council also undertakes for any firm, under contract, research problems that cannot be solved by private

consulting and testing laboratories and, in return, obtains assistance from many companies. The Council has long-standing and intimate contacts of this co-operative kind with many Canadian industries in various fields.

Associate committees were established by the National Research Council early in its history and have been continued to date. Throughout the years, hundreds of specialists have accepted invitations from the Council to serve on committees and have brought the wealth of their knowledge and experience to bear on the solution of research problems put before them. Members of committees give their time and effort to these special studies without fee or recompense, and their assistance is a source of great strength to the Council.

Assisted research grants have been made by the Council since its inception in 1916. These awards are given to heads of university science departments for the purchase of needed equipment and the employment of junior helpers, usually students. Aid of this kind has been of considerable assistance in enabling the universities to put into operation the excellent graduate schools that now exist in Canada.

Scholarships and grants in aid of research are awarded annually by the National Research Council. Scholarships awarded in science and engineering include Bursaries, Studentships and Fellowships which have values of $600, $900 and $1,200, respectively, for the academic year, to which a summer supplement of $500 may be added. In addition, Special Scholarships valued at $1,500 per year and Post-doctorate Overseas Fellowships at $2,500 are offered. The Council also awards two classes of Graduate Medical Research Fellowships, which have values of $1,800 to $3,000 for awards involving graduate training, and up to $5,000 for senior awards in advanced research. Graduate Dental Research Fellowships of similar value are also made. More than 275 of these different awards were made for 1952-53, totalling in value over $310,000.

In recent years (since 1948), the National Research Council has opened its doors to a limited number of post-doctorate fellows who have been carefully selected on the basis of merit from the universities of the world. There are now some 76 of these keen young scientists working in the laboratories, most of them in chemistry or physics. They are appointed for one year only but may be retained for a second year if conditions warrant. This flow of young men through the laboratories has a most stimulating effect; it creates a sort of university atmosphere that is both fresh and invigorating and keeps the Council young.

Principal Activities, 1952-53.—Development by industry of applied research laboratories in Canada has made it possible for the National Research Council to broaden its field of work so as to include fundamental studies, especially those having a bearing on problems related to industrial research projects. For example, the Division of Chemistry has been reorganized to form two separate units—Pure Chemistry and Applied Chemistry. A similar arrangement has been made in the Physics Division.

The Division of Pure Chemistry is chiefly concerned with fundamental scientific research, trying to find the reasons for certain chemical reactions. In this work, research extends over a wide range, from the nature and structure of alkaloids found in certain Canadian wild plants, to a study of the infra-red spectra of complex organic compounds including cortisone and other steroid hormones.

In the Division of Applied Chemistry, on the other hand, work is focussed more directly on practical problems such as chemical engineering studies, research on textiles, corrosion of metals, development of more efficient processes for the production of chemicals from natural gas, the properties and uses of natural and synthetic rubbers either alone or in admixture, and the applications of colloid chemistry in the improvement of lubricating greases. A new building for this group was completed and occupied during the year.

Improvements or new processes developed in the laboratories are passed on to industry through Canadian Patents and Development Limited, the Council's patent and licensing agency. In 1952 this Crown company entered an important new field of activities. It arranged for the carrying out of extensive pilot-plant operations on a commercial scale to assess the possibilities of the Cambron process, developed within the Council for the production of ethylene oxide by direct oxidation of ethylene, an important constituent of natural gas.

On the biological side, the laboratories have been actively working on the causes of rot and decay in textiles, wood and related products. Many moulds and bacteria attack the cellulose in these products by producing a ferment or enzyme which breaks down cellulose into simple sugars. Although the existence of the enzyme has been known for over fifty years it has only recently been isolated and purified in its biologically active form, thus opening the way for studies on its mode of action. Research has already shown that traces of certain acid dyes inhibit its activity, a finding that suggests new approaches to the practical problem of preventing decay. On the other hand, it has been found that some dyes and proteins stimulate the enzyme and this stimulatory effect may have a bearing on the ultimate use of cellulosic materials, such as wood-pulp, in fermentation processes.

In physics, a contribution has been made to the knowledge of how certain metals behave over a wide range of temperatures from close to the absolute zero (459·4° below zero F.) up to 200°C. (392°F.). Striking anomalies, hitherto unsuspected, have been found in the heavier alkali metals (rubidium and caesium). Comparison is being made with basic theory and considerable progress has been made in a deeper understanding of fundamental metallic behaviours.

In another physics laboratory it has been found that the so-called alpha bands of ammonia are due to the free "NH_2 radical" and this observation has been put to practical use by the physical chemists in the determination of the NH_2 radical in other chemical reactions. Thus does one science laboratory serve another.

Progress has been made, too, in other important fields in physics. Although the present-day fog-horn has been in general use throughout the world for over 35 years (48 years in Canada), no improvements have been made on it during all this time until recently. Canada pioneered its introduction in 1904 and has again pioneered substantial improvements, which are important not only to Canada but to the whole world. By the application of modern acoustical theory, the horn was redesigned to improve the loading to such an extent that in a comparison test the efficiency was raised from 0·2 p.c. to 15 p.c. There is every reason to believe that the new unit will have a longer life than the old and require less servicing. The practical aspects of the development work were made particularly easy by the experience and co-operation of the Marine Services, Department of Transport.

Three significant developments marked the work in building research during the year. A small Permafrost Research Station was established at Norman Wells, N.W.T., in co-operation with Imperial Oil Limited. A small laboratory was set up and the first field investigation carried out as the beginning of a long-term program of study of permafrost and of foundations on permafrost.

Work has been pressed forward on the revision of the National Building Code, this work being done by the Division for the Associate Committee on the National Building Code. Twenty-nine committees and panels have been at work involving the voluntary contributions of over 200 architects, engineers, contractors and others interested in building. All the technical and secretarial work for the Committee is done within the Division. Use of the new Code, when it becomes available, will promote still further the uniformity of building regulations across Canada.

The major effort in the Division of Radio and Electrical Engineering is now being devoted to defence problems, in which important advances have been realized. In non-secret work, a notable contribution has been made in the extension of the theory of slotted waveguide arrays which will result in smaller radar antennæ and clearer radar pictures.

The aeronautical facilities of NRC's Division of Mechanical Engineering serve the Royal Canadian Air Force and other government agencies concerned in military and defence production programs.

The wind tunnels of the Division were used to provide information in connection with the design of the de Havilland Otter aircraft which is now flying and is one of the most successful aircraft of its type. A high-speed wind tunnel was completed, installed and is now in operation; it is used primarily for the study of aircraft operation at speeds up to and in excess of the speed of sound.

The study of the icing of aircraft and engines and the development of means for their automatic protection has been continued both in the laboratory and in the air.

An interesting study has been made, in the hydraulics laboratory, of the Fraser River in British Columbia. A model of the river was built and river-flow conditions were established as a preliminary step in the investigation of silting conditions in the navigation channel. A larger model covering a longer section of the river has now been constructed and is in operation on a 3½-acre site on the campus of the University of British Columbia, where the climate permits open-air operation the year round.

In the 450-foot model-testing basin, models of lake freighters, ice breakers and other types of ships are tested, together with their propellers, for naval architects and shipbuilders.

In co-operation with engine manufacturers in the Maritimes, a small semi-diesel marine engine for fishing boats, together with a variable pitch propeller, was developed in the laboratories and three pilot models were built, one of which was given sea trials by a fisherman in Newfoundland. Two other units were made available to manufacturers.

The Prairie Regional Laboratory is devoted to the study of ways in which science can aid the prairie farmers in finding profitable industrial uses for waste or surplus products. An outstanding development was made this year in sugar chemistry using radioactive tracers, which led to a new synthesis of sugar derivatives.

In the Maritime Regional Laboratory one of the more important investigations in progress concerns the industrial use of the seaweeds found in abundance along the east coast which are of great economic significance.

In medical research, there is the closest integration of the Council's fellowship and medical research program with similar programs of the Defence Research Board, the National Cancer Institute, the Canadian Arthritis and Rheumatism Society, and the Federal Departments of National Health and Welfare and of Veterans Affairs.

The research picture in Canada is encouraging. At every level—the universities, industry, government departments, and in the institutions including the National Research Council which are devoted exclusively to research—satisfactory progress is being made and high standards of work are being maintained.

Section 2.—Research in the Atomic Field*

Atomic energy research in Canada had its origin over 50 years ago when Ernest Rutherford came to this country as Macdonald Professor of Physics at McGill University. There, in collaboration with F. Soddy, he announced in 1902 the results of his investigation of the nature of radioactivity, which had been discovered in 1898 by Henri Becquerel. Rutherford determined the fundamental laws governing spontaneous disintegration of radioactive materials. He went on, both in Canada and England, to make further discoveries of great importance in the development of atomic energy.

Fundamental research into the structure of the atom continued in many countries on a relatively small though fruitful scale over the ensuing years until the first recognition of nuclear fission was announced in Germany by Hahn and Strassman on Jan. 6, 1939. Soon it was discovered that when a neutron split a uranium-235 atom, not only was a remarkable quantity of energy released, but also additional neutrons were given off. This suggested the possibility of creating a chain reaction that would proceed so quickly that a new and tremendously powerful explosive would be available for military use.

The onslaught of World War II eight months later at first pushed into the background interest in harnessing the vast energy now recognized to be contained within the nucleus. But when scientists drew to the attention of their respective governments the possible military application of atomic energy, development work was accelerated.

In Canada, first investigation of the possibility of releasing a large quantity of energy from uranium took place in 1940 at the National Research Council. Dr. George C. Laurence directed an experiment with a bin of coke and uranium. The bin was lined with paraffin wax and filled with ten tons of calcined petroleum coke in which were embedded uniformly spaced packages of uranium oxide. The purpose of the experiment was to determine, by measuring the behaviour of neutrons within this material, whether a large amount of energy could be released if the neutrons were moderated (slowed down by the carbon in the coke) sufficiently to create a chain reaction, and what quantity of material would be needed for this purpose.

While the experiments continued at the National Research Council, progress in the United States toward achieving a chain reaction moved quickly and on Dec. 2, 1942, the first nuclear chain reaction to be initiated by man began a controlled

* Prepared by Clyde Kennedy, Public Relations Officer, Atomic Energy of Canada, Limited, Chalk River, Ont.

release of the tremendous energy stored within the atom. On the squash court underneath the west stands of Stagg Field on the University of Chicago campus, American scientists, working under the direction of Enrico Fermi, piled up layers of graphite and uranium (hence the term "pile") until the power indicators showed that a chain reaction had been initiated.

In 1942 the Government of the United Kingdom, where significant experiments had been made, suggested to the Government of Canada that a joint Canadian-United Kingdom atomic energy project should be set up in Canada. This was agreed to and by January 1943 British scientists arrived to work with hastily recruited Canadian scientists in a research centre established in a house on Simpson Street, Montreal. In February the group moved to the newly completed University of Montreal to work in great secrecy on the design of a heavy-water pile. Although considerable progress was made in this laboratory on the investigation of fundamental nuclear processes, the staff was hampered by a feeling in the United States, where atomic research was well advanced, that close co-operation with the scientists at Montreal would involve security risks through the wider distribution of classified United States research results.

At the Quebec Conference in August 1943, President Roosevelt, Prime Minister Churchill and Prime Minister Mackenzie King agreed that closer co-ordination of the allied efforts in the nuclear field was desirable and among other things it was agreed that a large heavy-water pile should be built immediately in Canada. A technical committee consisting of General Groves, Sir James Chadwick and Dr. C. J. Mackenzie was set up to co-ordinate this joint program on atomic energy. Dr. J. D. Cockcroft of the United Kingdom was appointed Director, Defence Industries Limited was engaged to undertake the detailed design and construction, a site on the Ottawa River about 130 miles west of Ottawa was chosen and construction started in 1944. By September 1945, a small low-power atomic energy pile, known as ZEEP, was in operation at Chalk River. This was the first pile outside of the United States to produce energy by nuclear fission.

In December 1946, by Act of Parliament, all matters concerning atomic energy in Canada were placed under the Atomic Energy Control Board. The Board immediately asked the National Research Council to assume responsibility for the operation of the complete establishment at Chalk River and, on Feb. 1, 1947, the Council formally took over that responsibility. By then, 400 scientists and engineers were engaged on research and development of atomic energy, the largest organization ever created in Canada to carry out a single research project.

In 1947, Dr. David A. Keys took on direction of the Chalk River project, with the research program being under the direction of Dr. W. B. Lewis. Dr. Cockcroft returned to England to take charge of the United Kingdom atomic energy project which was founded in 1946.

In July 1947, Canada's second reactor (the term reactor has replaced "pile" in atomic energy parlance) went into operation. It was outstanding because it had the highest neutron flux of any known reactor and, like ZEEP, used natural uranium as a fuel and heavy water as a moderator. With this reactor it was possible to produce radioactive isotopes with a high specific activity for which there was great demand. Purchasers of Canadian isotopes include the United States, the United Kingdom and various countries in western Europe and South America. Shipments have been made within Canada to industries, hospitals and universities.

Because of the increasing industrial aspects of the project and the growing view that large-scale industrial application of atomic energy was closer at hand than had been expected, the Government decided that the project should be operated by a separate organization without further responsibilities. Therefore, a new Crown company, Atomic Energy of Canada Limited, was incorporated in February 1952, under the Atomic Energy Control Act, 1946, to take over from the National Research Council, on Apr. 1, 1952, the operation of the project.* In 1953 the project employed a total of 1,700 people, of whom some 550 were scientific and technical personnel. The residential area for the project, Deep River, which is seven miles up the Ottawa River from the project, had a population of about 2,600 by the end of that year.

The Commercial Products Division of the new Company, which handles the marketing of isotopes, was transferred from Eldorado Mining and Refining Limited on Aug. 1, 1952. This Division, which has its headquarters at Ottawa, offers for sale the following products: isotopes which are produced in bulk at Chalk River and processed as required by the Division before shipment; equipment and instruments which are manufactured by the Division at Ottawa; and radium which is obtained in bulk from Eldorado Mining and Refining Limited and processed into various forms suitable for use in industry, research and therapy. Radioactive isotopes for use in the human body, such as iodine-131, phosphorus-32 and gold-198, are supplied by the Division to Charles E. Frosst and Company, Montreal, for distribution. More than a thousand shipments of isotopes were made during 1952. Six Cobalt-60 Beam Therapy Units were produced and are now installed in hospitals at London, Ont., Winnipeg, Vancouver, New York, Minneapolis and Chicago.

In December 1952, the NRX reactor broke down but restoration began immediately. So far as is known, this was the first time a large nuclear reactor had been completely dismantled after several years of operation and information of a particularly valuable nature was obtained. By the end of 1953, considerable progress had been made in the construction of a third and even more powerful natural uranium-heavy water reactor known as NRU.

Considerable progress was achieved during 1952-53 in the acquisition of new basic knowledge of nuclear science in its many phases, as well as in the chemical separation operations and isotope production processes. The ZEEP was used for essential investigations in connection with design of fuel rods and lattice arrangements required for the new NRU reactor. The NRX reactor was in continuous operation at high-power level 90 p.c. of the 24-hour-per-day period from the beginning of April 1952 until the breakdown occurred on Dec. 12 which caused its shut-down. Many fundamental investigations were performed during this period on nuclear reactions using the high flux which this reactor provided.

The Van de Graaff accelerator was operating on two shifts at potentials as high as 3,000,000 volts, providing a strong beam of protons of uniform and predetermined energy. These energetic particles have been employed to determine resonance levels in disintegrating nuclei and the angular distribution of the products of such reactions have been measured. The angular scattering of protons of given velocities by nuclei has also been investigated. Nuclear investigations on delay times of the order of a thousand millionth of a second between the emission of a β and subsequent γ ray from a disintegrating nucleus have continued, using special β ray spectrometers and coincident timing circuits. During the period of NRX operation,

* The President of the Company was Dr. C. J. Mackenzie, C.M.G., succeeded on Oct. 31, 1953 by W. J. Bennett, O.B.E., President of Eldorado Mining and Refining, Limited.

experiments using mono-energetic neutrons as bombarding particles were carried out. Analyses of position of different nuclei in chemical compounds were investigated using neutron spectrometers.

New methods of separating plutonium and certain valuable isotopes from the mixture of fission products have been developed by the research chemistry and operations groups, which indicate from such laboratory scale experiments that they will prove very efficient in plant operations. Methods of fabricating fuel rods enriched with plutonium have been worked out and employed in the reactor to provide excess neutrons for irradiation of materials used to produce isotopes. The new mass spectrograph with which isotopic composition of natural and reactor-produced elements can be determined has given excellent results since it commenced operations during the year. Investigations on the chemical and physical properties of irradiated elements, their radiations and methods of decay have been investigated, as well as X-ray analyses of irradiated materials. This fundamental information accumulated by the physics, chemistry and metallurgical research branches will be of special value in the design of future power reactors.

The plutonium and uranium-233 (from irradiated thorium) separation plants continued operating successfully. The new plant for separating the depleted uranium from the fission products has proved a very efficient process.

Fundamental investigations into changes produced in living cells have been carried out by the Biology Branch. Mutations have been observed in such fast-growing materials as moulds. By using carbon dioxide labelled with the radioactive isotope carbon-14, and by employing various types of radiations, experiments have been directed towards solving the still unknown way in which radiation damages cells and causes lethal effects. The presence of zinc in certain parts of organs has also been detected by the use of isotopes.

Other investigations that have proved very successful have been performed in co-operation with the Department of Agriculture and the Forestry Branch on the uptake of nutriment, motion of sap and the behaviour of insects. Methods of measuring radioactive materials in air and minute quantities in human excreta have been developed. Tests of various filters, gas masks and methods of decontamination have occupied the Radiation Hazards Control Branch. The Electronics Branch has devised special instruments for measuring high activity by remote control detectors.

Engineers, physicists and other scientists have co-operated with the staff of the consulting engineers responsible for the design of the NRU reactor.

Section 3.—Other Scientific and Industrial Research Facilities

Aside from the work of the National Research Council and Atomic Energy of Canada Limited, Canadian research is carried on by various federal agencies, provincial organizations, universities and industries.

For many years, raw materials were the basis of Canada's export trade; Government departments concerned with natural resources therefore became involved in research and large and powerful research organizations were established by the Departments of Agriculture, Fisheries, Mines and Technical Surveys, and Resources and Development. When secondary industry also became important, the Government established the National Research Council, operating under a committee of the Privy Council, to link science with industry for the best economic results.

The Department of National Defence and the Department of National Health and Welfare also maintain research laboratories. A system of committees, with nation-wide representation, eliminates unnecessary duplication of work from these national research organizations.

Several provinces in Canada have established Provincial Research Councils to stimulate and support research on problems having special provincial significance.

The universities, of course, form an extremely important part of the Canadian pattern of research, much of it along fundamental lines; however, practical problems are not neglected, especially those of regional interest.

All three types of institutions—federal, provincial and university organizations—have an interest in problems of industrial significance: this is part of the current Canadian pattern of research. While many Canadian industries now possess research facilities—some of them quite extensive—the main bulk of industrial research to date has been done under government auspices.

Thus the unique problems of the country, particularly its large area coupled with a small population, have led to a typically Canadian organization of research, of which a very strong associate committee system is perhaps the most distinctive feature.

Federal Institutions.—Although research by industrial concerns has been slow to develop in Canada, government research has expanded rapidly, at first because of the need for speeding up the production of raw materials, which were for many years the basis of Canada's export trade, and secondly because of the more recent interest in the processing of these raw materials and because of the necessity to meet the needs of national defence. Federal institutions involved in research include the Departments of Agriculture, Fisheries, Mines and Technical Surveys, National Defence, National Health and Welfare, Resources and Development, and Trade and Commerce; the National Research Council; and Crown corporations such as Atomic Energy of Canada Limited.

The scientific work of the Department of Agriculture is described at pp. 373-375 of this volume, the work of the Defence Research Board in Chapter XXVII (*See* Index), specialized work in scientific forest research at pp. 468-469, investigational work of the Department of Fisheries at pp. 590-591; and the work of the National Research Council at pp. 341-346. The activities of the other federal institutions engaged in research are described briefly in the following paragraphs.

Department of Mines and Technical Surveys.—The Department of Mines and Technical Surveys maintains a number of scientific services concerned with Canada's mineral resources—geology, mineralogy, topography and other services. The Department's Bureau of Mines is extremely well equipped for the task of studying the mineral resources of the country. The Bureau is responsible for mineral, metallurgical and fuel research, and carries out mineral dressing, extractive metallurgy and other phases of work on minerals basic to plant practice. In its modern physical metallurgy laboratories, the Bureau works on corrosion and its prevention, foundry research, heat treatment, fatigue and stress and strain, and welding. It is equipped to work on gases in metals and possesses a machine for shot-peening.

During the second world war, a special Minerals Projects Division of the Bureau carried on exploration and development work on strategic minerals and financed some university research in that field. In the fuel research laboratories, investigations are conducted on oils, gases and solid fuels. This includes coal analysis and classification, and studies in hydrogenation.

The Department's Bureau of Geology and Topography is responsible for the discovery of mineral resources, for studying the nature and extent of underground water resources and for ground and air mapping services. The Bureau has co-operated with the National Research Council and the Royal Canadian Air Force on problems associated with air photography for mapping purposes.

Dominion Observatories located at Ottawa, Ont., and at Victoria, B.C., carry on the usual functions of observatories and are interested in astrophysics, photogrammetry, terrestrial magnetism and earthquakes. A chain of teleseismic seismographs is maintained and short-period seismographs are utilized in connection with mine rock-burst research.

Department of National Health and Welfare.—The Department of National Health and Welfare is not organized primarily for research but, nevertheless, some research is carried out in the Food and Drug Laboratory and in the Laboratory of Hygiene, in addition to routine work. The Department has provided considerable funds for research in public health. There are also federal-provincial health grants for work on the prevention and treatment of crippling conditions in children, mental health, tuberculosis, the control of cancer and venereal diseases, and arthritis. To co-ordinate its medical health programs, conferences are held by representatives of the National Research Council, Defence Research Board, the National Cancer Institute, and the Public Health Research Grants Committee. These conferences provide for reasonably clear definition of the field of each organization and have prevented uneconomical overlapping.

Department of Trade and Commerce.—Rapid development of grain production in Western Canada led to the passing, in 1912, of the Canada Grain Act. This Act is administered by a Board of Grain Commissioners who are responsible for control of the transportation, weighing, grading and warehousing of Canadian grain. The Board soon encountered problems that required scientific study and a Grain Research Laboratory was established at Winnipeg in 1913.

The Grain Research Laboratory is the main centre of research on the chemistry of Canadian grains. It is well staffed and equipped to provide the service required to help maintain and expand domestic and foreign markets for all types of grain. Each year the Laboratory provides certain information required by the Board for administering the Canada Grain Act. The Laboratory collects and tests samples of various crops to obtain information on the current quality of all grains shipped during the crop year. Fundamental research is also undertaken; the program is directed towards increased understanding of what constitutes quality in cereal grains and towards improving the methods of assessing quality.

Canadian Patents and Development Limited.—Canadian Patents and Development Limited is a Crown corporation established in 1948. The primary purpose of the Company is to make available to industry, through licensing arrangements, new processes and improvements in processes developed by the scientific workers of the National Research Council. The services of the Company have also been made available to government departments and other agencies, and have been

extended to Canadian universities. The Company arranges to obtain patents of inventions originating in these agencies and handles all licensing matters for them. Any profits that the Company may derive from its licensing arrangements are used for further research and development.

Provincial Organizations.—The fact that only a few provincial research organizations exist does not indicate a lack of interest in research in the provinces. Most provincial governments have university laboratories to consult, particularly about local industrial and agricultural problems. Agriculture is particularly well covered because of its great importance as an export industry; the network of Federal Department of Agriculture laboratories and Experimental Stations, together with agricultural colleges and provincial research councils, provides this industry with a very well-developed research service.

Alberta Research Council.—The Province of Alberta set up a Scientific and Industrial Research Council in 1921. The scope of its work was not outlined in detail but mention was made of the need of promoting mineral development within the Province. This Council operates under an Act somewhat similar to the Act setting up the National Research Council of Canada and is financed by Provincial Government appropriations. The investigations include studies of the coal resources of the Province, the bituminous sands of the Athabasca region, geological and soil surveys, and natural gases. The Council is located at the University of Alberta and operates in close co-operation with the Science Department of that institution, some of its members being on the university staff. Advisory Committees have been appointed to consider the programs for various projects and the chairmen of these Committees form the Technical Advisory Committee of the Council.

British Columbia Research Council.—The British Columbia Research Council was set up in 1944 to deal with problems of primary and secondary industries. The Council makes surveys as a basis of new production from untapped sources, and to encourage the processing of raw materials when research indicates that economic possibilities exist. Members are specifically charged with bringing to the Council's attention the problems of industry, and the Council acts as a clearing-house for supplying technical assistance and advice to industries in British Columbia. Special committees are appointed for the life of specific projects.

Nova Scotia Research Foundation.—The Nova Scotia Research Foundation was set up in 1946. It has no laboratories; instead, the policy has been to stimulate research facilities already established in the Province. The Foundation co-operates with provincial and Federal Government departments and with industries, and assists local universities and colleges by lending equipment. Through its library and abstracting services it supplies scientific and technical information to industry and to research workers. It processes aerial photographs and aerial maps for geological, geographical, ecological, land-use and other surveys. The Foundation has sponsored research on slag utilization, diatomite recovery and underground gasification of coal. Surveys of availability of raw materials for new industries have been made and data have been acquired on mining, soils, lumbering, seaweed utilization and land-use.

Saskatchewan Research Council.—The Saskatchewan Research Council was established in 1947 for "research and investigation in the physical sciences as they affect the economy of the Province of Saskatchewan, and such particular matters as may be brought to its attention from time to time by the Lieutenant-Governor in

Council". The term "physical sciences" is given a broad interpretation to include biological sciences, agriculture and engineering. The Council encourages both pure and applied scientific research relating to the resources and economy of Saskatchewan. Among the projects supported by the Council are: utilization of the Saskatchewan lignites, studies on water supplies, clays, winter lubrication of engines, irrigation pumps, tracer research in agriculture, animal nutrition, and housing.

Research Council of Ontario.—The Research Council of Ontario started operations in 1948. Its functions are to advise the Government on research with particular reference to natural resources. The Council provides means of integrating provincial research problems and co-ordinating efforts towards their solution; for example, Government assistance may be given to projects supported by two or more units within an industry, to encourage the pooling of effort if individual organizations are unable to finance research alone. Grants-in-aid of research have been made to universities and to the Ontario Research Foundation, and a system of scholarships aimed at increasing the number of scientific workers in the Province is in operation.

The Ontario Research Foundation.—The Ontario Research Foundation was established in 1928, and is financed by an endowment fund composed of subscriptions from manufacturers, corporations, private individuals, and a grant from the Provincial Government on a dollar-for-dollar basis with the other contributions. The Foundation carries on research to assist agriculture and industry in developing the natural resources of the Province. Many investigations have been undertaken in the industrial field and the Foundation is well equipped to work in metallurgy, textiles, chemistry and biochemistry. The services of the Foundation are at the disposal of industry on a fee basis, and consultative services, testing, short-trial studies and long-term investigations have been undertaken for hundreds of firms. The work has resulted in better products and in more efficient processing.

The Banting Research Foundation.—The Banting Research Foundation supports the work of the Banting and Best Chair of Medical Research in the University of Toronto and aids medical research throughout Canada.

The Rockefeller Foundation.—The Rockefeller Foundation assists various agencies in Canada in the furtherance of scientific research in medical science, natural science, social science and public health.

Canadian Universities.—In eight of the ten Canadian provinces there is at least one major university with graduate-school facilities for training in research. In Ontario there are four; in Quebec, three. In addition, a large number of universities and colleges provide first-class undergraduate training, or training in special fields. Thus, Canadian universities provide adequate training up to the doctorate level in practically all fields of science.

In the main, research in Canadian universities has followed the traditional pattern found in the graduate schools of the British Commonwealth. It has been largely fundamental but, in certain schools, a great deal of research has been done on the basic local problems. The universities co-operate with Federal Government departments, provincial government departments, and the National Research Council in researches on most of the natural resources. One such co-operative

project has been established at the University of Toronto in the form of a computation centre. This is operated by the University and financially supported by the Defence Research Board and the National Research Council, with the object of developing computation equipment and of training competent operators in this new and complex field of work.

Industrial Research.—Many small industries and some large ones in Canada have, in the past, been totally unaware of the value of research to their industries and to the country, partly because many Canadian companies are subsidiaries of companies in the United Kingdom and the United States, and partly because small companies find it impossible to finance their own research. This general problem is well recognized in Canada, but cognizance should be taken of Canada's vast areas, absence of concentration of similar industries, and proximity to the relatively vast research facilities of the United States.

What Canada has done about industrial research, in the face of these rather formidable difficulties, has been partly covered above: in one way or another Canadian universities, provincial institutions and federal organizations have aided Canadian industry and, although relatively little research has been done in Canada by industrial organizations, a very great deal of research has been done on their behalf.

This picture is changing rapidly. To-day, Canadian industries are becoming aware of the value of research and many industries now possess research facilities—some of them quite extensive. A survey made by the Canadian Manufacturers' Association a few years ago showed that over 360 of their member companies maintained laboratories in which more than 3,100 persons were employed in research, testing or control. Examples of Canadian industries with powerful research organizations are: Aluminum Laboratories Limited at Kingston, Ont.; Consolidated Mining and Smelting Company at Trail, B.C.; and Ayerst, McKenna and Harrison Limited at Montreal, Que.

Aluminum Laboratories Limited undertakes both fundamental and applied research; its divisions include an industrial group to bridge the gap between scientific development and commercial application, plus mechanical testing, metallography, electro-metallurgy, physics, chemical-metallurgy, analysis and documents. Experimental alloys are constantly being produced and tested for such properties as hardness and resistance to corrosion.

The Consolidated Mining and Smelting Company maintains a large Research and Development Division. It has special laboratories equipped for study in ore-dressing, electrolysis, gas reactions, metallographic and petrographic work, X-ray diffraction of crystals, materials testing, and instrument design, and has many important developments to its credit, including the differential flotation process used on ores of the famous Sullivan mine.

Ayerst, McKenna and Harrison Limited has followed an extensive research program for some years in such fields as vitamins, antibiotics, liver extracts, bacteriological products, sex hormones, gland products, and veterinary medicines. It also does basic research and supervises the Canadian Government plant at St Laurent for the large-scale production of penicillin.

Other companies with sizable research departments represent many diversified interests, for example: Canadian Industries Limited, International Nickel Company, Dominion Rubber Company, Imperial Oil Limited, Shawinigan Chemicals Limited, the Maple Leaf Milling Company, Canadian Breweries Limited and Canada Packers. There are, of course, many others.

To an increasing extent, recent scientific developments are leading to a reasonably swift industrial application, as shown by the establishment of such companies as Isotope Products Limited at Oakville, Ont., and Computing Devices of Canada Limited at Ottawa, Ont.

To date, however, the main bulk of industrial research continues to be done under Government auspices, and sometimes with the co-operation of universities. Two further examples of this Canadian habit of co-operation between industries and other organizations may be cited: the Research Division of the Hydro-Electric Power Commission of Ontario, a provincial service, and the Pulp and Paper Research Institute, intimately associated with McGill University. These organizations are briefly described in the following sections.

Hydro-Electric Power Commission of Ontario.—The Research Division of the Hydro-Electric Power Commission of Ontario receives its main impetus from the continuing expansion of power-generating facilities throughout the Province.

The Electrical Research Department deals mainly with improvements in power equipment, insulation, lightning protection, illumination and electrical metering. New uses for electricity are under investigation, mostly on experimental equipment, e.g., crop-drying apparatus, soil-heating coils under greenhouses and heat pumps.

The subjects of study in the Structural Research Department include masonry materials, soil mechanics, vibration and "galloping" of transmission lines, and the best ways to test various construction components. Since one of the most widely used materials in hydro structures is concrete, all problems relating to this material are handled by a special Concrete Control Section. The Chemical Research Department is concerned with such varied items as corrosion, liquid electrical insulants, paints, plastics, protective coatings, weed control, and even black-fly control.

The Pulp and Paper Research Institute of Canada.—Because so much of the Canadian economy is dependent upon pulp and paper, the need has long been recognized for research on cellulose chemistry and other technologies associated with the use of cellulose. Near the beginning of the century, the Federal Government set up a Montreal branch of the Forest Products Laboratory, which worked closely with McGill University department of chemistry, and early in the 1920's the pulp and paper industry began to support research in this branch. In 1950, the Institute became an independent corporation under federal charter; it is administered by a Board of Directors consisting of appointees from McGill, industry, and the Federal Department of Resources and Development.

This Corporation has taken over the building it occupied on the McGill University grounds, together with all its equipment—the land remains University property and is lent to the Corporation. The Corporation has complete control of the operation, subject to the provision that work leading to degrees will be under the control of the appropriate faculties of the University.

Numerous contributions to fundamental knowledge of the chemistry of cellulose and lignin have been made by Institute personnel. McGill's Division of Industrial and Cellulose Chemistry forms an integral part of the Institute; to some degree, the Institute has also become the pulp and paper industry's bureau of standards.

At present the physical chemistry section is concerned mainly with problems of the surface chemistry of cellulose, swelling of cellulose, and float properties of suspensions. Research on the reactivity of cellulose, cellulose derogates, chemistry of bark and of lignin is being carried out by the organic chemistry section.

CHAPTER IX.—SURVEY OF PRODUCTION*

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

The scope of the Survey of Production is limited to the actual production of commodities. The activities of such industries as transportation, communication, trade, finance and service are excluded except as they are indirectly reflected in the value of output of the commodity-producing industries. This is in contrast to the scope of the widely used Gross National Product series (*see* Chapter XXIV), which encompasses all industries. Net production, or "value added" is generally considered more significant as a measure of output than gross value of production, and is, consequently, stressed in the following analyses and tables. It is obtained by deducting from the total or "gross" value of output, the cost of materials, fuel, purchased electricity and supplies consumed in the production process.

The measurement of value added is similar, although not strictly comparable, to the concept involved in the contribution of each industry to gross national product at factor cost (net income originating plus depreciation). Apart from variations in the statistical structure, the main difference is that value added, as computed for each commodity-producing industry, includes the cost of such services as insurance, advertising, transportation, communications, etc. In national income accounting, the contribution of these services to gross national product at factor cost is classified to the non-commodity industries from which they originate.

The value series shown in the following tables incorporate basic changes in classification and method of compilation for several of the industries. In order to maintain continuity of the series, the revisions were extended back to 1938. In the process of revision, adjustments for duplication between primary and secondary industries, necessary under the former system of compilation, were eliminated.†

Section 1.—Current Trends of Commodity Production

In 1950, the net value of commodity production in Canada rose to the record level of $10,562,000,000, an advance of more than 9 p.c. over 1949. Most of the increase occurred in the field of secondary production (manufacturing and construction). Both higher prices and an appreciable gain in the volume of output for the majority of industries contributed to the advance.

Preliminary estimates for 1951 indicate further increases in the values of both primary and secondary production. The index of industrial production (which measures the volume of output in the manufacturing, mining and electric power

* Prepared in the Business Statistics Section, Research and Development Division, Dominion Bureau of Statistics.

† A description of the revised methods of compilation is given in the DBS Bulletin, *Survey of Production 1938-1950.*

sectors) rose 7 p.c. over 1950 while the general index of wholesale prices advanced by 14 p.c. The value of farm output was also considerably higher in 1951, owing to larger crops and higher prices.

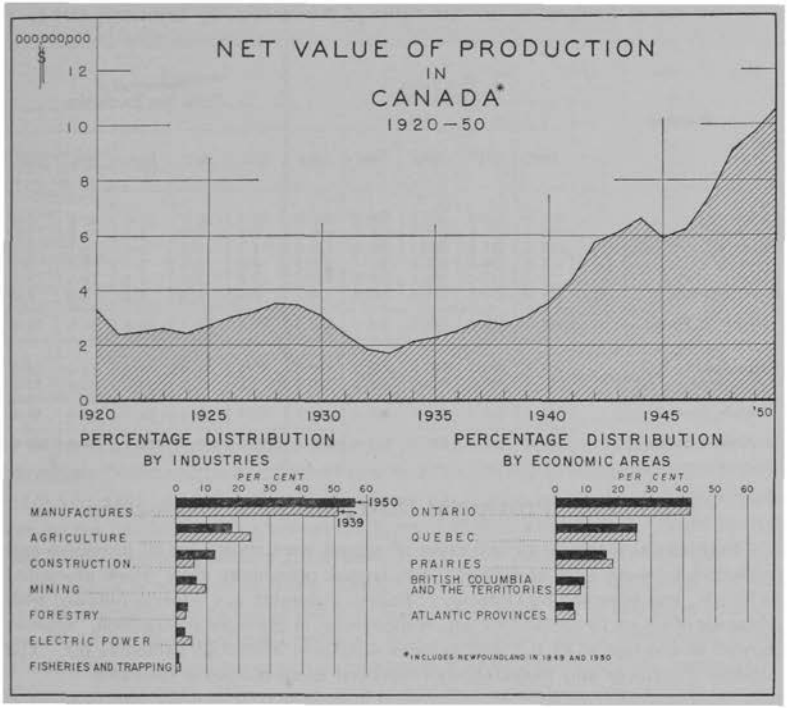
During 1952, industrial production averaged nearly 3 p.c. above the level of the preceding year. By contrast, wholesale prices declined by about 6 p.c. in the same comparison. Although prices of farm products also declined in 1952, favourable growing and harvesting conditions resulted in record crops of wheat, barley and soybeans and near-record or above-average outturns of most other field crops.

Section 2.—Industrial Distribution of Production

Between 1946 and 1950, the total net value of commodity production rose by more than 69 p.c. Higher price levels, sustained demand for consumer goods at home and abroad, the industrial development program and the expansion of defence industries have all contributed to this rapid advance. Most of the industrial groups showed increases in the five-year comparison, the largest gains being recorded in construction, mining and manufacturing. The continuing high level of building activity and the rapid advance of construction costs resulted in an increase of 214 p.c. in value of output for the construction industry. Higher prices and greater volume also accounted for the 104-p.c. gain in the value of mining and the 71-p.c. advance in the value of manufactures. The electric-power industry also expanded steadily since World War II, while forestry operations, after showing a moderate decline in 1949, resumed their upward trend in 1950. The value of agricultural output, after having receded slightly between 1948 and 1949, showed a further decline of about 7 p.c. in 1950, but was still 29 p.c. greater than in 1946. The trend in the output of fisheries was irregular over the period, declines having been shown in 1947 and 1949. Production in the trapping industry showed a tendency to decline.

Secondary production (construction and manufactures) has contributed a distinctly larger proportion of the total value of Canadian commodity output during recent years than it did before the second world war. Manufacturing constitutes the bulk of secondary production and, during the first five post-war years, has contributed between 54 p.c. and 58 p.c. of the total value of commodity production, compared with less than 52 p.c. in 1938 and 1939. The construction industry, which is frequently subject to steep fluctuations, had been accounting for approximately 6 p.c. of the total before the War. After declining during the war period, it recovered strongly in recent years; its value represented over 12 p.c. of total production in 1950.

The contribution of primary production to the Canadian aggregate has fallen off relatively to secondary production, and in 1950 stood at only 31·6 p.c., the lowest on record. However, the absolute value of primary production almost tripled between 1938 and 1950. Throughout the period, agriculture remained by far Canada's leading primary industry, providing rather more than 20 p.c. of the total value of commodity production in most years. Mining contributed about 6 p.c. during the past few years, a smaller proportion than a decade ago. The relative importance of electric power has also receded compared with pre-war years. The share of the forestry industry in commodity production, after fluctuating considerably, stood at 3·6 p.c. in 1950.



1.—Net Value of Production, by Industry, 1946-50

NOTE.—Net production represents total value under a particular heading, less the cost of materials, fuel, purchased electricity and supplies consumed in the production process.

Industry	1946	1947	1948	1949	1950
	$	$	$	$	$
Agriculture	1,468,027,000	1,507,519,000	2,045,693,000	2,019,279,000	1,886,766,000
Forestry	249,937,863	318,260,922	360,908,642	346,455,391	381,326,000
Fisheries	67,161,502	57,516,421	75,374,457	67,457,941	82,191,043
Trapping	31,077,867	16,842,966	20,178,077	15,296,615	15,204,419
Mining	322,214,083	402,538,490	538,762,152	570,215,430	657,328,924
Electric power	220,511,067	232,245,222	248,963,255	270,126,982	313,347,197
Totals, Primary	2,358,929,382	2,534,923,021	3,289,879,583	3,288,831,359	3,336,163,583
Manufactures	3,467,004,980	4,292,055,802	4,938,786,981	5,330,566,434	5,942,058,229
Construction	408,695,662	601,539,452	829,644,000	1,066,649,000	1,284,065,000
Totals, Secondary	3,875,700,642	4,893,595,254	5,768,430,981	6,397,215,434	7,226,123,229
Grand Totals	**6,234,630,024**	**7,428,518,275**	**9,058,310,564**	**9,686,046,793**[1]	**10,562,286,812**[1]

[1] Data for Newfoundland excludes agriculture, fisheries, trapping and fish processing.

2.—Percentage Analyses of the Net Value of Production, by Industry, 1946-50

Industry	Net Value in 1938=100					Percentage of Total Net Production				
	1946	1947	1948	1949	1950	1946	1947	1948	1949	1950
Agriculture	238·5	244·9	332·3	328·0	306·5	23·5	20·3	22·6	20·8	17·9
Forestry	280·9	357·7	405·6	389·4	428·6	4·0	4·3	4·0	3·6	3·6
Fisheries	294·2	251·9	330·2	295·5	360·0	1·1	0·8	0·8	0·7	0·8
Trapping	472·8	256·3	307·0	232·7	231·3	0·5	0·2	0·2	0·2	0·1
Mining	117·7	147·1	196·9	208·3	240·2	5·2	5·4	5·9	5·9	6·2
Electric power	154·9	163·2	174·9	189·8	220·2	3·5	3·1	2·8	2·8	3·0
Totals, Primary	205·1	220·4	286·1	286·0	290·1	37·8	34·1	36·3	34·0	31·6
Manufactures	242·7	300·5	345·8	373·2	416·0	55·6	57·8	54·5	55·0	56·2
Construction	231·3	340·5	469·6	603·8	726·9	6·6	8·1	9·2	11·0	12·2
Totals, Secondary	241·5	304·9	359·4	398·6	450·2	62·2	65·9	63·7	66·0	68·4
Grand Totals	**226·3**	**269·6**	**328·8**	**351·6**	**383·4**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**

Section 3.—Provincial Distribution of Production

Substantial increases in net value of output were shown by all provinces and territories between 1946 and 1950. The largest percentage gain, which amounted to 82 p.c., was recorded by Ontario. British Columbia and Alberta followed with advances of about 73 p.c. and 69 p.c., respectively, in the same comparison. Quebec showed an increase of 61 p.c. and value of output in Manitoba gained 51 p.c. The Atlantic Provinces and Saskatchewan recorded more moderate increases.

3.—Net Value of Production, by Province, 1946-50

Province	1946	1947	1948	1949	1950
	$	$	$	$	$
Newfoundland	...	...	...	74,878,122[1]	83,136,971[1]
P. E. Island	21,282,196	18,514,401	26,147,059	27,506,835	29,063,330
Nova Scotia	187,304,589	188,394,052	238,787,233	257,847,743	261,640,223
New Brunswick	155,127,789	175,128,238	203,970,853	206,223,563	225,128,289
Quebec	1,709,985,392	1,975,219,843	2,344,594,144	2,520,821,801	2,752,444,949
Ontario	2,475,316,690	3,053,858,761	3,650,422,166	4,006,778,159	4,507,301,611
Manitoba	314,851,928	349,811,482	466,823,080	461,371,653	474,576,230
Saskatchewan	378,513,591	445,853,279	597,878,284	611,596,461	528,005,571
Alberta	422,572,540	479,804,407	654,212,516	666,202,750	712,069,997
British Columbia[2]	563,346,792	735,411,095	865,882,886	840,180,749	971,878,669
Yukon and Northwest Territories[2]	6,328,517	6,522,717	9,592,343	12,638,957	17,040,972
Totals	**6,234,630,024**	**7,428,518,275**	**9,058,310,564**	**9,686,046,793**	**10,562,286,812**

[1] Newfoundland data excludes agriculture, fisheries, trapping and fish processing. [2] Forestry and construction figures for the Yukon and Northwest Territories are included with British Columbia.

Ontario, having the largest population and a well diversified economy, contributed nearly 43 p.c. of the total commodity production in 1950. Quebec's share amounted to 26 p.c. and British Columbia contributed the third largest share of 9 p.c.

4.—Percentages of Total Net Production, by Province, 1946-50

Province	1946	1947	1948	1949	1950
	p.c.	p.c.	p.c.	p.c.	p.c.
Newfoundland	...	...	...	0·77[1]	0·79[1]
Prince Edward Island	0·34	0·25	0·29	0·29	0·28
Nova Scotia	3·00	2·53	2·64	2·66	2·48
New Brunswick	2·49	2·36	2·25	2·13	2·13
Quebec	27·43	26·59	25·88	26·03	26·06
Ontario	39·70	41·11	40·30	41·37	42·67
Manitoba	5·05	4·71	5·15	4·76	4·49
Saskatchewan	6·07	6·00	6·60	6·31	5·00
Alberta	6·78	6·46	7·22	6·88	6·74
British Columbia[2]	9·04	9·90	9·56	8·67	9·20
Yukon and Northwest Territories[2]	0·10	0·09	0·11	0·13	0·16
Totals	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**

[1] Newfoundland data excludes agriculture, fisheries, trapping and fish processing. [2] Forestry and construction figures for the Yukon and Northwest Territories are included with British Columbia.

Per Capita Production.—The per capita net value of production in nine provinces (Newfoundland excluded) rose to $784 in 1950 as compared with $734 in 1949 and $592 in 1947. Ontario continued by a wide margin to hold first place among the provinces with a per capita figure of $1,008, while British Columbia with $852 regained second position from Alberta; the latter fell back into third place with a per capita production of $780. Quebec, Saskatchewan and Manitoba followed in that order with per capita figures of $693, $634 and $618. The last three positions were held by the Maritime Provinces: New Brunswick, Nova Scotia and Prince Edward Island showed per capita output levels of $440, $410 and $303, respectively. Compared with 1949, all provinces showed gains in this analysis except Saskatchewan which receded sharply owing to lower agricultural returns, and Nova Scotia which remained unchanged.

5.—Per Capita Net Value of Production with Percentage Variation from National Average, by Province, 1946-50

Province	1946		1947		1948		1949		1950	
	Per Capita Net Value	P.C. Variations	Per Capita Net Value	P.C. Variations	Per Capita Net Value	P.C. Variations	Per Capita Net Value	P.C. Variations	Per Capita Net Value	P.C. Variations
	$		$		$		$		$	
Prince Edward Island	226	−55·4	197	−66·7	281	−60·2	293	−60·1	303	−61·4
Nova Scotia	308	−39·3	306	−48·3	382	−45·9	410	−44·1	410	−47·7
New Brunswick	325	−35·9	359	−39·4	410	−41·9	406	−44·7	440	−43·9
Quebec	471	− 7·1	532	−10·1	619	−12·3	649	−11·6	693	−11·6
Ontario	605	+19·3	731	+23·5	854	+21·0	915	+24·7	1,008	+28·6
Manitoba	433	−14·6	473	−20·1	626	−11·3	609	−17·0	618	−21·2
Saskatchewan	454	−10·5	533	−10·0	713	+ 1·0	735	+ 0·1	634	−19·1
Alberta	526	+ 3·7	582	− 1·7	766	+ 8·5	753	+ 2·6	780	− 0·5
British Columbia[1]	555	+ 9·5	695	+17·4	792	+12·2	750	+ 2·2	852	+ 8·7
Totals	**507**	...	**592**	...	**706**	...	**734**[2]	...	**784**[2]	...

[1] Includes the Yukon and Northwest Territories. [2] Excludes Newfoundland in 1949 and 1950.

Section 4.—Distribution of Commodity Production in Each Province

Atlantic Provinces.—Available figures for the Province of Newfoundland, which has come into the Canadian picture for 1949 and 1950, show that the manufacturing industries lead in net value of production. Those industries are dominated by the forest and fisheries resources of the Province, the pulp and paper industry being in first place. Unfortunately, no information is available regarding the fish-processing industry and its position in the economy of the Province cannot be evaluated. Nor is any information available regarding the primary fisheries industry, which is undoubtedly of great importance.

The net value of commodity production in Prince Edward Island rose from $8,244,000 in 1938 to $29,063,000 in 1950, a considerable increase, although slightly below the Canadian average. Prince Edward Island's economy is still mainly agricultural; fisheries, manufacturing and construction constitute the bulk of the non-agricultural output.

Value of production for Nova Scotia increased by over 178 p.c. during the period, from $93,938,000 in 1938 to $261,640,000 in 1950. Manufacturing output expanded very rapidly during the War and, in recent years, has contributed about 40 p.c. of the Province's commodity production. Mining and agriculture have been the most valuable primary industries throughout the period, with mining providing a rather larger share of the Province's wealth in more recent years. Fisheries is Nova Scotia's third primary industry. Construction was at a high level in the post-war period, contributing more than 17 p.c. of total production in 1949 and 1950.

New Brunswick's net value of production rose from $61,708,000 in 1938 to $225,128,000 in 1950. Manufacturing industries provided somewhat less than one-half of this total during most years. Agriculture and forestry are the main primary activities. Agriculture contributed more than 20 p.c. of the provincial value of production during the war years and more recently, somewhat less. Forestry's share has fallen off since 1947. Activity in the construction industry increased considerably since the end of the War, accounting for nearly 15 p.c. of the value of output in 1950, compared with 6 p.c. in 1945.

Quebec.—Net value of production in Quebec increased nearly four-fold during the period under review, rising from $697,407,000 in 1938 to $2,752,445,000 in 1950. Manufacturing industries largely dominate the Province's economy, contributing over 70 p.c. of all value of production during some war years, and more than 65 p.c. in the post-war period. However, the primary industries of agriculture, forestry, mining and electric power still add substantially to the Province's output, with agriculture's share averaging 10 to 12 p.c. during the post-war years. The relative importance of electric power and mining has declined since 1938, although the latter's position has shown improvement in recent years. The contribution of forestry is still greater than in 1938 and 1939, but has been declining since 1948. The construction industry contributed over 10 p.c. of total value in 1949 and 1950, compared with 7·5 p.c. in 1938.

Ontario.—In Ontario, the net value of production for 1950 was nearly four times the 1938 value. The Ontario economy is largely dominated by manufactures, which were responsible for over 70 p.c. of value of production during the war years and for about 68 p.c. in subsequent years. This compares with a

contribution of 62 p.c. in 1938. Agriculture is Ontario's principal primary industry, with mining next in importance. The relative importance of these two industries has dropped sharply since 1938, although their dollar values have increased. The value of the construction industry has risen sharply since 1945 and accounted for 12 p.c. of the net value in 1950 compared with 4 p.c. in 1945 and 6 p.c. in 1938.

Prairie Provinces.—The value of commodity production in Manitoba rose from $135,842,000 in 1938 to $474,577,000 in 1950 without the general balance of the economy altering greatly over the period. Agriculture remained the Province's principal industry, accounting, in most years, for from 40 p.c. to 50 p.c. of the net value of production. The share of manufacturing usually stood between 35 p.c. and 40 p.c. The Manitoba mining industry, the output of which fell off markedly during the War, has shown some expansion in recent years, but its share of the total is still well below that of 1938. By contrast, value of construction output rose in the post-war period and in 1950 accounted for over 14 p.c. of the provincial total. In 1938 construction contributed only 5 p.c. of the net value of production.

The Saskatchewan economy is greatly dependent on agricultural production. In 1950, for the first time in nine years, agriculture's share of the Province's net value of output fell below 75 p.c. Throughout the period, fluctuations in total value of production and in value of agricultural output paralleled each other closely. Depressed conditions in 1938 were followed by a swiftly rising trend, partly obscured by violent year-to-year fluctuations in value of production. Net value reached record levels in 1948 and 1949 but fell off appreciably in 1950. Although the actual value of Saskatchewan's manufacturing output rose steadily, it still constituted only from 7·5 to 10 p.c. of the net value of production during the post-war years, much the smallest proportion among the older provinces. Mining and construction were the other industries with appreciable values of output.

The Alberta economy has also been largely agrarian until very recently. Before World War II, agriculture provided over 60 p.c. of value of production, and it still contributed nearly 60 p.c. between 1946 and 1948. During 1949 and 1950, however, the share of agriculture dropped substantially as that of mining and construction rose, but it easily remained the Province's principal industry. The value of mineral output increased sharply since 1947, owing principally to the rapid development of the Province's petroleum resources. Throughout the period, manufacturing was Alberta's second industry and contributed between 17 p.c. and 20 p.c. of the net value of production during the post-war years. Its position is being challenged, however, by the fast-growing mining and construction industries.

British Columbia.—Net value of production in British Columbia increased from $228,573,000 in 1938 to $971,878,000 in 1950, an advance of more than 300 p.c. Since the Second World War, manufacturing has provided about one-half the aggregate amount. Five primary industries make substantial contributions to the Province's output, these being, in order of 1950 value of production, forestry, mining, agriculture, fisheries and electric power. The economy of British Columbia is therefore one of the most diversified in the nation, and the forestry and construction industries particularly have shown marked expansion during the post-war period. Compared with 1938, the relative importance of the manufacturing and construction industries has risen sharply at the expense of agriculture, mining and electric power.

6.—Net Value of Production and Percentage Analysis, by Province, 1950

Industry	Newfoundland		Prince Edward Island		Nova Scotia		New Brunswick	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
Agriculture	..	...	16,357	56·3	33,265	12·7	41,267	18·4
Forestry	15,202	...	—	—	4,939	1·9	19,355	8·6
Fisheries	..	...	2,556	8·8	21,399	8·2	6,792	3·0
Trapping	..	...	6	—	140	0·1	257	0·1
Mining	20,124	...	—	—	48,549	18·5	10,862	4·8
Electric power	2,199	...	762	2·6	9,548	3·6	7,021	3·1
Manufactures	36,712[1]	...	4,284	14·8	97,781	37·4	106,204	47·2
Construction	8,899	...	5,098	17·5	46,018	17·6	33,370	14·8
Grand Totals	**83,137**	...	**29,063**	**100·0**	**261,639**	**100·0**	**225,128**	**100·0**

	Quebec		Ontario		Manitoba		Saskatchewan	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
Agriculture	290,245	10·5	545,379	12·1	182,491	38·4	389,052	73·7
Forestry	115,186	4·2	79,659	1·8	5,297	1·1	3,422	0·6
Fisheries	3,200	0·1	6,252	0·1	3,880	0·8	718	0·1
Trapping	1,844	0·1	4,097	0·1	2,942	0·6	1,971	0·4
Mining	141,455	5·1	161,671	3·6	19,259	4·1	26,938	5·1
Electric power	114,301	4·2	106,852	2·4	16,947	3·6	10,027	1·9
Manufactures	1,798,320	65·3	3,068,142	68·0	177,052	37·3	49,495	9·4
Construction	287,894	10·5	535,250	11·9	66,709	14·1	46,383	8·8
Grand Totals	**2,752,445**	**100·0**	**4,507,302**	**100·0**	**474,577**	**100·0**	**528,006**	**100·0**

	Alberta		British Columbia[2]		Yukon and Northwest Territories[2]		Canada	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
Agriculture	326,484	45·8	62,226	6·4	—	—	1,886,766	17·9
Forestry	7,202	1·0	131,063	13·5	[2]	[2]	381,326	3·6
Fisheries	437	0·1	36,345	3·7	612	3·6	82,191	0·8
Trapping	1,889	0·3	950	0·1	1,109	6·5	15,205	0·1
Mining	122,543	17·2	91,953	9·5	13,975	82·0	657,329	6·2
Electric power	13,863	1·9	31,050	3·2	777	4·6	313,347	3·0
Manufactures	123,893	17·4	479,606	49·3	569	3·3	5,942,058	56·2
Construction	115,759	16·3	138,685	14·3	[2]	[2]	1,284,065	12·2
Grand Totals	**712,070**	**100·0**	**971,878**	**100·0**	**17,042**	**100·0**	**10,562,287**	**100·0**

[1] Excludes fish-processing. [2] Forestry and construction figures for the Yukon and Northwest Territories are included with British Columbia.

CHAPTER X.—AGRICULTURE

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Agriculture, including stock-raising and horticulture, is the most important of the primary industries of the Canadian people, employing, according to the Census of 1951, 15·6 p.c. of the total labour force and 19·2 p.c. of the labour force males. In addition, agriculture provides the raw materials for many Canadian manufactures and its products in raw or manufactured form constitute a very large percentage of Canada's exports. The area of present and potential agricultural land is shown by province at p. 20 of this volume.

Section 1.—Federal Government in Relation to Agriculture*

The creation of the Department of Agriculture is provided for in Sect. 95 of the British North America Act (1867), which says, in part, that "in each province, the legislature may make laws in relation to agriculture in the province" and that "the Parliament of Canada may from time to time make laws in relation to agriculture in all or any of the provinces; and any law of the legislature of a province relative to agriculture, shall have effect in and for the province as long and as far as it is not repugnant to any Act of the Parliament of Canada". As a result of this provision, there exists at the present time a Department of Agriculture, with a Minister of Agriculture at its head, in the Federal Government and in each of the provinces except Newfoundland where agricultural affairs are dealt with by the Agricultural Division of the Department of Natural Resources.

The following special article reviews the federal agricultural legislation that has been put into effect since the need for aid and promotion was first indicated.

* Except as otherwise indicated, this material was prepared under the direction of Dr. J. G. Taggart, C.B.E., Deputy Minister of Agriculture, Ottawa.

MAJOR DEVELOPMENTS IN ORGANIZATION AND POLICY OF THE FEDERAL DEPARTMENT OF AGRICULTURE

Canada's first move to organize for the promotion of agriculture was made more than a century ago. By Act of the Legislature of the Province of Canada, passed on Nov. 10, 1852, provision was made for setting up a Bureau of Agriculture, under a Minister of the Crown. This Bureau later became a department, forerunner of the Department of Agriculture of to-day. In addition to general agriculture, the Bureau concerned itself with agricultural statistics and registration (including the Census), and with patents and inventions. Later it was given responsibility for immigration and the building of colonization roads.

The Early Days.—The present Department of Agriculture was established by Act of the new Parliament of Canada, following Confederation in 1867. Little progress was made during the first few years but, under an Act passed in 1869, attention was directed to the safeguarding of Canadian live stock against the introduction of contagious diseases. By 1884, inspection and quarantine stations had been established all along the International Boundary and at Atlantic seaports. Attention was also being given to the eradication of diseases already in the country and the first entomologist was appointed in 1884 to investigate the ravages of crop-destroying insects.

In 1885, preliminary steps were taken to set up the experimental farms organization and Parliament passed an Act in 1886 respecting Experimental Farm Stations. This provided for a central farm at Ottawa, Ont., and branch farms at Nappan, N.S., Brandon, Man., Indian Head, N.W.T., and Agassiz, B.C. Dr. William Saunders was appointed the first Director.

Departmental organization at this time comprised only two branches dealing specifically with agriculture—Experimental Farms and Veterinary. In 1890, the first Dairy Commissioner was appointed to aid farmers in the improvement of butter and cheese manufacture and in the better feeding of dairy cattle for milk production. A Dairy Products Act, passed in 1893, made provision for the branding of dairy products and for prohibiting the sale of filled or imitation cheese.

In 1895, the possibilities of the British market as an outlet for Canadian produce began to attract attention. Arrangements were made for shipments of butter and cheese under refrigeration and these proved highly successful but similar efforts with fruit shipments were less satisfactory.

Early regulatory legislation administered by the Department included measures providing for the registration of cheese factories and creameries in 1897, for the control of insect pests (San José scale) in 1898, for the incorporation of live-stock record associations in 1900, and the Fruit Marks Act in 1901. In 1903, provision was made for the inspection of seeds and testing for purity and germination. Cow-testing was begun in 1904 and the Animal Contagious Diseases Act was amended to provide compensation for the owners of live stock slaughtered under the Act. At the 1906-07 Session of Parliament an Act was passed to encourage the establishment of cold-storage warehouses for perishable food products and the Meat and Canned Foods Act was brought in at the same time. The Destructive Insect and Pest Act was passed in 1910.

In the early years of the 20th century the departmental organization gradually developed: in 1905, the seed and live-stock divisions were withdrawn from the Dairy Branch and set up as separate branches; in 1912, the Census and Statistics office was transferred to the Department of Trade and Commerce; the Agricultural

Instruction Act, passed in 1913, provided annual grants, over a ten-year period, to the provinces for the encouragement and assistance of agricultural education; the Entomological Branch and the Fruit Branch were established in 1914 and, in the same year following the outbreak of war, the Department was asked to take over the purchase of supplies for the British Government and a special organization was formed for that purpose. In 1918, those matters not concerning agriculture but still under the control of the Department were transferred elsewhere.

During the next two decades, marked progress was made in the improvement of agriculture and the development of production and marketing policies under various legislative enactments. Marquis wheat, then at its peak of popularity, was an outstanding example of plant improvement, contributing many millions of dollars in new wealth by its ability to ripen early and thus extend the area of profitable production. It, in turn, was superseded by other varieties, bred to overcome the menace of rust and other pests. Improved varieties of other crop plants, superior kinds of hardy fruits, and finer strains of farm animals and poultry were among the contributions to Canadian agriculture during this period.

The Period 1920 to 1939.—Many of the present-day policies covering the grading of farm products had their beginning in this period. Grading of dairy produce for export was provided by legislation in 1921. In 1922, egg-grading regulations, which had been set up in 1917 to cover export shipments, were made applicable to the domestic market. In the same year, regulations governing the grading of hogs were passed, launching a program that resulted eventually in the almost complete conversion of the industry from the production of lard-type to bacon-type hogs. This program was initiated in an effort to recapture a share of the United Kingdom market.

As a result of disastrous rust epidemics in Western Canada and the need for finding an answer to the problem, a new Rust Research Laboratory was opened in 1925 at Winnipeg, Man., to study the menace of wheat rust.

Challenged in the courts of Ontario in 1926, the egg-grading regulations were found to be beyond federal jurisdiction. Public opinion was solidly behind the regulations, however, and the difficulty was overcome by the passage of provincial enabling legislation. Similarly, other grading legislation, applicable initially to interprovincial and export trade, was extended to cover domestic trading by action of the various provincial governments.

Grade standards for dressed poultry were set up in 1928 and record-of-performance for poultry was inaugurated in 1929 at a time when average annual production per bird was around 80 to 90 eggs. In 1929, standards were adopted for beef and the Advanced Registry policy for purebred swine was introduced. Carcass grading of hogs on a voluntary basis was begun in 1934. Effective December 1940, live grading of hogs was discontinued and carcass grading has since been the only official system.

The various grading policies introduced by the Department served not only to create price differentials for quality products but resulted in substantial increases in consumption. The grading of hogs laid the foundation for a great expansion of the industry, improving the quality of bacon and pork products and stimulating domestic and export trade. Egg grading resulted in such an upsurge in demand that Canada soon outstripped all other countries in per capita consumption of eggs. Fruits and vegetables, dairy products, wool, beef, dressed poultry and canned goods afford other examples of the benefits accruing from marketing on a graded basis.

The prolonged drought period of the 1930's in Western Canada, coupled with generally depressed economic conditions, brought the Department of Agriculture into the fields of marketing legislation, assistance and rehabilitation programs. The Natural Products Marketing Act, passed in 1934, provided for the establishment of a Dominion Marketing Board. The object of the Act was to improve the methods and practices of marketing natural products in domestic and export trade. In 1936, the Act was declared *ultra vires* by the Supreme Court of Canada and the decision was upheld in 1937 by the Imperial Privy Council. The Government then decided to assist orderly marketing by the encouragement of pools which would return to the producer the maximum sales return for his product, less a maximum margin for handling expenses agreed upon in advance.

In 1935, with the passage of the Prairie Farm Rehabilitation Act, the Department moved to the relief of prairie agriculture. The three major purposes of the Act were: to develop tillage and cropping practices that would enable farmers to farm successfully under a wide and fluctuating range of physical and economic hazards; to divert crop production from poor land and to use such land for grazing; and to make better use of the limited water resources of the prairie area. In succeeding years the developments under the program of the Prairie Farm Rehabilitation Act did much to change the farming pattern over a large part of Western Canada. So valuable have been the results of this program that it has been retained and extended over an increasingly large part of the country. The magnitude of the undertakings stemming from this legislation is indicated by the fact that $76,500,000 has been spent on it since its inception.

In 1937, the organization of the Department of Agriculture was changed and its activities grouped into services on a functional basis. Activities relating to production were included in one service, those relating to marketing in another, and the research activities in the natural sciences were grouped together in a third. The Experimental Farms organization, aside from the units concerned with botany, chemistry and bacteriology, comprised the fourth major service.

In 1939, the Wheat Co-operative Marketing Act and the Agricultural Products Co-operative Marketing Act were passed. The Wheat Co-operative Marketing Act was used for only one year after which most problems connected with the marketing of wheat were handled by the Department of Trade and Commerce under the Canadian Wheat Board Act. The Agricultural Products Co-operative Marketing Act, which covers the marketing of all agricultural products other than wheat, has been used to a considerable degree. Its purpose is to aid farmers in pooling returns from the sale of their products by guaranteeing initial payments and thus assisting in the orderly marketing of the product. Sales returns are made to producers on a co-operative plan.

In order to provide a measure of assistance for farmers who might suffer from low yields because of factors beyond their control, the Prairie Farm Assistance Act was passed in 1939. When the average yields in designated areas fall below certain figures, direct money payments are made to farmers within the area. A 1-p.c. levy on all western grain marketed in Canada provides some of the funds from which assistance payments are made. Up to Mar. 31, 1953, $143,327,607 had been paid out to farmers and the total levy collected was $69,832,427.

World War II Period.—The outbreak of war in 1939 brought many changes to Canadian agriculture and to the activities of the Department. The appointment of an Agricultural Supplies Committee (later Board) provided the machinery whereby the Department could move to keep Canadian agriculture functioning in such a manner as to meet the needs of the people of Canada and their allies. The Board undertook various programs for assisting production, including the provision of aid to producers whose natural markets were lost because of the War and the conservation of supplies of materials needed in production. Other Boards set up to handle specific commodities followed the general pattern of operation established by the Supplies Board.

The loss of export markets for wheat resulted in the introduction of a scheme for reducing the acreage sown to wheat. Along with this, a system of delivery quotas was adopted to ensure that every farmer should have a fair opportunity to market a portion of his crop. In order to compensate farmers for loss of income arising from their inability to sell as usual, payments were made to encourage the seeding of coarse grains and the extension of summer-fallow on land that otherwise would be sown to wheat. In 1942, the Wheat Acreage Reduction Act was passed, placing the program on a definite statutory basis and representing the first occasion on which the Department had sought by legislation to directly influence production programs. Having accomplished its purpose, the program was discontinued after the 1943 season. More than $85,000,000 was distributed to farmers and landowners during the three years that the program operated.

Another important policy of the Department initiated during the war years was that of paying freight assistance on feeds. Under this program substantial payments were made against the cost of moving feed grains from the Prairie Provinces to Eastern Canada and British Columbia, thus stimulating the output of livestock products and aiding in the marketing of coarse grains. From the inception of the policy up to Mar. 31, 1953, assistance was given on the movement of 31,381,865 tons of feed grain. Total cost during the period was $188,212,524.

The Federal and Provincial Governments have, through legislation and in other ways, provided marketing aids related to research, education, information, inspection, grading and many other service measures designed to assist in correcting the maladjustments in marketing within agriculture and between agriculture and the rest of the economy.

The Post-War Period.—In 1944, the Agricultural Prices Support Act was passed with the stated purpose of "endeavouring to ensure adequate and stable returns for agricultural products during the transition from war to peace and to endeavour to secure a fair relationship between the returns from agriculture and those from other occupations". This assistance was to compensate for the controls placed on the prices of agricultural products during the War.

The Prices Support Board, established under the Act, is authorized to purchase products outright or to underwrite the market through guarantees or deficiency payments to producers. A working capital revolving fund of $200,000,000 is provided for its operations. In 1950, the Act was extended on a continuing basis.

The rehabilitation of dyke-land in Nova Scotia and New Brunswick was provided for under the Maritime Marshland Rehabilitation Act. This measure, passed in 1948, empowers the Department of Agriculture to undertake the construction of

all main protective works and to do all the engineering required, on condition that the provinces assume responsibility for the proper use of the lands protected and for necessary drainage works. The Act provides for the development of new areas in addition to the reconstruction and repair of existing works.

Another measure which is of considerable importance in price stabilization is the Agricultural Products Marketing Act, 1949. A number of provincial governments have passed legislation providing for a Board to control or regulate the marketing of agricultural products produced within the province concerned. This Act enables such provincial marketing legislation to be applied in the same way to the marketing of agricultural products outside that province and in export trade.

In retrospect, the development of the Department of Agriculture over the past century falls into a fairly well-defined pattern. Initially, agriculture itself played a minor role in the departmental activities but, as the country opened up and farming became more extensive and correspondingly more important in the country's economy, it gradually made increasing demands for governmental recognition. Sound policies for the development and regulation of Canadian agriculture were developed within the Department of Agriculture during the first decades of the present century. Drought and depression in the 1930's left a permanent mark on the industry and altered, in considerable degree, the cultural practices over large areas of the country. War imposed new strains on the agricultural economy but it also paved the way for lasting advances in many lines of production. Finally, in the post-war period, Canadian agriculture has broken new ground in the fields of planned production and marketing.

Progress is not necessarily measured in terms of costs. Nevertheless, some indication of the broadening of departmental activities is given by the amounts of money spent over the past 45 years. These outlays, averaged for five-year periods from 1906 to 1950, are as follows:—

Period	*Average Annual Expenditure*	*Period*	*Average Annual Expenditure*
	$		$
1906-10	1,444,868	1931-35	8,501,910
1911-15	3,321,233	1936-40	20,961,666
1916-20	5,049,727	1941-45	75,548,381
1921-25	7,037,296	1946-50	84,463,223
1926-30	7,822,326		

While the Department of Agriculture has progressed steadily during the past hundred years, the most spectacular advances have been made during the two latest decades. The Department has now developed to the point where it is of major importance in Canada's administrative set-up.

Subsection 1.—General Policy and Price Stability

All the activities of the Department are directed toward the production of marketable farm products. Apart from the initial research and experimentation in connection with operations on the farm itself, it is essential that processing, grading and inspection of farm products should be of a high standard if markets both at home and abroad are to be retained and new ones developed. It is with this end in view that the inspection and grading activities of the Department have become of increasing importance. By inspection and grading the buyer is able to obtain a product suited to his requirements; the producer is compensated according to the grade of his product and is thus encouraged to produce a high-quality commodity.

The results of experimental and research work and the policies of the Department, in general, are given to farmers and to the public through bulletins, the press, radio and screen. Releases on market conditions and prices are a regular feature of this publicity.

Measures taken by the Government of Canada, designed to give price stability and security to the industry, are outlined in the special article on pp. 366-370.

Farm Credit.—The Federal Government has made provision for the extension of credit to farmers under the Canadian Farm Loan Act and under the Farm Improvement Loans Act. The Prairie Grain Producers' Interim Financing Act, 1951, was emergency legislation intended primarily to relieve any hardship caused by the extremely unfavourable harvesting conditions of that autumn.

*The Canadian Farm Loan Act, 1929.**—Long-term farm mortgage credit is made available to Canadian farmers under the provisions of this Act, which is administered by the Canadian Farm Loan Board. The Board makes loans for the purchase of live stock, farm equipment and farm land, for improvements, for refinancing debts and for covering operating expenses. The Board also provides short- and intermediate-term credit to its long-term mortgage borrowers by means of five-year second mortgages with collateral chattel security.

From the commencement of operations in 1929 to Mar. 31, 1952, the Board has lent $79,429,000. Loans approved in the year ended Mar. 31, 1952, totalled $4,238,400, a decline of 10 p.c. from the previous year. Approximately 60 p.c. of current borrowing is to buy land or pay debts secured on land. Assets under administration by the Board increased by more than $7,000,000 in the past five years, amounting to $29,864,550 at Mar. 31, 1952.

* Revised by W. A. Reeve, Secretary, Canadian Farm Loan Board.

1.—Loans Approved and Disbursed under the Canadian Farm Loan Act, Years Ended Mar. 31, 1943-52

NOTE.—Figures for previous years are given in the corresponding table of former Year Books beginning with the 1940 edition.

Year Ended Mar. 31—	Applications Received		Loans Approved					Loans Paid Out		
			First Mortgage		Second Mortgage		Total Amount	First Mortgage	Second Mortgage	Total Amount
	No.	Amount	No.	Amount	No.	Amount				
		$		$		$	$	$	$	$
1943.....	1,055	2,277,830	601	1,156,150	135	59,300	1,215,450	1,260,033	60,223	1,320,256
1944.....	1,037	2,419,001	603	1,315,950	162	90,850	1,406,800	1,251,949	84,154	1,336,103
1945.....	1,306	3,293,559	728	1,623,000	176	100,700	1,723,700	1,561,174	100,235	1,661,409
1946.....	1,846	4,758,916	918	2,161,050	258	163,050	2,324,100	1,977,902	143,305	2,121,207
1947.....	2,015	5,579,142	1,312	3,165,250	404	253,900	3,419,150	3,030,915	242,896	3,273,811
1948.....	2,380	6,672,998	1,301	3,145,150	517	315,400	3,460,550	2,911,167	274,073	3,185,240
1949.....	3,357	9,698,276	1,821	4,450,100	756	469,200	4,919,300	4,169,070	425,966	4,595,035
1950.....	4,639	13,293,132	1,949	4,715,500	801	473,900	5,189,400	4,480,779	462,150	4,942,929
1951.....	3,971	11,485,673	1,796	4,312,450	680	409,550	4,722,000	4,288,866	404,213	4,693,079
1952.....	3,339	10,613,527	1,437	3,929,500	494	308,900	4,238,400	4,131,141	337,951	4,469,092

2.—Loans Approved under the Canadian Farm Loan Act and Appraised Values of Security, by Province, Year Ended Mar. 31, 1952

NOTE.—Figures for previous years are given in the corresponding table of former Year Books beginning with the 1940 edition.

Province	Loans Approved					Appraised Values of Security at Time of Loan		
	First Mortgage		Second Mortgage		Total Amount	Land	Buildings	Total Amount
	No.	Amount	No.	Amount				
		$		$	$	$	$	$
Newfoundland	1	2,500	1	500	3,000	7,520	7,520	15,040
Prince Edward Island	76	180,700	8	4,400	185,100	265,010	186,237	451,247
Nova Scotia	34	79,900	4	1,900	81,800	104,930	72,024	176,954
New Brunswick	64	161,450	13	7,950	169,400	229,424	169,991	399,415
Quebec	131	345,450	41	24,700	370,150	500,928	349,564	850,492
Ontario	295	937,600	70	44,150	981,750	1,323,644	881,494	2,205,138
Manitoba	156	443,550	93	65,250	508,800	920,003	394,633	1,314,636
Saskatchewan	381	1,065,950	210	129,350	1,195,300	2,253,775	670,964	2,924,739
Alberta	178	393,450	34	18,450	411,900	864,202	271,642	1,135,844
British Columbia	121	318,950	20	12,250	331,200	533,434	322,794	856,228
Totals	**1,437**	**3,929,500**	**494**	**308,900**	**4,238,400**	**7,002,870**	**3,326,863**	**10,329,733**

*The Farm Improvement Loans Act, 1944.**—The Farm Improvement Loans Act is designed to provide intermediate-term credit and a type of short-term credit to farmers to enable them to equip, improve and develop their farms. There is scarcely anything a farmer wants in the way of mechanical aids for his farm operation or for his home for which a loan may not be made. Assistance may also be obtained for the purchase of live stock, principally foundation or breeding stock; for installation or repair of farm electric systems; for repair, alteration or construction of farm buildings, including the home; and for fencing, drainage and other development projects. The Act is intended to assist the farmer who previously has not been able to obtain adequate credit for such purposes. Moreover, credit is provided on security and terms that are convenient and suited to the individual borrower. The Act is administered by the Department of Finance.

The chartered banks are the lending agency under the Act. The legislation, originally operative for three years, has been extended from time to time for three-year periods. The Government guaranteed each bank against loss up to 10 p.c. of the total loans made by it during the period. Under the Act, the guarantee was limited by a provision stating that it would not apply to any loan made after the aggregate of all loans made by all banks in a given period reached an amount fixed by statute. When, in February 1951, the Act was extended for another three years, the amount fixed was $200,000,000. Within two years the loans almost totalled this amount, and a further extension of the Act was made for three years from Apr. 1, 1953. The aggregate of loans for this three-year period, affected by the guarantee, was set at $300,000,000. By Dec. 31, 1952, 80 claims amounting to $38,383 had been paid under the guarantee.

Loans may be obtained for terms up to seven years with interest not to exceed 5 p.c. The maximum amount to be advanced to a borrower at any one time was increased to $4,000 by the legislation of 1953. The borrower himself must provide 20 p.c. to 33 p.c. of the cost of his project.

* Prepared by D. M. McRae, Supervisor, Farm Improvement Loans Act, Department of Finance.

By Dec. 31, 1952, $230,986,561, or 65·3 p.c. of the total of all loans made, had been repaid. Of the loans made during the first three years of operation, all but 0·7 p.c. had been repaid; of those made during the second three years, all but 9·7 p.c. had been repaid; for the 22 months of the third three-year period ended Dec. 31, 1952, 38·7 p.c. had been repaid.

3.—Loans made under the Farm Improvement Loans Act, by Purpose, 1945-52

Purpose	1951		1952		Totals Since Inception in 1945	
	Loans	Amount	Loans	Amount	Loans	Amount
	No.	$	No.	$	No.	$
Purchase of agricultural implements	67,605	78,302,385	75,347	90,818,129	291,722	320,973,199
Construction, repair or alteration of, or additions to any structure on a farm	2,813	3,378,564	2,923	3,474,114	15,461	16,902,825
Purchase of live stock	2,918	2,741,289	3,175	2,899,824	11,498	9,456,613
Improvement or development project	1,253	694,460	1,420	843,724	10,740	5,057,286
Purchase or installation of equipment or electric system	406	167,668	357	154,459	2,033	950,237
Fencing or drainage	61	39,374	91	67,437	433	278,586
Alteration or improvement of electric system	7	2,487	2	1,465	53	21,336
Totals	**75,063**	**85,326,227**	**83,315**	**98,259,152**	**331,940**	**353,640,082**

4.—Loans made under the Farm Improvement Loans Act, by Province, 1945-52

Province	1951		1952		Totals Since Inception in 1945	
	Loans	Amount	Loans	Amount	Loans	Amount
	No.	$	No.	$	No.	$
Newfoundland	3	2,412	44	49,900	49	53,279
Prince Edward Island	1,271	1,144,295	1,782	1,756,128	4,088	3,779,698
Nova Scotia	695	619,720	888	852,297	2,345	2,077,078
New Brunswick	655	696,751	866	926,499	2,246	2,357,227
Quebec	5,405	6,125,622	6,049	7,128,775	17,033	18,645,800
Ontario	11,323	12,178,465	11,299	12,245,803	41,208	42,727,383
Manitoba	10,120	11,370,755	10,061	11,225,437	45,725	47,088,194
Saskatchewan	23,272	27,876,923	28,127	35,365,330	110,710	123,241,474
Alberta	20,309	23,240,816	22,130	26,495,163	99,592	104,714,997
British Columbia	2,010	2,070,468	2,069	2,213,820	8,944	8,954,952
Totals	**75,063**	**85,326,227**	**83,315**	**98,259,152**	**331,940**	**353,640,082**

Prairie Grain Producers' Interim Financing Act, 1951.—This Act, which came into force Jan. 15, 1952, provides short-term credit to grain producers in the Prairie Provinces who, because of congested delivery points or inability to complete harvesting of their grain, are in need of credit until their grain can be delivered. Individual advances can be made to a maximum of $1,000.

Subsection 2.—Agricultural Research and Experimentation

The Department of Agriculture conducts, on a broad scale, scientific research and experimentation on the control of pests and diseases, the nutritional requirements of plants and animals, the breeding and testing of new species and varieties, the microbiology of soils and foods, investigations of crop production and cultural methods,

and many other matters. This work is carried on mainly by the Science Service and the Experimental Farms Service. In addition to providing information on current production problems, the work is of paramount importance to the long-time well-being of agriculture.

Conservation of the soil is of basic importance to agriculture. Research in that field takes the form of soil surveys and study of methods for protecting and conserving soil resources and is carried on in collaboration with the provincial governments. Studies include the chemistry of the soil, cover crops, value of manure and fertilizers, cultural methods, use of tillage machinery and development of large land-reclamation projects.

The Department has for many years conducted investigations into the control of insects and diseases of forest trees. The limited silvicultural work carried on has been done with the aim of maintaining a supply of trees suitable for planting on the prairies as shelter belts against the wind and to prevent soil and snow drifting. Basically, this is also a soil-conservation measure.

As might be expected, much of the research and experimental work carried on is concerned with crop plants for, after the soil itself, they are of chief importance. This work includes the breeding and testing of suitable varieties of crops to be grown under the varying climatic conditions throughout Canada. Their culture, their nutritional value and, in the case of food crops, their suitability for human consumption—even their appeal or lack of appeal to a somewhat discerning housewife—are continuously under study.

Work on live stock includes mainly the feeding, care and handling of stock, its protection from insects and diseases, and the production of suitable market and breeding types. A limited amount of work has also been done on the production of new strains of animals.

Research and study of processed products such as milk, butter, cheese and meat, and of fruits and vegetables is a most active item in the scientific work of the Department. Storage of agricultural products creates many problems that call for constant study.

Chemical and biological research and experimentation is mainly of an applied nature. That is, the Department does not specialize in so-called fundamental research involving the discovery of basic scientific phenomena and laws, but concentrates mainly on the adoption of known processes and the application of such processes to specific aims. At the same time, some discoveries bordering on fundamental research are occasionally made, and it is also found necessary to extend to some degree into the basic field where certain information is lacking in applied science.

Agricultural research, particularly in plant science, must be decentralized to a great extent for most problems must be studied where they occur. Apart from the value to farmers of having a local source of information, the experimental farms and science laboratories are widely distributed because the work can be done in no other way. In addition to the headquarters of the Experimental Farms Service at Ottawa, work is carried on at 28 branch experimental farms and 20 substations. Experimental work of local application is done at 162 illustration stations, 54 district substations and 11 fox and mink illustration stations. The work of the Science Service, centralized at Ottawa, is also augmented by about 100 laboratories throughout the country.

In the field of economic research, studies in farm management, land utilization, marketing and farm-family living are undertaken in all parts of the country. The scope of the scientific and experimental work of the Department is revealed when it is realized that there is no plant or animal in Canada that is not susceptible to damage by disease caused by bacteria, fungi or viruses, or subject to attacks by insects or, in the case of animals, by internal parasites. That the work of the agricultural scientist is never done is illustrated by the appearance of a new stem rust of wheat (Race 15B) which attacks varieties previously found to be rust-resistant. The only answer to this menace is the development of a new resistant strain necessitating an intensive breeding program. The answers to many such problems are found only after years of continuous study and investigation.

Subsection 3.—Protection and Grading

Unlike manufactured articles, even close scrutiny of most agricultural products is no clue to their purity as food, or their value to the farmer for further production. Obviously, products that are eventually used as food must be pure and healthful and must come up to standards of quality established for them. On the other hand, if agriculture is to be conducted on a sound basis, the supplies farmers buy—seeds, feeds, fertilizers and pesticides—must also carry some guarantee that they will be as represented. Much of the research and experimental work would go for naught if legislation were not provided to see that the end-product of such work was satisfactory. In addition, Canada's live stock, crops and trees must be protected from diseases that might be introduced with importations from other countries, or that might originate in Canada.

These protective and grading services are a most important part of the work of the Department of Agriculture. They come under two sections, the Production Service and the Marketing Service, and the necessary authority is gained from about 20 Acts or their regulations. Generally, the protective features and the grading to standards or approval of analyses of farm supplies come under the Production Service. The grading of most food products is the responsibility of the Marketing Service.

Health of Animals.—The protection of the health of Canada's live stock is a most important service. To guard against the introduction of contagious diseases from foreign lands stringent regulations are enforced by the Health of Animals Division covering the importation of live stock, live-stock products and even packing material and litter. Provision is also made for the control or eradication of animal diseases developing within Canada. The Division is responsible for the inspection of animals slaughtered for food, and post-mortem examination is made on all carcasses in the course of slaughter and dressing before the meat is approved for human consumption. Sanitary conditions in packing plants and slaughter houses come under review and all canned meats must meet high standards of processing to qualify as food.

Protection of Supplies.—The Plant Products Division, in co-operation with the provinces and other agencies, is primarily concerned with the administration of Acts respecting feeding stuffs, fertilizers, pesticides, hay and straw, fibre flax and binder twine, and the production of seed. The inspection services of the Division have three main functions: (1) to enforce the Acts that regulate the sale of the agricultural supplies; (2) to provide, as required, such services as seed-crop inspection

and the sealing of seed produced from inspected and other approved crops; (3) to co-operate with provincial governments and other agencies in promoting and improving supplies of seeds, feeds, fertilizers and pesticides.

Visual inspection is of little value for most of these products and laboratory testing is necessary; the laboratory services of the Division maintain branch offices across Canada. In the case of seeds it is a complex matter, for they must be tested for germination, variety, purity and freedom from weeds and other kinds of seeds before they are graded. All feeding stuffs, fertilizers and pesticides are subject to registration, and this is refused if the use of products would be dangerous, if the ingredients or analyses are unsatisfactory, or if the claims made regarding their value are incorrect or misleading.

Plant Protection.—The Division of Plant Protection functions with regard to plants and plant products much as the Health of Animals Division does with animals, and administers the Destructive Insect and Pest Act. Imported nursery stock and plant material are all subject to inspection as protection against the introduction of insects and diseases. Extensive inspection is maintained within Canada to identify, localize and exterminate dangerous enemies of crops and trees. Provision is also made for the inspection of potato crops to be used for seed, both for the domestic and the export market, and for the issuance of health certificates required for a wide range of plant products.

Standards and Inspection.—For 50 years or more, the Department has been steadily establishing and improving standards of quality for agricultural products. This work originated in an effort to improve the quality of export commodities and has gradually extended to include many products that move in interprovincial trade. The provinces have in most cases adopted these standards for enforcement within their respective areas on products marketed intraprovincially.

Grade standards are established and enforced for dairy products, meats, eggs and poultry, fruits and vegetables (canned and processed, and seed). Grade standards are widely recognized outside Canada and many Canadian foods and agricultural products command premium prices because of the strict quality standards maintained.

Dairy Products.—The grading and inspection services of the Dairy Products Division are somewhat typical of those of other sections of the Marketing Service. Cheddar cheese, creamery butter and dry skimmed milk must be graded before being exported; in practice this means practically all the cheddar cheese, 60 p.c. of the creamery butter and 82 p.c. of the dry skimmed milk. In addition, creamery print butter is branded as to grade in nine provinces. Dairy products are required to meet standards of composition, to be of correct weight or volume and be described accurately in accordance with the provisions of the Dairy Industry Act and regulations thereunder. In the case of condensed, evaporated and dried-milk products, technical assistance is given on manufacturing and sanitation problems.

Meats.—In addition to the approval of carcasses for human consumption, inspection and grading of meats is of importance. All hogs marketed at stockyards and plants are rail graded, that is, the farmer is paid on the dressed weight and quality of the carcass. Export bacon is inspected as well as other export meat and meat products. The better grades of beef are marked according to standards of

Choice and Good beef, making them eligible for marketing as Red and Blue brands, respectively. Lamb carcasses are graded on an optional basis, and wool is inspected and graded in some 28 registered wool warehouses.

Eggs and Poultry.—Registered egg-grading stations are the basic units in the grading and packing of eggs; registered poultry-processing and eviscerating stations are the basic units in the processing, eviscerating, grading and packing of poultry; and registered egg-breaking stations are the basic units in the processing, grading and packing of frozen egg products. These stations have been brought to a high standard of efficiency with regard to sanitation, equipment, temperature control, grading and packaging.

Inspection of eggs, poultry and frozen egg products is compulsory on all sizable quantities intended for export. Inspection is compulsory for interprovincial shipments of poultry of 10,000 lb. or over. These products are also check-inspected periodically for grade when offered for wholesale and retail sale. The sale of eggs by grade, at retail, is compulsory throughout Canada, and the sale of poultry by grade, at retail, is compulsory in many of the larger consuming centres.

Canned boneless poultry for interprovincial and export shipment must be packed according to grade and prepared in registered canneries. Registered poultry canneries also operate on a high standard of efficiency with respect to sanitation, temperature control, cooking procedure, packaging, etc.

Fruits and Vegetables.—A commercial inspection service covering fresh fruits and vegetables is provided and dealers and brokers handling these commodities in interprovincial, export and import trade are licensed and are subject to established regulations.

The fruit and vegetable canning and processing industry has made great strides in the past quarter-century. In 1952, the 526 plants licensed to operate produced processed fruits and vegetables valued at $200,779,150. The inspection of these plants, the testing of the products and the grading is done by the Canning Section of the Fruit and Vegetable Division.

Maple Products and Honey.—Regulations are established for the inspection, analysis and grading of these products. Maple-products manufacturers and sugar-bush owners, operating interprovincially or for export, are licensed. To prevent the possibility of adulteration of maple syrup and sugar, inspection is made of manufacturing plants, stores and restaurants. Interprovincial and export shippers of honey are registered.

Subsection 4.—Canada's Relationship with FAO

The Food and Agriculture Organization of the United Nations (FAO) was conceived at a special United Nations Conference at Hot Springs, Virginia, in May-June 1943 and brought into being at Quebec in October 1945. Its objectives include the raising of levels of nutrition and standards of living of the peoples of all countries, improvement in the efficiency of production and distribution of farm, forest and fisheries products, and the betterment of the conditions of rural populations. Membership in the Organization expanded from 42 member nations in 1945 to 68 by the end of 1952. Headquarters of the Organization is at Rome, Italy.

FAO is governed by a Conference in which each member nation has one vote. The Conference meets every second year and between sessions a Council acts for the Conference. The Council has 18 members, elected for a period of two years.

The work is directed by a Director-General who, with the Chairman of the Council, is elected by the Conference for a two-year term of office. Under the Director-General are the General Secretariat, Special Assistants and the Area Liaison Service which includes the regional offices for North America, Latin America, Asia and the Far East, and the Near East and European areas. The Organization is divided into five technical Divisions: agriculture, economics, fisheries, forestry and nutrition.

FAO carries out four major types of activity. (1) It serves as a world extension or advisory service mobilizing modern scientific knowledge for increased production, improved handling and processing, and better distribution of food and other farm, forest and fisheries products. Much of the work is concerned with the economic development of under-developed areas. (2) It serves as a forum for bringing governments together for organizing international action. (3) It provides all governments, to the limits of its facilities, with facts and figures relating to food, agriculture, forestry, fisheries and nutrition. (4) It endeavours to appraise the outlook for production and consumption and the likely developments of international trade in food and agricultural commodities.

In the field of economic development, experts, scientists and investigating missions are supplied at the request of member countries to work in the country concerned on problems that are hindering its development. Through this program of technical assistance, FAO, by December 1952, had signed agreements with 52 countries to provide technical assistance and had recruited 890 experts, including those who had completed their assignments; 109 agreements were still being negotiated and 142 instructors were involved in training centres. The experts, who were drawn from 40 countries, were active in 53 countries and FAO was concerned in 27 co-operative projects with other international agencies. Under the Fellowship program, 367 fellowships were being arranged at the end of 1952, 42 had completed courses and 97 were enrolled.

Canada, as an important producer in agriculture, forestry and fisheries, has maintained a strong interest in the development of FAO. A Canadian was a member of the original Executive Committee and continued to sit on the Council and the Advisory Committee which supervise the work of the Organization between biennial Conferences. A number of Canadians are included in FAO's Headquarters staff and, under the Expanded Technical Assistance Program during 1952-53, Canadian specialists served in Afghanistan, Ceylon, Chile, Egypt, Ethiopia, Finland, Haiti, India, Iraq, Korea, Malaya and Pakistan. Canadian universities, federal and provincial government departments, and commercial organizations have assisted in FAO's Expanded Technical Assistance Program by training a number of scholars and Fellows during 1952-53. It is expected that Canadian participation in the Program will be increased during 1954-55.

Section 2.—Provincial Governments in Relation to Agriculture*

Subsection 1.—Agricultural Services

Newfoundland.—Government agricultural services in Newfoundland are operated by the Agricultural Division of the Department of Mines and Resources.

The Division maintains an extension service and encourages agricultural development by the payment of bonuses on the purchase of pure-bred sires and for the clearing of land; by assistance with agricultural exhibitions and the payment

*Information supplied by the agricultural authorities of the various provinces.

of a subsidy on agricultural limestone. Each year several scholarships are awarded young men enabling them to take a two-year degree course in agriculture. Government policy relating to the clearing of land for agricultural purposes, with government-owned tractors, is administered by the Land Development Division of the Department of Mines and Resources.

Prince Edward Island.—The Department of Agriculture is presided over by a Minister assisted by a Deputy Minister, a Dairy Inspector, a Pathologist, a Veterinarian and five subsidized Assistant Veterinarians, a Soil Assistant, a Poultry Director, three Field Representatives, a Supervisor and Assistant Supervisor of Women's Institutes.

Nova Scotia.—The Nova Scotia Advisory Committee on Agricultural Services was established a few years ago to further the effective prosecution, within the Province, of agricultural policies and projects of the Federal and the Provincial Departments of Agriculture.

The main purpose and function of the Committee, which meets quarterly, is to determine ways and means by which the purposes of both Departments of Agriculture can best be served, and how the work of those Departments may be co-ordinated and directed through integrated agricultural policies and with a minimum duplication of services.

Every effort is made by the Department of Agriculture and Marketing to "help the people to help themselves". This is being done through strengthening member-interest in such organizations as the Nova Scotia Farmers' Association, Nova Scotia Fruit Growers' Association, through various agricultural co-operative organizations, through credit unions and through several producer-organizations.

New Brunswick.—Provincial Government policy concerning agriculture in New Brunswick is directed by the Department of Agriculture. This Department has as its head the Minister of Agriculture who is assisted by a Deputy Minister and the Directors of the following services: extension, live stock, dairy, veterinary, poultry, horticulture, field husbandry, soils and crops, plant protection and promotion, agricultural engineering, home economics, Credit Union Co-operative Association, agricultural education, apiculture, and agricultural societies.

Quebec.—The Department of Agriculture of Quebec comprises eleven services: rural education, rural economy, extension, animal husbandry, horticulture, field husbandry, information and research, home economics, animal health, rural engineering and the secretariat. Each service is divided into sections dealing with particular problems.

The Department also includes many other special organizations such as the Research Council, the Dairy Industry Commission, the Dairy School of St. Hyacinthe, the Provincial Extension Farm (Deschambault), the Fur Bearing Animals Extension Farm (St. Louis de Courville). The Farm Credit Bureau, the Quebec Sugar Refinery (St. Hilaire) and the Veterinary College (St. Hyacinthe) are also under the authority of the Minister of Agriculture, and the Office of Rural Electrification is connected with the Provincial Executive Council.

The annual competition for the Agricultural Merit Order, organized in 1890, is held alternately in each of five regions. Each contest lasts five years and covers the different farm productions; the main objective is an economical increase in crop and cattle yields. County Farm Improvement Contests have been conducted

for more than twenty years and are still very popular. Over 6,000 competitors have benefited from these contests which promote better methods of culture designed to increase farm income.

Soil-improvement policies include large drainage projects carried out by the Department and smaller projects carried out by groups of farmers with government help. In the past five years, 500,000 acres of land have been improved or reclaimed and 400,000 acres of underground drainage have been completed.

Various forms of assistance are offered towards improvement of crops and live stock. An artificial insemination station operates at St. Hyacinthe for the benefit of 31 breeders' clubs, and plant-breeding stations for cereal and forage crops, vegetables and small fruits are maintained in a number of localities. Trained specialists are employed in the work of controlling plant and animal pests and diseases; the main laboratories are situated at Quebec and field laboratories are located in different districts or in schools.

Agricultural co-operation is widespread in Quebec. There are 600 co-operatives with 69,000 members and 90 agricultural societies with 28,000 members look after local interests and organize county exhibitions. There are also 850 Cercles de Fermières (Women's Institutes) in operation with a membership of 48,000; 500 farmers' clubs with a membership of 24,000, and 140 junior farmer clubs where 3,400 young boys and girls are working on numerous practical agricultural projects.

The Farm Credit Bureau was established in 1936. During its 17 years of operations, the Bureau has placed at the disposal of 36,000 farmers of Quebec a sum of $96,000,000 and has established 13,000 young men on farms.

Ontario.—The Ontario Department of Agriculture provides financial assistance and administrative services to agriculture through its Head Office, 11 branches, three Experimental Farms, and through research and extension work carried on at the four educational institutions under its administration. In addition to general administration, the Head Office administers the policies providing assistance to farmers and settlers in northern Ontario in connection with land breaking and clearing, and with improving farms and live stock. (1) The Live Stock Branch promotes live-stock improvement policies, licences and examines stallions and gives support to pure-bred live-stock associations; (2) the Crops, Seeds and Weeds Branch assists in the development of good cultural practices and promotes the use of improved strains of seed, the improvement of pastures, and the eradication of weeds; (3) the Dairy Branch provides an inspection, instruction and supervision service to all dairy factories and promotes the production of clean milk on farms; (4) the Farm Economics Branch conducts cost studies on agricultural production in co-operation with agricultural organizations; (5) the Fruit Branch enforces fruit and vegetable regulations, provides information to growers, and administers the Co-operative Marketing Loans Act; (6) the Co-operation and Markets Branch administers the Farm Products Control Act, the Credit Unions Act, the Ontario Food Terminal Act and the Farm Products Containers Act; (7) the Milk Control Board, under the Milk Control Act, regulates and supervises the marketing of fluid milk; (8) the Agricultural and Horticultural Societies Branch gives assistance to agricultural and horticultural fairs and exhibitions, plowing matches and other competitions, and administers the Community Centres Act; (9) the Agricultural Representatives Branch carries on an educational and extension service through agricultural representatives located in all counties and districts and gives direction to club work

carried on among farm youth; (10) the Women's Institute Branch and Home Economics Service gives leadership and direction to organized activities of rural women; (11) the Statistics and Publications Branch, in co-operation with the Dominion Bureau of Statistics, provides a crop-reporting service and gathers and disseminates data on crops, live stock and dairy products. The Horticultural Experiment Station at Vineland, the Western Ontario Experimental Farm and Agricultural School at Ridgetown, the Demonstration Farm at New Liskeard, the Kemptville Agricultural School, the Ontario Agricultural College and the Ontario Veterinary College at Guelph, all under the administration of the Department, provide research and extension services to Ontario agriculture.

Manitoba.—The Department of Agriculture of Manitoba serves through the following branches: agricultural extension; live stock; dairy; agricultural publications and statistics; weeds administration; co-operative services; and the provincial veterinary laboratory.

The Extension Service deals with agronomy, horticulture, poultry, agricultural engineering, beekeeping, 4-H Clubs and women's work, and has specialists devoting their attention to these subjects. Meetings, field days and short courses are held. There are 31 agricultural representatives located throughout the Province, each representative serving from one to five municipalities. Six home economists serve designated areas.

The Live Stock Branch administers the Animal Husbandry Act, develops and administers policies that encourage the improvement and production of live stock, and works in close co-operation with the Veterinary Laboratory Service and the Federal Health of Animals Division in the control of live-stock diseases.

The Dairy Branch administers the Dairy Act, supervises the grading of cream, inspects creameries and cheese factories, gives instruction in cheese- and butter-making, issues licences to makers of dairy products and to cream graders and conducts a dairy-cost study among milk producers. Extension activities include addressing meetings and preparing articles and leaflets on dairy-farm problems.

The Agricultural Publications and Statistics Branch publishes and distributes, annually, approximately 100,000 bulletins, circulars, posters, leaflets, etc.

The Weeds Administration Branch directs the activities of 18 municipal weed-control units comprising 70 rural municipalities engaged in eradicating deep-rooted, persistent perennial weeds; supervises weed demonstrations; investigates weed problems; conducts weed surveys; and prepares weed literature, radio addresses, articles, pictures, mounted weed specimens, etc.

The Co-operative Services Branch takes care of the registration and supervision of co-operatives and credit unions and the administration of the Acts governing them. The Branch also collects and compiles statistics on co-operative activity throughout the Province. The Director is Secretary of the Co-operative Promotion Board.

The Veterinary Laboratory operates a diagnostic laboratory for animal diseases, the services of which are available to veterinarians and live-stock owners.

Saskatchewan.—The Saskatchewan Department of Agriculture is organized as follows. (1) The Administration Branch includes the Accounting Division handling staff records, accounts and vouchers and mail assembly; the Agricultural Records Division, handling records particularly of Agricultural and Horticultural Societies;

the Statistics Division, which, in co-operation with the Dominion Bureau of Statistics, collects data on crop conditions, production, marketings and income; and the Radio and Information Division which broadcasts farm information daily over seven private stations. (2) The Agricultural Representative Service has a field staff of 37 agricultural representatives, four area supervisors and specialists in farm mechanics and visual aids. The Farm Labour Division co-ordinates farm labour requirements and services with federal agencies. The Service provides an extension field staff for all Branches of the Department as well as for the other agencies operating within the Co-operative Agricultural Extension Program. Agricultural representatives are active in all federal, provincial and university farm services. In farm labour matters, co-operation is maintained with the Federal Department of Labour and the National Employment Service in directing annual movements of farm labour in and out of the Province. Agricultural representatives work through Agricultural Conservation and Improvement Committees in each rural municipality and local improvement district to supply the farmer with the scientific and practical information necessary for improvement in agriculture. Agricultural committees are instrumental in studying local farm problems and in initiating agricultural improvement programs. These programs are encouraged through an Earned Assistance Program under which the Department pays one-half the costs of local group development projects. (3) The Animal Industry Branch includes four divisions. The Dairy Division administers dairy herd improvement programs and assists producers with management and production problems; inspects and licenses dairy manufacturing and frozen-food locker plants; and administers dairy, locker-plant and margarine legislation. The Livestock Division encourages the use of suitable animals for breeding purposes by the establishment of pure-bred sire areas and by assistance in the purchase and distribution of stallions, bulls, boars and rams. It registers brands, licenses live-stock dealers and agents and promotes programs on insect control, feeding and management. The Poultry Division maintains flock-testing and turkey-grading services; administers an approved hatchery policy, licenses produce dealers and poultry buyers, hatcheries and hatchery agents. It also assists with poultry shows and field days and otherwise promotes flock improvement. The Veterinary Division assists students in veterinary science under a scholarship plan, administers disease-testing and vaccination programs and co-operates with Federal Government officials and local veterinarians in disease prevention and control. (4) The Conservation and Development Branch is responsible for the engineering, farming and land-development activities of the Department, including irrigation and drainage programs conducted in co-operation with the Federal Government and irrigation on departmental and privately owned projects. Reclamation of land by drainage, development of misused land and under-utilized land, and construction of provincial community pastures all come within its jurisdiction. The Branch administers the Farm Implement Act and provides engineering service for conservation and water-control projects. (5) The Lands Branch classifies all land administered by the Department of Agriculture according to the use for which it is best suited; disposes of such land under long-term leases or by inclusion in land-utilization projects; collects rentals for land under disposition; clears and breaks plots made available for settlement; and operates community pastures. (6) The Plant Industry Branch organizes and administers programs for

crop improvement and crop protection, and advises on seed and crop improvement, soil conservation, horticultural problems, weed control and management of irrigated land. The improvement of grassland is promoted through a forage crop program. The Seed Plant Division carries on custom cleaning of forage seeds and registered cereals. The Apiary Division advises on beekeeping and honey production, carries on continuous inspection for American foul brood and supervises grading.

Alberta.—The Alberta Department of Agriculture is organized as follows. (1) The Field Crops Branch deals with all matters that pertain to the utilization of soil and the production of crops. A Commissioner of Field Crops and four Supervisors administer programs and policies relating to crop improvement, soil conservation and weed control, crop protection and pest control, and horticulture. Agricultural Service Boards of municipalities carry out programs and administer regulations for which the municipality is made responsible by provincial legislation; the Department is represented on each Board. (2) The Live Stock Branch aids in maintaining the quality of herds and flocks by assisting farmers in securing pure-bred herd sires and by maintaining an artificial insemination laboratory. The work of the Branch includes the supervision of live-stock feeder associations and the administration of legislation relating to stock inspection, brands, domestic animals and the sale of horned cattle. (3) The Dairy Branch administers the Dairymen's Act and the Frozen Food Locker Act. Grading and purchasing of raw produce by all dairy plants are under regulation, as well as standards of construction, manufacture, processing, sanitation and temperature control for dairies and frozen-food lockers. A regular cow-testing service is available to dairy producers and the Branch laboratory provides facilities for chemical and bacteriological analyses needed for industrial directives. Yearly cost studies and dairy-farm management services are operating in the principal milk-producing areas. (4) The Poultry Branch carries on programs for the improvement of poultry husbandry, supervises flock approval for the control of pullorum disease, maintains a practical poultry-breeding plant for the distribution of breeding stock and issues all hatchery, wholesale, first receiver and truck licences for the handling of poultry products. (5) The Veterinary Services Branch provides the scientific diagnosis of live-stock and poultry diseases through its laboratory; conducts investigations of disease conditions; gives lectures in veterinary science at the University of Alberta, Schools of Agriculture, and a large number of meetings; and actively promotes government policies aimed at reducing disease losses throughout the Province. (6) The Apiculture Branch administers the Bee Diseases Act which requires the registration of all beekeepers and the maintenance of an inspection service; it also administers the regulations on honey grading. The Branch carries on a considerable amount of general educational work. (7) The Agricultural Extension Service operates 40 offices and employs the services of 45 district agriculturists and 14 district home economists. The district agriculturists work with farmers, assisting them with their problems and with departmental policies designed to improve the standard of agricultural practices; the district home economists provide a similar service for farm women. Bulletins are prepared dealing with agricultural and home economics topics and weekly farm notes are prepared for distribution to the press. The Branch is responsible for the supervision of agricultural societies and, in co-operation with the Federal Department of Labour, is concerned with recruitment and placement of farm labour. (8) The Fur Farm Branch administers the licensing and exporting of live animals and pelts, assists fur farmers with problems pertaining to care and management and stock improvement,

and operates a vaccine distemper assistance plan to control disease. (9) Schools of agriculture and home economics are operated at Olds, Vermilion and Fairview. Practical two-year courses in agriculture and home economics are offered to young men who intend to farm and to young women who plan to become homemakers. During the summer the schools are used for short courses and gatherings of farm people. A comprehensive 4-H Club program, designed to train boys and girls in the essentials of citizenship and practical agriculture and homemaking, is conducted; in 1952, the program embraced 13 projects. (10) A Radio and Information Branch, established on Apr. 1, 1953, provides a radio program consisting of five broadcasts a week over six Alberta stations.

British Columbia.—The Department of Agriculture has four main divisions. (1) The Administrative Division is responsible for the general direction of agricultural policies, administration of legislation affecting agriculture, supervision of extension programs, collection of agricultural statistics, compilation of reports and publications, preparation of material for agricultural exhibitions, supervision of farmers' and women's institutes, as well as the carrying out of soil surveys in various sections of the Province. (2) The Animal Industry Division consists of general live-stock, veterinary, dairy and poultry branches and supervises the promotion and improvement of animal production, fur farms, brand inspection, inspection of beef grading, control of contagious diseases of animals, eradication of insect pests detrimental to live stock, and field extension connected with animal nutritional work. (3) The Plant Industry Division includes horticulture, field-crop, plant pathology, entomology and apiculture branches and supervises fruit, vegetable and seed production and surveys dealing with orchards, small fruits, flowering bulbs and greenhouse areas; also the suppression of insect pests, plant disease inspection with control of noxious weeds and general promotion of crop production. In addition there are field officials in 12 of the principal fruit and vegetable producing areas who undertake extension work on behalf of field crop, fruit and vegetable producers. (4) The Agricultural Development and Extension Division includes field-extension work through the district agriculturist service, clearing agricultural lands for production, agricultural engineering, farm labour supply, and junior club projects. Extension Division officials of the Department are located in 32 agricultural centres throughout the Province.

Subsection 2.—Agricultural Colleges and Schools

All provinces, with the exception of Newfoundland, provide facilities for training in agricultural science at university level. Such colleges are administered by either the Department of Agriculture or the Department of Education of the respective provinces.

Prince Edward Island.—The two-year course in scientific agriculture offered at Prince of Wales College is designed for students preparing to enter third year at Macdonald College, Que. The course is started every second year.

In the Vocational School, the one-year course offered in agriculture is planned to provide not only knowledge and skill but to develop in the student a sense of the dignity and importance of agriculture as a calling and an understanding of the importance of the industry to the Province.

Nova Scotia.—Nova Scotia Agricultural College at Truro offers three courses: the first two years of a course leading to the degree of Bachelor of Science in Agriculture; a two-year course in general agriculture; and a two-year course in vocational agriculture. In addition, the College assists in conducting short courses at various provincial centres, supports Folk Schools and gives leadership and direction to the 4-H Club organization.

New Brunswick.—The Province's four Agricultural Schools are located at Woodstock, Fredericton, St. Joseph and Edmundston. Two-year agricultural courses extending over five months each year are offered at St. Joseph, Fredericton and Edmundston while at Woodstock a three-year course is conducted. The curriculum includes training in all phases of agriculture, shop and general academic work. Ten-month home economics courses are offered at Woodstock and St. Joseph in conjunction with the agricultural courses.

Quebec.—Courses in agricultural schools in the Province include a four-year university course leading to a degree of Bachelor of Science in Agriculture at the following universities: Laval Faculty of Agriculture (Ste. Anne de la Pocatière); L'Institut Agricole d'Oka (affiliated with the University of Montreal); and McGill Faculty of Agriculture (Macdonald College). At the Provincial Veterinary School (St. Hyacinthe), affiliated with the University of Montreal, a four-year course is offered leading to a Doctorate degree in veterinary medicine. There are also nine secondary agricultural schools throughout the Province; 10 regional schools and six orphanages offering courses in agriculture. More than 1,200 students, the great majority of whom are sons of farmers, attend these intermediate and regional schools of agriculture, and in the orphanages 160 pupils follow practical agricultural courses. In each case, a farm is annexed to the school for practical training and specialists give instruction on the maple-sugar industry, farm mechanics, co-operatives, plant protection, veterinary hygiene, aviculture, marketing and sylviculture. School co-operatives and clubs are organized and directed by the pupils, under the supervision of their professors. Household science training for the daughters of farmers and settlers is given in five of these schools. The courses extend over the four summer months of two consecutive years.

Ontario.—The two-year course of the Ontario Agricultural College for the Associate Diploma in Agriculture is planned to provide basic training of personnel in agriculture. Young persons interested in making agriculture their vocation study the application of science to agricultural practice and also receive training for rural citizenship.

The four-year course for the degree of Bachelor of Science in Agriculture is designed for fundamental education in the science of agriculture. A sound training is provided for farming as a profession, for entrance into government extension and allied agricultural services, agricultural industry, teaching, and for those who wish to proceed to graduate studies for the Master's and Doctorate degrees.

Graduate courses are also offered leading to the degree of Master of Science in Agriculture. Graduate students are enrolled in a department or departments of the Ontario Agricultural College conjointly with a department or departments of the University of Toronto for advanced courses of study and training in experimentation and scientific investigation. M.S.A. graduates may go into teaching, research, or for further post-graduate study for a Doctorate degree.

The Ontario Veterinary College offers a course leading to the degree of Doctor of Veterinary Medicine. The course is five years in length with two four-month periods of regulated summer internship. In addition to its function as a teaching institution, the College is a centre for research into the diseases of animals and provides free consultation for veterinary surgeons in practice as well as extension services in the interests of the live-stock industry.

The Kemptville Agricultural School offers diploma courses in the following subjects:—

(1) A two-year diploma course in agriculture (two terms of six months each) giving practical training in modern farm methods designed primarily for young people who wish to farm but serving also as a preparation for many other occupations closely connected with agriculture. Stress is laid on the development of community leadership. A 300-acre school farm and residence life are features of the Kemptville Agricultural School. (2) A one-year diploma course (six-month session) leading to a diploma in homemaking and qualification for the less exacting positions in fields of home economics. (3) A two-year diploma course (two terms of six months each) for girls wishing to prepare for positions in the tourist trade, food services, sewing centres and other fields of home economics. (4) A three-month winter course for all dairy apprentices leading to the Dairy School Diploma required for certified buttermakers, cheesemakers and operators of dairy manufacturing plants.

Western Ontario Agricultural School offers a practical course intended for young men who propose to return to farming. It consists of two winter courses of 20 weeks each, starting late in October and ending late in March. All subjects relating to agriculture are included in the curriculum.

Manitoba.—The Faculty of Agriculture and Home Economics offers a degree course and a two-year diploma course in agriculture as well as a one-year diploma course in agriculture and homemaking. Classes for young men and for young women are held throughout the autumn and winter months at Brandon. These courses are recognized by the University of Manitoba which, in the case of the girls, awards a diploma for the one-year course and, for the boys, accepts the course at Brandon as the equivalent of the first year of the two-year diploma course.

Saskatchewan.—Saskatchewan offers a degree course in agriculture designed to meet the needs of those who intend to teach agriculture in secondary schools or colleges, to engage in research or administrative work, or to farm. Specialization is possible with permission of the faculty. Provision is made for combined courses in agriculture and arts or commerce. Post-graduate courses are available.

The Saskatchewan School of Agriculture offers a practical course intended to give sound training in farm practice and also to train young men to become rural leaders.

All courses leading to a degree in home economics require four years. The prescribed course of studies for the first two years is the same for all pupils but in the third and fourth years four types are offered: (1) for teachers, (2) for dietitians, (3) general, and (4) additional specializations. A combined course leading to a degree in arts and science and in home economics requires at least five years.

Alberta.—The University of Alberta offers a four-year degree course in agriculture to students with senior matriculation or its equivalent. Students may elect a general program or major in a wide range of special courses in the fields of

animal science, economics, entomology, dairying, plant science, and soils. Graduate work at the Master level is offered in all departments and at the Doctorate level in some.

The Alberta Schools of Agriculture and Home Economics, located at Olds, Vermilion and Fairview, offer practical courses in agriculture and homemaking. The purpose of the schools is to train young men for farming and young women for homemaking.

The regular course in agriculture and in home economics requires two terms, each extending from late October to early April. A special two-in-one course of one term is offered to students who have completed 70 high-school credits. These schools accept students who have reached 16 years of age. There are no academic requirements for regular students, although Grade VIII is desirable, and no tuition fees for residents of Alberta. Living accommodation is provided in modern dormitories with dining-room, auditorium and gymnasium facilities.

During the summer months the schools are used for agricultural meetings and conferences of organizations that are connected with agriculture. During the month of July, leadership courses, 4-H Club gatherings, farm camps and other events keep the facilities in constant operation.

British Columbia.—The Faculty of Agriculture at the University of British Columbia offers a four-year general degree course in agriculture and a five-year honours course. In the honours course there are 15 different fields in which a student may specialize. Work is also offered by the Faculty of Agriculture in the Faculty of Graduate Studies through which a student may proceed to the degrees of Master of Science in Agriculture and Master of Science; in a limited number of fields, work is offered at the Doctorate level. The Faculty also offers a one-year or two-year diploma course in occupational agriculture, adaptable to the needs of individual students.

In co-operation with various branches of the provincial Department of Agriculture and under the auspices of the University Extension Department, the Faculty of Agriculture also offers a number of short courses which vary in length from one or two days to several weeks.

Section 3.—Agricultural Irrigation and Land Conservation

Subsection 1.—Federal Projects*

PRAIRIE FARM REHABILITATION ACT

The Prairie Farm Rehabilitation Act is a rehabilitation program conceived by Parliament in 1935 to meet the problems of drought and soil drifting adversely affecting agriculture on the Canadian prairies.

Existing agencies of the Government of Canada were assisted, with P.F.R.A. funds, to expand their activities in providing leadership in the immediate drought problems. In particular, cultural investigations were carried out by the Experimental Farms Service to ensure the most economic use of the limited supply of soil moisture for crop production and the prevention of soil drifting farm lands that were a menace to surrounding good land. A program of water conservation to meet

* Prepared under the direction of Dr. J. G. Taggart, C.B.E., Deputy Minister of Agriculture, by G. J. Matte, Associate Director of Rehabilitation.

immediate needs was also initiated in 1935. Other services, such as the Economics Division, were assisted where special knowledge was required for rehabilitation measures.

The major activities of the P.F.R.A. Administration, with headquarters at Regina, Sask., include the construction, for the Government of Canada, of all projects concerned with water conservation and land utilization in the Prairie Provinces. The five principal phases of investigational study in the field of engineering include surveys (exploration), soil mechanics, drainage, hydrology and design. These studies are undertaken by P.F.R.A. to gather the fundamental groundwork of technical and other basic information that is required before construction of any project is undertaken. Considerable work in each of these fields of study was undertaken during the year ended Mar. 31, 1952, together with co-operative studies using the services of existing government departments.

Water Conservation

Small and Community Projects.—P.F.R.A. provides engineering and financial assistance to farmers in the construction of water conservation works within drought areas of the three Prairie Provinces as a rehabilitation measure. The amount of financial assistance awarded is largely dependent upon the type and size of the project contemplated. At all times P.F.R.A. policy, with respect to assistance provided, is to assist farmers to rehabilitate themselves. Authority to proceed with construction is first secured through the respective provincial water rights departments. Water conservation projects in this category are classified either as "individual farm projects" or as "community projects" undertaken by a group of farmers.

Individual Farm Projects.—During 18 years of operation, P.F.R.A. has provided assistance to farmers to construct 48,324 individual farm projects in the form of dugouts and small dams, many of which are suitable for irrigation. The objective is to provide adequate water-storage facilities where water shortages exist, and to assure dependable water supplies through irrigation for domestic requirements, for stock-watering and for the production of live-stock feed.

The construction of these projects has extended the benefits of water to all parts of the dry area. By so doing, a much larger number of farmers have been rehabilitated than would have been possible through the construction of large schemes on well-defined watersheds, and without the movement of settlers from their present holdings. The maintenance of valuable live-stock herds has been secured by assuring dependable water supplies on farm stock-watering projects and through the development of 90,000 acres of irrigated land on small irrigation schemes.

Community Projects.—The development of community projects is necessarily confined within the narrow reaches of well-defined watersheds where sufficient water resources are available. Where a group of farmers organizes a water-users' association or a rural municipality provides leadership in an irrigation or water-storage project, P.F.R.A. co-operates with the local body. The usual procedure is for the Government of Canada to assume the capital cost of storage and connecting works and the provincial body to assume the responsibility for the distribution of water to the land or along the watershed. The local body also undertakes maintenance and operation.

To Mar. 31, 1953, P.F.R.A. provided the necessary assistance to construct 254 community projects. The majority of these are located on six watersheds originating in the three Prairie Provinces. Their purpose is to conserve surplus spring runoff water that flows in streams early in the season to supplement short supply later in the year. By maintaining stream flows, farmers are assured of dependable water supplies for live stock and for irrigation use. In addition, community projects provide homes for farmers moved from submarginal areas to where they can be assured a livelihood.

P.F.R.A.'s responsibility for the development of large community irrigation schemes terminates with the construction of primary reservoirs and connecting canals. In special cases where the need for early returns to farmers proved imminent, P.F.R.A. has assisted further in the development of the irrigable land and has maintained a constant surveillance of the project's operations and progress. At times, agreement has been reached between P.F.R.A. and the provincial government concerned whereby P.F.R.A. provides engineering and financial assistance to construct primary works and the province agrees to assist with the development of the irrigable area. Such an agreement is in effect in connection with sections of the Swift Current Irrigation Project being developed in Saskatchewan.

Major Irrigation Projects.—During recent years P.F.R.A. has administered special votes by Parliament for the construction of water conservation and development projects that involve large expenditures of money. These undertakings have extended P.F.R.A. administration beyond the boundaries of the P.F.R.A. area in the three Prairie Provinces into British Columbia.

St. Mary Irrigation Project.—The St. Mary Irrigation project has been undertaken by agreement between the Government of Canada and the Province of Alberta. The Government of Canada has agreed to construct the main supply reservoirs and connecting works. The Province of Alberta has undertaken the responsibility for construction of the auxiliary reservoirs and distribution system from the main works to the land.

The St. Mary River System is by far the most important irrigation project undertaken in Canada and when completed will irrigate an area of approximately 510,000 acres. Construction of the St. Mary Dam, key structure on the whole project, was completed in 1951. It stands 195 feet high and is 2,536 feet wide, and creates a reservoir capable of storing 320,000 acre-feet of water. Approximately 200 miles of main canal have been built and 10,000 acres of land have been developed, together with over 100 miles of the distribution canal system. Further lands will be developed in 1953 and 1954.

South Saskatchewan River Development.—This development in central Saskatchewan is a proposed multipurpose project to be used for developing power and irrigation, the irrigable area lying between the town of Elbow and the city of Saskatoon. The key structure on the project will be a dam on the South Saskatchewan River located at a point midway between the towns of Outlook and Elbow.

The plan is to stabilize agriculture in the south-central area of the Province where prolonged droughts have created serious economic problems for over 50,000 farmers. Full use will be made of the river's control, power, urban water supply and recreational benefits. Considerable investigational work has been undertaken on this project, a full report of which was presented to the Government of Canada in 1951. In view of the large expenditure involved in this proposed development,

a Royal Commission was appointed in 1951 to conduct an inquiry as to whether the economic and social returns to the Canadian people would be commensurate with the cost. The inquiry was completed in 1952 and a report submitted to Parliament.

Bow River Irrigation Project.—The Bow River project was purchased by the Government of Canada in 1950 from the Canada Land and Irrigation Company, a private British interest. Development of this project will ensure water to 57,000 acres of presently irrigated land and will bring an additional 180,000 acres "under the ditch".

Engineering surveys, drainage studies and soil mechanics investigations were started in 1950. Construction activities so far have been mainly the repair and enlargement of old and worn out structures to meet new and increased demands. Twelve thousand acres of new land in the Hays district of the Bow River irrigation project were prepared for settlement in 1951. A complete irrigation distribution system was installed in the area (*see* also p. 396).

Red Deer Irrigation Project.—The proposed Red Deer River development concerns the irrigation of an estimated 400,000 acres of land located in the east-central part of Alberta. The project will consist of a dam on the Red Deer River at Ardley and about 100 miles of main canal to two main reservoirs—Craig Lake and Hamilton Lake. The dam will contain power installations to produce power for pumping and also for sale commercially. An estimated 20,000,000 kwh. of water power will be available for sale when fully developed. Plans for the development of the project are under preparation.

Irrigation Development in British Columbia.—Irrigation development in British Columbia has been undertaken in connection with the Veterans' Land Act and at the request of the British Columbia Government. Three projects, namely, the Chase irrigation project and the Johnstone Western Canada ranching projects No. 1 and No. 2, have been completed within the South Thompson Valley area. On these projects, 809 acres of land have been developed for irrigation for the benefit of approximately 40 veterans of World War II.

In the Okanagan Valley three new projects have been completed, the Westbank irrigation project and the Bankhead project near Kelowna, and the Cawston Benches project located east of the town of Keremeos. The three projects irrigate 1,782 acres of land and provide locations for 170 veterans of World War II. The Penticton West Benches project, to irrigate approximately 200 acres and accommodate 97 veterans on small holdings, will be completed in 1953.

Intensive farming is practised in the Okanagan and South Thompson Valleys. The land developed for irrigation by P.F.R.A. will be used mainly for the growing of small fruits and vegetables and for dairying.

New projects are constantly being investigated as potential development areas. During the year ended Mar. 31, 1952, investigation reports were completed for: Lister Project, Creston; Grandview Flats Project, Vernon; Black Mountain Irrigation Project, Black Mountain Irrigation District; Salmon Arm Irrigation Project, Salmon Arm; Pitt Meadows Dyking District No. 1, Port Coquitlam; and the British Columbia Fruitlands Irrigation Project, between Kamloops and Tranquille.

Major Reclamation Projects.—*Riding Mountain Reclamation Project.*—Extensive investigations have been undertaken by P.F.R.A. in the Riding Mountain area at the request of the Manitoba Government. A serious flood problem exists

on a number of streams flowing off the north and east slopes of Riding Mountain and Duck Mountain, causing damage to a large area of valuable agricultural land. P.F.R.A. was asked to devise and carry out a plan to relieve a land area of over 252,000 acres affected by flooding.

The cost of reclamation in the area is borne jointly by the Government of Canada and the Government of Manitoba. Construction work so far has centred mainly along Edwards and Mink Creeks in the Riding Mountain area. The work consisted of clearing and dyking stream channels and straightening the alignment of channels by building stream cutoffs and diversions. The larger portion of the work on these two streams was completed in 1951.

Stream bank erosion studies are also being continued on streams of Riding Mountain to stabilize stream banks and minimize erosion problems. It will be necessary to continue the studies for a number of years before definite results can be presented.

Saskatchewan River Reclamation Project.—Surveys and investigations were made by P.F.R.A. during the past two years to determine the possibility of successfully reclaiming land for agriculture in the Pasquia area of the Saskatchewan River Delta region near the town of The Pas in Manitoba. The findings were favourable and, as a result, an agreement was reached on Apr. 17, 1953, between the Government of Canada and the Province of Manitoba for the construction of the necessary reclamation works to protect the area from flooding and to settle about 96,000 acres of suitable land. The Government of Canada is assuming the costs of building the main protective works, and the Province is assuming the costs of settlement, maintenance of works, and internal drainage. Half of the reclaimed land will be reserved for the resettlement of farmers from drought areas and the remainder is to be sold. Part of the proceeds from the sale of the lands will go to the Federal Government as a partial reimbursement of the costs of building the main protective works. Construction was started early in 1953; it will take three years to complete the works consisting of dykes, drains and diversion of streams.

Assiniboine River Project.—This project was undertaken as a direct result of damaging floods that occurred in 1950 in the vicinity of Winnipeg from the Assiniboine and Red Rivers. The project is being undertaken at the request of the Manitoba Government to prevent further flooding on the Assiniboine River, particularly between Brandon and Virden and between Portage la Prairie and Headling where thousands of acres of valuable agricultural land have been inundated repeatedly. All the studies undertaken are in conjunction with the Red River Basin investigation currently being carried out.

Several alternative plans are being investigated to divert excess water from the Assiniboine River during flood stages. Detailed study is being given to water runoff data in the Assiniboine River Drainage Basin and the possibility of building water-storage works on the headwaters of the Assiniboine River.

Lillooet Valley Reclamation Project.—The Lillooet Valley Reclamation Project was undertaken upon agreement between the Government of Canada, the Government of British Columbia and the Pemberton Valley Reclamation District. This project is located in the Lillooet River Valley above and below the town of Pemberton and its objective is to protect lands now under cultivation from flooding and to reclaim additional lands by dyking and drainage. The land reclaimed amounts to 14,000 acres, which will allow farmers in the district to increase their holdings and also permit the settlement of hundreds of additional inhabitants.

Construction work to deepen and straighten the channel leading from Lillooet Lake to Green Lake, below the town of Pemberton, was completed in 1949. The construction of dykes and drains to reclaim the flooded areas along Miller Creek to Ryan Creek and Green River to Miller Creek was completed in 1952. No damage from flooding occurred in the protected areas during 1952-53.

Land Utilization

In addition to cultural and water-conservation activities, the rehabilitation of drought areas involves the conversion of large tracts of land proved to be unsuitable for crop production, which had initially been cultivated to a permanent grass cover for live-stock production, and the relocation of farmers residing thereon. To this end, P.F.R.A.'s Land Utilization Program has constructed 59 operating pasture units, resulting in the reclamation of 1,652,020 acres of submarginal land. During the 1951-52 construction season 61,820 additional acres were fenced and included in the pasture system.

During the year ended Mar. 31, 1953, summer grazing was provided for 93,207 head of live stock owned by between 5,500 and 6,000 patrons living on lands adjacent to these pastures.

An extensive pasture improvement program is in effect on all pastures and is immediately initiated as soon as new areas are enclosed. This policy has more than doubled the 1938 average carrying capacity on pasture land. The three improvement policies most extensively practised in all pastures are: (1) regrassing—since 1938 approximately 175,000 acres of land in community pastures have been regrassed; (2) development of stock-watering sites—to Mar. 31, 1953, over 1,000 stock-watering dams, dugouts and wells have been constructed in community pastures; and (3) pasture management and controlled grazing.

PRAIRIE FARM ASSISTANCE ACT

The Prairie Farm Assistance Act, passed in 1939 and administered by the Federal Department of Agriculture, provides for direct money payments by the Federal Government, on an acreage basis, to farmers in areas of low crop yields in the Prairie Provinces and the Peace River District of British Columbia. The Act was designed to assist the municipalities and provinces, in years of crop failure, to meet relief expenditures which would normally be too great to be assumed by them. The Act provides that payments be made to farmers under certain conditions and terms and, in order that the Federal Government's costs may be defrayed to some extent, it is required that 1 p.c. of the purchase price of all grains (wheat, oats, barley and rye) marketed in the Prairie Provinces be paid to the Federal Government and set aside in a special fund for the purposes of the Act.

If the farmer, who may be an owner, a tenant, or a member of a co-operative farm association engaged in farming, is located in a crop-failure area, he may be awarded assistance on not more than one-half of the cultivated land or a maximum of 200 acres. The rates of payment range up to $2.50 per acre.

From the inception of the scheme to Mar. 31, 1953, the total amount paid out under the Act was $143,327,607. The amount collected under the 1-p.c. levy to Feb. 28, 1953, was $69,329,954.

MARITIME MARSHLANDS REHABILITATION ACT

The marshlands of Prince Edward Island, Nova Scotia and New Brunswick are among the more productive soils in Canada when protected and properly cultivated. They are composed of deposits laid down by tidal waters and are, for the most part, adjacent to the Bay of Fundy.

The initial areas were reclaimed as early as 1630 and since that time about 80,000 acres have been protected by dykes and aboiteaux. These structures prevented flooding by tide water and permitted cultivation after drainage had been carried out.

Through a variety of circumstances—loss of cattle markets, loss of hay markets and the increase in labour costs—maintenance of the protective structures was not adequately carried out and, in many cases, deterioration of the structures resulted. Because the marshlands, when protected, can play such an important role in the agricultural economy of the provinces concerned, the Government of Canada and the Provincial Governments of Nova Scotia and New Brunswick passed legislation permitting them to carry on a program of reclamation and rehabilitation of these lands. The federal Act, the Maritime Marshland Rehabilitation Act, was passed in 1948. Complementary provincial marshland reclamation Acts were passed by both Nova Scotia and New Brunswick in 1949. These Acts permitted agreements to be signed whereby the Government of Canada would construct or reconstruct the protective works, normally called dykes, aboiteaux and breakwaters, and also would assume the responsibility of maintaining these works until such time as they could be turned back to the Provinces. The Federal Government is responsible also for any engineering work in connection with the complete program. The Provinces are responsible for the organization of the marsh areas, the freshwater drainage and acquisition of any land required. They are responsible also for the instigation and follow-up of a suitable land-use program. Owing to the small area of marshland in Prince Edward Island, no provincial legislation was considered necessary in that Province.

By Mar. 31, 1953, the Provinces had asked to have 119 areas considered for reclamation purposes. These comprised 32,547·2 acres of marshland in New Brunswick (including 6,892·2 salt or unprotected marsh), 33,333·8 acres in Nova Scotia (including 5,453·2 salt or unprotected marsh) and 275 acres in Prince Edward Island. It is estimated that the 66,156 acres of marshland in the three Provinces constitute an integral part of 375,000 acres of farm land.

By the end of the 1953 construction season, protective works of a major type had been carried out on 59 projects and 35 areas had been temporarily reconstructed.

Investigations to determine the advisability of constructing a large structure to eliminate the need for many miles of dyke and many aboiteaux were being carried out on the Annapolis River in Nova Scotia and on the Tantramar and Shepody Rivers in New Brunswick. Construction on the Shepody River Project will likely be started in 1953.

Subsection 2.—Provincial Projects

Saskatchewan.*—Crown lands have been administered by the Lands Branch of the Saskatchewan Department of Agriculture since Apr. 1, 1947. On Apr. 1, 1949, the Conservation and Development Branch was established and made responsible for: (1) the administration of water rights; (2) development of irrigation;

* Prepared under the direction of W. H. Horner, Deputy Minister of Agriculture, Regina, Sask.

(3) reclamation of land by flood control and drainage; (4) the restoration of abandoned, under-utilized and misused lands; (5) the preparation of unoccupied land for settlement; (6) the construction of provincial community pastures outside the area covered by the agreement with P.F.R.A. and not provided for in the agreement with the Federal Government.

The Provincial Department of Agriculture's conservation and development activity in the field of agricultural rehabilitation and reclamation is based on co-ordination with the Federal P.F.R.A. program, with which a closely knit working arrangement is maintained. The following is a summary of the Saskatchewan Department of Agriculture activities, according to the above division of responsibility, as at Dec. 31, 1952.

Dry Land Fodder Projects.—Development of 41 dry land feed and fodder projects has been undertaken, nine of which have been completed or partially completed and made available for disposition to rural municipalities or co-operative associations. All of these projects have been developed for forage production and are situated on abandoned or under-utilized lands.

The area under development for fodder production totals 44,579 acres of which 20,647 acres are in the nine projects available for disposition. An additional 7,734 acres are in preparation for seeding to forage crops.

Irrigated Forage Projects.—Nine irrigated feed and fodder projects are under development in the area of the Province where there is a winter feed deficiency for live stock. An irrigable area of 15,233 acres is involved in these projects with 1,855 acres producing forage crops.

One irrigable fodder project has 850 acres producing forage and this portion has been made available for disposition to rural municipalities or co-operative associations. Seventeen rural municipalities and co-operative associations have been assisted in developing smaller dry land and irrigated fodder projects as insurance against a feed shortage. A total of 9,680 acres are in these projects with 3,770 acres seeded to forage crops.

Irrigation Development.—Secondary distribution systems on irrigation projects installed since Apr. 1, 1949, for which storage and main canals have been constructed by P.F.R.A. have brought 20,731 acres under the ditch. During the same period 29 water-users' organizations have been established with a total membership of 701 farmers.

Pasture Development.—In the area of the Province outside the P.F.R.A. program the development and improvement of 61 pastures, with a total area of 610,780 acres, has been carried out. These pastures are operated by the Lands Branch of the Department of Agriculture, by the municipality or municipalities in which they are located, or by co-operative associations. In 1952, provincial community pastures provided grazing for 7,370 head of live stock over one year old, with a natural increase in the pastures of 1,811 calves. This live stock was the property of 438 local farmers.

Drainage Development.—Flood control and drainage to reclaim lands is proceeding in 95 projects. The northeastern area bordering on the presently settled area of the Province is receiving particular attention. Lands benefited by drainage works either constructed or in the process of construction total 530,100 acres.

Surveys for drainage and flood works that will benefit 1,169,700 acres are near completion. Channel improvement works to secure more adequate drainage have been constructed in five sub-drainage districts.

Miscellaneous Project Work.—Miscellaneous projects include the regrassing of 10,870 acres and the planting of 331,000 trees. Rural municipalities and local organizations may obtain assistance for tree planting either through the use of government-owned equipment or financially for the purchase of machinery.

Fifty-seven dams and dugouts have been constructed for groups of farmers in the area of northern Saskatchewan outside the P.F.R.A. area of operations.

Nine Conservation and Development Areas, comprising a total of 1,350,260 acres, were established during the period Apr. 1, 1949, to Dec. 31, 1952.

Development of Land for Settlement.—The development and improvement of unoccupied land for agricultural settlement in six new projects has been carried out under the supervision of the Lands Branch during the period Apr. 1, 1950, to Dec. 31, 1952. These projects included the breaking of 50 acres on each of 273 farm units. A total of 12,350 acres were broken and prepared for seeding. Each of these farm units is to be leased for a 33-year term, the leases specifying the conservation methods to be followed.

Alberta.*—Extensive surveys have been carried out in Alberta to determine the distribution and extent of the available water supplies in the Province and their most beneficial use for irrigation, water power and other purposes. Sect. 69 of the Alberta Water Resources Act gives the Minister of the Department of Water Resources wide powers with respect to investigation of the water resources of the Province.

In more recent years much of the work has been carried out by the Federal Government in co-operation with the Provincial Government. Stream measurement is now done by the Hydrometric Service of the Federal Department of Resources and Development, while irrigation surveys are carried out largely by the Water Development Organization under P.F.R.A. The Water Resources Division, Federal Department of Resources and Development, and the power companies operating in the Province also assist in the program.

The Calgary Power Company has completed a fairly extensive and detailed water-power survey of the Bow River and its tributaries and, as a result, the Company has constructed a number of water-power reservoirs and power stations on the stream. Also, in co-operation with the Provincial Government, the Company has made a preliminary survey of Lesser Slave River and the Athabasca River from Athabasca to McMurray.

By Order in Council dated Feb. 17, 1941, the St. Mary and Milk River Water Development Committee was set up to investigate and report on the many phases of irrigation development of southern Alberta including water supplies available to Canada from the Waterton, Belly, St. Mary and Mild Rivers; the most feasible plan to put these waters to the most beneficial use; the benefits that such water-development projects would confer on federal and provincial interests; the allocation of costs; and methods that might be adopted to finance such developments. The Committee completed a very thorough investigation and published a full and comprehensive report, not only on the projects on the international streams, but also on other projects in Alberta.

* Prepared by J. L. Reid, Secretary, Alberta Power Commission, Edmonton, Alta

The allocation of water to the major irrigation projects in Alberta, as approved by the Prairie Provinces Water Board, are as follows:—

Project	*Acres Irrigable*	*Water Allocation in Acre Feet*
St. Mary and Milk River Development	465,000	796,000
Western Irrigation District	50,000	85,700
Eastern Irrigation District	281,000	562,000
Bow River Irrigation Development	240,000	478,534
United Irrigation District	34,000	51,000
Lethbridge Northern District	96,135	150,000
Mountain View Irrigation District	3,600	6,000
Aetna Irrigation District	7,300	13,000
Leavitt Irrigation District	4,400	7,000
Macleod Irrigation District	5,000	8,000
Private Projects	70,000	80,000
TOTALS	1,256,435	2,237,234

The following paragraphs outline developments during 1952-53.

St. Mary River Project.—Progress on this important project for 1952-53 was excellent and contrasted sharply with progress reported in the 1951-52 season when adverse weather greatly retarded the work. In 1952-53, 54,000 acres of new land were put under the ditch and expenditures of the Water Resources Office on the development were about $4,200,000, used for the construction of canals, purchase of material, acquiring rights and colonization. The estimated expenditure for 1953-54 is $3,975,000.

Bow River Project.—During 1952, P.F.R.A. continued work on enlarging the main canal. Total expenditure given by that organization in the 1951-52 report was $6,738,745. This amount has been augmented by 1952 expenditure and will be greatly exceeded in 1953 when the Travers Dam will be built.

The Government of Alberta has made an initial appropriation for 1953-54 of $250,000 for development of the Retlaw-Lomond tract.

William Pearce Irrigation Project.—During 1952, the Water Resources Office submitted a brief to the Royal Commission investigating the merits of the South Saskatchewan Project (in Saskatchewan), pointing out that the William Pearce project provided a more economical method of irrigating those lands in Saskatchewan covered by the South Saskatchewan proposal and in addition will irrigate the large tract near Hanna in Alberta. The Commission recommended that the entire Saskatchewan River problem be reviewed. This recommendation would entail the inclusion of the William Pearce project.

In 1952, further studies were made of the suitability of the soils in those areas blocked out for the William Pearce project.

Macleod Irrigation District.—The Water Resources Office reconstructed part of the distribution system and built a considerable portion of new distribution works. Expenditure on this development for the year ended Mar. 31, 1953, totalled $30,188.

Lake-Level Stabilization.—In co-operation with Ducks Unlimited, three projects were constructed in 1952—at Moore and Tucker Lakes near Bonnyville, and at Grey's Lake near Hemaruka. All of these projects consist of dams in the outlets to lakes with pipes inserted under the dams to permit continuous flow. The Water Resources Office built, for fishing and recreation, two dams for the Department of Lands and Forests—one at Elkwater Lake near Medicine Hat and the Hartell Dam, near Turner Valley. Expenditure on the five dams was about $25,000.

Heart River Project.—During 1952, five 36-inch water-control gates were installed on the combined roadway and control structure at the outlet of Winagami Lake. The question is under consideration of augmenting the domestic water supply for the town of McLennan by means of a canal from Lake Winagami to Kimiwan. Study of the power development from Winagami Lake is being conducted.

Stream Control.—The Highwood River at High River has a definite tendency at high stages of flow to return to its ancient channel down the Little Bow Valley. This would be disastrous as the waters of the Highwood merge with those of the Bow to serve two large irrigation diversions. Moreover, the existence of the town of High River depends on the effectiveness of the control measures. The work of dyking the right bank of the river has gone on for several years but, because of the shifting channel conditions, further dyking will be necessary.

The following projects were built in 1952:—

(1) A new canal and dyke system was built to create increased flow at the point where the Trans-Canada Highway crosses Mackay Creek near Walsh.

(2) Serious flooding in the city of Medicine Hat occurred in the spring of 1952 from overflow of Sevenpersons and Ross Creeks. The work of cleaning out the channels of these streams was started in 1952 and was continued in 1953.

(3) The Oldman River has, for years, been wearing away its bank at the town of Fort Macleod; a new channel was built in 1952 to redirect the flow of the river.

(4) A dyke was constructed along the Bow River to protect a low-lying area in Bowness.

(5) A small river diversion project was built on the Belly River near Standoff to ensure water delivery to two pumping licensees and also to save valuable private property from inundation.

(6) In the spring of 1952, violent flood flow of Michichi Creek eroded the banks of the new channel built in 1951; the most vulnerable stretches of the channel were, therefore, lined with creosoted timber.

The following amounts were expended on provincial government projects during the year ended Mar. 31, 1953:—

Project	*Amount*	*Purpose*
	$	
Highwood River Protection	45,118	Flood control
Mackay Creek at Walsh	36,690	Flood control
Macleod Irrigation District	30,188	Irrigation
Oldman Diversion at Macleod	22,377	Stream control
Heart River Diversion	3,161	Stream control
Sevenpersons and Ross Creeks at Medicine Hat	35,030	Flood control
Elkwater Lake Dam	7,090	Recreation
Hartell Dam	9,855	Recreation
Belly River Diversion	6,204	Stream control
Bow River Protection (Bowness)	10,308	Flood control
TOTAL	206,021	

Water Power.—Calgary Power Limited commenced construction of the Bearspaw dam, located on the Bow River a few miles above Calgary. This project when completed will produce some 22,000 h.p. of electric energy and, by creating a small storage for ice accumulations, is the first step towards solving winter flooding n the Calgary-Bowness area.

A project which is indirectly connected with power development is the creation of a dam on the Vermilion River at Vermilion by Canadian Utilities Limited for condensing cooling water. This Company also increased its diversion from the Red Deer River at Drumheller for the same purpose.

Peace River Dugout Program.—The Provincial Department of Agriculture extends assistance for the construction of dugouts in the Peace River area because of a serious lack of underground water. Assistance is on the basis of six cents per cubic yard up to a maximum of $120 per dugout (2,000 cubic yards) and, to Mar. 31, 1953, totalled $184,725 on 2,048 dugouts. The program, which is of incalculable benefit to the Peace River area, is administered by District Agriculturists.

Ground Water.—The Provincial Government has recently passed new legislation regarding the study of ground water; it is expected that a start on this program will be made in 1953.

British Columbia.*—About 17 p.c. of the arable land in British Columbia is under cultivation and nearly all the grazing area is being utilized. The 1,100,000 acres developed give a ratio of approximately one acre per person. Within this arable area there exist 150,000 acres of irrigated land, an acreage considered to be less than one-half the ultimate total that can be served by water (approximately 350,000 acres).

About two-thirds of the irrigated area is made up of individual projects, while the remaining 50,000 acres are served by the larger irrigation projects listed below.

* Prepared by E. H. Tredcroft, Comptroller of Water Rights, Department of Lands and Forests, Victoria, B.C.

5.—Major Irrigation Projects in British Columbia, 1952

Project	Water Supply	Irrigable Area	Irrigated Area	Average Irrigation Charge	Locality
		acres	acres	$	
Provincial Irrigation System—					
Southern Okanagan Lands Project	Okanagan River	5,000	4,200	12·50	Okanagan Valley
Municipal Irrigation Systems—					
Penticton Municipality	Penticton and Ellis Creeks	2,500	2,200	18·00	Okanagan Valley
Summerland Municipality	Trout and Eneas Creeks	3,448	3,407	13·44	"
Irrigation Districts—					
Balfour Irrigation District	Laird Creek	240	150	—	Kootenay Valley
Bankhead	Kelowna and Mission Creeks	85	85	17·00	Okanagan Valley
Barriere	Barriere River	225	129	2·50	North Thompson Valley
B.C. Fruitlands	Jameson and North Thompson Rivers	2,648	2,082	17·25	"
Black Mountain	Mission Creek, etc	4,275	3,995	15·00	Okanagan Valley
Blueberry Creek	Blueberry Creek	150	30	2·70	Columbia Valley
Boundary Line	Osoyoos Lake	96	96	18·00	Okanagan Valley
Brent Davis	Mission Creek	480	405	6·00	"
Cawston	Similkameen River	643	481	14·00	"
Chase	Chase Creek	639	625	2·50	South Thompson Valley
Covert	4th of July Creek	278	278	4·50	Near Grand Forks
Darfield	Lindquist Creek	363	200	—	North Thompson Valley

5.—Major Irrigation Projects in British Columbia, 1952—concluded

Project	Water Supply	Irrigable Area	Irrigated Area	Average Irrigation Charge	Locality
		acres	acres	$	
Irrigation Districts—concl.					
East Creston	Arrow Creek	1,477	1,272	4·50	Kootenay Valley
Ellison	Kelowna Creek	962	—	5·55	Okanagan Valley
Girouard	B.X. (Swan Lake) Creek	101	49	6·00	"
Glenmore	Kelowna Creek	1,770	1,770	13·00	"
Grand Forks	Kettle River	2,500	2,000	8·83	Kettle Valley
Heffley	North Thompson River	1,662	1,250	3·14 Gravity 6·31 Pumping	North Thompson Valley
Kaleden	Marron River, Shatford Creek, etc.	600	535	23·41	Okanagan Valley
Keremeos	Ashnola River, etc.	1,120	940	13·50	Similkameen Valley
Malcolm Horie	Joseph Creek	220	150	3·00	Near Cranbrook
Merritt Central	Coldwater River	125	100	2·50	Nicola Valley
Naramata	Lequime, Naramata, Robinson Creeks	969	907	19·50	Okanagan Valley
Okanagan Falls	Shuttleworth Creek	530	209	10·00	"
Okanagan Mission	Bellevue Creek and Okanagan Lake	446	367	16·00	"
Osoyoos	Haynes Creek, etc.	203	25	—	"
Oyama	Long Lake	292	292	22·00	"
Peachland	Peachland Creek	771	455	15·00	"
Renata Irrigation District	Dog Creek	162	129	15·00	Columbia Valley
Robson	Pass Creek	262	250	6·00	"
Scotty Creek	Scotty Creek	1,863	863	4·50	Okanagan Valley
South East Kelowna	Hydraulic Creek	4,019	2,680	13·32	"
South Vernon	Vernon Creek	319	207	3·60	"
Trout Creek	Trout Creek	320	309	12·60	"
Valleyview	South Thompson River	107	107	3·00	South Thompson Valley
Vermilion	Kindersley Creek	1,498	258	5·00	Columbia Valley
Vernon	Coldstream, Paradise Creeks, etc.	12,000	7,779	12·50	Okanagan Valley
Vinsulla	Knouff Creek, etc.	298	155	5·50	"
Westbank	Powers Creek	798	772	15·30	"
Winfield and Okanagan Centre	Vernon Creek	1,898	1,835	15·55	"
Wynndel	Duck Creek	516	417	4·50	Kootenay Valley
Irrigation Companies—					
Columbia Valley Irrigated Fruitlands Company	Bruce Creek	2,000	367	3·50	Columbia Valley
Woods Lake Water Company	Oyama Creek	832	832	7·50	Okanagan Valley

Section 4.—Statistics of Agriculture*

The collection, compilation and publication of statistics relating to agriculture is a responsibility of the Dominion Bureau of Statistics. Valuable information is obtained through the Decennial Census of Canada and the Census of the Prairie Provinces. Complete details of the 1951 Census of Agriculture may be found in Volume VI of the *Census of Canada, 1951.*†

The Bureau also collects and publishes primary and secondary statistics of agriculture on an annual and monthly basis. The primary statistics relate mainly to the reporting of crop conditions, crop and live-stock estimates, values of farm lands, wages of farm labour and prices received by farmers for their products. The secondary statistics relate to the marketing of grain and live stock, dairying, milling and sugar industries and cold-storage holdings.

* Revised in the Agriculture Division, Dominion Bureau of Statistics.
† Copies obtainable from the Dominion Statistician or the Queen's Printer, Ottawa, Ont.

In the collection of annual and monthly statistics, the Federal Department of Agriculture and the Provincial Departments of Agriculture, as well as such agencies as the Board of Grain Commissioners and the Canadian Wheat Board, co-operate with the Bureau. Many thousands of farmers throughout Canada also send in reports voluntarily.

The figures for 1949 to 1952 (except for 1951 Census data) contained in this Section do not include those for Newfoundland, though that Province came into Confederation on Mar. 31, 1949. Agriculture plays a relatively minor part in Newfoundland's economy. The climate is not well suited to the production of any but the hardier crops and the amount of pasture land and arable soil is limited.

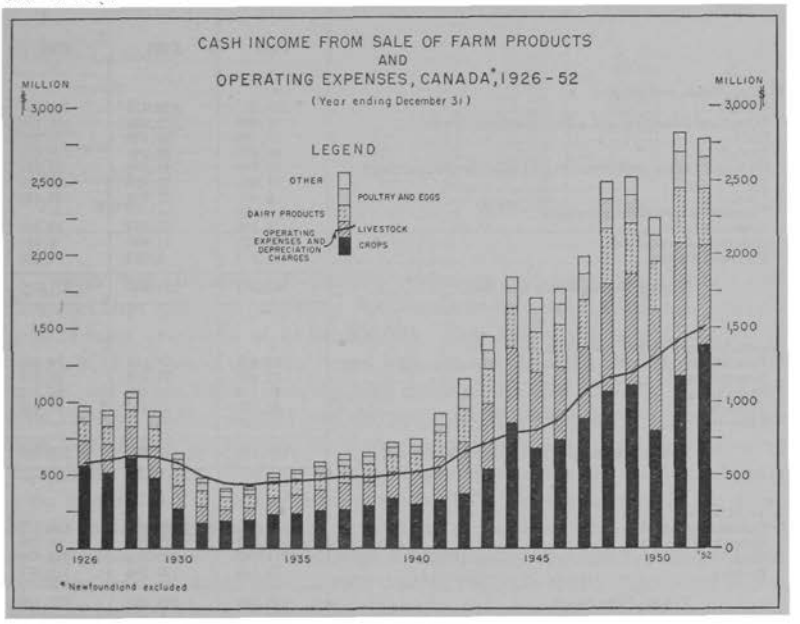
Subsection 1.—Farm Income and Capital

Farm Cash Income.—Estimates of farm cash income are based on reports of marketings and prices received by farmers for principal farm products and are subject to revision. The estimates include the amounts paid on account of wheat participation certificates, oats, barley and flax (to the end of 1950) adjustment and equalization payments. Also included are those Federal and Provincial Government payments that farmers receive as subsidies to prices. It is estimated that, during 1952, Canadian farmers (excluding Newfoundland farmers) realized $2,778,300,000 from the sale of farm products and from participation payments on previous year's grain crops, an amount only 1·2 p.c. below the revised and all-time high cash income of $2,811,900,000 estimated for 1951. Supplementary payments made to western farmers under the provisions of the Prairie Farm Assistance Act amounted to only $5,100,000 as compared with $13,800,000 and $10,400,000 paid during 1950 and 1951, respectively.

The maintenance of farm cash income at near-record levels in 1952 can be largely attributed to a substantial increase in receipts from the sale of field crops which offset, to a great extent, the decline in cash returns from live stock and some of the live-stock products.

Spring marketings of grain were exceptionally heavy in Western Canada as a result of the heavy carryover of both threshed and unthreshed portions of the 1951 crop. Weather conditions were excellent during the growing and harvesting seasons of 1952 with the result that prairie farmers were able to produce record crops of high quality. At the beginning of the year the initial price for wheat was $1.40 per bu., basis No. 1 Northern at the Lakehead. On Feb. 1, it was raised to $1.60 and continued at that level until July 31 when it was again set at $1.40. Subsequent payments on wheat during 1952 included a 20-cent per bu. adjustment payment on all wheat delivered between Aug. 1, 1951, and Jan. 31, 1952, and a final payment of 25·2 cents on all wheat delivered during the crop year 1951-52. The initial price of barley at the beginning of the year of 96 cents per bu., basis No. 3 C.W. 6-row at Lakehead, was increased to $1.16 for the period Mar. 1 to July 31 and then lowered to 96 cents for the remainder of the year. Subsequent payments on barley, during 1952, included a 20-cent per bu. adjustment payment on all barley delivered between Aug. 1, 1951, and Feb. 29, 1952, and a final payment of 14·7 cents per bu. on all

barley delivered during the crop year 1951-52. Initial prices for oats for the entire year were set at 65 cents per bu., basis No. 2 C.W. at the Lakehead, with final payments amounting to 18·5 cents per bu. Apart from the grain crops, the most spectacular increase in field-crop receipts occurred in the case of potatoes; prices for this commodity during 1952 averaged more than two and one-half times higher than those of 1951.



A general and substantial drop in average live-stock prices together with lower marketings of all live stock, except hogs, accounted for the significant decline in live-stock receipts in 1952. The greatest decline occurred in the case of cattle and calves. The prices of these live stock, which had been declining since the beginning of the year, declined still further after the outbreak of foot-and-mouth disease in February and the consequent imposition by the United States of an embargo on imports. Compared with 1951, hog prices were down significantly in 1952. From July 1951 when the peak was reached, hog prices declined from $38.86 per cwt. (including federal premium), basis Grade A hogs, Toronto, to $26.00 per cwt. by the middle of February 1952. On Feb. 16, the Agricultural Prices Support Board was authorized to support hog prices at this level. This basis of support was continued throughout the year. Poultry and egg receipts were also down substantially in 1952. Although the production of eggs and poultry meat was higher in 1952 than in 1951, prices were down sufficiently from the high levels of the previous year to more than offset this gain. On the other hand, income from dairying was up slightly, as a result of increased production, more than compensating for a decline in prices.

6.—Cash Income from the Sale of Farm Products, by Source, 1950-52

(Exclusive of Newfoundland)

NOTE.—Figures for the years 1926 to 1948, inclusive, will be found in DBS *Reference Paper No. 25* (Part II). Figures for 1949 are given in the 1952-53 Year Book, p. 407.

Item	1950	1951	1952
	$'000	$'000	$'000
Grains, Seeds and Hay—			
Wheat	379,231	426,415	583,534
Wheat participation and adjustment payments	7,525	271,350	165,708
Oats	43,496	58,849	69,622
Barley	46,081	65,741	121,027
Oats and barley participation and equalization payments	42,190	41,530	57,589
Rye	11,081	12,855	23,714
Flax	9,465	17,774	26,445
Flaxseed adjustment payments	30	—	—
Corn	6,349	12,054	13,661
Clover and grass seed	13,820	11,696	9,081
Hay and clover	4,274	3,323	1,328
Totals, Grains, Seeds and Hay	563,542	921,587	1,071,709
Vegetables and Other Field Crops—			
Potatoes	39,605	36,519	74,263
Vegetables	42,987	55,452	68,314
Sugar beets	13,479	16,439	14,792
Tobacco	56,759	57,442	66,423
Fibre flax	326	—	—
Totals, Vegetables and Other Field Crops	153,156	165,852	223,792
Live Stock—			
Cattle and calves	486,707	493,396	330,124
Sheep and lambs	16,267	17,194	10,286
Hogs	317,463	385,783	335,826
Poultry	75,132	123,280	115,874
Totals, Live Stock	895,569	1,019,653	792,110
Dairy products	330,088	374,194	380,945
Fruits	41,585	42,045	42,653
Other Principal Farm Products—			
Eggs	96,147	126,375	104,957
Wool	3,922	3,864	2,052
Honey	4,144	5,781	5,146
Maple products	7,180	5,778	8,232
Totals, Other Principal Farm Products	111,393	141,798	120,387
Miscellaneous farm products	41,781	52,731	51,319
Forest products sold off farms	64,304	85,354	84,097
Fur farming	11,808	8,735	11,331
Totals, Cash Income from Farm Products	**2,213,226**	**2,811,949**	**2,778,343**
Supplementary payments[1]	13,806	10,356	5,131
Totals, Cash Income	**2,227,032**	**2,822,305**	**2,783,474**

[1] Includes payments made under the Prairie Farm Assistance Act; other government subsidies have been included in cash income from individual commodities.

7.—Cash Income from the Sale of Farm Products, by Province, 1950-52

NOTE.—*Figures for the years 1926 to 1945, inclusive, will be found in DBS Reference Paper No. 25* (Part II). Figures for 1946-49 are given in the 1952-53 Year Book, p. 408.

Province	1950	1951	1952
	$'000	$'000	$'000
Newfoundland	..	..	..
Prince Edward Island	21,619	26,676	31,281
Nova Scotia	37,981	44,574	37,388
New Brunswick	43,655	48,157	48,943
Quebec	355,685	426,376	385,927
Ontario	679,757	790,934	714,898
Manitoba	197,254	262,391	246,065
Saskatchewan	412,455	631,032	698,960
Alberta	363,458	466,047	506,660
British Columbia	101,362	115,762	108,221
Totals	**2,213,226**	**2,811,949**	**2,778,343**

Farm Net Income.—Preliminary estimates indicate that during 1952 Canadian farm operators (excluding Newfoundland farmers) realized a net income from farming operations of $1,949,900,000. This figure, the second highest on record, is 11 p.c. lower than the record high net income of $2,188,600,000 realized in 1951 and 35 p.c. higher than the 1950 estimate of $1,448,100,000. The decline from the level reached in 1951 was the net result of a decrease of 4 p.c. in gross farm income and an increase of 6 p.c. in farm operating expenses, including depreciation charges. The decline in gross farm income was the result of slightly lower returns from the sale of farm products and a substantial drop in the value of year-end changes in farm-held stocks of grains and live stock. Income in kind for 1952 was virtually unchanged from 1951. Nearly all items included in farm operating expenses were higher in 1952 than in 1951, the result of generally higher prices for goods and services bought by farmers and greater numbers of farm machines on farms requiring increased outlays for operation and maintenance.

8.—Net Income of Farm Operators from Farming Operations, 1950-52

(Exclusive of Newfoundland)

Item	1950[r]	1951[r]	1952
	$'000	$'000	$'000
1. Cash income from sale of farm products	2,213,226	2,811,949	2,778,343
2. Income in kind	383,478	434,553	433,722
3. Value of changes in inventory	+130,729	+353,493	+237,625
4. Gross income (Items 1+2+3)	2,727,433	3,599,995	3,449,690
5. Operating expenses	1,119,089	1,225,441	1,292,578
6. Depreciation charges	174,069	196,271	212,346
7. Total operating and depreciation (Items 5+6)	1,293,158	1,421,712	1,504,924
8. Net income, excluding supplementary payments (Items 4−7)	1,434,275	2,178,283	1,944,766
9. Supplementary payments	13,806	10,356	5,131
10. Net income of farm operators from farming operations (Items 8+9)[1]	1,448,081	2,188,639	1,949,897

[1] Includes estimated rental value of farm homes and supplementary payments made under the provisions of the Prairie Farm Assistance Act.

9.—Net Income of Farm Operators from Farming Operations, by Province, 1950-52

NOTE.—Net income includes estimated rental value of farm homes and supplementary payments made under the provisions of the Prairie Farm Assistance Act.

Province	1950r	1951r	1952
	$'000	$'000	$'000
Newfoundland	..	..	..
Prince Edward Island	12,771	17,613	20,920
Nova Scotia	22,204	27,041	19,231
New Brunswick	30,341	36,525	34,423
Quebec	247,401	333,397	267,089
Ontario	461,811	576,404	454,534
Manitoba	128,298	180,758	158,628
Saskatchewan	269,572	553,765	574,477
Alberta	232,242	401,309	372,328
British Columbia	43,441	61,827	48,267
Totals	**1,448,081**	**2,188,639**	**1,949,897**

Value of Farm Capital.—The items included in the term "farm capital" as used in Table **10** are: lands and buildings; implements and machinery, including motor-trucks and automobiles; and live stock, including poultry and animals on fur farms. The value of lands and buildings for intercensal years is based on the value of occupied farm lands reported annually by crop correspondents; annual values of farm implements and machinery are estimated on the basis of sales reported each year.

10.—Current Value of Farm Capital, by Province, 1950 and 1951

Province	1950				1951			
	Lands and Buildings	Implements and Machinery[1]	Live Stock[2]	Total	Lands and Buildings	Implements and Machinery[1]	Live Stock[2]	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Newfoundland	..	..	..	..	..	..	..	..
P. E. Island	55,647	8,864	17,465	81,976	60,710	9,721	23,651	94,082
Nova Scotia	110,253	16,975	33,798	161,026	116,648	18,592	40,081	175,321
New Brunswick	118,277	16,731	31,513	166,521	120,643	18,414	39,702	178,759
Quebec	718,482	121,882	325,253	1,165,617	805,418	136,689	418,448	1,360,555
Ontario	1,394,089	279,678	582,435	2,256,202	1,672,907	323,421	828,068	2,824,396
Manitoba	527,880	154,209	114,933	797,022	568,527	173,259	166,272	908,058
Saskatchewan	1,236,313	313,107	206,102	1,755,522	1,331,509	355,042	283,419	1,969,970
Alberta	1,090,554	235,135	256,822	1,582,511	1,152,716	264,291	374,624	1,791,631
British Columbia	166,333	32,424	58,117	256,874	175,814	35,184	79,820	290,818
Totals	**5,417,828**	**1,179,005**	**1,626,438**	**8,223,271**	**6,004,892**	**1,334,613**	**2,254,085**	**9,593,590**

[1] Includes trucks and automobiles. [2] Includes poultry and animals on fur farms.

Value of Farm Lands.—The average value of occupied farm lands in Canada for 1952 is reported at $48 per acre. This represents an increase of 2·1 p.c. over the average value in 1951 and an increase of 100 p.c. over the 1935-39 average. Increases in farm land values over 1951 levels were recorded in all provinces except Nova Scotia, New Brunswick and Alberta. In the latter Province no change was recorded between 1951 and 1952. The all-Canada average is determined by weighting the provincial averages by the area of occupied farm land in each province. The upward trend in farm land values from pre-war levels reflects, at least in part, the relative changes that have occurred in the price levels of farm products and of the things farmers buy. The DBS index of farm prices of agricultural products for 1952

was 170·4 p.c. above the 1935-39 level while, for the same year, the index of prices of commodities and services used by farmers, including living costs, increased 128·6 p.c. from the 1935-39 base period level.

11.—Average Values per Acre of Occupied Farm Lands, by Province, Selected Years, 1910-52

NOTE.—Figures include unimproved lands and buildings.

Province	1910	1920	1929	1935	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Newfoundland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	..	..	..
P. E. Island	31	49	43	31	35	32	34	37	37	41	43	42	47	51	52	55	60	61
Nova Scotia	25	43	36	31	33	28	31	33	35	41	41	42	46	48	49	52	55	54
New Brunswick	19	35	35	25	29	24	25	30	33	40	40	39	44	44	45	51	52	51
Quebec	43	70	55	41	44	44	50	55	58	58	57	59	61	63	59	66	74	76
Ontario	48	70	60	42	46	46	45	48	56	58	57	59	64	68	71	75	90	92
Manitoba	29	39	26	17	17	16	17	18	19	20	21	25	27	34	36	39	42	43
Saskatchewan	22	32	25	17	15	15	14	15	15	17	18	19	21	24	24	26	28	29
Alberta	24	32	28	16	16	16	16	17	18	19	20	21	25	31	33	35	37	37
British Columbia	74	175	90	58	60	58	60	62	62	64	67	70	75	79	84	87	92	93
Canada Average[1]	**33**	**48**	**37**	**24**	**25**	**24**	**25**	**26**	**28**	**30**	**30**	**32**	**35**	**39**	**40**	**43**	**47**	**48**

[1] *See* text preceding table.

Subsection 2.—Volume of Agricultural Production

The index of physical volume of agricultural production, based on the period 1935-39 inclusive, represents a measure of "net farm production". This is achieved by removing duplication, such as when feed grains credited to field-crop production reappear in the form of live stock and live-stock products.

The index established a new record for Canada in 1952 when it reached 165·0, almost one point higher than the previous record of 164·2 established in 1942.

12.—Index Numbers of Physical Volume of Agricultural Production, by Province, 1941-52

(1935-39=100. Exclusive of Newfoundland)

NOTE.—For a description of this index, methods and coverage, *see* DBS *Quarterly Bulletin of Agricultural Statistics* for April-June, 1952. Figures for 1935-40 are given in the 1950 Year Book, p. 420.

Year	P.E.I.	N.S	N.B	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
1941	90·6	91·3	101·9	108·2r	107·9r	133·9	110·1	100·9	113·4	109·1r
1942	121·9	88·5	104·0	121·7	125·0	174·2	247·8	184·2	99·9	164·2
1943	102·7	89·6	133·2	112·3	89·4	152·2	138·1	104·6	114·7	113·7
1944	119·2	107·3	136·8	131·1	114·0	145·1	196·4	125·1	140·0	140·4
1945	121·3	80·7	106·7	100·7	107·6	116·8	129·3	97·6	131·1	110·9
1946	123·6	100·3	119·6	112·2	117·6	139·1	138·7	122·7	151·9	125·6
1947	128·9	86·7	119·0	102·6	107·7	122·1	128·2	115·8	146·8	116·0
1948	133·3	91·8	124·3	121·6	119·0	143·8	131·8	118·5	143·7	125·1
1949	158·8	105·1	145·8	126·4	124·9	125·7	128·1	98·1	148·7	122·3
1950r	147·7	105·7	137·4	133·4	131·0	139·0	169·9	123·8	134·0	139·0
1951	119·9	88·5	108·4	137·8	131·6	145·4	217·3	160·9	127·3	155·8
1952	135·5	80·2	105·3	120·7	119·2	162·4	265·3	176·9	129·9	165·0

Subsection 3.—Field Crops

Canadian farmers in 1952 harvested record crops of wheat, barley and soybeans and near-record crops of rye, sugar beets and shelled corn. In Western Canada, the major grain-producing area, excellent weather prevailed throughout the

season in sharp contrast to 1951 when much of the grain had to be left in the fields for harvest the following spring. In many parts of Eastern Canada, on the other hand, unfavourable weather conditions interfered with seeding, plant growth and harvesting and, although yields of practically all the principal grain crops were above average, they were below those of 1951.

Favourable weather in Western Canada in 1952 contributed to producing a crop not only of record volume but also of high quality. Almost 66 p.c. of the wheat inspected during the crop year 1952-53 graded No. 4 Northern or higher (excluding "Toughs" and "Damps"), in marked contrast to only 32 p.c. in 1951-52 when an abnormally wet harvesting season reduced grades sharply. Similar improvement in grades was also evident in Western oats, barley, rye and flaxseed.

The gross value of production of principal field crops produced on Canadian farms in 1951, based on average prices received by farmers throughout the 1951-52 crop year, was estimated at $2,124,000,000—the first time that the total value has exceeded the two-billion-dollar level. Largely as a result of record wheat and barley crops, the gross value of field crops produced in 1952 is expected to exceed the 1951 record. Estimates of the value of the 1952 crops, based on average prices received by farmers in the crop year ended July 31, 1953, will be published in DBS crop reports issued at regular intervals throughout the year and in the *Quarterly Bulletin of Agricultural Statistics.*

13.—Acreages, Yields and Prices of Principal Field Crops, 1951 and 1952, with Five-Year Average, 1945-49

(Exclusive of Newfoundland)

Crop and Year	Area	Yield per Acre	Production	Average Price	Total Value[1]	Crop and Year	Area	Yield per Acre	Production	Average Price	Total Value[1]
	'000 acres	bu.	'000 bu.	$ per bu.	$'000		'000 acres	bu.	'000 bu.	$ per bu.	$'000
Wheat—						Mixed Grains—					
Av. 1945-49	24,717	14·8	366,349	1·62	593,271	Av. 1945-49	1,429	35·4	50,551	0·85	42,859
1951	25,254	21·9	552,657	1·55	855,137	1951	1,524	44·9	68,509	1·01	69,485
1952	25,995	26·5	687,922	[2]	[2]	1952	1,570	40·3	63,205	[2]	[2]
Oats—						Flaxseed—					
Av. 1945-49	12,021	28·4	341,612	0·67	229,883	Av. 1945-49	1,135	8·2	9,253	3·84	35,489
1951	11,897	41·0	488,191	0·76	369,296	1951	1,158	8·5	9,897	3·90	38,616
1952	11,062	42·2	466,805	[2]	[2]	1952	1,206	10·7	12,961	[2]	[2]
Barley—						Potatoes—					
Av. 1945-49	6,717	21·5	144,688	0·94	136,599	Av. 1945-49	509	156·0	79,282	1·11	87,669
1951	7,840	31·3	245,218	1·10	269,951	1951	285	169·7	48,355	2·03	98,077
1952	8,477	34·4	291,379	[2]	[2]	1952	294	200·4	58,957	[2]	[2]
Rye—						Tame Hay—		ton	'000 tons	$ per ton	
Av. 1945-49	1,128	11·2	12,654	1·86	23,482	Av. 1945-49	11,269	1·62	18,256	15·03	274,474
1951	1,127	15·7	17,647	1·56	27,575	1951	10,538	1·85	19,484	15·26	297,238
1952	1,257	19·5	24,557	[2]	[2]	1952	10,682	1·79	19,090	[2]	[2]

[1] Gross value of farm production; does not represent cash income from sales. [2] *See* footnote [1], Table 14.

14.—Acreages, Production and Values of Principal Field Crops, by Province, 1951 and 1952, with Five-Year Average, 1945-49

(Exclusive of Newfoundland)

Province	Area			Total Production			Gross Farm Value[1]	
	Average 1945-49	1951	1952	Average 1945-49	1951	1952	Average 1945-49	1951
	'000 ac.	'000 ac.	'000 ac.	'000 bu.	'000 bu.	'000 bu.	$'000	$'000
WHEAT								
Maritimes—								
Prince Edward Island	5	5	4	107	113	85	167	226
Nova Scotia	2	1	1	29	26	22	43	52
New Brunswick	3	3	3	55	78	62	92	152
Totals, Maritimes	10	9	8	191	217	169	302	430
Central Canada—								
Quebec	24	12	11	412	267	220	633	513
Ontario (a) winter wheat	719	703	650	20,970	19,696	20,800	33,066	40,574
(b) spring wheat	43	44	37	867	952	760	1,376	1,961
Totals, Central Canada	786	759	698	22,249	20,915	21,780	35,075	43,048
Prairie Provinces—								
Manitoba	2,442	2,326	2,368	48,160	52,000	57,000	79,827	83,720
Saskatchewan	14,438	15,635	16,432	185,220	325,000	435,000	301,085	494,000
Alberta	6,920	6,424	6,404	107,540	152,000	172,000	171,983	229,520
Totals, Prairie Provinces	23,800	24,385	25,204	340,920	529,000	664,000	552,895	807,240
British Columbia	122	101	86	2,989	2,525	1,973	4,999	4,419
Totals	**24,718**	**25,254**	**25,995**	**366,349**	**552,657**	**687,922**	**593,271**	**855,137**
OATS								
Maritimes—								
Prince Edward Island	118	100	96	4,379	3,900	3,456	3,356	3,510
Nova Scotia	69	62	56	2,389	2,650	2,356	2,039	2,650
New Brunswick	191	175	155	6,599	6,700	4,650	5,171	5,963
Totals, Maritimes	378	337	307	13,367	13,250	10,462	10,566	12,123
Central Canada—								
Quebec	1,481	1,396	1,363	35,462	47,985	37,483	28,745	47,505
Ontario	1,673	1,749	1,732	63,168	82,218	67,560	47,005	73,174
Totals, Central Canada	3,154	3,145	3,095	98,630	130,203	105,043	75,750	120,679
Prairie Provinces—								
Manitoba	1,542	1,643	1,611	51,300	58,000	65,000	33,205	41,180
Saskatchewan	4,212	3,815	3,362	99,400	148,000	152,000	61,734	100,640
Alberta	2,654	2,854	2,587	75,000	134,000	129,000	45,962	91,120
Totals, Prairie Provinces	8,408	8,312	7,560	225,700	340,000	346,000	140,901	232,940
British Columbia	81	103	100	3,915	4,738	5,300	2,666	3,554
Totals	**12,021**	**11,897**	**11,062**	**341,612**	**488,191**	**466,805**	**229,883**	**369,296**

[1] 1952 values not available at time of going to press; estimates will be published in DBS crop reports and the *Quarterly Bulletin of Agricultural Statistics*.

14.—Acreages, Production and Values of Principal Field Crops, by Province, 1951 and 1952, with Five-Year Average, 1945-49—continued

Province	Area			Total Production			Gross Farm Value[1]	
	Average 1945-49	1951	1952	Average 1945-49	1951	1952	Average 1945-49	1951
	'000 ac.	'000 ac.	'000 ac.	'000 bu.	'000 bu.	'000 bu.	$'000	$'000
BARLEY								
Maritimes—								
Prince Edward Island	11	4	4	324	131	126	331	165
Nova Scotia	8	4	4	221	141	118	249	190
New Brunswick	12	14	10	364	476	268	406	595
Totals, Maritimes	31	22	18	909	748	512	986	950
Central Canada—								
Quebec	137	62	61	3,076	1,847	1,556	3,374	2,438
Ontario	256	194	203	8,193	7,339	6,689	7,867	9,541
Totals, Central Canada	393	256	264	11,269	9,186	8,245	11,241	11,979
Prairie Provinces—								
Manitoba	1,795	2,040	2,165	42,900	56,000	71,000	41,416	63,280
Saskatchewan	2,377	2,449	2,644	43,500	73,000	92,000	40,125	78,840
Alberta	2,106	3,041	3,336	45,600	105,000	118,000	42,326	113,400
Totals, Prairie Provinces	6,278	7,530	8,145	132,000	234,000	281,000	123,867	255,520
British Columbia	15	32	51	510	1,284	1,622	505	1,502
Totals	**6,717**	**7,840**	**8,477**	**144,688**	**245,218**	**291,379**	**136,599**	**269,951**
FALL RYE								
Central Canada—								
Quebec	10	5	4	166	102	72	217	168
Ontario	87	72	75	1,810	1,505	1,494	2,964	2,513
Totals, Central Canada	97	77	79	1,976	1,607	1,566	3,181	2,681
Prairie Provinces—								
Manitoba	40	42	44	664	685	750	1,132	1,055
Saskatchewan	496	404	379	4,023	5,200	7,000	7,883	8,112
Alberta	201	186	254	3,026	3,725	5,400	5,704	5,736
Totals, Prairie Provinces	737	632	677	7,713	9,610	13,150	14,719	14,903
British Columbia	1	2	2	21	60	67	38	89
Totals	**835**	**712**	**758**	**9,710**	**11,277**	**14,783**	**17,938**	**17,673**
SPRING RYE								
Prairie Provinces—								
Manitoba	10	11	11	141	150	174	253	231
Saskatchewan	163	306	363	1,638	4,600	7,200	3,078	7,176
Alberta	120	98	126	1,165	1,620	2,400	2,213	2,495
Totals, Prairie Provinces	293	415	500	2,944	6,370	9,774	5,544	9,902
Totals	**293**	**415**	**500**	**2,944**	**6,370**	**9,774**	**5,544**	**9,902**

[1] 1952 values not available at time of going to press; estimates will be published in DBS crop reports and the *Quarterly Bulletin of Agricultural Statistics*.

14.—Acreages, Production and Values of Principal Field Crops, by Province, 1951 and 1952, with Five-Year Average, 1945-49—continued

Province	Area			Total Production			Gross Farm Value[1]	
	Average 1945-49	1951	1952	Average 1945-49	1951	1952	Average 1945-49	1951
	'000 ac.	'000 ac.	'000 ac.	'000 bu.	'000 bu.	'000 bu.	$'000	$'000
	ALL RYE							
Central Canada—								
Quebec	10	5	4	166	102	72	217	168
Ontario	87	72	75	1,810	1,505	1,494	2,964	2,513
Totals, Central Canada	97	77	79	1,976	1,607	1,566	3,181	2,681
Prairie Provinces—								
Manitoba	50	53	55	805	835	924	1,385	1,286
Saskatchewan	654	710	742	5,661	9,800	14,200	10,961	15,288
Alberta	321	284	380	4,191	5,345	7,800	7,917	8,231
Totals, Prairie Provinces	1,025	1,047	1,177	10,657	15,980	22,924	20,263	24,805
British Columbia	1	2	2	21	60	67	38	89
Totals	**1,123**	**1,127**	**1,257**	**12,654**	**17,647**	**24,557**	**23,482**	**27,575**
	PEAS							
Central Canada—								
Quebec	19	3	3	261	60	58	982	274
Ontario	31	8	9	552	155	144	1,575	484
Totals, Central Canada	50	11	12	813	215	202	2,557	758
Prairie Provinces—								
Manitoba	19	15	18	334	343	460	846	858
Saskatchewan	6	1	2	91	28	27	242	63
Alberta	16	8	8	215	118	142	598	283
Totals, Prairie Provinces	41	24	28	640	489	629	1,686	1,204
British Columbia	6	2	2	126	41	57	326	122
Totals	**97**	**37**	**43**	**1,579**	**745**	**888**	**4,569**	**2,084**
	BEANS							
New Brunswick	1	—	—	19	—	—	81	—
Central Canada—								
Quebec	12	1	1	183	16	16	760	79
Ontario	80	57	59	1,326	1,210	1,277	4,900	5,058
Totals, Central Canada	92	58	60	1,509	1,226	1,293	5,660	5,137
British Columbia	1	[2]	[2]	14	7	5	48	36
Totals	**94**	**59**	**60**	**1,542**	**1,233**	**1,298**	**5,789**	**5,173**
	SOYBEANS							
Ontario	73	155	172	1,491	3,843	4,128	3,490	10,568

[1] 1952 values not available at time of going to press; estimates will be published in DBS crop reports and the *Quarterly Bulletin of Agricultural Statistics*. [2] Less than 500 acres.

14.—Acreages, Production and Values of Principal Field Crops, by Province, 1951 and 1952, with Five-Year Average, 1945-49—continued

Province	Area			Total Production			Gross Farm Value[1]	
	Average 1945-49	1951	1952	Average 1945-49	1951	1952	Average 1945-49	1951
	'000 ac.	'000 ac.	'000 ac.	'000 bu.	'000 bu.	'000 bu.	$'000	$'000
	BUCKWHEAT							
Maritimes—								
Prince Edward Island	1	[2]	[2]	27	10	9	29	14
Nova Scotia	2	1	1	32	15	15	39	22
New Brunswick	15	8	9	376	245	189	460	336
Totals, Maritimes	18	9	10	435	270	213	528	372
Central Canada—								
Quebec	82	44	41	1,640	1,084	865	1,886	1,518
Ontario	121	64	63	2,452	1,436	1,443	2,476	1,837
Totals, Central Canada	203	108	104	4,092	2,520	2,308	4,362	3,385
Manitoba	4	7	10	56	126	183	73	173
Totals	**225**	**124**	**124**	**4,583**	**2,916**	**2,704**	**4,963**	**3,930**
	MIXED GRAINS							
Maritimes—								
Prince Edward Island	61	72	71	2,384	3,011	2,777	2,018	2,860
Nova Scotia	5	9	10	173	352	392	168	422
New Brunswick	10	7	8	350	275	236	282	275
Totals, Maritimes	76	88	89	2,907	3,638	3,405	2,468	3,557
Central Canada—								
Quebec	279	212	218	7,282	7,619	6,605	7,247	9,905
Ontario	989	1,081	1,129	38,299	51,867	47,970	31,673	51,867
Totals, Central Canada	1,268	1,293	1,347	45,581	59,486	54,575	38,920	61,772
Prairie Provinces—								
Manitoba	20	33	37	518	1,056	1,200	352	845
Saskatchewan	20	28	24	383	1,060	1,000	275	806
Alberta	38	81	71	843	3,159	2,900	580	2,401
Totals, Prairie Provinces	78	142	132	1,744	5,275	5,100	1,207	4,052
British Columbia	8	2	2	319	110	125	264	104
Totals	**1,430**	**1,524**	**1,570**	**50,551**	**68,509**	**63,205**	**42,859**	**69,485**
	FLAXSEED							
Ontario	36	66	75	420	960	871	1,698	3,840
Prairie Provinces—								
Manitoba	443	655	593	4,224	5,000	5,700	16,280	19,350
Saskatchewan	508	296	380	3,197	2,300	4,300	11,885	9,062
Alberta	145	135	151	1,375	1,570	2,000	5,486	6,123
Totals, Prairie Provinces	1,096	1,086	1,124	8,796	8,870	12,000	33,651	34,535
British Columbia	3	7	7	37	67	90	140	241
Totals	**1,135**	**1,158**	**1,206**	**9,253**	**9,897**	**12,961**	**35,489**	**38,616**

[1] 1952 values not available at time of going to press; estimates will be published in DBS crop reports and the *Quarterly Bulletin of Agricultural Statistics.* [2] Less than 500 acres.

14.—Acreages, Production and Values of Principal Field Crops, by Province, 1951 and 1952, with Five-Year Average, 1945-49—continued

Province	Area			Total Production			Gross Farm Value[1]	
	Average 1945-49	1951	1952	Average 1945-49	1951	1952	Average 1945-49	1951
	'000 ac.	'000 ac.	'000 ac.	'000 lb.	'000 lb.	'000 lb.	$'000	$'000
SUNFLOWER SEED								
Manitoba	29	22	3	16,312	6,450	2,085	952	258
RAPESEED								
Manitoba	—	—	6	—	—	4,500	—	—
Saskatchewan	40	8	12	29,663	7,125	11,400	1,746	249
Totals	**40**	**8**	**18**	**29,663**	**7,125**	**15,900**	**1,746**	**249**
SHELLED CORN								
				'000 bu.	'000 bu.	'000 bu.		
Ontario	225	289	320	10,451	15,765	19,170	13,364	28,377
Manitoba	13	25	20	304	150	552	330	150
Totals	**238**	**314**	**339**	**10,755**	**15,915**	**19,722**	**13,694**	**28,527**
POTATOES								
Maritimes—								
Prince Edward Island	46	30	36	10,220	5,930	10,800	7,931	12,631
Nova Scotia	22	11	12	4,080	2,034	2,760	4,727	4,576
New Brunswick	66	38	43	15,838	9,510	10,974	14,314	19,020
Totals, Maritimes	134	79	91	30,138	17,474	24,534	26,972	36,227
Central Canada—								
Quebec	154	92	92	19,600	12,739	13,755	22,828	25,733
Ontario	116	55	56	16,998	9,661	11,276	21,390	21,254
Totals, Central Canada	270	147	148	36,598	22,400	25,031	44,218	46,987
Prairie Provinces—								
Manitoba	25	16	17	2,863	2,244	2,751	2,924	3,321
Saskatchewan	36	16	14	3,075	1,923	1,847	3,862	2,750
Alberta	25	18	17	3,022	2,354	3,256	4,025	4,049
Totals, Prairie Provinces	86	50	48	8,960	6,521	7,854	10,811	10,120
British Columbia	17	10	10	3,586	1,960	2,652	5,668	4,743
Totals	**507**	**285**	**297**	**79,282**	**48,355**	**60,071**	**87,669**	**98,077**
FIELD ROOTS								
Maritimes—				'000 cwt.	'000 cwt.	'000 cwt.		
Prince Edward Island	12	8	7	3,554	2,060	2,100	2,869	2,225
Nova Scotia	10	4	4	2,563	1,398	1,290	3,055	1,957
New Brunswick	11	4	4	2,264	964	900	1,880	1,398
Totals, Maritimes	33	16	15	8,381	4,422	4,290	7,804	5,580
Central Canada—								
Quebec	25	12	11	4,072	2,150	1,537	4,842	2,365
Ontario	55	18	18	10,233	3,564	4,077	8,253	3,564
Totals, Central Canada	80	30	29	14,305	5,714	5,614	13,095	5,929
British Columbia	2	1	1	372	108	122	583	243
Totals	**115**	**46**	**45**	**23,058**	**10,244**	**10,026**	**21,482**	**11,752**

[1] 1952 values not available at time of going to press; estimates will be published in DBS crop reports and the *Quarterly Bulletin of Agricultural Statistics*.

14.—Acreages, Production and Values of Principal Field Crops, by Province, 1951 and 1952, with Five-Year Average, 1945-49—concluded

Province	Area			Total Production			Gross Farm Value[1]	
	Average 1945-49	1951	1952	Average 1945-49	1951	1952	Average 1945-49	1951
	'000 ac.	'000 ac.	'000 ac.	'000 tons	'000 tons	'000 tons	$'000	$'000
TAME HAY								
Maritimes—								
Prince Edward Island	226	204	199	340	385	418	4,734	4,909
Nova Scotia	418	345	353	726	690	847	12,240	11,040
New Brunswick	640	441	443	897	793	886	14,198	11,102
Totals, Maritimes	1,284	990	995	1,963	1,868	2,151	31,172	27,051
Central Canada—								
Quebec	4,163	3,654	3,673	5,866	5,875	6,060	93,420	82,250
Ontario	3,777	3,406	3,401	7,058	7,357	6,157	100,849	110,355
Totals, Central Canada	7,940	7,060	7,074	12,924	13,232	12,217	194,269	192,605
Prairie Provinces—								
Manitoba	393	399	417	707	650	646	7,442	7,800
Saskatchewan	439	572	586	622	1,017	1,020	8,229	15,255
Alberta	907	1,206	1,292	1,331	2,157	2,261	18,392	38,287
Totals, Prairie Provinces	1,739	2,177	2,295	2,660	3,824	3,927	34,063	61,342
British Columbia	306	311	315	709	560	788	14,970	16,240
Totals	**11,269**	**10,538**	**10,679**	**18,256**	**19,484**	**19,083**	**274,474**	**297,238**
FODDER CORN								
Maritimes—								
Prince Edward Island	1	1	1	10	6	8	71	50
Nova Scotia	1	1	1	9	8	7	52	49
New Brunswick	2	1	1	17	5	5	104	35
Totals, Maritimes	4	3	3	36	19	20	227	134
Central Canada—								
Quebec	101	80	71	865	654	636	6,000	4,120
Ontario	369	282	268	3,360	2,823	3,006	15,691	12,704
Totals, Central Canada	470	362	339	4,225	3,477	3,642	21,691	16,824
Prairie Provinces—								
Manitoba	21	16	21	73	56	106	528	452
Saskatchewan	6	2	1	15	3	4	146	40
Alberta	2	2	2	10	9	15	59	70
Totals, Prairie Provinces	29	20	24	98	68	125	733	562
British Columbia	4	4	4	42	42	46	310	422
Totals	**507**	**388**	**370**	**4,401**	**3,607**	**3,833**	**22,961**	**17,942**
SUGAR BEETS								
Central Canada—								
Quebec	3	10	8	27	96	87	344	1,446
Ontario	22	32	32	218	342	332	2,950	5,436
Totals, Central Canada	25	42	40	245	438	419	3,294	6,882
Manitoba	11	19	16	90	178	124	1,111	2,554
Alberta	30	33	37	354	349	480	4,672	5,007
Totals	**66**	**93**	**93**	**689**	**965**	**1,023**	**9,077**	**14,443**

[1] 1952 values not available at time of going to press; estimates will be published in DBS crop reports and the *Quarterly Bulletin of Agricultural Statistics*.

15.—Acreages and Production of Grain in the Prairie Provinces, 1951 and 1952

NOTE.—Figures for years prior to 1951 will be found in corresponding tables of previous editions of the Year Book.

Grain	Acreages		Production	
	1951	1952	1951	1952
	'000 acres	'000 acres	'000 bu.	'000 bu.
Wheat	24,385	25,204	529,000	664,000
Oats	8,312	7,560	340,000	346,000
Barley	7,530	8,145	234,000	281,000
Rye	1,047	1,177	15,980	22,924
Flaxseed	1,086	1,124	8,870	12,000

Stocks of Grain in Canada.—Table 16 shows the stocks of Canadian grain on hand in Canada and in the United States on July 31, for the years 1950-52, with averages for the five-year periods 1935-39, 1940-44 and 1945-49. Stocks in Canada are broken down into stocks in commercial positions and those on farms, with a separate column for farm stocks in the Prairie Provinces. An additional column indicates the amounts held in country elevators in the Prairie Provinces.

16.—Carryover of Canadian Grain as at July 31, 1950-52, with Five-Year Averages, 1935-49

NOTE.—Figures for individual years prior to 1950 will be found in corresponding tables of previous editions of the Year Book.

As at July 31—	Total in Canada and United States	Total in Canada	In Commercial Storage in Canada	On Farms in Canada	Prairie Provinces	
					On Farms	In Country Elevators
	bu.	bu.	bu.	bu.	bu.	bu.
	WHEAT					
Av. 1935-39	101,142,053	92,273,005	86,848,305	5,424,700	4,328,000	18,075,723
Av. 1940-44	431,102,442	408,734,141	351,581,341	57,152,800	54,960,000	154,370,863
Av. 1945-49	119,587,196	115,603,875	82,718,676	32,885,200	31,265,600	24,698,778
1950	112,199,543	112,199,543	99,810,543	12,389,000	11,000,000	24,054,149
1951	189,202,667	187,189,563	164,929,563	22,260,000	20,000,000	78,529,616
1952	217,177,826	214,934,143	195,672,143	19,262,000	18,050,000	98,782,136
	OATS					
Av. 1935-39	30,700,483	30,682,283	6,229,883	24,452,400	12,585,600	1,361,855
Av. 1940-44	74,984,299	74,212,213	16,435,613	57,776,600	43,826,600	6,500,924
Av. 1945-49	70,725,656	69,841,382	18,954,582	50,886,800	41,042,800	5,091,295
1950	44,904,579	44,904,579	11,325,579	33,579,000	26,000,000	3,483,376
1951	95,177,487	94,526,622	35,045,622	59,481,000	43,000,000	14,922,787
1952	108,358,284	104,861,518	47,025,518	57,836,000	45,142,000	25,455,272
	BARLEY					
Av. 1935-39	8,096,869	7,827,168	4,182,808	3,644,360	2,500,800	711,449
Av. 1940-44	29,922,222	28,868,755	12,191,755	16,677,000	15,453,000	4,138,057
Av. 1945-49	29,747,854	29,512,098	12,702,098	16,810,000	16,140,000	3,842,261
1950	20,355,035	20,188,842	8,864,842	11,324,000	11,000,000	2,777,584
1951	53,496,371	53,496,371	35,642,371	17,854,000	17,007,000	11,584,103
1952	79,503,741	79,286,664	57,810,664	21,476,000	21,026,000	26,916,163

16.—Carryover of Canadian Grain as at July 31, 1950-52, with Five-Year Averages, 1935-49—concluded

As at July 31—	Total in Canada and United States	Total in Canada	In Commercial Storage in Canada	On Farms in Canada	Prairie Provinces	
					On Farms	In Country Elevators
	bu.	bu.	bu.	bu.	bu.	bu.
	RYE					
Av. 1935-39	2,236,368	1,940,370	1,763,390	176,980	149,000	373,309
Av. 1940-44	6,897,205	4,942,647	3,260,247	1,682,400	1,617,800	1,172,857
Av. 1945-49	3,273,777	3,123,572	2,023,372	1,100,200	1,053,400	544,436
1950	6,431,085	5,307,219	4,176,219	1,131,000	1,100,000	664,768
1951	3,298,681	2,624,988	1,774,988	850,000	800,000	226,523
1952	8,094,397	7,517,089	6,171,089	1,346,000	1,300,000	2,232,344
	FLAXSEED					
Av. 1935-39	277,016	277,016	271,356	5,660	5,000	64,481
Av. 1940-44	1,923,885	1,923,885	1,667,525	256,360	251,700	373,895
Av. 1945-49	3,888,325	3,888,325	3,423,525	464,800	461,400	240,711
1950	4,467,771	4,467,771	4,360,771	107,000	105,000	31,235
1951	1,203,778	1,203,778	997,778	206,000	205,000	113,467
1952	2,463,918	2,463,918	2,054,918	409,000	390,000	526,003

Subsection 4.—Live Stock

The numbers of live stock on farms in the different provinces in 1951 and 1952 are given in Table **17** and the average value per head of farm live stock is given by provinces in Table **18**.

17.—Live Stock on Farms, by Province, at June 1, 1951 and 1952

Province and Item	1951	1952	Province and Item	1951	1952
	No.	No.		No.	No.
Newfoundland—			**Quebec—**		
Horses	2,874		Horses	232,863	221,000
Milk cows[1]	4,062	..	Milk cows[1]	895,539	937,000
Other cattle	3,882		Other cattle	745,301	871,000
Sheep	17,519		Sheep	316,418	337,100
Swine	1,712	..	Swine	1,108,306	1,312,000
P. E. Island—			**Ontario—**		
Horses	21,349	19,700	Horses	260,627	218,700
Milk cows[1]	38,909	41,000	Milk cows[1]	922,116	959,000
Other cattle	59,015	63,900	Other cattle	1,543,759	1,778,000
Sheep	34,386	36,200	Sheep	360,201	389,700
Swine	72,499	77,000	Swine	1,755,490	1,937,000
Nova Scotia—			**Manitoba—**		
Horses	25,975	24,400	Horses	130,887	113,500
Milk cows[1]	78,970	83,000	Milk cows[1]	218,473	209,000
Other cattle	87,232	102,700	Other cattle	452,710	476,000
Sheep	95,396	83,700	Sheep	65,481	68,000
Swine	48,216	51,000	Swine	337,953	399,000
New Brunswick—			**Saskatchewan—**		
Horses	31,019	29,800	Horses	303,853	279,500
Milk cows[1]	82,362	86,000	Milk cows[1]	306,896	289,000
Other cattle	79,535	91,900	Other cattle	967,953	1,093,000
Sheep	55,223	55,000	Sheep	136,136	155,000
Swine	78,393	83,000	Swine	533,263	646,000

[1] Cows and heifers, two years or over, kept for milk purposes.

17.—Live Stock on Farms, by Province, at June 1, 1951 and 1952—concluded

Province and Item	1951	1952	Territory and Item	1951	1952
	No.	No.		No.	No.
Alberta—			**Yukon Territory—**		
Horses	261,133	239,700	Horses	5	..
Milk cows[1]	277,598	280,000	Milk cows[1]	5	..
Other cattle	1,285,421	1,474,000	Other cattle	10	..
Sheep	330,503	387,000	Sheep	—	..
Swine	930,714	1,170,000	Swine	—	..
British Columbia—			***Totals—***		
Horses	36,054	34,100	**Horses**	**1,306,639**	**1,180,400**
Milk cows[1]	82,924	84,000	**Milk cows[1]**	**2,907,854**	**2,968,000**
Other cattle	238,334	254,200	**Other cattle**	**5,463,152**	**6,204,700**
Sheep	67,474	76,500	**Sheep**	**1,478,737**	**1,588,200**
Swine	49,441	66,000	**Swine**	**4,915,987**	**5,741,000**

[1] Cows and heifers, two years or over, kept for milk purposes.

18.—Average Value per Head of Farm Live Stock, by Province, 1951 and 1952

Province and Item	1951	1952	Province and Item	1951	1952	Province and Item	1951	1952
	$	$		$	$		$	$
Newfoundland—			**Quebec—**			**Alberta—**		
Horses	216	..	Horses	125	142	Horses	44	50
All cattle	259	..	All cattle	152	136	All cattle	202	164
Milk cows[1]	350	..	Milk cows[1]	202	188	Milk cows[1]	272	235
Other cattle	164	..	Other cattle	91	80	Other cattle	187	150
Sheep	33	..	Sheep	21	20	Sheep	27	20
Swine	52	..	Swine	36	26	Swine	39	26
P. E. Island—			**Ontario—**			**British Columbia—**		
Horses	89	102	Horses	86	98	Horses	79	84
All cattle	161	134	All cattle	219	167	All cattle	181	150
Milk cows[1]	226	190	Milk cows[1]	296	228	Milk cows[1]	231	205
Other cattle	118	98	Other cattle	173	134	Other cattle	164	132
Sheep	24	22	Sheep	34	28	Sheep	26	25
Swine	45	27	Swine	40	28	Swine	42	29
Nova Scotia—			**Manitoba—**			**Yukon Territory—**		
Horses	116	131	Horses	53	56	Horses	80	..
All cattle	142	140	All cattle	190	153	All cattle	154	..
Milk cows[1]	191	200	Milk cows[1]	255	214	Milk cows[1]	227	
Other cattle	98	92	Other cattle	159	127	Other cattle	118	
Sheep	19	20	Sheep	23	19	Sheep	—	
Swine	37	28	Swine	35	25	Swine	—	..
New Brunswick—			**Saskatchewan—**			**Totals—**		
Horses	117	129	Horses	42	43	**Horses**	**73**	**80**
All cattle	139	121	All cattle	189	158	**All cattle**	**191**	**156**
Milk cows[1]	189	172	Milk cows[1]	258	216	**Milk cows[1]**	**249**	**210**
Other cattle	87	74	Other cattle	167	142	***Other cattle***	***160***	**129**
Sheep	19	20	Sheep	25	19	**Sheep**	**26**	**22**
Swine	38	26	Swine	33	24	**Swine**	**38**	**27**

[1] Cows and heifers, two years or over, kept for milk purposes.

The Federal Department of Agriculture inspects all live stock in plants designated as inspected establishments under the Meat and Canned Foods Act. A statistical record is kept of these inspections and the figures appear in Table **19**. Local wholesale butchering and such slaughterings as are carried out by retail butchers and by farmers for their own use are not included. Actually, the slaughtering and meat-packing industry is concentrated into a comparatively small number of large establishments to facilitate greater efficiency and utilization of products. Thus, the figures of Table **19** are fairly inclusive. The slaughtering

and meat-packing industry is dealt with in its proper relation to all other manufacturing enterprises in Chapter XVI of this volume. On a gross value basis it normally ranks among the three largest manufacturing industries in Canada but it owes its importance to the value of raw products obtained from the farmer and the rancher rather than to the value added by the manufacturing process.

19.—Live Stock Slaughtered at Inspected Establishments, 1937-52, and by Month, 1952

(Exclusive of Newfoundland)

Year	Cattle	Calves	Sheep	Hogs	Year and Month	Cattle	Calves	Sheep	Hogs
	No.	No.	No.	No.		No.	No.	No.	No.
1937	923,961	702,405	821,758	3,802,141	**1952**				
1938	859,260	676,579	801,679	3,137,203	January	91,850	23,226	24,876	506,066
1939	873,660	679,117	783,828	3,623,645	February	71,552	22,966	21,024	499,758
1940	890,919	703,918	765,165	5,457,083	March	68,430	38,775	16,021	446,341
1941	1,003,691	727,829	828,603	6,280,345	April	81,465	77,129	17,586	571,743
1942	970,415	666,672	825,368	6,196,850	May	122,243	71,692	19,273	532,634
1943	1,021,054	594,087	889,317	7,168,525	June	115,763	58,121	15,133	425,808
1944	1,354,121	661,245	959,169	8,766,417	July	107,515	50,432	24,682	412,895
1945	1,891,024	787,626	1,185,161	5,681,629	August	98,895	43,044	45,616	391,829
1946	1,668,441	752,343	1,213,235	4,252,591	September	108,826	48,420	75,787	428,411
1947	1,291,759	665,311	900,766	4,452,816	October	140,642	52,478	125,132	583,012
1948	1,489,883	787,410	768,943	4,487,649	November	127,587	43,165	81,117	642,755
1949	1,439,489	766,277	629,673	4,098,609	December	102,862	38,312	46,719	792,893
1950	1,284,683	773,205	521,089	4,405,055					
1951	1,149,789	583,718	438,518	4,488,007	**Totals, 1952**	**1,237,630**	**567,760**	**512,966**	**6,234,145**

Wool.—Wool production in Canada (exclusive of Newfoundland) in 1952 was 11·8 p.c. above that of 1951. The 1935-39 average was 16,022,000 lb. and the 1952 production 7,691,000 lb. The shorn-wool production in 1952 was higher, the result of the increase in sheep population. Average fleece weight was 7·7 lb. compared with 7·5 lb. in 1951. The 11·1 p.c. increase in wool pulled from domestic skins was partly accounted for by an increase in inspected slaughterings of sheep and lambs.

Exports of wool in 1952 were 3,639,000 lb. compared with 2,656,000 lb. in 1951, while imports dropped from 69,012,000 lb. in 1951 to 49,537,000 lb. in 1952. Thus, assuming there was no change in stocks, the domestic disappearance of wool was lower by 26·8 p.c. in 1952 than in 1951.

Comparable data for the period 1942-50 are not included in this edition because revisions based on census information have not yet been completed. Revised figures for 1951, based on the census, with comparable data for 1952 are as follows:—

		1951	*1952*
Shorn Wool—			
Yield per fleece	lb.	7·5	7·7
Total yield shorn	'000 lb.	5,700	6,378
Price per pound	cts.	74	36
Total value of shorn wool	$'000	4,231	2,265
Total pulled wool	'000 lb.	1,182	1,313
Total wool production	"	6,882	7,691
Apparent consumption	"	73,238	53,589

Subsection 5.—Dairying

Milk Production.—Milk production in 1952 amounted to 16,784,982,000 lb., an increase of 361,400,000 lb. over the previous year but a considerable reduction from the high point of 17,628,610,000 lb. reached in 1945. The proportion of the total milk production used for factory-made dairy products increased from 51·1 p.c. in 1951 to 52·2 p.c. in 1952, and the proportion sold in fluid form showed a fractional increase. Milk used for all purposes on farms (home consumed, manufactured and fed) declined from 23·1 p.c. of the total in 1951 to 22·0 p.c. in 1952.

20.—Production and Utilization of Milk, by Province, 1949-52, with Totals for 1945-52

NOTE.—Figures for years prior to 1949 will be found in corresponding tables of previous editions of the Year Book.

Province and Year	Used in Manufacture		Milk Otherwise Used			Total Milk Production
	On Farms	In Factories	Fluid Sales	Farm-Home Consumed	Fed on Farms	
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Newfoundland	..	..	..	..	..	..
Prince Edward Island 1949	14,198	124,622	21,171	24,130	9,791	193,912
1950	10,192	119,053	22,209	23,630	11,880	186,964
1951	9,278	130,546	22,674	24,170	12,924	199,592
1952p	7,919	123,739	23,194	23,300	10,446	188,598
Nova Scotia 1949	64,058	184,307	128,116	49,150	16,820	442,451
1950	62,839	173,104	132,166	47,330	19,824	435,263
1951	51,663	156,800	138,733	44,610	19,198	411,004
1952p	46,298	153,190	145,772	47,160	24,420	416,840
New Brunswick 1949	99,390	205,008	80,266	58,770	15,540	458,974
1950	88,214	194,526	80,606	60,690	19,530	443,566
1951	96,813	189,812	81,837	56,820	22,200	447,482
1952p	73,453	188,169	83,516	56,470	21,750	423,358
Quebec 1949	191,118	2,795,875	1,303,797	358,200	223,500	4,872,490
1950	200,092	2,639,871	1,336,469	367,900	295,800	4,840,132
1951	250,326	2,738,813	1,366,377	354,600	257,100	4,967,216
1952p	271,179	2,965,601	1,455,277	355,800	250,300	5,298,157
Ontario 1949	173,382	3,235,218	1,569,465	523,200	196,800	5,698,065
1950	137,722	2,971,223	1,585,005	541,800	229,800	5,465,550
1951	133,809	2,945,242	1,603,576	524,600	233,800	5,441,027
1952p	89,479	3,058,363	1,596,931	522,000	225,700	5,492,473
Manitoba 1949	140,510	622,669	194,186	129,900	73,160	1,160,425
1950	122,914	571,827	191,247	123,000	93,740	1,102,728
1951	111,808	570,325	189,312	121,600	104,130	1,097,175
1952p	95,618	601,888	193,349	120,000	102,420	1,113,275
Saskatchewan 1949	323,803	775,604	179,658	298,600	123,400	1,701,065
1950	289,759	707,974	181,712	300,800	131,600	1,611,845
1951	277,716	685,492	185,425	278,000	154,600	1,581,233
1952p	259,651	683,897	191,171	268,100	174,300	1,577,119
Alberta 1949	202,388	849,349	279,592	178,000	155,700	1,665,029
1950	162,792	827,929	293,036	188,800	222,900	1,695,457
1951	141,752	770,784	313,085	196,000	232,000	1,653,621
1952p	119,376	748,970	332,957	185,900	237,700	1,624,903
British Columbia 1949	29,475	227,677	327,502	39,700	26,580	650,934
1950	24,273	238,825	334,577	41,500	28,180	667,355
1951	21,649	209,894	325,859	40,150	27,680	625,232
1952p	22,001	231,493	322,805	42,620	31,340	650,259
Totals 1945	**1,256,709**	**9,851,624**	**4,007,858**	**1,716,296**	**796,123**	**17,628,610**
1946	**1,278,736**	**8,871,785**	**4,254,000**	**1,740,072**	**810,960**	**16,955,553**
1947	**1,327,236**	**9,210,818**	**4,162,539**	**1,722,923**	**817,272**	**17,240,788**
1948	**1,480,590**	**8,882,812**	**4,024,917**	**1,594,160**	**747,883**	**16,730,362**
1949	**1,238,322**	**9,020,329**	**4,083,753**	**1,659,650**	**841,291**	**16,843,345**
1950	**1,098,797**	**8,444,332**	**4,157,027**	**1,695,450**	**1,053,254**	**16,448,860**
1951	**1,094,814**	**8,397,708**	**4,226,878**	**1,640,550**	**1,063,632**	**16,423,582**
1952p	**984,974**	**8,755,310**	**4,344,972**	**1,621,350**	**1,078,376**	**16,784,982**

21.—Farm Values of Milk Production, by Province, 1949-52, with Totals for 1945-52

NOTE.—Figures for years prior to 1949 will be found in corresponding tables of previous editions of the Year Book.

Province and Year	Value of Milk Used in Manufacture		Value of Milk Otherwise Used			Value of Total Milk Production[1]
	On Farms	In Factories	Fluid Sales	Farm-Home Consumed	Fed on Farms[1]	
	$'000	$'000	$'000	$'000	$'000	$'000
Newfoundland	..	..	..	..	..	..
Prince Edward Island..1949	371	2,814	742	632	681	5,240
1950	244	2,464	783	565	654	4,710
1951	246	3,054	823	650	743	5,516
1952p	210	2,738	872	603	653	5,076
Nova Scotia.....1949	1,621	4,272	5,148	1,376	1,156	13,573
1950	1,470	3,750	5,442	1,264	1,245	13,171
1951	1,323	3,972	5,868	1,365	1,183	13,711
1952p	1,166	3,697	6,427	1,382	1,280	13,952
New Brunswick.....1949	2,583	4,473	3,142	1,581	1,191	12,970
1950	2,101	3,911	3,215	1,529	1,296	12,052
1951	2,562	4,433	3,546	1,625	1,429	13,595
1952p	1,944	4,072	3,753	1,536	1,322	12,627
Quebec.....1949	4,919	64,327	46,978	9,170	11,010	136,404
1950	4,765	57,035	47,741	8,756	11,767	130,064
1951	6,624	68,931	51,248	9,929	13,863	150,595
1952p	7,060	67,797	58,845	9,393	14,037	157,132
Ontario.....1949	4,595	71,655	56,751	11,877	8,339	153,217
1950	3,321	62,573	58,207	12,245	8,502	144,848
1951	3,598	73,933	62,972	13,902	10,447	164,852
1952p	2,330	68,059	68,482	12,946	9,934	161,751
Manitoba.....1949	3,556	12,845	6,300	3,014	3,700	29,415
1950	2,770	10,741	6,154	2,620	3,733	26,018
1951	2,815	12,671	6,655	3,101	4,907	30,149
1952p	2,285	12,355	6,903	2,868	4,742	29,153
Saskatchewan.....1949	7,656	15,867	5,759	6,868	5,871	42,021
1950	6,443	13,007	5,985	6,287	5,381	37,103
1951	6,993	14,961	6,504	6,839	6,501	41,798
1952p	6,317	13,777	6,990	6,113	6,611	39,808
Alberta.....1949	4,777	18,074	9,685	4,272	6,436	43,244
1950	3,599	16,228	11,030	4,191	7,354	42,402
1951	3,509	17,699	12,591	5,076	8,433	47,308
1952p	2,853	16,177	14,145	4,517	7,963	45,655
British Columbia.....1949	712	6,072	13,250	1,060	854	21,948
1950	548	6,220	12,972	1,029	867	21,636
1951	554	6,504	14,860	1,120	889	23,927
1952p	554	6,596	16,547	1,129	961	25,787
Totals.....1945	**18,915**	**163,265**	**102,981**	**30,680**	**29,805**	**345,646**
1946	**21,306**	**163,407**	**118,624**	**34,513**	**30,526**	**368,376**
1947	**28,217**	**186,796**	**131,409**	**38,393**	**36,087**	**420,902**
1948	**41,255**	**232,403**	**146,446**	**45,170**	**40,868**	**506,142**
1949	**30,790**	**200,399**	**147,755**	**39,850**	**39,238**	**458,032**
1950	**25,261**	**175,929**	**151,529**	**38,486**	**40,799**	**432,004**
1951	**28,224**	**206,158**	**165,067**	**43,607**	**48,395**	**491,451**
1952p	**24,719**	**195,268**	**182,964**	**40,487**	**47,503**	**490,941**

[1] Includes values of skim milk, buttermilk and whey retained on farms.

Butter and Cheese Production.—Butter production in 1952 amounted to 324,499,000 lb., an increase of approximately 18,584,000 lb. as compared with 1951. Of the total produced in 1952, 280,747,000 lb. was creamery butter, 42,039,000 lb. dairy or farm-made butter and 1,713,000 lb. whey butter. This output may be compared with the peak production of 371,000,000 lb. reached in 1941 which was

made up of 286,000,000 lb. of creamery butter, 83,000,000 lb. of dairy butter and about 2,000,000 lb. of whey butter. The decline from the 1941 total was not continuous in the intervening years. The total for 1943 was 2,000,000 lb. lower than that for 1941, followed by declines for the next three years to 328,194,000 lb. in 1946, increases for two years to 350,317,000 lb. in 1948 and then decreases again to 1951, the lowest production since 1930. However, the loss in butter production in 1951 was more than covered by margarine output which amounted to 105,151,000 lb. In 1952, the amount of margarine produced increased to 105,924,000 lb.

Factory cheese production in 1952 was estimated at 72,658,000 lb., a decrease of 21,603,000 lb. or 22·9 p.c. from the 1951 estimate and a 65·0 p.c. decline from the peak production of 207,431,000 lb. reached in 1942. Total cheese production, including factory and farm-made cheese, amounted to 208,219,000 lb. in 1942. The total manufactured in 1952, on the other hand, was the lowest on record. Indeed, judging from early estimates of farm-made cheese production and cheese exports, it is apparent that the 1952 output was the lowest since the mid-1880's. Following the peak output of 1942, production fell to 166,274,000 lb. in 1943 and rose again to 188,729,000 lb. in 1945. However, from 1945 to 1948 factory output was cut approximately in half as a result of the restrictions placed on the importation of cheese into the United Kingdom. Lower creamery butterfat prices in 1949 and the uncertainties resulting from the introduction of margarine in that year caused farmers to sell more of their milk to the cheese factories, but this recovery was temporary and in the three succeeding years a decline of over 48,000,000 lb. occurred.

22.—Production of Butter and Cheese, by Province, 1949-52, with Totals for 1945-52

NOTE.—Figures for years prior to 1949 will be found in the corresponding tables of previous editions of the Year Book.

Province and Year	Butter				Cheese
	Creamery	Dairy	Whey	Total	Factory[1]
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Newfoundland	..	..	..		
Prince Edward Island 1949	4,852	606	—	5,458	746
1950	4,626	435	—	5,061	707
1951	5,012	396	—	5,408	878
1952	4,886	338	—	5,224	514
Nova Scotia 1949	6,283	2,734	—	9,017	—
1950	5,927	2,682	—	8,609	—
1951	5,080	2,205	—	7,285	—
1952	4,953	1,976	—	6,929	—
New Brunswick 1949	7,674	4,242	—	11,916	873
1950	7,320	3,765	—	11,085	856
1951	6,767	4,132	—	10,899	1,331
1952	6,969	3,135	—	10,104	833
Quebec 1949	93,623	8,157	259	102,039	27,106
1950	87,488	8,540	215	96,243	23,379
1951	91,363	10,684	173	102,220	18,921
1952	102,346	11,574	118	114,038	14,161
Ontario 1949	74,597	7,400	2,074	84,071	86,788
1950	68,699	5,878	1,925	76,502	72,388
1951	67,137	5,711	1,791	74,639	68,657
1952	78,903	3,819	1,542	84,264	53,187

For footnote, *see* end of table, p. 420.

22.—Production of Butter and Cheese, by Province, 1949-52, with Totals for 1945-52—concluded

Province and Year	Butter				Cheese
	Creamery	Dairy	Whey	Total	Factory[1]
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Manitoba.....1949	24,419	5,997	37	30,453	1,839
1950	22,522	5,246	30	27,798	1,447
1951	22,277	4,772	28	27,077	1,457
1952	23,549	4,081	27	27,657	1,419
Saskatchewan.....1949	31,750	13,820	—	45,570	393
1950	28,972	12,367	—	41,339	373
1951	27,903	11,853	—	39,756	376
1952	27,811	11,082	—	38,893	56
Alberta.....1949	31,996	8,638	16	40,650	2,787
1950	31,238	6,948	22	38,208	2,944
1951	28,960	6,050	24	35,034	2,084
1952	27,660	5,095	24	32,779	2,022
British Columbia.....1949	4,611	1,258	9	5,878	498
1950	4,672	1,036	10	5,718	565
1951	2,666	924	7	3,597	557
1952	3,670	939	2	4,611	466
Totals.....**1945**	**293,811**	**53,283**	**2,805**	**349,899**	**188,729**
1946	**271,491**	**54,225**	**2,478**	**328,194**	**148,884**
1947	**290,952**	**56,295**	**2,225**	**349,472**	**124,831**
1948	**285,629**	**62,845**	**1,843**	**350,317**	**93,948**
1949	**279,805**	**52,852**	**2,395**	**335,052**	**121,030**
1950	**261,464**	**46,897**	**2,202**	**310,563**	**102,659**
1951	**257,165**	**46,727**	**2,023**	**305,915**	**94,261**
1952	**280,747**	**42,039**	**1,713**	**324,499**	**72,658**

[1] Factory-made cheese includes cheddar and other cheese made from whole milk. The latter amounted to 4,115,000 lb. in 1949, 5,005,000 lb. in 1950, 5,477,000 lb. in 1951 and 6,084,000 lb. in 1952, produced principally in Quebec and Ontario.

Production of Concentrated Milk Products.—Products manufactured in concentrated milk plants and creameries equipped with powder manufacturing facilities are classified as whole-milk products and milk by-products. Production of whole-milk products in 1952 increased 3 p.c. over 1951 production, while concentrated milk by-products increased 27 p.c.

23.—Production of Concentrated Milk Products, 1949-52

(Exclusive of Newfoundland)

Product	1949	1950	1951	1952[p]
	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Concentrated Whole-Milk Products—				
Evaporated milk	231,306	256,484	290,443	305,715
Condensed milk	23,543	14,541	19,541	16,539
Whole-milk powder	13,160	15,679	17,404	16,035
Miscellaneous whole-milk products	5,020	7,742	13,159	11,919
Totals, Concentrated Whole-Milk Products	**273,029**	**294,446**	**340,547**	**350,208**
Concentrated Milk By-products—				
Condensed skim milk	4,279	4,366	6,282	4,741
Evaporated skim milk	10,354	12,407	10,323	10,428
Skim-milk powder	64,312	53,263	52,748	86,778
Condensed buttermilk	3,417	3,020	4,107	2,668
Buttermilk powder	5,485	5,006	5,428	6,539
Casein	3,538	4,309	6,678	2,830
Totals, Concentrated Milk By-Products[1]	**98,313**	**87,924**	**95,215**	**121,267**
Grand Totals	**371,342**	**382,370**	**435,762**	**471,475**

[1] Includes lactose and whey powder.

Ice-Cream Production.—The output of ice cream in Canada in 1952 was higher by 7 p.c. than in 1951; compared with 1941 there was an increase in production amounting to 92 p.c. The per capita disappearance of ice cream in 1952 amounted to 1·9 gal.

24.—Production of Ice Cream, by Province, 1949-52

Province	1949	1950	1951	1952	Province	1949	1950	1951	1952
	'000 gal.	'000 gal.	'000 gal.	'000 gal.		'000 gal.	'000 gal.	'000 gal.	'000 gal.
N'f'ld	..	..	..	..	Man.	1,650	1,496	1,719	1,832
P.E.I.	150	155	185	196	Sask.	1,556	1,383	1,519	1,748
N.S.	1,538	1,420	1,578	1,478	Alta.	1,978	1,967	2,109	2,293
N.B.	885	749	913	867	B.C.	2,416	2,451	2,892	2,964
Que.	4,715	4,762	5,227	5,702					
Ont.	9,902	9,439	9,224	10,158	**Totals**	**24,790**	**23,822**	**25,366**	**27,238**

Domestic Disappearance of Dairy Products.—The estimated consumption of fluid milk and cream, on a milk basis, amounted to 4,524,000,000 pt. in 1952, 74,000,000 pt. higher than the 1951 consumption and 670,000,000 pt. above that of 1942. The average daily consumption per capita was 0·88 pt. in 1952 compared with 0·89 pt. in 1951. The peak daily per capita consumption of approximately 1 pt. was reached during the period 1944-46 when subsidies were in effect.

25.—Estimated Consumption of Milk and Cream (expressed as Milk), by Province, 1949-52, with Totals for 1945-52

Province and Year	Estimated Consumption	Daily Per Capita Consumption	Province and Year	Estimated Consumption	Daily Per Capita Consumption
	'000 pt.	pt.		'000 pt.	pt.
Newfoundland	..		Saskatchewan 1949	366,564	1·17
			1950	369,814	1·16
Prince Edward Island 1949	34,624	1·01	1951	354,932	1·17
1950	35,017	1·00	1952	351,578	1·14
1951	35,786	1·00			
1952	35,503	0·94	Alberta 1949	348,221	1·10
			1950	366,701	1·12
Nova Scotia 1949	134,437	0·57	1951	387,358	1·13
1950	136,071	0·57	1952	394,472	1·11
1951	138,900	0·59			
1952	146,170	0·61	British Columbia 1949	277,036	0·68
			1950	283,752	0·68
New Brunswick 1949	105,913	0·56	1951	276,149	0·65
1950	107,657	0·57	1952	275,768	0·63
1951	105,582	0·56			
1952	106,574	0·55	**Totals 1945**	**4,344,122**	**1·02**
			1946	**4,547,637**	**1·01**
Quebec 1949	1,258,049	0·89			
1950	1,290,136	0·89	**1947**	**4,465,570**	**0·97**
1951	1,302,315	0·88			
1952	1,370,092	0·90	**1948**	**4,262,270**	**0·91**
Ontario 1949	1,585,721	0·98	**1949**	**4,357,279**	**0·90**
1950	1,611,826	0·98			
1951	1,612,457	0·96	**1950**	**4,440,128**	**0·90**
1952	1,605,444	0·92			
			1951	**4,450,094**	**0·89**
Manitoba 1949	246,714	0·87			
1950	239,154	0·82	**1952**	**4,524,010**	**0·88**
1951	236,615	0·84			
1952	238,409	0·82			

Domestic disappearance of butter (creamery, dairy and whey) was approximately 318,478,000 lb. in 1952, compared with 317,204,000 lb. in 1951 and 370,153,000 lb. in 1948. Per capita figures reflected this decline, falling from 28·73 lb. in 1948 to 22·64 lb. in 1951 and 22·07 lb. in 1952. The per capita consumption of margarine for 1951 and 1952 was 7·45 lb. and 7·34 lb., respectively.

The domestic disappearance of cheese (including cheddar, process and other) was about 84,719,000 lb. in 1952, an average of 5·87 lb. per capita. In the previous year the per capita average was 5·70 lb.

The domestic disappearance of concentrated whole-milk products increased from 19·92 lb. per capita in 1951 to 20·31 lb. in 1952.

Disappearance of all dairy products represented the equivalent of approximately 1,068 lb. of milk per capita in 1952 compared with 1,082 lb. in 1951.

26.—Domestic Disappearance of Dairy Products, 1949-52

(Exclusive of Newfoundland)

Product	1949		1950		1951		1952	
	Disappearance	Per Capita	Disappearance	Per Capita	Disappearance	Per Capita	Disappearance	Per Capita
	'000 lb.	lb.	'000 lb.	lb.	'000 lb.	lb.	'000 lb.	lb.
Fluid Milk and Cream—								
Milk	4,788,617	362·75	4,870,295	361·03	4,884,085	357·86	4,955,368	352·54
Cream as product	181,482	13·75	181,759	13·47	178,283	13·06	182,372	12·97
Cream as milk	832,273	63·04	857,471	63·56	856,537	62·76	880,605	62·65
Totals, Milk and Cream	5,620,890	425·79	5,727,766	424·59	5,740,622	420·62	5,835,973	415·19
Butter—								
Creamery	261,186	19·40	276,671	19·98	268,542	19·17	274,717	19·04
Dairy	52,854	3·93	46,897	3·39	46,727	3·33	42,040	2·91
Whey	2,581	0·19	2,187	0·16	1,935	0·14	1,721	0·12
Totals, Butter	316,621	23·52	325,755	23·53	317,204	22·64	318,478	22·07
Cheese—								
Cheddar	29,710	2·21	31,466	2·27	29,713	2·12	31,837	2·21
Process	34,292	2·55	36,409	2·63	39,551	2·82	41,178	2·85
Other	6,371	0·47	8,597	0·62	10,579	0·76	11,704	0·81
Totals, Cheese	70,373	5·23	76,472	5·52	79,843	5·70	84,719	5·87
Concentrated Whole-Milk Products—								
Evaporated	197,777	14·69	239,408	17·29	250,169	17·86	265,163	18·38
Condensed	9,412	0·70	10,976	0·79	10,712	0·76	11,017	0·76
Powdered	8,499	0·63	6,038	0·44	4,994	0·36	5,041	0·35
Totals, Concentrated Whole-Milk Products[1]	220,706	16·39	264,167	19·08	279,032	19·92	293,139	20·31
Concentrated Milk By-products—								
Evaporated	10,337	[2]	11,942	[2]	9,057	[2]	10,349	[2]
Condensed	4,328	[2]	4,574	[2]	6,087	[2]	4,700	[2]
Powdered	37,308	[2]	46,817	[2]	52,052	[2]	49,356	[2]
Totals, Concentrated Milk By-products[3]	70,108	[2]	80,779	[2]	91,534	[2]	83,086	[2]
All Dairy Products in Terms of Milk—								
Butter	**7,357,957**	**546·57**	**7,581,199**	**547·58**	**7,386,753**	**527·29**	**7,421,616**	**514·32**
Cheese	**686,960**	**51·03**	**760,184**	**54·91**	**774,352**	**55·28**	**824,447**	**57·13**
Concentrated	**535,052**	**39·75**	**619,011**	**44·71**	**649,125**	**46·34**	**679,733**	**47·11**
Grand Totals[4]	**14,634,228**	**1,095·33**	**15,113,320**	**1,102·50**	**15,007,098**	**1,082·10**	**15,251,405**	**1,067·68**

[1] Includes malted milk, cream powder and substandard products of a variable fat content, items that do not appear separately in this table. [2] Since the quantities used for human consumption and livestock feeding cannot definitely be established, per capita figures cannot be calculated. [3] Includes milk by-products items not separately listed, i.e., condensed buttermilk, powdered buttermilk, sugar of milk, casein and powdered whey. [4] Includes ice cream in terms of milk.

Subsection 6.—Poultry and Eggs

Statistics of production and consumption of poultry meat and eggs are given in Tables 27 to 29.

27.—Numbers and Values of Poultry on Farms, by Province, as at June 1, 1951 and 1952

Province and Year	Hens and Chickens	Turkeys	Geese	Ducks	Totals
	Birds				
	'000	'000	'000	'000	'000
Newfoundland 1951	74	2	--	--	76
1952	..	..	..	..	..
Prince Edward Island 1951	978	16	21	15	1,030
1952	925	18	21	15	979
Nova Scotia 1951	1,630	31	5	4	1,670
1952	1,480	28	4	3	1,515
New Brunswick 1951	1,231	41	6	5	1,283
1952	1,145	44	5	5	1,199
Quebec 1951	10,090	423	14	49	10,576
1952	9,875	440	13	49	10,377
Ontario 1951	23,767	667	139	165	24,738
1952	20,700	692	137	166	21,695
Manitoba 1951	6,458	311	55	65	6,889
1952	6,667	418	62	65	7,212
Saskatchewan 1951	8,587	400	34	51	9,072
1952	8,680	587	43	74	9,384
Alberta 1951	8,348	395	65	62	8,870
1952	8,420	640	80	95	9,235
British Columbia 1951	3,452	244	14	20	3,730
1952	3,840	300	21	25	4,186
Totals 1951	**64,615**	**2,529**	**353**	**437**	**67,934**
1952	**61,732**	**3,167**	**386**	**497**	**65,782**
	Values				
	$	$	$	$	$
Newfoundland 1951	202,611	11,652	2,740	1,842	218,845
1952	..	..	..	..	..
Prince Edward Island 1951	1,174,695	47,000	52,000	18,000	1,292,000
1952	1,107,000	56,000	51,000	18,000	1,232,000
Nova Scotia 1951	2,291,678	88,000	18,000	7,000	2,405,000
1952	2,200,000	88,000	12,000	4,000	2,304,000
New Brunswick 1951	1,639,008	150,000	21,000	8,000	1,818,000
1952	1,602,000	166,000	18,000	8,000	1,794,000
Quebec 1951	13,738,383	1,220,000	39,000	81,000	15,078,000
1952	13,657,000	1,471,000	33,000	66,000	15,227,000
Ontario 1951	32,865,259	2,195,000	429,000	245,000	35,734,000
1952	25,817,000	2,229,000	349,000	231,000	28,626,000
Manitoba 1951	6,303,324	821,000	120,000	75,000	7,319,000
1952	5,501,000	874,000	120,000	63,000	6,558,000
Saskatchewan 1951	6,716,480	1,077,000	86,000	71,000	7,951,000
1952	7,083,000	1,390,000	88,000	82,000	8,643,000
Alberta 1951	8,153,343	1,182,000	175,000	80,000	9,590,000
1952	7,886,000	1,776,000	186,000	133,000	9,981,000
British Columbia 1951	4,857,596	815,000	54,000	29,000	5,756,000
1952	5,584,000	875,000	66,000	42,000	6,567,000
Totals 1951	**77,942,377**	**7,607,000**	**997,000**	**616,000**	**87,162,000**
1952	**70,437,000**	**8,925,000**	**923,000**	**647,000**	**80,932,000**

28.—Production, Utilization and Value of Farm Eggs, by Province, 1952

Province	Average Number of Layers	Average Production Per 100 Layers	Net Eggs Laid[1]	Sold	Used on Farms[2]	Value per Dozen[3]	Total Value Sold and Used
	'000	No.	'000 doz.	'000 doz.	'000 doz.	cts.	$'000
Newfoundland	..	..	..	..	..	..	..
Prince Edward Island	432	17,438	6,351	5,418	933	34·5	2,193
Nova Scotia	670	20,566	11,407	8,078	3,329	46·5	5,299
New Brunswick	508	18,265	7,614	5,725	1,889	48·5	3,694
Quebec	3,408	18,872	53,409	40,526	12,883	44·2	23,606
Ontario	8,565	18,897	133,398	119,731	13,667	41·2	54,973
Manitoba	2,075	16,569	28,546	24,529	4,017	32·0	9,135
Saskatchewan	2,482	15,456	31,996	24,259	7,737	27·9	8,927
Alberta	2,544	16,179	34,113	25,634	8,479	33·9	11,560
British Columbia	1,552	19,679	25,069	22,893	2,176	43·3	10,862
Totals	**22,236**	**157,991**	**331,903**	**276,793**	**55,110**	**39·2**	**130,249**

[1] Total laid less loss. This figure is not equal to "Sold" and "Used on Farms" because of the carry-over on farms at beginning and end of the year. [2] Includes eggs used for hatching. [3] Average value at farms for all purposes.

29.—Production and Domestic Disappearance of Eggs and Poultry, 1952

Item	Farm Production	Produced Elsewhere	Total Production	Total Supply	Domestic Disappearance	Per Capita Consumption
	'000 doz.	'000 doz.	'000 doz.	'000 doz.	'000 doz.	doz.
Eggs	331,903	9,609	341,512	348,372	329,312	22·7
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	lb.
Poultry—						
Fowl and chickens	324,662	11,719	336,383	367,853	348,579	24·8
Turkeys	58,244	1,758	60,002	66,999	58,025	4·1
Geese	4,625	104	4,729	4,972	4,839	0·3
Ducks	4,179	105	4,284	4,851	4,651	0·3
Totals, Poultry	391,712	13,686	405,398	444,675	416,094	29·6

Subsection 7.—Fruit

Commercial fruit growing in Canada is confined almost exclusively to rather limited areas in the Provinces of Nova Scotia, New Brunswick, Quebec, Ontario and British Columbia. In Nova Scotia production is centred mainly in the Annapolis Valley and in New Brunswick it is centred in the St. John River Valley and Westmorland County. The fruit-growing districts of Quebec are the Montreal area, the North Shore area, the Eastern Townships and Quebec city district. In Ontario, fruit is grown in all the counties adjacent to the St. Lawrence River and the Great Lakes as far west as Georgian Bay, the Niagara district being the most productive. In British Columbia, the four well-defined fruit areas are the Okanagan Valley, the Fraser Valley, the Kootenay and Arrow Lakes district and Vancouver Island. The climate elsewhere in Canada is not suitable for commercial tree-fruit culture.

A marketing system has been developed for distributing fresh fruit from the specialized production areas to all parts of the country and a very large proportion of the deciduous fruit consumed in Canada is domestically grown. Considerable

quantities of apples, strawberries and blueberries are exported annually. The United States is the most important export market for Canadian fruit. The import restrictions of the United Kingdom have greatly reduced exports of Canadian fruit to that market in recent years. In most of the producing areas, and particularly in the Annapolis Valley of Nova Scotia, the Niagara Peninsula of Ontario and the Okanagan Valley of British Columbia, fruit-growing is the principal form of agriculture and its prosperity is of paramount importance to the economy of those areas. Apples and small fruits are produced commercially in the four provinces named, but tender tree fruits and commercial vineyards are limited to Ontario and British Columbia.

Canning and processing industries have developed in the fruit-growing districts and, although the importance of the processing market varies with different fruits, it provides a valuable outlet for substantial proportions of most Canadian-grown fruit crops. Some canned fruits are exported.

30.—Estimated Commercial Production and Farm Value of Fruit, 1946-52

Kind of Fruit and Year	Quantity	Weight	Value	Average Value per Unit of Quantity	Kind of Fruit and Year	Quantity	Weight	Value	Average Value per Unit of Quantity
	'000 bu.	'000 lb.	$'000	$		'000 bu.	'000 lb.	$'000	$
Apples—					Cherries—				
1946	19,282	867,690	21,066	1·09	1946	337	16,850	1,977	5·87
1947	15,617	702,765	17,236	1·10	1947	299	14,950	1,953	6·53
1948	13,404	603,180	16,938	1·26	1948	392	19,600	2,735	6·98
1949	18,142	816,390	12,989	0·72	1949	491	24,550	3,139	6·39
1950	16,166	727,470	12,467	0·77	1950	359	17,950	2,065	5·75
1951	13,610	612,450	13,893	1·02	1951	419	20,950	2,263	5·40
1952	11,936	537,120	16,654	1·40	1952	439	21,950	2,251	5·13
Pears—						'000 qt.			
1946	951	47,550	1,918	2·02	Strawberries—				
1947	966	48,300	1,839	1·30	1946	17,657	22,071	4,437	0·25
1948	789	39,450	1,784	2·26	1947	25,904	32,380	5,305	0·20
1949	1,058	52,900	2,055	1·94	1948	33,244	41,555	6,679	0·20
1950	864	43,200	1,877	2·17	1949	26,545	33,181	5,456	0·21
1951	1,225	61,250	2,238	1·83	1950	27,444	34,305	6,742	0·25
1952	1,055	52,750	2,088	1·98	1951	26,204	32,755	5,662	0·22
					1952	27,632	34,540	5,721	0·21
Plums and Prunes—					Raspberries—				
1946	811	40,550	1,491	1·84	1946	13,240	16,550	3,252	0·25
1947	779	38,950	1,154	1·48	1947	18,212	22,765	4,209	0·23
1948	671	33,550	1,603	2·39	1948	15,657	19,571	3,148	0·20
1949	827	41,350	961	1·16	1949	10,936	13,670	2,476	0·23
1950	600	30,000	1,016	1·69	1950	11,964	14,955	2,840	0·24
1951	692	34,600	865	1·25	1951	11,772	14,715	3,133	0·27
1952	706	35,300	967	1·37	1952	12,091	15,114	2,867	0·24
						'000 lb.			
Peaches—					Loganberries—				
1946	2,145	107,250	4,916	2·29	1946	1,637	1,637	202	0·12
1947	1,681	84,050	3,528	2·10	1947	1,413	1,413	196	0·14
1948	1,760	88,000	4,371	2·48	1948	2,261	2,261	322	0·14
1949	2,011	100,550	4,365	2·17	1949	877	877	114	0·13
1950	1,222	61,100	2,754	2·25	1950	1,197	1,197	166	0·14
1951	1,792	89,600	4,004	2·23	1951	883	883	147	0·17
1952	1,955	97,750	3,785	1·94	1952	1,449	1,449	224	0·15
Apricots—					Grapes—				
1946	147	7,350	342	2·33	1946	67,321	67,321	3,160	0·05
1947	116	5,800	210	1·81	1947	73,803	73,803	3,568	0·05
1948	152	7,600	477	3·14	1948	57,623	57,623	2,559	0·04
1949	181	9,050	612	3·38	1949	51,194	51,194	2,013	0·04
1950	18	900	77	4·28	1950	109,189	108,189	3,543	0·03
1951	38	1,900	116	3·05	1951	88,602	88,602	2,813	0·03
1952	250	12,500	344	1·38	1952	86,713	86,713	3,050	0·04

31.—Quantity and Value of Commercial Fruit Produced, by Province, 1946-52

Year	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	British Columbia	Total
	Quantity						
	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1946		274,223,000	15,956,000	48,862,000	281,854,000	573,924,000	1,194,819,000
1947		166,564,000	16,715,000	63,100,000	298,854,000	479,943,000	1,025,176,000
1948	..	105,918,000	16,056,000	60,775,000	267,468,000	462,173,000	912,390,000
1949	..	170,875,000	17,720,000	99,750,000	331,894,000	523,473,000	1,143,712,000
1950	..	104,359,000	17,450,000	91,147,000	360,669,000	466,641,000	1,040,266,000
1951	..	72,831,000	17,331,000	148,719,000	393,048,000	325,776,000	957,705,000
1952	839,000	81,158,000	14,980,000	72,406,000	326,905,000	398,898,000	895,186,000
	Value						
	$	$	$	$	$	$	$
1946		5,993,000	667,000	2,022,000	14,636,000	19,443,000	42,761,000
1947		2,905,000	630,000	3,548,000	14,181,000	17,934,000	39,198,000
1948		2,210,000	734,000	3,605,000	15,018,000	19,049,000	40,616,000
1949	..	2,568,000	722,000	4,108,000	12,645,000	14,137,000	34,180,000
1950	..	1,843,000	680,000	3,822,000	14,305,000	12,897,000	33,547,000
1951	..	1,518,000	682,000	5,122,000	14,762,000	13,050,000	35,134,000
1952	101,000	2,047,000	744,000	4,574,000	14,907,000	15,578,000	37,951,000

Subsection 8.—Special Crops

Tobacco.—The chief tobacco-growing area of Canada is located in southern Ontario in the counties adjacent to Lake Erie. Most of the cigarette tobacco comes from that district. In Ontario in 1952, 81,303 acres of flue-cured or Bright Virginia type tobacco and 1,406 acres of Burley tobacco were harvested. These are the most important types grown, though dark air-cured and fire-cured tobacco as well as cigar tobacco are grown on a more limited scale. The only other important production comes from Quebec. In 1952, 4,650 acres of flue-cured tobacco, 1,227 acres of cigar tobacco and 1,197 acres of pipe tobacco were harvested in that Province.

A study of Department of National Revenue reports of tax-paid withdrawals of tobacco products reveals changes in the smoking habits of Canadians during the past three decades. In 1922, the first year for which comparable figures are available, the Canadian per capita consumption of cigarettes was 229, cigars 20, cut tobacco 1·26 lb., plug tobacco 1·14 lb. and snuff about 1·25 oz. By 1952, the annual per capita consumption of cigarettes had increased to 1,237, cigars had dropped to 13·9, cut tobacco went up to 2·15 lb. and plug declined considerably.

32.—Acreages, Production and Values of the Commercial Crop of Leaf Tobacco, 1948-52, with Average for 1941-45

Year	Harvested Area	Average Yield per Acre	Total Production	Average Farm Price per lb.	Gross Farm Value
	acres	lb.	lb.	cts.	$
Av. 1941-45	80,440	1,121	90,149,000	27·1	24,429,000
1948	110,590	1,145	126,629,000	39·7	50,272,000
1949	109,053	1,282	139,820,000	39·7	55,453,000
1950	101,809	1,182	120,298,000	42·6	51,292,000
1951	118,970	1,293	153,792,000	43·1	66,213,000
1952	91,639	1,525	139,719,000	40·6	56,797,000

33.—Acreages, Production and Values of the Commercial Crop of Leaf Tobacco, by Province, 1948-52, with Average for 1941-45

Year	Quebec			Ontario			British Columbia		
	Harvested Area	Production	Value	Harvested Area	Production	Value	Harvested Area	Production	Value
	acres	'000 lb.	$	acres	'000 lb.	$	acres	'000 lb.	$
Av. 1941-45...	9,916	8,763	1,872,000	70,224	81,04	22,483,000	300	341	74,000
1948.....	12,932	13,753	3,977,000	97,634	112,857	46,287,000	24	19	8,000
1949.....	9,790	8,016	1,992,000	99,182	131,717	53,432,000	81	87	29,000
1950.....	9,163	9,556	2,732,000	92,556	110,610	48,505,000	120	132	55,000
1951.....	9,080	8,631	2,600,000	109,740	144,975	63,544,000	150	186	69,000
1952.....	7,997	8,358	2,688,000	83,548	131,236	54,065,000	94	125	44,000

34.—Acreages, Production and Values of the Commercial Crop of Leaf Tobacco, by Main Type, 1948-52, with Average for 1941-45

Type of Tobacco and Year	Harvested Area	Average Yield per Acre	Total Production	Average Farm Price per lb.	Gross Farm Value
	acres	lb.	lb.	cts.	$
Flue-cured.....Av. 1941-45	66,073	1,114	73,581,000	28·9	21,264,000
1948	90,874	1,127	102,442,000	42·5	43,546,000
1949	90,733	1,286	116,668,000	42·1	49,099,000
1950	92,080	1,175	108,202,000	44·5	48,144,000
1951	111,300	1,294	144,055,000	44·2	63,729,000
1952	86,047	1,534	131,965,000	41·6	54,867,000
Burley.....Av. 1941-45	8,064	1,223	9,866,000	20·4	2,012,000
1948	10,706	1,199	12,841,000	30·5	3,917,000
1949	11,385	1,357	15,452,000	30·5	4,708,000
1950	4,652	1,217	5,660,000	30·0	1,700,000
1951	2,480	1,457	3,609,000	30·1	1,088,000
1952	1,406	1,673	2,352,000	29·6	695,000
Cigar leaf.....Av. 1941-45	3,151	1,068	3,366,000	16·3	548,000
1948	6,463	1,300	8,402,000	25·2	2,114,000
1949	3,590	1,032	3,706,000	22·5	834,000
1950	3,212	1,300	4,175,000	22·0	919,000
1951	3,000	1,243	3,728,000	22·9	853,000
1952	2,150	1,227	2,639,000	22·9	603,000

Sugar Beets and Beetroot Sugar.—Sugar beets are grown commercially in Quebec, Ontario, Manitoba and Alberta, and seven beet-sugar factories are located in these Provinces. In Quebec, commercial production, which centres in the St. Hilaire area of the Eastern Townships, started in 1944; in 1951, about 97,000 tons were harvested from 10,000 acres. The sugar-beet industry of Ontario is largely confined to the southwestern section of the Province and factories are located at Wallaceburg and Chatham. The wartime reduction in acreage, caused by labour shortage and competition from other crops, has been overcome and, in 1951, Ontario factories processed about 341,000 tons harvested from over 31,000 acres.

Processing of sugar beets in Manitoba began in 1940 when 95,000 tons were handled. In 1951, the factory processed 178,000 tons from 19,000 harvested acres. In Alberta, where the industry has shown steady growth, sugar beets are produced

under irrigation with yields averaging above those received in the other provinces. In 1950, the three Alberta factories, located in the south of the Province at Raymond, Picture Butte and Taber, handled 349,000 tons of beets from a harvested area of over 32,000 acres.

35.—Acreages, Yields and Values of Sugar Beets, and Quantities and Values of Refined Beetroot Sugar Produced, 1947-51, with Average for 1942-46

Year	Sugar Beets					Refined Beetroot Sugar Produced		
	Harvested Area	Yield per Acre	Total Yield	Average Price per Ton	Total Value	Quantity	Value	Price per lb.
	acres	tons	tons	$	$	lb.	$	cts.
Av. 1942-46..	59,000	10·54	622,000	10·64	6,616,000	170,654,000	11,316,000	6·6
1947.....	59,000[r]	10·30[r]	606,000	14·34	8,686,000	156,263,000	13,209,000	8·5
1948.....	60,000	10·48	629,000	14·62	9,202,000	175,641,000	15,664,000	8·9
1949.....	84,000	10·20	859,000	13·68	11,750,000	224,854,000	20,232,000	9·0
1950.....	102,000	11·10	1,128,000	16·28	18,367,000	300,185,000	30,845,000	10·3
1951.....	93,000	10·37	965,000	14·96	14,443,000	247,753,000	26,446,000	10·7

Apiculture.—Honey is produced commercially in all provinces of Canada, Ontario being the largest producer. There is a considerable movement of honey, particularly from the Prairie Provinces, to other parts of Canada and to other countries, although the export trade in this commodity has been sharply reduced in recent years owing to strong competition and to import restrictions imposed by many countries.

The 1951 crop was the largest since 1948, despite a reduction in the number of bee colonies. In 1952 production was lower owing to a further reduction in colony numbers and a return to a normal yield after the extremely high production per colony experienced in 1951.

In order to facilitate storage, shipment and uniformity of quality, considerable quantities of Canadian honey are pasteurized. Beekeepers' marketing co-operatives are active in several provinces.

As a matter of interest it is noted that bees are kept in some of the fruit-growing and greenhouse districts of the country chiefly for purposes of pollination.

36.—Beekeepers and Bee Colonies, Production and Values of Honey and Beeswax, 1948-52, with Average for 1943-47

Year	Beekeepers	Bee Colonies	Honey				Beeswax		Value of Honey and Wax
			Average Production per Hive	Total Production	Average Price per lb. to Producers	Total Value	Production	Value	
	No.	No.	lb.	lb.	cts.	$	lb.	$	$
Av. 1943-47	40,100	522,200	65	33,808,000	18·0	6,075,000	475,000	222,000	6,297,000
1948....	32,100	569,800	79	45,145,000	21·0	9,336,000	666,000	295,000	9,631,000
1949....	25,900	473,400	66	31,481,000	13·0	4,200,000	466,000	186,000	4,386,000
1950....	22,200	430,000	66	28,351,000	15·0	4,282,000	425,000	166,000	4,448,000
1951....	18,900	406,300	101	40,909,000	16·0	6,445,000	590,000	294,000	6,739,000
1952....	15,950	388,000	81	31,470,000	15·0	4,718,000	467,000	218,000	4,936,000

37.—Honey Production, by Province, 1948-52, with Average for 1943-47

Province	Av. 1943-47	1948	1949	1950	1951	1952
	lb.	lb.	lb.	lb.	lb.	lb.
Newfoundland	...	...	...	...	...	...
Prince Edward Island	39,000	64,000	63,000	46,000	71,000	91,000
Nova Scotia	79,000	125,000	103,000	81,000	143,000	125,000
New Brunswick	154,000	200,000	140,000	68,000	151,000	156,000
Quebec	4,337,000	4,831,000	3,709,000	3,041,000	5,044,000	4,398,000
Ontario	12,261,000	15,736,000	9,086,000	8,350,000	20,500,000	14,900,000
Manitoba	4,925,000	6,525,000	5,586,000	5,891,000	5,400,000	3,600,000
Saskatchewan	5,451,000	6,492,000	6,000,000	4,881,000	3,600,000	2,500,000
Alberta	5,526,000	10,254,000	5,830,000	4,851,000	4,500,000	4,900,000
British Columbia	1,036,000	918,000	964,000	1,142,000	1,500,000	800,000
Totals	**33,808,000**	**45,145,000**	**31,481,000**	**28,351,000**	**40,909,000**	**31,470,000**

Maple Sugar and Syrup.—Maple syrup is produced in the Provinces of Nova Scotia, New Brunswick, Quebec and Ontario. The bulk of the crop comes from the Eastern Townships of Quebec, a district famous both in Canada and the United States as the centre of the maple-products industry. Virtually all of the maple products exported are sent to the United States with the larger proportion moving as sugar, although substantial quantities of syrup are also shipped.

Most of the syrup sold in Canada is marketed in one-gallon cans direct to the consumer from the producer but a considerable amount of both sugar and syrup is sold each year to processing firms.

38.—Estimated Production of Maple Sugar and Maple Syrup, by Province, 1948-52, with Average for 1943-47

Province and Year	Maple Sugar			Maple Syrup			Total Value, Sugar and Syrup
	Quantity	Average Price per lb.	Value	Quantity	Average Price per gal.	Value	
	lb.	cts.	$	gal.	$	$	$
Nova Scotia—							
Av. 1943-47[1]	25,000	40·0	10,000	7,000	3·46	24,000	34,000
1948	16,000	46·0	7,000	8,000	4·08	33,000	40,000
1949	13,000	45·0	6,000	6,000	4·07	24,000	30,000
1950	13,000	47·0	6,000	7,000	3·76	26,000	32,000
1951	15,000	52·0	8,000	5,000	4·18	21,000	29,000
1952	11,000	54·0	6,000	6,000	4·13	25,000	31,000
New Brunswick—							
Av. 1943-47[1]	85,000	42·0	35,000	13,000	3·68	49,000	84,000
1948	124,000	49·0	61,000	12,000	4·28	51,000	112,000
1949	81,000	43·0	35,000	7,000	4·26	30,000	65,000
1950	86,000	43·0	37,000	14,000	4·00	56,000	93,000
1951	90,000	46·0	41,000	10,000	4·27	43,000	84,000
1952	114,000	50·0	57,000	12,000	4·30	52,000	109,000
Quebec—							
Av. 1943-47[1]	2,367,000	29·0	687,000	1,915,000	2·99	5,723,000	6,411,000
1948	2,187,000	34·0	744,000	1,750,000	3·49	6,108,000	6,852,000
1949	1,651,000	36·0	598,000	1,894,000	3·61	6,829,000	7,427,000
1950	1,692,000	37·0	626,000	2,273,000	3·44	7,819,000	8,445,000
1951	1,500,000	39·0	585,000	1,750,000	3·55	6,212,000	6,797,000
1952	2,020,000	42·0	848,000	2,777,000	3·33	9,247,000	10,095,000
Ontario—							
Av. 1943-47[1]	27,000	36·8	10,000	412,000	3·41	1,406,000	1,416,000
1948	23,000	35·0	8,000	389,000	3·93	1,529,000	1,537,000
1949	42,000	40·0	17,000	399,000	3·98	1,587,000	1,604,000
1950	33,000	40·0	13,000	507,000	4·05	2,053,000	2,066,000
1951	44,000	43·0	19,000	379,000	4·29	1,626,000	1,645,000
1952	16,000	47·0	8,000	459,000	4·21	1,932,000	1,940,000

For footnote, see end of table, p. 430.

38.—Estimated Production of Maple Sugar and Maple Syrup, by Province, 1948-52, with Average for 1943-47—concluded

Year	Maple Sugar			Maple Syrup			Total Value, Sugar and Syrup
	Quantity	Average Price per lb.	Value	Quantity	Average Price per gal.	Value	
	lb.	cts.	$	gal.	$	$	$
Totals—							
Av. 1943-47[1]	2,504,000	29·7	743,000	2,347,000	3·07	7,202,000	7,945,000
1948	2,350,000	34·9	820,000	2,159,000	3·58	7,721,000	8,541,000
1949	1,787,000	36·7	656,000	2,306,000	3·67	8,470,000	9,126,000
1950	1,824,000	37·4	682,000	2,801,000	3·55	9,954,000	10,636,000
1951	1,649,000	39·6	653,000	2,144,000	3·69	7,902,000	8,555,000
1952	2,161,000	42·5	919,000	3,254,000	3·46	11,256,000	12,175,000

[1] Five-year average prices are derived from actual figures, but quantities and values are rounded to the nearest thousand.

Fibre Flax.—The demand for fibre flax was heavy during the war years when exports increased to many times the pre-war volume. After World War II, however, exports of fibre flax to Canada's principal market, the United Kingdom, dropped sharply and acreage devoted to this crop decreased; in 1950 it was at the lowest level since 1931. In 1951 there were some increases in both acreage and production. Flax is now grown commercially only in Ontario and Quebec.

39.—Acreages, Yields and Values of Flaxseed, Fibre and Tow, 1947-51, with Average for 1942-46

Year	Area	Production			Values			
		Seed	Fibre	Green Tow	Seed	Fibre	Green Tow	Total
	acres	bu.	lb.	tons	$	$	$	$
Av. 1942-46	31,758	125,000	6,117,000	671	465,000	1,585,000	35,000	2,085,000
1947	11,003	50,000	1,852,000	—	300,000	482,000	—	782,000
1948	14,116	50,000	3,700,000	—	275,000	1,055,000	—	1,330,000
1949	7,518	36,000	1,948,000	29	179,000	350,000	2,000	531,000
1950	4,569	25,000	900,000	—	133,000	193,000	—	326,000
1951	7,555	42,000	2,400,000	—	210,000	512,000	—	722,000

Subsection 9.—Prices of Agricultural Produce

During 1952, the monthly index numbers of farm prices of agricultural products were lower than the corresponding figures for 1951, except in January. Higher prices during 1952 for potatoes, which kept the Maritime indices well above the 1951 levels, did not offset the lower prices received for live stock, dairy products, poultry and eggs in the national index. The annual average for the year at 270·4 was 9 p.c. below the record high of 296·9 reached in 1951 but was still higher than the index for any other year. It should be noted that the index number of 270·4 is

not strictly comparable with the 1951 index and will be revised. In connection with grains, western farm prices used to construct the 1951 index and the 1952 index up to July were final prices, whereas those used since August 1952 are initial prices for oats and initial prices plus interim payments for wheat and barley.

40.—Average Index Numbers of Farm Prices of Agricultural Products, by Province, 1942-52, and by Month, 1951 and 1952

(1935-39=100)

NOTE.—A description of this index, its coverage and the methods used will be found in DBS *Quarterly Bulletin of Agricultural Statistics* for October-December, 1946.

Year and Month	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total[1]
1942 Averages	**156·2**	**144·1**	**160·4**	**153·4**	**147·0**	**122·2**	**110·5**	**121·7**	**140·4**	**133·1**
1943 Averages	**190·3**	**169·1**	**181·4**	**172·6**	**165·0**	**151·3**	**139·9**	**149·9**	**175·8**	**157·8**
1944 Averages	**172·7**	**173·3**	**171·9**	**171·7**	**169·1**	**173·1**	**171·4**	**176·9**	**179·5**	**172·4**
1945 Averages	**196·7**	**180·8**	**195·3**	**179·5**	**174·6**	**188·4**	**192·6**	**196·2**	**187·8**	**185·7**
1946 Averages	**194·2**	**191·1**	**207·7**	**196·9**	**187·9**	**209·4**	**217·3**	**219·9**	**199·2**	**204·1**
1947 Averages	**180·1**	**184·6**	**199·6**	**213·7**	**202·1**	**225·9**	**226·1**	**231·9**	**207·1**	**215·8**
1948 Averages	**236·6**	**214·1**	**250·4**	**265·6**	**258·6**	**259·6**	**247·1**	**262·9**	**240·2**	**255·8**
1949 Averages	**204·1**	**210·5**	**220·5**	**261·3**	**257·8**	**262·8**	**248·8**	**265·6**	**245·1**	**255·4[1]**
1950 Averages	**189·6**	**206·5**	**216·4**	**260·9**	**265·1**	**274·4**	**251·5**	**276·1**	**244·3**	**260·8[1]**
1951[r]										
January	185·4	216·8	221·3	280·5	285·4	283·3	251·9	296·3	255·8	274·6
February	210·5	224·7	224·7	203·0	301·8	292·2	258·8	301·9	268·7	285·2
March	203·8	228·1	230·6	303·1	313·7	302·3	265·5	309·8	272·9	294·2
April	207·9	231·5	226·9	301·7	310·3	299·5	265·2	306·4	273·1	292·1
May	208·5	235·0	229·6	303·5	311·0	298·6	265·1	307·8	271·6	292·9
June	217·5	235·1	227·3	310·1	301·0	308·4	272·6	316·4	272·7	300·7
July	226·0	244·6	238·9	320·8	334·4	311·0	273·6	319·7	292·3	308·4
August	244·7	246·1	243·0	312·5	325·0	317·6	281·6	319·1	289·4	307·0
September	243·6	250·3	253·6	310·0	323·2	310·0	280·6	317·0	310·7	306·1
October	286·5	255·4	267·5	308·0	317·9	302·0	276·1	307·7	316·0	301·6
November	313·4	275·0	320·5	309·5	317·4	297·4	269·0	298·9	319·4	300·3
December	328·0	275·9	320·9	314·0	320·1	296·8	264·1	295·1	318·3	300·0
1951 Averages	**236·4**	**243·2**	**250·4**	**305·6**	**315·2**	**301·6**	**268·7**	**308·0**	**288·4**	**296·9**
1952[p]										
January	343·8	283·2	329·3	314·9	313·5	293·1	261·7	290·8	215·3	296·8
February	319·4	273·9	318·2	306·7	297·9	281·4	252·3	277·6	308·9	285·1
March	349·1	278·9	355·3	301·3	290·4	277·2	247·7	268·9	303·9	279·8
April	394·8	286·6	377·0	295·0	285·4	271·2	244·1	265·6	301·8	276·7
May	414·7	287·8	386·2	285·6	278·6	258·8	235·6	255·6	301·5	269·2
June	493·8	307·3	433·3	293·2	289·7	259·7	237·4	258·0	302·8	276·6
July	348·4	272·2	370·8	292·5	293·0	264·6	241·5	259·8	317·5	275·7
August	378·8	271·1	376·9	284·5	293·4	247·2	229·3	247·9	205·5	268·4
September	309·8	259·5	308·6	279·2	279·8	242·0	226·3	244·3	289·8	259·3
October	294·5	248·6	297·4	273·3	272·3	238·6	219·4	235·5	281·5	252·0
November	293·6	247·0	293·4	275·1	273·3	239·3	220·3	236·8	281·6	252·9
December	281·1	245·9	279·9	277·0	271·0	239·3	219·9	238·1	280·7	252·1
1952 Averages	**351·8**	**271·8**	**343·9**	**289·9**	**286·5**	**259·4**	**236·3**	**256·7**	**297·6**	**270·4**

[1] Exclusive of Newfoundland.

Monthly prices of grain and monthly prices of live stock are shown in DBS *Quarterly Bulletin of Agricultural Statistics.*

41.—Yearly Average Cash Prices per Bushel of Canadian Cereals—Basis, in Store at Fort William and Port Arthur—Crop Years Ended July 31, 1942-52

NOTE.—Statistics for 1926-41 are given in the corresponding tables of previous editions of the Year Book.

Year Ended July 31—	Averages in Cents and Eighths per Bushel				
	Wheat,[1] No. 1 N.	Oats,[2] No. 2 C.W.	Barley,[2] No. 2 C.W. -6 Row	Rye,[3] No. 2 C.W.	Flaxseed,[3] No. 1 C.W.
	cts.	cts.	cts.	cts.	cts.
1942	76/5	49/1	61/4	60/1	158/1[4]
1943	94/4	49/2	64/2	68/4	225[5]
1944	135	67/3	79/6	115/4	250[5]
1945	143/6	61/4	87/3	126/2	275[5]
1946	183/3	61/4	84/6	223/7	275[5]
1947	183/3	66/2	93/4	287/6	325[5]
1948	183/3	90	119/7	374/5	550[6]
1949	183/3	78/1	124/3	140	403/17[7]
1950	183/3	90/4	158/7	146	371/6
1951	185/4	95/4	147/4	184/5	441/4
1952	183/5	90/6	132/5	193/5	428/1

[1] Average cash closing price, Winnipeg Grain Exchange, to Sept. 27, 1943; thereafter, initial payments plus additional payments to producers. [2] Based on cash closing prices, Winnipeg Grain Exchange. From Aug. 1, 1944, to Oct. 22, 1947, prices of oats and barley remained at or near the government-imposed ceiling prices. From Oct. 23, 1947, to July 31, 1949, open market trading again prevailed. Equalization payments to producers are included for the crop years 1943-44 to 1947-48, inclusive. [3] Average cash closing price, Winnipeg Grain Exchange, except where otherwise noted. [4] During March the Canadian Wheat Board assumed control of Canadian flaxseed stocks and the price was held at $1.64 for remainder of crop year. [5] Fixed price to growers. [6] $5 fixed price to growers plus 50 cents participation payment. [7] Winnipeg Grain Exchange renewed trading in flaxseed cash and futures on Aug. 16, 1948. The Canadian Wheat Board was authorized to buy all flaxseed offered to it during the 1948-49 crop year on the basis of $4 per bushel for No. 1 C.W. in store Fort William-Port Arthur.

42.—Yearly Average Prices per 100 lb. of Canadian Live Stock at Principal Markets, 1947-52

NOTE.—Classification of live stock was changed in February 1949 as follows: steers up to 1,050 lb. changed to steers up to 1,000 lb.; steers over 1,050 lb. to steers over 1,000 lb.; lambs, good handy weights to lambs, good; sheep, good handy weights to sheep, good.

Item	Toronto						Montreal					
	1947	1948	1949	1950	1951	1952	1947	1948	1949	1950	1951	1952
	$	$	$	$	$	$	$	$	$	$	$	$
Steers, up to 1,000 lb., good	14·28	18·25	20·45	24·74	32·60	25·15	14·35	18·57	20·99	26·67	32·75	26·90
Steers, up to 1,000 lb., medium	13·38	17·76	19·26	23·45	31·51	23·85	12·96	17·73	18·75	24·63	31·04	23·88
Steers, up to 1,000 lb., common	12·21	16·35	17·29	22·06	29·46	19·85	10·64	13·90	16·07	20·66	27·18	19·36
Steers, over 1,000 lb., good	14·63	19·40	21·29	26·72	33·49	25·85	14·38	21·14	21·28	26·83	33·00	26·54
Steers, over 1,000 lb., medium	13·88	19·47	20·51	25·16	32·46	24·00	13·08	18·56	19·69	25·30	31·45	23·77
Steers, over 1,000 lb., common	12·85	19·20	19·26	22·80	31·04	20·10	10·68	13·17	17·19	22·15	27·97	17·95
Heifers, good	13·85	18·32	19·99	24·35	31·85	24·55	13·04	18·06	19·58	25·04	31·38	23·38
Heifers, medium	13·23	17·66	18·84	23·78	30·94	23·10	11·73	15·43	16·82	22·64	28·01	21·34
Calves, fed, good	14·50	19·10	21·71	25·44	32·84	25·65	14·35	18·06	21·37	27·33	33·41	27·17
Calves, fed, medium	13·62	18·63	20·15	23·78	31·19	23·80	12·12	16·75	19·30	23·78	31·26	23·53
Cows, good	11·10	15·18	15·77	20·07	26·95	18·55	10·95	14·74	15·64	20·21	26·55	18·85
Cows, medium	10·18	14·11	14·55	18·59	25·43	16·80	9·76	13·06	14·07	17·82	24·51	16·48
Bulls, good	11·40	16·53	17·76	21·93	29·30	18·50	11·32	15·08	16·63	21·44	28·31	18·55
Stocker and feeder steers, good	12·58	17·17	18·45	26·36	33·65	23·00	[1]	[1]	[1]	[1]	[1]	21·30
Stocker and feeder steers, common	11·01	15·78	16·37	23·61	30·99	20·15	[1]	[1]	[1]	[1]	[1]	15·20
Stock cows and heifers, good	7·00	12·01	14·98	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
Stock cows and heifers, common	8·23	9·50	14·00	16·66	23·92	17·05	[1]	[1]	[1]	[1]		15·27

[1] No sales reported.

42.—Yearly Average Prices per 100 lb. of Canadian Live Stock at Principal Markets, 1947-52—concluded

Item	Toronto						Montreal					
	1947	1948	1949	1950	1951	1952	1947	1948	1949	1950	1951	1952
	$	$	$	$	$	$	$	$	$	$	$	$
Calves, veal, good and choice	16·24	23·66	25·51	29·61	36·55	27·90	15·41	22·22	24·64	27·11	36·60	26·55
Calves, veal, common and medium	13·58	19·10	20·89	24·20	31·96	21·85	12·65	16·65	20·09	22·28	33·48	22·84
Hogs, Grade B-1, dressed	22·04	29·96	30·20	28·98	32·85	25·70	22·29	30·02	30·30	29·03	32·95	25·75
Lambs, good	15·63	22·53	23·75	28·33	33·95	26·05	14·83	21·76	22·50	27·86	32·60	25·05
Lambs, common	12·05	15·71	18·21	23·97	30·28	21·10	10·15	16·26	16·31	22·18	26·88	17·40
Sheep, good	8·33	9·33	10·87	14·32	19·77	14·80	7·38	8·29	9·40	13·78	19·82	13·23
	Winnipeg						Edmonton					
	1947	1948	1949	1950	1951	1952	1947	1948	1949	1950	1951	1952
	$	$	$	$	$	$	$	$	$	$	$	$
Steers, up to 1,000 lb., good	13·55	18·39	20·06	24·55	31·70	24·00	13·01	18·01	19·03	24·30	31·75	23·45
Steers, up to 1,000 lb., medium	11·79	16·05	17·86	22·37	29·42	21·12	11·59	16·06	17·54	23·18	30·18	21·97
Steers, up to 1,000 lb., common	10·06	14·40	15·58	19·84	26·60	17·74	9·01	12·50	14·84	19·96	26·76	17·37
Steers, over 1,000 lb., good	13·44	18·29	20·01	24·38	31·82	23·93	13·26	17·33	19·31	24·39	31·84	23·82
Steers, over 1,000 lb., medium	11·65	16·46	17·60	22·94	29·40	20·69	11·78	15·04	17·78	23·21	30·12	21·93
Steers, over 1,000 lb., common	10·17	14·44	15·37	20·20	26·65	17·61	9·54	14·16	15·41	20·64	27·00	18·37
Heifers, good	11·96	17·10	17·77	22·43	29·24	20·61	11·42	16·58	16·73	21·92	29·94	21·38
Heifers, medium	10·40	15·01	16·00	20·90	26·82	18·06	10·13	13·69	15·19	21·65	27·77	19·65
Calves, fed, good	13·44	17·64	20·27	24·64	32·03	23·79	13·33	16·20	19·01	23·51	31·45	22·78
Calves, fed, medium	11·96	15·29	18·29	22·35	29·79	20·63	11·87	15·79	17·48	21·38	29·46	20·94
Cows, good	10·11	14·54	14·54	18·91	25·74	16·00	9·64	13·97	13·50	18·47	25·51	16·45
Cows, medium	8·85	13·26	13·04	17·20	23·79	13·78	8·41	12·18	12·55	17·15	23·84	14·60
Bulls, good	10·77	16·10	16·71	21·32	28·24	15·59	9·43	14·96	15·35	20·49	27·70	15·76
Stocker and feeder steers, good	10·95	17·91	17·46	24·56	30·45	19·55	10·59	15·80	16·07	24·34	30·60	20·60
Stocker and feeder steers, common	8·72	13·84	14·75	21·18	27·24	15·22	8·89	12·79	13·26	20·34	26·13	15·94
Stock cows and heifers, good	9·22	14·40	14·23	19·69	26·84	17·41	8·76	11·77	12·56	18·88	26·22	17·02
Stock cows and heifers, common	7·35	11·20	11·96	16·67	23·23	13·87	7·22	10·50	11·44	16·22	22·91	12·05
Calves, veal, good and choice	14·82	21·35	23·71	29·00	35·45	26·10	12·72	19·53	19·76	27·24	36·30	26·90
Calves, veal, common and medium	10·80	14·99	17·56	22·04	28·81	19·51	9·78	14·09	15·69	22·74	28·75	19·51
Hogs, Grade B-1, dressed	20·61	27·94	28·49	27·76	30·85	24·45	20·21	27·87	29·86	28·40	32·70	24·60
Lambs, good	13·96	20·86	21·89	26·62	32·05	22·85	13·01	18·32	20·53	24·06	31·45	22·45
Lambs, common	10·05	14·85	16·82	20·64	26·56	18·98	9·13	12·73	15·73	20·91	26·87	17·82
Sheep, good	6·34	7·11	7·86	10·28	12·53	9·64	6·69	8·54	7·63	11·52	15·43	12·42

Subsection 10.—Food Consumption

Consumption of Major Foods.—A study of consumption of the major foods was undertaken during World War II by the Dominion Bureau of Statistics in recognition of the national and international significance of such information. While data on total consumption of certain commodities such as wheat, alcoholic beverages, meats, etc., had been available for a considerable period, it was found necessary to establish a per capita level of consumption of a wide range of products on a comparable basis.

The figures represent available supplies, including production and imports, adjusted for change of stocks, exports, marketing losses and industrial uses. All calculations have been made at the retail stage of distribution, except meats for

which the figures are worked out at the wholesale stage. The amount of food actually eaten would be somewhat lower than indicated because of losses and waste occurring after the products reached the hands of the consumer. It should also be pointed out that there are minor discrepancies in certain of the figures since statistics of storage stocks in the hands of retailers and consumers were not available. However, the figures represent the best summary of food consumption data that has been compiled for Canada.

All basic foods have been classified under 13 main commodity groups. Totals for each group have been computed using common denominators for the group, as for example: milk solids (dry weight) in the case of the dairy-products group; fat content in the case of fats and oils; and fresh equivalent in the case of fruits. All foods have been included in their basic form, that is, as flour, fat, sugar, etc., rather than in more highly manufactured forms.

The series in Table 43 represents the official estimates of yearly supplies of food moving into consumption, expressed in pounds per capita, for the years 1935-39 as an average for comparison with the years 1950, 1951 and 1952.

43.—Per Capita Supplies of Food Moving into Consumption, 1950-52, with Average for 1935-39

NOTE.—Figures for 1952 are preliminary and certain revisions are anticipated for the years 1950 and 1951 as a result of forthcoming intercensal revisions of production estimates.

Food		Pounds per Capita per Annum				Percentages of 1935-39 Average		
		Average 1935-39	1950	1951	1952[p]	1950	1951	1952[p]
Cereals—								
Flour (including rye flour)[1]	Retail wt.	184·8	154·9	152·1	151·6	83·8	82·3	82·0
Oatmeal and rolled oats	"	7·3	6·0	6·3	5·5	82·2	86·3	75·3
Pot and pearl barley	"	0·3	0·3	0·3	0·3	100·0	100·0	100·0
Corn meal and flour	"	1·4	0·8	0·8	0·6	57·1	57·1	42·9
Buckwheat flour	"	0·2	0·1	0·1	0·1	50·0	50·0	50·0
Rice	"	4·3	4·0	4·8	3·0	93·0	111·6	69·8
Breakfast food	"	7·4	6·7	7·1	7·0	90·5	95·9	94·6
Totals, Cereals	"	**205·7**	**172·8**	**171·5**	**168·1**	**84·0**	**83·4**	**81·7**
Potatoes—								
Potatoes, white	Retail wt.	192·3	[2]	[2]	170·4	[2]	[2]	88·6
Potatoes, sweet	"	0·6	0·7	0·7	0·5	116·7	116·7	83·3
Totals, Potatoes	"	**192·9**	[2]	[2]	**170·9**	[2]	[2]	**88·6**
Sugars and Syrups—								
Sugar	Refined wt.	94·7	101·1	96·3	96·9	106·8	101·7	102·3
Maple sugar	Retail wt.	1·8	1·4	1·1	1·4	77·8	61·1	77·8
Other	"	8·2	8·9	8·3	8·4	108·5	101·2	102·4
Totals, Sugars and Syrups	**Sugar content**	**101·7**	**108·3**	**102·8**	**103·8**	**106·5**	**101·1**	**102·1**
Starch	**Retail wt.**	**2·5**	**1·6**	**1·6**	**1·6**	**64·0**	**64·0**	**64·0**
Pulses and Nuts—								
Dry beans	Retail wt.	3·7	4·7[3]	5·4[3]	3·6[3]	127·0	145·9	97·3
Dry peas	"	5·7	2·3	2·1	1·4	40·4	36·8	24·6
Peanuts	Shelled wt.	2·2	3·2	2·7	2·7	145·5	122·7	122·7
Tree nuts	"	1·1	1·2	1·1	1·1	109·1	100·0	100·0
Cocoa	Green beans	3·7	3·4	2·4	3·1	91·9	64·9	83·8
Totals, Pulses and Nuts	**Retail wt. incl. shelled wt. of nuts**	**14·5**	**13·0**	**12·5**	**10·3**	**89·7**	**86·2**	**71·0**

For footnotes, *see* end of table, p. 436.

43.—Per Capita Supplies of Food Moving into Consumption, 1950-52, with Average for 1935-39—continued

Food	Pounds per Capita per Annum				Percentages of 1935-39 Average		
	Average 1935-39	1950	1951	1952[p]	1950	1951	1952[p]
Fruit—							
Tomatoes and Citrus Fruit—							
Tomatoes, fresh....Retail wt.	15·4	17·9	19·3	19·4	116·2	125·3	126·0
Tomato products....Net wt. canned	10·0	16·0	16·0	13·6	160·0	160·0	136·0
Citrus fruit, fresh....Retail wt.	25·1	29·9	34·5	37·5	119·1	137·5	149·4
Citrus fruit, canned....Net wt. canned	0·5	5·8	6·9	9·2	1,160·0	1,380·0	1,840·0
Other Fruit—							
Fresh....Retail wt.	40·5	54·7	61·6	64·9	135·1	152·1	160·2
Canned....Net wt. canned	6·3	11·9	11·7	12·7	188·9	185·7	201·6
Dried....Processed wt.	8·3	6·6	6·7	6·9	79·5	80·7	83·1
Juice....Net wt. canned	..	3·2	3·9	4·1	...	...	...
Frozen....Retail wt.	0·2	0·4	0·4	0·5	200·0	200·0	250·0
Totals, Fruit....Fresh equiv.	**138·7**	**182·9**	**200·6**	**210·1**	**131·9**	**144·6**	**151·5**
Vegetables—							
Fresh—							
Cabbage and greens....Retail wt.	16·2	20·5	19·1	19·8	126·5	117·9	122·2
Carrots.... "	15·4	13·1	12·9	11·7	85·1	83·8	76·0
Legumes.... "	6·2	3·2	2·6	2·7	51·6	40·3	43·5
Other.... "	29·8	39·6	34·8	35·4	132·9	116·8	118·8
Canned....Net wt. canned	10·8	17·6	18·7	17·9	163·0	173·1	165·7
Frozen....Retail wt.	..	0·5	0·6	0·7	..	..	..
Totals, Vegetables....Fresh equiv.	**78·4**	**94·5**	**88·6**	**88·2**	**120·5**	**113·0**	**112·5**
Oils and Fats—							
Margarine....Retail wt.	..	6·8	7·4	7·3	...	...	...
Lard.... "	3·9	8·1	8·1	8·9	207·7	207·7	228·2
Shortening.... "	10·6	9·3	8·2	8·3	87·7	77·4	78·3
Salad and cooking oil.... "	1·8	3·0	2·4	2·7	166·7	133·3	150·0
Butter.... "	31·0	23·5	22·6	22·1	75·8	72·9	71·3
Totals, Oils and Fats....Fat content	**41·4**	**44·8**	**42·9**	**43·6**	**108·2**	**103·6**	**105·3**
Meat—							
Pork....Carcass wt.	39·8	60·8	67·8	62·2	152·8	170·4	156·3
Beef.... "	54·7	50·3	43·8	44·8	92·0	80·1	81·9
Veal.... "	10·5	9·2	7·7	6·7	87·6	73·3	63·8
Mutton and lamb.... "	5·6	2·5	2·6	1·9	44·6	46·4	33·9
Offal....Edible wt.	5·8	5·6	5·3	5·4	96·6	91·4	93·1
Canned....Net wt. canned	1·4	4·0	4·9	6·2	285·7	350·0	442·9
Totals, Meat....Carcass wt.	**118·3**	**133·7**	**133·7**	**129·2**	**113·0**	**113·0**	**109·2**
Poultry and Fish—							
Hens and chickens....Retail wt., dressed	15·6	18·3[4]	20·7[4]	24·8[4]	117·3	132·7	159·0
Other poultry.... "	2·8	3·7[4]	3·9[4]	4·8[4]	132·1	139·3	171·4
Shell fish....Fresh, edible wt.	0·4	0·4	..		100·0	..	..
Fish, (other) fresh, frozen and cured....Filleted wt.	8·8	8·6	..		97·7	..	..
Fish, canned....Net wt. canned	2·7	4·6	..	..	170·4	..	..
Totals, Poultry and Fish..Edible wt.	**22·4**	**26·2**	..	..	**117·0**	..	..
Eggs....Fresh egg equiv.	**30·7**	**34·5[4]**	**34·6[4]**	**34·0[4]**	**112·4**	**112·7**	**110·7**
Milk and Cheese—							
Cheddar cheese[5]....Retail wt.	3·7	4·9	4·9	5·1	132·4	132·4	137·8
Other cheese.... "	0·2	0·6	0·8	0·8	300·0	400·0	400·0
Cottage cheese.... "	0·2	0·6	0·7	0·7	300·0	350·0	350·0
Evaporated whole milk.... "	6·1	17·3	17·9	18·4	283·6	293·4	301·6
Condensed whole milk.... "	0·6	0·8	0·8	0·8	133·3	133·3	133·3
Whole milk powder.... "	0·1	0·4	0·4	0·4	400·0	400·0	400·0
Condensed skim milk.... "	0·4	0·3	0·4	0·3	75·0	100·0	75·0

For footnotes, *see* end of table, p. 436.

43.—Per Capita Supplies of Food Moving into Consumption, 1950-52, with Average for 1935-39—concluded

Food		Pounds per Capita per Annum				Percentages of 1935-39 Average		
		Average 1935-39	1950	1951	1952[p]	1950	1951	1952[p]
Milk and Cheese—concluded								
Skim milk powder	Retail wt.	1·8	3·4	3·7	3·4	188·9	205·6	188·9
Evaporated skim milk	"	0·1	0·9	0·7	0·7	900·0	700·0	700·0
Condensed buttermilk	"	0·1	0·2	0·3	0·2	200·0	300·0	200·0
Milk in ice cream	"	10·9	30·7	32·6	33·9	281·7	299·1	311·0
Powdered buttermilk	"	0·2	0·4	0·3	0·5	200·0	150·0	250·0
Fluid whole milk[6]	"	408·5	424·6[4]	420·6[4]	415·2[4]	103·9	103·0	101·6
Totals, Milk and Cheese	**Milk solids**	**52·0**	**64·5**	**64·8**	**64·4**	**124·0**	**124·6**	**123·8**
Beverages—								
Tea	Primary distribution wt.	3·5	4·0	3·0	3·2	114·3	85·7	91·4
Coffee	Green beans	3·7	6·0	6·3	6·8	162·2	170·3	183·8
Totals, Beverages	**Primary distribution wt.**	**7·2**	**10·0**	**9·3**	**10·0**	**138·9**	**129·2**	**138·9**

[1] Fluctuations in apparent per capita flour consumption are partly due to the fact that complete data on flour inventories in all positions are not available. [2] Not available pending revision of intercensal estimates. [3] Includes soybean flour. [4] Exclusive of Newfoundland. [5] Includes process cheese. [6] Includes cream expressed as milk.

Consumption of Meats.—Production of meats from slaughter, total supply, distribution and per capita consumption of meats and lard are shown in Table 44. All estimates are on a carcass-weight basis except canned meats which are in terms of product.

44.—Supply, Distribution and Consumption of Meats and Lard, 1948-52, with Average for 1935-39

NOTE.—Estimates for 1942-51 are not strictly comparable with those for 1952, since revisions for those years necessitated by the 1951 Census of Agriculture have not yet been completed.

Meats		Average 1935-39	1948	1949	1950	1951	1952[p]
Beef—							
Animals slaughtered in Canada	'000	1,347·0	1,953·5	1,904·5	1,729·3	1,472·0	1,459·1
Estimated dressed weight[1]	'000 lb.	618,556	891,688	866,844	790,395	708,546	726,638
On hand, Jan. 1	"	22,684	43,154	35,313	23,415	22,174	19,497
Imports[2]	"	158[3]	8	9,335	10,587	10,112	9,289
Totals, Supply	"	641,398	934,850	911,492	824,397	740,832	755,424
Exports[2]	"	10,899	133,822	105,121	90,740	96,605	67,215
Used for canning	"	1,406	25,480	17,415	14,582	11,701	9,199
On hand, Dec. 31	"	24,040	35,313	23,415	22,174	19,497	32,702
TOTALS, CONSUMPTION	"	605,053	740,235	765,541	696,901	613,029	646,308
CONSUMPTION PER CAPITA	lb.	54·7	57·5	56·5	50·3	43·8	44·8
Veal—							
Animals slaughtered in Canada	'000	1,333·6	1,554·1	1,287·1	1,387·4	1,166·3	959·2
Estimated dressed weight[1]	'000 lb.	116,372	142,390	124,303	125,958	110,407	98,149
On hand, Jan. 1	"	3,452	6,624	6,894	6,327	3,356	4,171
Imports	"	[4]	[4]	[4]	[4]	[4]	[4]
Totals, Supply	"	119,824	149,014	131,197	132,285	113,763	102,320
Exports	"	—	[4]	[4]	[4]	[4]	[4]
Used for canning	"	22	1,527	1,554	1,605	1,182	1,736
On hand, Dec. 31	"	3,785	6,894	6,327	3,356	4,171	3,879
TOTALS, CONSUMPTION	"	116,017	140,593	123,316	127,324	108,410	96,705
CONSUMPTION PER CAPITA	lb.	10·5	10·9	9·1	9·2	7·7	6·7

For footnotes, *see* end of table.

44.—Supply, Distribution and Consumption of Meats and Lard, 1948-52, with Average for 1935-39—concluded

Meats		Average 1935-39	1948	1949	1950	1951	1952[p]
Pork—							
Animals slaughtered in Canada	'000	5,165·1	7,441·1	7,169·5	7,650·4	7,961·6	8,447·8
Estimated dressed weight[5]	'000 lb.	620,522	941,406	910,568	963,757	1,005,695	1,126,483
On hand, Jan. 1	"	34,511	57,585	32,439	35,445	31,292	39,000
Imports[2]	"	7,394	1,562	6,685	5,733	22,456	4,677
Totals, Supply	"	662,427	1,000,553	949,692	1,004,935	1,059,443	1,170,160
Exports[3]	"	179,630	229,496	76,060	85,099	21,382	13,094
Used for canning	"	4,602	44,661	35,494	46,835	48,754	190,911
On hand, Dec. 31	"	37,863	32,439	35,445	31,292	39,000	68,282
Totals, Consumption	"	440,332	693,957	802,693	841,709	950,307	897,873
Consumption per Capita	lb.	39·8	53·9	59·2	60·8	67·8	62·2
Mutton and Lamb—							
Animals slaughtered in Canada	'000	1,543·0	1,148·1	1,023·1	855·7	824·8	595·9
Estimated dressed weight[1]	'000 lb.	61,417	47,494	43,641	35,691	35,973	26,195
On hand, Jan. 1	"	6,190	9,153	6,346	5,023	3,894	3,584
Imports[2]	"	422	1	29	486	3,499	2,661
Totals, Supply	"	68,029	56,648	50,016	41,200	43,366	32,440
Exports[3]	"	248	5,056	3,906	2,761	2,737	46
Used for canning	"	37	379	246	220	205	350
On hand, Dec. 31	"	5,965	6,346	5,023	3,894	3,584	4,395
Totals, Consumption	"	61,779	44,867	40,841	34,325	36,840	27,649
Consumption per Capita	lb.	5·6	3·5	3·0	2·5	2·6	1·9
Canned Meats—							
Estimated production	'000 lb.	5,624	62,774	45,973	53,485	54,545	144,183
Imports	"	12,292	565	11,099	10,969	23,977	14,185
Change in stock[6]	"	—	−2,014	−3,850	+94	+879	+54,442
Totals, Supply	"	17,916	65,353	60,922	64,360	77,643	103,926
Exports	"	1,999	32,390	10,009	8,430	9,258	14,874
Totals, Consumption	"	15,917	32,963	50,913	55,930	68,385	89,052
Consumption per Capita	lb.	1·4	2·6	3·8	4·0	4·9	6·2
Offal—							
Estimated production	'000 lb.	64,611	90,083	85,916	84,446	79,739	81,046
Imports	"	..	30	729	1,483	4,348	1,594
Totals, Supply	"	64,611	90,113	86,645	85,929	84,087	82,640
Exports	"	..	6,860	7,270	5,657	7,223	2,535
Used for canning	"	583	5,513	3,161	3,258	2,923	2,493
Totals, Consumption	"	64,028	77,740	76,214	77,014	73,941	77,612
Consumption per Capita	lb.	5·8	6·0	5·6	5·6	5·3	5·4
Lard—							
Estimated production[7]	'000 lb.	63,237	92,085	98,019	109,652	117,874	170,445
On hand, Jan. 1	"	2,685	3,267	3,387	4,014	3,385	6,000
Imports	"	56	35	14,548	13,031	12,045	1,265
Totals, Supply	"	65,978	95,387	115,954	126,697	133,304	177,710
Exports	"	19,485	569	208	126	84	14,289
On hand, Dec. 31	"	2,963	3,387	4,014	3,385	6,000	8,404
Totals, Consumption	"	43,530	91,431	111,732	123,186	127,220	155,017
Consumption per Capita	lb.	3·9	7·1	8·2	8·9	9·1	10·7

[1] Edible meat excluding offal. [2] Basis cold dressed carcass weight. [3] Includes edible offal of beef and veal. [4] Quantity small; included with beef. [5] Edible meat excluding fats and offal. [6] The positive changes represent deductions from the available supply during a given year and therefore are subtracted; similarly, negative changes represent an increase in disappearance. [7] Includes rendered pork fat.

Section 5.—Agricultural Statistics of the Census*

Census of Agriculture statistics relating to farms, farm operators, mechanization, electrification and area are included in this Section. Data relating to crops and live stock for 1951 are given in Section 4. Newfoundland data are excluded from historical tables as no comparable data for previous years are available.

Number of Occupied Farms.—The number of occupied farms in Canada at June 1, 1951, was 623,091, or 619,465 excluding Newfoundland. This compares with 732,858 farms in 1941. The apparent decrease of 113,393 farms since 1941 is, however, not a true indication of the change in number of farms in Canada because of the changes made in the definition of a farm for census purposes. In the 1951 Census, a farm was defined as a holding on which agricultural operations are carried out. The holding may consist of a single tract of land or of a number of separate tracts held under different tenures. It must be (*a*) three acres or more in size or (*b*) from 1 to 3 acres in size with agricultural production in 1950 valued at $250 or more. Where the farm was made up of several parts located in different municipalities, the 1951 Census reported the complete farm as one unit in the municipality where the headquarters was located.

The 1941 Census counted as farms all holdings one acre or more in size if the 1940 production were valued at $50 or more. Unlike the 1951 Census, it counted as separate farms those parts of farms lying outside the municipality in which the farm headquarters was located although the farm area was counted only once.

Allowing for these changes in definition it would seem that the decrease in number of farms (exclusive of Newfoundland) between 1941 and 1951 would be of the order of 58,000 or about 8·6 p.c. instead of 113,393 or 15·5 p.c.

In British Columbia the number of farms, under the 1951 definition, was 21·1 p.c. greater in 1951 than in 1941, but all other provinces showed decreases, ranging from 3·7 p.c. for Manitoba to 15·7 p.c. for Nova Scotia.

* Prepared in the Agriculture Section of the Census Division, Dominion Bureau of Statistics.

45.—Number of Occupied Farms, by Province, 1941 and 1951

Province or Territory	1941	1951	Percentage Change 1941-51	Estimated Farms in 1941 on Basis of 1951 Definition	
				Number	Percentage Change
	No.	No.	p.c.		
Newfoundland	..	3,626	..	..	..
Prince Edward Island	12,230	10,137	−17·1	11,400	−11·1
Nova Scotia	32,977	23,515	−28·7	27,900	−15·7
New Brunswick	31,889	26,431	−17·1	29,800	−11·3
Quebec	154,669	134,336	−13·1	144,900	−7·3
Ontario	178,204	149,920	−15·9	167,200	−10·3
Manitoba	58,024	52,383	−9·7	54,400	−3·7
Saskatchewan	138,713	112,018	−19·2	126,900	−11·7
Alberta	99,732	84,315	−15·5	93,200	−9·5
British Columbia	26,394	26,406	+0·05	21,800	+21·1
Yukon and Northwest Territories	26	4	−84·6	..	..
Canada	**732,858**[1]	**623,091**	**−15·5**[1]	**677,500**[1]	**−8·6**[1]

[1] Exclusive of Newfoundland.

Farms Classified by Tenure.—While the proportion of owned farms in Canada decreased from 80·5 p.c. in 1931 to 75·5 p.c. in 1941, there was an increase to 78·5 p.c. in 1951. In the latest Census, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba and British Columbia reported the largest proportion of owned farms in 20 years. Prince Edward Island, Saskatchewan and Alberta showed smaller proportions than in 1931, but the percentages in these Provinces were up from 1941. All provinces except New Brunswick, Quebec and British Columbia have shown a steady increase since 1931 in the proportion of farms that are partly owned and partly rented; the Prairie Provinces, where this type of land tenure is particularly important, showed an increase of 41·6 p.c.

The proportion of tenant-operated farms in each of the provinces was lower than that recorded in either the 1931 or 1941 Censuses. While the Prairie Provinces had shown a percentage increase in tenant-operated farms in 1941, the percentage in 1951 was even less than in 1931.

46.—Tenure of Farms, by Province, 1931, 1941 and 1951

Tenure and Year	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
	No.	No.	No.	No.	No.
Owner (including manager).....1931	..	12,091	37,176	31,933	126,563
1941	..	11,354	30,715	29,665	144,089
1951	3,283	9,510	22,209	25,189	127,979
Tenant.....1931	..	234	1,055	928	5,089
1941		299	952	852	5,610
1951	60	82	291	316	2,566
Part owner, part tenant.....1931		540	1,213	1,164	4,305
1941	..	577	1,310	1,372	4,970
1951	283	545	1,015	926	3,791
Totals, Occupied Farms.....1931		**12,865**	**39,444**	**34,025**	**135,957**
1941	..	**12,230**	**32,977**	**31,889**	**154,669**
1951	**3,626**	**10,137**	**23,515**	**26,431**	**134,336**

Tenure and Year	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Totals
	No.	No.	No.	No.	No.	No.
Owner (including manager).....1931	157,427	37,973	90,691	71,060	21,385	586,299
1941	141,379	38,671	73,592	62,939	21,245	553,649
1951	125,159	37,541	61,763	53,482	22,763	488,882[1]
Tenant.....1931	21,514	9,857	21,044	11,808	2,853	74,382
1941	21,543	10,986	34,093	17,032	2,920	94,287
1951	8,852	5,062	16,495	9,735	1,524	44,983[1]
Part owner, part tenant.....1931	13,233	6,369	24,737	14,540	1,841	67,942
1941	15,282	8,367	31,028	19,761	2,229	84,896
1951	15,909	9,780	33,760	21,098	2,119	89,226[1]
Totals, Occupied Farms.....1931	**192,174**	**54,199**	**136,472**	**97,408**	**26,079**	**728,623**
1941	**178,204**	**58,024**	**138,713**	**99,732**	**26,394**	**732,832**
1951	**149,920**	**52,383**	**112,018**	**84,315**	**26,406**	**623,091[1]**

[1] Includes data for the Yukon and Northwest Territories.

Farms Classified by Size of Holding.—Although only 4·0 p.c. of the farms in Canada were less than 10 acres in size, 25·7 p.c. in British Columbia and 53·3 p.c. in Newfoundland were in this size group. Less than 6 p.c. of the farms in the other provinces were under 10 acres in size.

The largest percentage of farms in the Maritime Provinces, Quebec, Ontario and Manitoba were in the 70 to 239 acre size group. In Saskatchewan and Alberta the 240 to 399 acre group contained the largest percentage of farms while in British Columbia it was the 10 to 69 acre group and in Newfoundland the 3 to 9 acre group that had the largest proportion.

For Canada as a whole, 19·0 p.c. of the farms were 400 or more acres in size. However, it was only in the Prairie Provinces that these larger farms formed a significant proportion of the total. In Saskatchewan 52·8 p.c., Alberta 38·7 p.c. and Manitoba 29·1 p.c. of the farms were 400 or more acres in size. In the other provinces, the proportion of farms of 400 or more acres ranged from 7·4 p.c. in British Columbia to less than 1 p.c. in Newfoundland and Prince Edward Island.

47.—Farm Holdings classified by Size of Farm, by Province, 1951

Size of Farm	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
	No.	No.	No.	No.	No.
Under 3 acres	51	7	67	30	222
3 - 9 acres	1,884	170	1,181	975	2,258
10 - 69 "	1,400	2,819	6,478	6,852	21,377
70 - 239 "	268	6,684	12,557	15,395	97,812
240 - 399 "	17	406	2,199	2,219	10,257
400 - 559 "	4	44	705	646	1,832
560 - 759 "	—	6	198	178	402
760 - 1,119 "	2	—	92	101	111
1,120 - 1,599 "	—	1	20	23	39
1,600 acres or over	—	—	18	12	26
Totals, Occupied Farms	**3,626**	**10,137**	**23,515**	**26,431**	**134,336**

Size of Farm	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada[1]
	No.	No.	No.	No.	No.	No.
Under 3 acres	652	240	115	195	679	2,258
3 - 9 acres	6,733	1,278	656	1,203	6,107	22,446
10 - 69 "	26,243	3,160	1,505	2,039	11,389	83,264
70 - 239 "	97,132	16,326	19,373	23,712	4,613	293,872
240 - 399 "	14,265	16,135	31,224	24,562	1,661	102,946
400 - 559 "	3,385	7,399	21,354	12,071	752	48,192
560 - 759 "	992	4,433	16,490	7,664	458	30,821
760 - 1,119 "	368	2,411	12,871	6,369	340	22,665
1,120 - 1,599 "	101	728	5,499	3,309	179	9,899
1,600 acres or over	49	273	2,931	3,191	228	6,728
Totals, Occupied Farms	**149,920**	**52,383**	**112,018**	**84,315**	**26,406**	**623,091**

[1] Includes holdings in the Yukon and Northwest Territories.

Economic Classification of Farms.—All farms (except institutional farms, etc.) with reported sales of farm products of $1,200 or more in 1950 were classified as commercial farms. Also included in this group were farms reporting sales of between $250 and $1,199 in 1950 if the farm operator worked off the farm less than 100 days and reported the value of farm sales greater than income received from other sources. Of the 623,091 farms in Canada, 75·4 p.c. were classified as commercial farms. The smallest percentage of commercial farms was in Newfoundland where only 21·5 p.c. of the 3,626 farms were in this category. At the other extreme was Saskatchewan where 90·6 p.c. of the farms were so classified.

Of the total farms in Canada, 3·4 p.c. reported sales of farm products of $10,000 or over in 1950. Alberta had the largest proportion of farms in this group with 6·0 p.c. and Ontario had the second largest proportion with 5·6 p.c.

Part-time farms included those with sales of farm products between $250 and $1,199 in 1950 if the operator reported that he worked 100 or more days off the farm, or reported the farm income less than income from other sources. This group accounted for 10·5 p.c. of all farms in Canada.

If the value of farm products sold was less than $250 in 1950, the farm was classified as a small-scale farm and 14 p.c. of the farms in Canada were in this class. The province with the largest proportion of small-scale farms was Newfoundland with 62·4 p.c., while Saskatchewan had the lowest with 5·3 p.c.

Experimental farms, community pastures, Indian reserves and farms operated by institutions were classified as institutional farms, etc.

48.—Farm Holdings classified by Economic Classification, by Province, 1950

Economic Classification	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
	No.	No.	No.	No.	No.
Commercial Farms—					
Value of products sold —					
$20,000 or over	17	6	69	45	175
$15,000 - $19,999	14	13	55	37	208
$10,000 - $14,999	20	53	112	121	883
$ 7,500 - $ 9,999	32	97	165	194	1,731
$ 5,000 - $ 7,499	35	343	525	583	6,186
$ 3,750 - $ 4,999	29	535	631	704	8,392
$ 2,500 - $ 3,749	50	1,309	1,253	1,598	17,606
$ 1,200 - $ 2,499	204	2,898	3,760	4,422	35,407
$ 250 - $ 1,199	379	2,185	3,807	3,927	18,170
Small-Scale Farms—					
Value of products sold (less than $250)	2,264	1,372	7,757	8,754	24,187
Part-Time Farms	576	1,321	5,362	6,032	21,189
Institutional Farms, etc	6	5	19	14	202
Totals, Occupied Farms	**3,626**	**10,137**	**23,515**	**26,431**	**134,336**

	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada[1]
	No.	No.	No.	No.	No.	No.
Commercial Farms—						
Value of products sold —						
$20,000 or over	1,922	240	392	1,231	312	4,409
$15,000 - $19,999	1,801	313	549	1,015	235	4,240
$10,000 - $14,999	4,651	1,200	2,156	2,828	570	12,594
$ 7,500 - $ 9,999	6,804	2,115	3,709	3,400	737	18,984
$ 5,000 - $ 7,499	16,770	5,770	10,520	7,748	1,555	50,035
$ 3,750 - $ 4,999	16,382	5,822	11,466	7,762	1,439	53,162
$ 2,500 - $ 3,749	24,747	9,042	20,720	12,841	2,500	91,666
$ 1,200 - $ 2,499	32,742	12,824	33,236	21,177	4,618	151,290
$ 250 - $ 1,199	13,428	7,464	18,772	12,964	2,730	83,827
Small-Scale Farms—						
Value of products sold (less than $250)	17,172	4,285	5,976	8,141	7,148	87,057
Part-Time Farms	13,364	3,271	4,376	5,118	4,526	65,135
Institutional Farms, etc	137	37	146	90	36	692
Totals, Occupied Farms	**149,920**	**52,383**	**112,018**	**84,315**	**26,406**	**623,091**

[1] Includes data for the Yukon and Northwest Territories.

Age of Farm Operators.—During the period 1921-41 there had been a gradual increase in the proportion of farm operators in the higher age groups, until, in 1941, 46·1 p.c. of the operators were 50 or more years of age. This trend was reversed in 1951, however, when 40·9 p.c. were reported in this older age group, the lowest proportion since the 1921 Census.

The 1951 Census figures also show a reversal of the trend toward fewer farms occupied by operators in the younger age groups. While the proportion of farm operators under 40 years of age had decreased from 39·6 p.c. in 1921 to 30·8 p.c. in 1941, it increased to 34·3 p.c. in 1951. The 1951 Census showed the largest proportion of farm operators under 40 years of age since the Census of 1921 for all provinces except Alberta. In Alberta the proportion was greater in 1951 than in 1941 but still less than in either 1931 or 1921.

49.—Percentage Distribution of Farm Operators, by Age Group and by Province, Census Years 1921-51

Province and Year	All Occupied Farms	Operators Reporting Age	Percentage Distribution by Age Group							
			Under 24	25-29	30-34	35-39	40-49	50-59	60-69	70+
	No.	No.								
Newfoundland.....1921	...	...	...	...	...	...	...	...	...	...
1931	...	...	...	...	...	...	...	...	...	...
1941	...	...	...	...	...	...	...	...	...	...
1951	3,626	3,624	2·2	4·3	8·1	12·1	22·8	22·3	18·5	9·7
Prince Edward Island...1921	13,701	13,285	4·2	7·0	8·6	10·9	21·0	21·0	27·3[1]	...
1931	12,865	12,213	2·3	4·8	7·7	10·7	22·4	21·4	18·2	12·5
1941	12,230	11,360	2·2	5·5	7·6	9·0	22·6	22·6	17·9	12·7
1951	10,137	10,124	2·2	5·5	8·9	11·8	23·1	22·9	16·4	9·2
Nova Scotia.....1921	47,432	45,897	2·2	4·6	7·0	9·8	23·2	22·1	31·1[1]	...
1931	39,444	38,091	1·4	3·1	6·0	8·6	21·7	23·7	21·0	14·5
1941	32,977	31,700	1·9	4·1	6·3	7·8	20·8	22·7	22·0	14·2
1951	23,515	23,477	1·6	3·9	7·6	11·0	22·6	22·3	19·2	11·8
New Brunswick.....1921	36,655	36,156	3·2	6·7	9·5	11·6	24·2	20·3	24·5[1]	...
1931	34,025	33,079	2·1	5·0	7·8	10·6	24·2	23·1	17·6	9·5
1941	31,889	30,865	2·6	6·0	8·2	10·0	22·2	22·9	18·6	9·5
1951	26,431	26,368	2·0	5·3	9·3	12·4	23·9	21·7	16·9	8·5
Quebec.....1921	137,619	135,556	4·4	9·7	11·7	13·0	24·8	19·4	17·0[1]	...
1931	135,957	126,489	2·7	7·5	10·4	12·0	25·3	22·1	13·9	6·1
1941	154,669	142,676	3·8	9·0	11·1	11·9	24·0	21·1	13·9	5·0
1951	134,336	134,073	3·5	8·3	11·5	13·9	26·1	20·9	12·1	3·7
Ontario.....1921	198,053	187,573	3·3	7·6	10·0	11·8	24·6	22·2	20·5[1]	...
1931	192,174	177,474	1·9	5·5	8·5	10·9	24·0	23·2	17·5	8·4
1941	178,204	165,566	2·1	5·2	7·7	10·1	24·0	23·8	18·0	9·2
1951	149,920	149,573	2·5	5·9	8·9	11·3	25·5	23·8	15·4	6·7
Manitoba.....1921	53,252	51,613	4·7	11·8	14·4	15·0	24·5	17·6	12·0[1]	...
1931	54,199	50,203	2·9	7·6	10·2	13·0	27·8	21·0	13·0	4·5
1941	58,024	54,073	2·9	8·3	10·5	11·7	24·0	23·9	14·2	4·5
1951	52,383	52,134	3·6	8·9	12·2	13·9	25·0	20·2	13·1	3·1
Saskatchewan.....1921	119,451	114,153	4·5	13·5	16·8	18·5	25·2	13·4	8·1[1]	...
1931	136,472	119,835	4·5	9·2	10·6	13·6	30·6	20·2	8·5	2·7
1941	138,713	121,054	4·3	9·1	10·7	10·9	22·0	25·4	14·1	3·5
1951	112,018	111,586	5·5	9·9	12·3	13·2	22·9	18·3	14·3	3·6
Alberta.....1921	82,954	77,714	5·2	12·1	15·9	17·0	25·1	15·3	9·4[1]	...
1931	97,408	88,058	5·3	9·6	11·2	13·0	28·6	19·5	9·6	3·2
1941	99,732	90,750	3·4	7·9	10·6	12·2	23·8	24·5	13·7	3·8
1951	84,315	84,044	4·3	8·8	11·4	12·4	25·2	20·8	13·8	3·3
British Columbia.....1921	21,973	21,586	2·6	5·8	10·4	14·5	28·5	22·2	16·0[1]	...
1931	26,079	25,551	1·8	3·8	5·9	9·3	28·1	26·6	17·7	6·8
1941	26,394	25,756	1·6	4·3	6·6	9·3	21·3	28·0	20·4	8·4
1951	26,406	26,343	1·5	4·8	7·7	11·0	25·6	23·1	19·4	6·9
Totals.....1921	**711,090**	**683,533**	**4·0**	**9·5**	**12·2**	**13·9**	**24·7**	**18·9**	**16·8[1]**	**...**
1931	**728,623**	**670,993**	**3·0**	**7·0**	**9·4**	**11·8**	**26·3**	**21·9**	**14·1**	**6·4**
1941	**732,832**	**673,800**	**3·1**	**7·3**	**9·5**	**10·9**	**23·2**	**23·7**	**15·9**	**6·5**
1951[2]	**623,091**	**621,350**	**3·5**	**7·6**	**10·6**	**12·6**	**24·8**	**21·3**	**14·5**	**5·1**

[1] 60 years or over. [2] Includes data for the Yukon and Northwest Territories.

Farm Machinery.—The tremendous increase in farm mechanization during the past 20 years is clearly shown in the census figures on the number of machines and the number of farms reporting them. One of the important increases has been in the use of tractors, 150 p.c. more being reported on farms in 1951 than in 1941. Farmers in Quebec, Prince Edward Island and British Columbia reported five times as many as in 1941, New Brunswick farmers over four times as many, Ontario and Nova Scotia farmers three times as many, and Prairie Province farmers twice as many.

Compared with 1941, there has also been a sharp increase in the use of motor-trucks on farms in all provinces, ranging from an increase of 93 p.c. in British Columbia to an increase of 186 p.c. in Quebec. The 10-year increase for all Canada was 153 p.c. The number of automobiles on farms showed an increase of only 4·5 p.c. for the same period. The largest increases were in Quebec (53·9 p.c.) and British Columbia (28·7 p.c.). Nova Scotia, New Brunswick and Ontario had fewer automobiles on farms in 1951 than in 1941, but it should be noted that there were also fewer farms in these Provinces.

Grain combines increased 376 p.c. in the 10-year period, the Prairie Provinces and Ontario accounting for most of the increase. While there were only 8,917 combines reported in Canada in 1931 and 19,013 in 1941, the figure climbed to 90,500 by 1951. The number of combines on farms in Saskatchewan increased from 6,019 in 1931 to 42,997 in 1951 and accounted for a substantial part of the increase. Despite the increase in the use of combines, there were 4·0 p.c. more threshing machines on Canadian farms in 1951 than in 1941. All provinces except Nova Scotia, Ontario, Alberta and British Columbia reported decreases ranging from 12·1 p.c. in New Brunswick and 10·5 p.c. in Saskatchewan to 1·4 p.c. in Prince Edward Island, but increases in other provinces—particularly the 75·3-p.c. increase in Ontario—out-weighed these decreases.

Grain binders were not included in the 1941 Census, but the 1951 Census showed a decrease for Canada of 29·7 p.c. compared with 1931. Nova Scotia, New Brunswick, Quebec and British Columbia reported slight increases in the number of grain binders, but the other provinces reported substantial decreases ranging from 17·3 p.c. in Prince Edward Island to 45·4 p.c. in Saskatchewan.

The expansion in farm electrification is reflected in the increased numbers of electric motors on farms. For Canada as a whole, the increase was 238 p.c. as compared with 1941 and over 10 times the number in 1931: all provinces contributed. The increase in stationary gasoline engines was confined to the western provinces as all provinces eastward from Ontario showed a considerable decrease as compared with 1941.

While no information is available from the 1941 Census on milking machines, the 1951 Census showed that there were over 11 times as many on farms in 1951 as in 1931.

50.—Farm Machinery and Number of Farms Reporting, by Province, 1931, 1941 and 1951

Province and Year	Automobiles		Tractors		Motor Trucks		Gasoline Engines		Threshing Machines	
	No.	Farms Reporting	No.	Farms Reporting	No.	Farms Reporting	No.	Farms Reporting	No.	Farms Reporting
N'f'ld.....1931	...	...	...	...	...	...	...	...	...	...
1941	...	...	...	...	...	...	...	...	...	...
1951	185	169	126	110	507	476	136	118	5	5
P.E.I.....1931	3,885	3,741	176	169	369	356	4,193	3,641	3,238	3,234
1941	3,570	3,485	577	570[1]	494	465	4,128	3,457	3,015	3,010
1951	4,147	4,021	2,776	2,714	1,679	1,614	3,813	3,181	2,973	2,968
N.S.....1931	10,297	9,982	424	415	1,704	1,633	2,848	2,578	837	836
1941	9,430	9,092	1,386	1,336[1]	2,697	2,475	3,023	2,684	802	789
1951	6,970	6,757	4,307	4,056	5,687	5,308	2,178	1,901	826	819
N.B.....1931	10,425	9,998	289	279	1,126	1,093	4,505	4,243	3,260	3,257
1941	8,677	8,403	1,140	1,135[1]	1,861	1,762	4,344	4,006	2,788	2,782
1951	7,999	7,808	5,221	5,023	4,786	4,528	2,439	2,299	2,450	2,443
Que.....1931	26,877	25,741	2,417	2,356	5,152	4,939	36,251	34,029	39,575	39,341
1941	27,026	26,412	5,869	5,758[1]	6,703	6,365	39,274	36,554	32,383	32,239
1951	41,602	40,937	31,971	30,835	19,167	18,438	30,692	28,589	30,360	30,225
Ont.....1931	125,716	115,833	18,993	18,318	14,586	13,875	45,380	40,082	8,490	8,278
1941	128,744	118,829	35,460	34,478[1]	17,537	16,312	32,801	28,193	9,094	8,795
1951	114,870	107,031	105,204	92,065	41,486	38,481	20,243	16,524	15,946	15,788
Man.....1931	25,588	24,450	14,366	12,983	3,260	3,123	17,557	13,820	10,107	10,008
1941	27,074	26,410	22,050	20,948[1]	7,566	7,248	15,772	12,639	9,979	9,925
1951	32,060	30,848	50,984	40,641	21,163	19,937	17,370	14,150	9,425	9,381
Sask.....1931	65,094	62,568	43,308	39,434	10,938	10,559	38,549	32,096	27,046	26,722
1941	57,093	55,767	54,129	51,353[1]	21,285	20,225	33,882	27,935	21,486	21,311
1951	62,963	60,916	106,664	90,307	52,626	49,277	55,763	41,630	19,221	19,105
Alta.....1931	42,817	41,025	23,985	21,996	7,319	7,080	26,938	22,137	12,457	12,288
1941	44,090	42,678	36,445	34,456[1]	14,512	13,634	31,091	25,199	12,753	12,649
1951	46,314	44,431	79,282	65,369	39,723	35,732	46,003	34,248	14,768	14,666
B.C.....1931	10,585	10,034	1,402	1,312	3,947	3,707	3,544	3,051	534	518
1941	9,757	9,318	2,696	2,573[1]	4,825	4,490	3,910	3,245	701	688
1951	12,557	12,103	13,148	11,535	9,291	8,460	4,407	3,375	717	699
Totals....1931	**321,284**	**303,372**	**105,360**	**97,262**	**48,401**	**46,365**	**179,765**	**155,677**	**105,544**	**104,482**
1941	**315,461**	**300,394**	**159,752**	**152,607[1]**	**77,480**	**72,976**	**168,225**	**143,912**	**93,001**	**92,188**
1951[2]	**329,667**	**315,021**	**399,686**	**342,658**	**196,122**	**182,255**	**183,051**	**146,018**	**96,691**	**96,099**

	Grain Binders		Grain Combines		Mowing Machines		Milking Machines		Electric Motors	
	No.	Farms Reporting	No.	Farms Reporting	No.	Farms Reporting	No.	Farms Reporting	No.	Farms Reporting
N'f'ld.....1931	...	...	...	...	...	...	...	...	...	...
1941	...	...	...	...	...	...	...	...	...	...
1951	4	4	—	—	737	716	66	47	131	60
P.E.I.....1931	7,204	7,189	—	—	...	...	27	27	184	156
1941	...	...	4	4	...	...	...	...	387	282
1951	5,956	5,942	18	18	7,720	7,538	454	445	1,754	1,060
N.S.....1931	2,015	2,013	—	—	...	...	41	41	437	355
1941	...	...	2	2	...	...	...	...	1,225	793
1951	2,101	2,095	16	16	16,114	15,633	1,903	1,865	3,861	2,241
N.B.....1931	3,814	3,807	—	—	...	...	76	76	501	389
1941	...	...	15	15	...	...	...	...	928	645
1951	4,149	4,144	211	211	16,288	15,828	1,901	1,831	3,471	2,101

For footnotes, *see* end of table.

50.—Farm Machinery and Number of Farms Reporting, by Province, 1931, 1941 and 1951—concluded

Province and Year	Grain Binders		Grain Combines		Mowing Machines		Milking Machines		Electric Motors	
	No.	Farms Reporting	No.	Farms Reporting	No.	Farms Reporting	No.	Farms Reporting	No.	Farms Reporting
Que.....1931	42,944	41,793	—	—	..	..	827	827	3,311	2,790
1941	..	..	55	55	..	..	..	..	8,039	5,327
1951	43,467	43,163	420	418	103,936	100,052	18,238	17,632	43,638	25,833
Ont.....1931	124,561	116,994	—	—	..	..	4,015	4,007	9,604	7,188
1941	..	..	796	786	..	..	..	..	40,137	22,681
1951	85,135	83,990	10,031	9,856	112,567	107,164	38,740	37,464	84,679	44,657
Man.....1931	45,883	35,613	355	351	..	..	248	247	854	676
1941	..	..	1,714	1,655	..	..	..	..	1,374	887
1951	31,410	29,467	15,268	14,663	37,856	33,804	2,302	2,145	18,850	11,258
Sask.. 1931	129,177	98,676	6,019	5,919	..		414	414	1,702	1,426
1941	..	..	11,202	10,822	..	..	..	..	1,708	1,267
1951	70,584	65,156	42,997	41,215	63,838	60,121	2,330	2,191	12,711	6,877
Alta.....1931	73,487	61,048	2,523	2,461	..		366	366	1,087	895
1941	..	..	5,165	4,910	..	..	..	..	2,150	1,499
1951	57,930	53,613	20,852	19,569	53,468	47,900	4,469	4,134	20,925	10,835
B.C.....1931	2,318	2,207	20	19	..		405	405	959	764
1941	..	..	60	54	..	..	..	..	2,244	1,546
1951	2,638	2,547	687	665	10,743	9,230	3,788	3,129	6,661	4,026
Totals....1931	**431,403**	**369,340**	**8,917**	**8,750**	..		**6,419**	**6,410**	**18,639**	**14,639**
1941	..	..	**19,013**	**18,303**	..	..	..	..	**58,192**	**34,927**
1951[2]	**303,374**	**290,121**	**90,500**	**86,631**	**423,272**	**397,988**	**74,191**	**70,883**	**196,681**	**108,948**

[1] Includes duplication where farms had tractors under 15 h.p. and 15 h.p. or over. [2] Includes data for the Yukon and Northwest Territories.

Farm Electrification.—Slightly more than one-half of the farms in Canada reported electric power. Ontario had the largest proportion with 73·8 p.c., followed by Nova Scotia with 71·1 p.c., British Columbia with 68·8 p.c., and Quebec with 67·1 p.c. Saskatchewan had the smallest proportion with only 16·3 p.c. Power line was reported to be the source of power on over 90 p.c. of the farms reporting electricity in all provinces except Saskatchewan and Alberta. In Alberta, 60·1 p.c. of the farms reported power-line source, 13·2 p.c. wind electric, and 28·1 p.c. other sources. In Saskatchewan, 31·9 p.c. of the farms reported power line, 34·4 p.c. wind electric, and 35·8 p.c. other sources.

51.—Farm Electrification, by Province, 1951

Province	Farms Reporting One or More Sources of Power	Source of Supply—		
		Power Line	Wind Electric	Other Sources
	No.	No.	No.	No.
Newfoundland	1,383	1,300	55	28
Prince Edward Island	2,226	2,152	22	53
Nova Scotia	16,733	16,656	21	57
New Brunswick	15,938	15,791	55	93
Quebec	90,209	89,040	540	647
Ontario	110,595	110,128	134	337
Manitoba	25,208	24,004	527	687
Saskatchewan	18,213	5,810	6,262	6,513
Alberta	20,709	12,439	2,727	5,824
British Columbia	18,168	17,420	35	717
Canada[1]	**319,383**	**294,740**	**10,378**	**14,957**

[1] Includes data for the Yukon and Northwest Territories.

Farm Areas.—The total area of occupied farms in Canada was slightly greater in 1951 than in 1941. Excluding Newfoundland, for which 1941 figures are not available, the 1951 total shows an increase of 395,551 acres or 0·2 p.c. over that of 10 years earlier. Increases in the Prairie Provinces and British Columbia more than offset decreases in each of the eastern provinces.

Area of improved land increased by 5·7 p.c. in the 10-year period, but this increase was entirely owing to increases in the Prairie Provinces and British Columbia. Decreases were recorded in each of the Maritime Provinces, Quebec and Ontario. Similarly, while there was an increase of 10·5 p.c. in the area under crops for Canada as a whole, this increase was confined to the Prairie Provinces and British Columbia.

The total area of owner-operated farm land increased by 6·3 p.c. in 1951 as compared with 1941, increases in the western provinces outweighing decreases in the Maritime Provinces, Quebec and Ontario. The largest increase in farm land owned by the operator was in Manitoba (18·8 p.c.) followed by British Columbia (14·8 p.c.) and Saskatchewan (13·2 p.c.). Nova Scotia recorded the largest decrease, having 15·6 p.c. less land owned by farm operators in 1951 than in 1941. Each province except British Columbia showed a decrease in the area rented by farm operators, the decrease for Canada being 14·0 p.c. This decrease in rented land ranged from 8·5 p.c. in Alberta to 49·5 p.c. in Nova Scotia; British Columbia recorded an increase of 23·8 p.c.

52.—Condition and Tenure of Occupied Farm Land, by Province, 1941 and 1951

Item	Newfoundland		Prince Edward Island		Nova Scotia	
	1941	1951	1941	1951	1941	1951
	acres	acres	acres	acres	acres	acres
Condition—						
Under crops	...	20,271	470,351	426,210	575,934	477,459
Pasture	...	5,885	237,062	197,937	175,236	155,108
Summer fallow	...	..	3,943	1,806	3,748	2,524
Other	...	2,825	26,044	19,842	57,485	26,884
Totals, Improved Land	...	28,981	737,400	645,795	812,403	661,975
Woodland	...	37,394	315,780	346,191	2,075,245	1,845,648
Other	...	18,665	115,688	103,318	928,998	666,068
Totals, Unimproved Land	...	56,059	431,468	449,509	3,004,243	2,511,716
Tenure—						
Farm area operated by owner[1]	...	79,770	1,116,579	1,068,013	3,674,000	3,101,578
Farm area operated by tenant	...	5,270	52,289	27,291	142,646	72,113
Totals, Farm Area	...	**85,040**	**1,168,868**	**1,095,304**	**3,816,646**	**3,173,691**

	New Brunswick		Quebec		Ontario	
	1941	1951	1941	1951	1941	1951
	acres	acres	acres	acres	acres	acres
Condition—						
Under crops	865,914	711,647	6,137,521	5,790,359	9,261,626	8,645,302
Pasture	296,776	243,872	2,519,354	2,685,217	3,237,865	3,235,345
Summer fallow	8,472	6,927	6,776	47,084	320,765	333,764
Other	64,269	43,931	399,020	306,308	543,105	478,839
Totals, Improved Land	1,235,431	1,006,377	9,062,671	8,828,968	13,363,361	12,693,250

[1] Includes "operated by manager".

52.—Condition and Tenure of Occupied Farm Land, by Province, 1941 and 1951—concluded

Item	New Brunswick		Quebec		Ontario	
	1941	1951	1941	1951	1941	1951
	acres	acres	acres	acres	acres	acres
Condition—concluded						
Woodland	2,210,412	2,044,103	5,962,906	5,874,341	3,864,869	3,852,774
Other	518,266	419,754	3,036,987	2,083,096	5,159,751	4,334,030
Totals, Unimproved Land	2,728,678	2,463,857	8,999,893	7,957,437	9,024,620	8,186,804
Tenure—						
Farm area operated by owner[1]	3,778,825	3,371,867	17,197,991	16,261,924	19,023,994	18,632,732
Farm area operated by tenant	185,284	98,367	864,573	524,481	3,363,987	2,247,322
Totals, Farm Area	**3,964,109**	**3,470,234**	**18,062,564**	**16,786,405**	**22,387,981**	**20,880,054**

	Manitoba		Saskatchewan		Alberta	
	1941	1951	1941	1951	1941	1951
	acres	acres	acres	acres	acres	acres
Condition—						
Under crops	6,327,967	7,335,184	19,767,341	23,705,575	12,284,123	14,427,631
Pasture	455,487	584,722	783,901	1,441,015	625,578	1,112,825
Summer fallow	2,767,335	2,519,264	13,803,088	12,855,394	6,545,931	6,194,976
Other	278,385	322,640	1,222,990	804,786	669,588	535,612
Totals, Improved Land	9,829,174	10,761,810	35,577,320	38,806,770	20,125,220	22,271,044
Woodland	1,529,648	1,812,209	2,566,115	2,945,167	2,727,375	2,865,568
Other	5,532,500	5,156,374	21,817,492	19,911,258	20,424,700	19,323,020
Totals, Unimproved Land	7,062,148	6,968,583	24,383,607	22,856,425	23,152,075	22,188,588
Tenure—						
Farm area operated by owner[1]	11,608,541	13,788,328	35,641,592	40,363,086	26,706,328	29,301,589
Farm area operated by tenant	5,282,781	3,942,065	24,319,335	21,300,109	16,570,967	15,158,043
Totals, Farm Area	**16,891,322**	**17,730,393**	**59,960,927**	**61,663,195**	**43,277,295**	**44,459,632**

	British Columbia		Totals	
	1941	1951	1941	1951[2]
	acres	acres	acres	acres
Condition—				
Under crops	589,133	672,448	56,279,910	62,212,148
Pasture	171,614	343,195	8,502,873	10,005,126
Summer fallow	75,048	70,318	23,535,106	22,032,062
Other	57,290	61,815	3,318,176	2,603,490
Totals, Improved Land	893,085	1,147,776	91,636,065	96,852,826
Woodland	1,013,732	1,156,549	22,266,082	22,779,944
Other	2,126,753	2,397,949	59,661,135	54,413,884
Totals, Unimproved Land	3,140,485	3,554,498	81,927,217	77,193,828
Tenure—				
Farm area operated by owner[1]	3,235,233	3,714,231	121,983,083	129,683,550
Farm area operated by tenant	798,337	988,043	51,580,199	44,363,104
Totals, Farm Area	**4,033,570**	**4,702,274**	**173,563,282**	**174,046,654**

[1] Includes "operated by manager".

[2] Includes data for the Yukon and Northwest Territories.

Section 6.—International Crop Statistics

Tables 53 and 54 are based on official estimates published in March 1953 by the Foreign Agricultural Service, United States Department of Agriculture, and give the acreages and production of wheat and the production of oats and barley for the harvests of 1951 and 1952, with averages for the years 1945-49, in the leading countries of the world.

53.—Estimated Acreages and Production of Wheat Harvested in 1951 and 1952 in Specified Countries, with Average for 1945-49

Continent and Country	Acreages			Production		
	Average 1945-49	1951	1952	Average 1945-49	1951	1952
	'000 acres	'000 acres	'000 acres	'000 bu.	'000 bu.	'000 bu.
North America—						
Canada	24,717	25,254	25,995	366,349	552,657	687,922
Mexico	1,244	1,668	1,730	15,522	15,800	17,500
United States	71,024	61,492	70,585	1,202,396	980,810	1,291,447
Totals, North America[1]	**97,030**	**88,470**	**98,370**	**1,585,000**	**1,550,000**	**1,997,000**
Europe—						
Austria	528	560	590	10,800	15,800	17,500
Belgium	371	391	405	14,733	18,890	20,280
Denmark	175	200	185	8,704	10,030	11,060
Finland	420	480	..	8,966	9,500	..
France	10,354	10,900	11,000	238,200	265,000	310,000
Greece	1,917	2,357	2,382	24,750	34,200	38,500
Ireland	561	290	275	17,746	9,500	9,600
Italy	11,742	12,125	12,000	227,200	260,000	295,000
Luxembourg	32	42	43	800	1,260	1,290
Netherlands, The	262	186	203	11,109	9,910	12,160
Norway	91	60	51	2,670	1,500	1,500
Portugal	1,661	1,663	1,711	14,190	21,300	20,360
Spain	9,640	10,380	10,625	116,700	175,000	170,000
Sweden	749	810	821	23,222	18,500	28,700
Switzerland	223	219	226	7,800	8,600	8,900
United Kingdom	2,148	2,131	2,030	77,505	86,460	86,130
Western Germany	2,283	2,650	2,950	67,420	112,580	120,920
Other Europe[2]	18,530	20,720	20,410	318,000	435,000	415,000
Totals, Europe[1]	**66,110**	**71,170**	**71,340**	**1,265,000**	**1,585,000**	**1,650,000**
Union of Soviet Socialist Republics (Europe and Asia)	**82,200**	..	..	**883,000**	..	..
Asia—						
China	54,447	..	..	864,280	..	..
India[3]	23,312	24,134	23,235	212,336	248,000	246,000
Iran	..			70,791	66,000	75,000
Iraq	1,593	.	..	14,424	19,100	18,000
Japan	1,655	1,812	1,781	34,325	54,750	56,480
Lebanon	166	161	161	2,133	1,650	1,800
Pakistan[3]	10,307	10,832	10,435	130,018	147,600	115,000
Syria	1,957	..	..	18,762	20,200	26,000
Turkey	9,436	12,000	13,500	125,089	205,000	235,000
Totals, Asia[1]	**111,180**	**114,620**	**115,320**	**1,525,000**	**1,610,000**	**1,630,000**
Africa—						
Algeria	3,566	4,037	4,258	29,900	33,000	45,000
Egypt	1,618	1,554	1,455	42,633	45,000	40,500
French Morocco	2,621	3,269	3,530	21,792	30,800	30,500
Tunisia	1,907	1,450	2,850	12,320	12,500	23,400
Union of South Africa	2,416	2,996	..	15,067	25,640	18,940
Totals, Africa[1]	**13,740**	**15,360**	**16,920**	**133,000**	**160,000**	**175,000**

For footnotes, *see* end of table.

53.—Estimated Acreages and Production of Wheat Harvested in 1951 and 1952 in Specified Countries, with Average for 1945-49—concluded

Continent and Country	Acreages			Production		
	Average 1945-49	1951	1952	Average 1945-49	1951	1952
	'000 acres	'000 acres	'000 acres	'000 bu.	'000 bu.	'000 bu.
South America—						
Argentina	*11,493*	*6,772*	*13,500*	*193,740*	*77,161*	*285,000*
Brazil	876	..	..	11,283	13,000	20,000
Chile	1,980	1,853	2,070	35,628	36,300	43,590
Peru	278	..	..	3,749	..	.
Uruguay	1,060	1,350	1,225	13,124	17,550	16,900
Totals, South America[1]	**16,320**	**12,150**	**19,190**	**263,000**	**155,000**	**375,000**
Oceania—						
Australia	12,662	10,331	10,106	177,742	159,695	188,110
New Zealand	140	95	130	5,241	4,000	4,000
Totals, Oceania	**12,802**	**10,426**	**10,236**	**182,983**	**163,695**	**192,110**
World Totals[1]	**400,010**	**427,200**	**446,380**	**5,835,000**	**6,480,000**	**7,320,000**

[1] Estimated totals, which in the case of production are rounded to millions, include allowances for any missing data for countries shown and data for producing countries not shown. [2] Includes Albania, Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland and Roumania. [3] Figures for the periods shown are not strictly comparable since figures for 1951 and 1952 include allowances for non-reporting areas not included for the earlier period shown, but included in estimated total for Asia.

54.—Estimated Production of Oats and Barley Harvested in 1951 and 1952 in Specified Countries, with Average for 1945-49

Continent and Country	Oats			Barley		
	Average 1945-49	1951	1952	Average 1945-49	1951	1952
	'000 bu.	'000 bu.	'000 bu.	'000 bu.	'000 bu.	'000 bu.
North America—						
Canada	341,612	488,191	466,805	144,688	245,218	291,379
Mexico	2,152	..	..	6,032	..	..
United States	1,376,527	1,321,288	1,268,280	273,306	254,287	227,008
Totals, North America[1]	**1,720,000**	**1,814,000**	**1,739,000**	**424,000**	**507,000**	**525,000**
Europe—						
Austria	17,424	25,150	27,300	7,127	13,000	12,500
Belgium	37,888	32,550	31,100	9,388	12,400	13,825
Denmark	67,820	58,350	66,620	64,345	81,160	98,890
Finland	35,275	55,500	54,000	8,500	10,000	9,900
France	221,821	254,120	227,540	52,500	76,450	79,210
Greece	6,058	9,650	8,040	7,359	10,560	9,800
Ireland	48,040	41,000	40,000	6,739	8,300	11,100
Italy	30,513	35,107	35,000	9,467	12,400	12,190
Luxembourg	2,370	2,700	2,750	—	—	—
Netherlands, The	24,125	33,840	33,660	7,147	9,650	11,180
Norway	11,137	11,730	11,370	4,014	5,630	6,910
Portugal	8,255	10,100	9,420	3,835	6,280	6,050
Spain	34,390	37,200	37,680	83,528	98,425	102,330
Sweden	58,000	57,050	59,000	8,252	11,400	15,750
Switzerland	5,568	4,490	4,340	2,745	2,200	2,195
United Kingdom	204,692	183,120	194,040	91,895	90,490	101,140
Western Germany	144,500	200,000	180,000	43,740	79,870	80,700
Other Europe[2]	313,000	380,000	370,000	173,000	222,000	220,000
Totals, Europe[1]	**1,293,000**	**1,455,000**	**1,410,000**	**601,000**	**770,000**	**810,000**

For footnotes, *see* end of table, p. 450.

54.—Estimated Production of Oats and Barley Harvested in 1951 and 1952 in Specified Countries, with Average for 1945-49—concluded

Continent and Country	Oats			Barley		
	Average 1945-49	1951	1952	Average 1945-49	1951	1952
	'000 bu.	'000 bu.	'000 bu.	'000 bu.	'000 bu.	'000 bu.
Union of Soviet Socialist Republics (Europe and Asia)	**721,000**	..	..	**272,000**	..	..
Asia—						
China	51,335	..	..	322,244	..	..
India[3]	—	—	—	106,255	109,000	100,000
Iran	—	—	—	37,157	33,000	38,600
Iraq	—	—	—	29,502	34,500	34,500
Japan	6,431	9,650	9,510	56,046	100,000	99,100
Korea	—	—	—	35,000		
Lebanon	—	—	—	1,165	550	700
Manchuria	—	—	—	5,550	..	..
Pakistan[3]	—	—	—	6,922	7,500	6,400
Syria	574	..	..	11,135	..	..
Turkey	14,000	24,110	27,560	68,675	124,000	146,970
Totals, Asia[1]	**84,000**	**103,000**	**106,000**	**700,000**	**780,000**	**810,000**
Africa—						
Algeria	7,694	8,920	9,820	28,120	26,000	46,000
Egypt	—	—	—	8,605	4,800	5,500
French Morocco	2,376	3,360	4,230	47,322	74,000	57,000
Tunisia	958	1,380	830	7,901	3,220	16,080
Union of South Africa	—	—	—	1,740	..	..
Totals, Africa[1]	**20,000**	**23,000**	**24,000**	**107,000**	**128,000**	**148,000**
South America—						
Argentina	47,782	30,200	70,000	35,576	15,500	46,000
Chile	5,310	7,640	8,330	4,030	5,830	6,830
Uruguay	2,840	2,600	2,660	846	820	1,060
Totals, South America[1]	**57,000**	**41,000**	**82,000**	**53,000**	**37,000**	**68,000**
Oceania—						
Australia	33,249	43,130	53,440	16,854	22,830	34,930
New Zealand	3,669	3,090	2,500	2,223	2,270	2,600
Totals, Oceania	***36,918***	***46,220***	***55,940***	***19,077***	***25,100***	***37,530***
World Totals[1]	**3,930,000**	**4,210,000**	**4,190,000**	**2,175,000**	**2,575,000**	**2,750,000**

[1] Estimated totals, which are rounded to millions, include allowances for any missing data for countries shown and for other producing countries not shown. [2] Comprises Albania, Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland and Roumania. [3] Figures for the periods shown are not strictly comparable since figures for 1951 and 1952 include allowances for non-reporting areas not included for the earlier period shown, but included in estimated total for Asia.

CHAPTER XI.—FORESTRY*

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Land is the basis of the Canadian economy and wise use of the land is the foundation of good forestry. Good forestry will aid in maintaining agricultural lands against drought and erosion; will continuously protect water-catchment areas and assure supplies of water; will furnish good cover for game and fur-bearing animals; and will give Canadians and their tourist guests opportunities for recreation which only the forests can provide.

Section 1.—Forest Regions†

The forests of Canada cover a vast area in the north temperate climatic zone. Wide variations in physiographic, soil and climatic conditions cause marked differences in the character of the forests in different parts of the country; hence eight fairly well defined forest regions may be recognized. These are the Boreal, Great Lakes-St. Lawrence, Acadian, Deciduous, Subalpine, Columbia, Montane, and Coast Forest Regions, as illustrated on the accompanying map. The relative proportion of the total area of all forest regions occupied by each is as follows:—

Region	*Percentage of Total Regional Area*	*Region*	*Percentage of Total Regional Area*
Boreal	80·1	Acadian	2·0
Great Lakes - St. Lawrence	7·9	Columbia	0·9
Subalpine	4·0	Deciduous	0·4
Montane	2·5		
Coast	2·2	Total	100·0

The Boreal Forest Region.—This forest Region, covering the greater part of Canada, stretches unbrokenly from Newfoundland westward to the boundary of Alaska. Along its southern border it follows the limits of the Great Lakes-St. Lawrence Region and then skirts the grasslands of the Prairies to the foothills of the Rocky Mountains and northwestward into the Yukon Territory. The northern

* Sections of this Chapter that deal with forestry and forest administration have been revised in the Forest Economics Section, Forestry Branch, Department of Resources and Development. Sections dealing with forest utilization and forest industries, except as otherwise noted, have been revised in the Forestry Section, Industry and Merchandising Division, Dominion Bureau of Statistics.

† A more detailed discussion of forest regions is given in the Department of Resources and Development, Forestry Branch Bulletin No. 89, *A Forest Classification for Canada*, by W. E. D. Halliday. Accounts of variations in Canadian physiography, climate, etc., are given in Chapter I of this volume.

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limits of tree growth form its boundary to the north. White and black spruce, trembling aspen, balsam poplar, tamarack, white birch and jack pine comprise the principal trees of the Region.

Within the Region are two sections that are quite distinctive—the Northern Transition and the Aspen Grove. The Northern Transition Section lies between the merchantable forests on the south and the Arctic tundra on the north. White and black spruce, tamarack and white birch, stunted in growth, are the characteristic trees. In the Aspen Grove Section, lying as a transition zone between the true forest region to the north and the open grasslands to the south, the trembling aspen is the dominant tree species. Bur oak, white elm and green ash are found in certain localities.

The Great Lakes–St. Lawrence Forest Region.—This Region lies south of the Boreal Forest in the eastern part of Canada, from the drainage basin of the Great Lakes–St. Lawrence River System to southeastern Manitoba. Some of the earliest centres of settlement are within the Region and in many portions the forest has been largely cleared and remains now only in woodlots. The area is characterized by the occurrence of white pine, yellow birch and sugar maple. A large number of species occur, including red pine, jack pine, white spruce, black spruce, balsam fir, cedar, hemlock, white birch, other maples and the elms.

The Acadian Forest Region.—This Region includes Prince Edward Island, Nova Scotia, and all but the northwest corner of New Brunswick. Red spruce is the dominant conifer and is usually associated with balsam fir, white and black spruce, hemlock, yellow birch, sugar maple and white birch.

The Deciduous Forest Region.—The Deciduous Region of Canada consists of a small northerly portion of the temperate forest of the same type as in the United States. The Region occupies the Sarnia-Niagara peninsula of southern Ontario. Beech and sugar maple, associated with basswood, red maple and several oaks are the characteristic trees. Many broad-leaved species such as hickory, black walnut, tulip-tree, cucumber-tree, mulberry, sycamore, sassafras, and a number of other species find their northern limit in this Region.

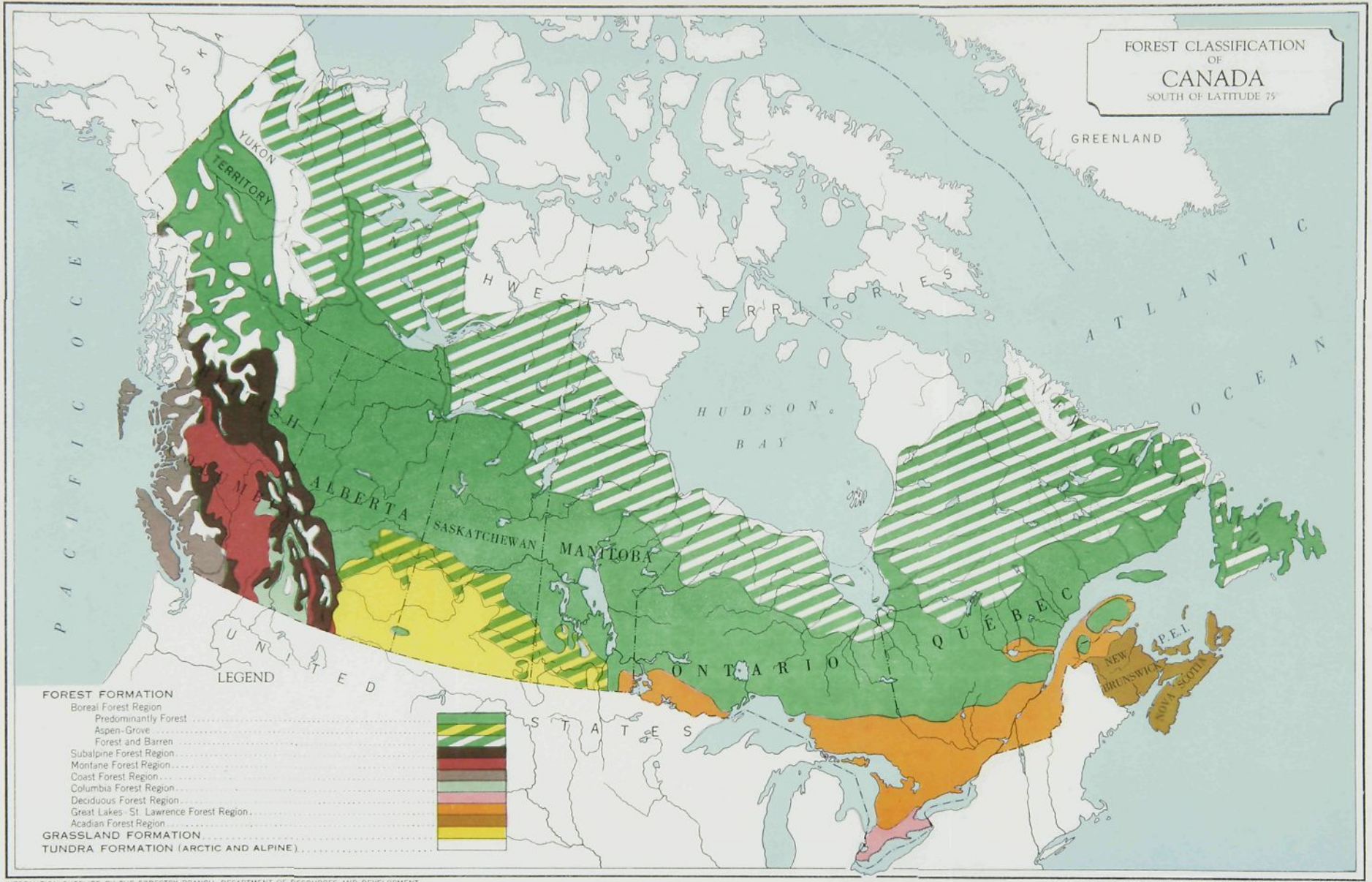
The Subalpine Forest Region.—This is essentially a coniferous forest region, occupying the upper slopes of the Cordilleran System east of the Coast ranges, and lying between the Alpine Tundra formation and the Montane Forest Region. Generally, the Region lies between altitudes of 3,000 and 6,000 feet. The dominant tree species are Englemann spruce, alpine fir, lodgepole pine and trembling aspen.

The Columbia Forest Region.—The forests of this Region, often referred to as the interior wet belt of British Columbia, comprise stands in the valleys of the Columbia and Fraser Rivers that lie between altitudes of 2,500 and 4,000 feet. These forests are somewhat similar in composition to those of the Coast Region. The principal tree species are Englemann spruce, western red cedar, western hemlock and Douglas fir. Associated with these are grand fir, western white pine and western larch. Black cottonwood is found on rich alluvial soils.

The Montane Forest Region.—This Region forms part of the interior dry belt of British Columbia and is found, generally, at elevations below the Columbia Region. It covers an extensive series of plateaux, valleys and ranges in the interior

FOREST CLASSIFICATION OF CANADA

SOUTH OF LATITUDE 75



INFORMATION SUPPLIED BY THE FORESTRY BRANCH, DEPARTMENT OF RESOURCES AND DEVELOPMENT.

DRAWN AND PRINTED AT THE SURVEYS AND MAPPING BRANCH, OTTAWA, 1953

of the Province. Typical of the Region are ponderosa pine, Douglas fir, lodgepole pine and trembling aspen. Towards the northern half of the Region, ponderosa pine disappears, leaving Douglas fir and lodgepole pine as characteristic species.

The Coast Forest Region.—The western slopes of the Coast and Cascade Mountains and the islands along the coast comprise this Region. It produces the largest trees and heaviest stands in Canada. The dominant trees are western hemlock and western red cedar. Associated with these are Douglas fir in the south and Sitka spruce in the north. Also occurring in the Region are yellow cedar, western white pine and amabilis fir. Black cottonwood and red alder are the important hardwood species in the Region.

Section 2.—Native Tree Species

There are more than 150 tree species in Canada, of which 31 are conifers, commonly called 'softwoods'. About two-thirds of these softwoods are of commercial importance. Of the large number of deciduous or 'hardwood' species, only about 10 p.c. is of any great commercial value to the wood-using industries. About 82 p.c. of the volume of merchantable timber is made up of softwood species.

Detailed information on Canadian trees is given in Forestry Branch Bulletin No. 61, *Native Trees of Canada,** published by the Department of Resources and Development.

Section 3.—Forest Resources

The forested area of Canada (exclusive of Labrador) is estimated at 1,320,321 sq. miles, or 37 p.c. of the total land area. In comparison, only 15 p.c. of the land area is considered to be of present or potential value for agriculture and 4 p.c. is classed as "improved and pasture"

Over 40 p.c. of the total forested area of Canada is classified as "non-productive", i.e., incapable of producing crops of merchantable wood. However, these forests do provide valuable protection for drainage basins and shelter for game and fur-bearing animals.

Of the productive half of the forested area, 503,000 sq. miles are considered to be now accessible for commercial operations. Further details are given in Chapter I, Table 1, p. 20. The economically inaccessible productive forests contain much valuable timber suitable for lumber and pulpwood. At present it is not economical to conduct cutting operations on these areas but, as low-cost methods of transportation are developed, as accessible forested areas become depleted, and as the demand for wood products increases, these inaccessible productive forests will be brought progressively into commercial development. Owing generally to less favourable climatic conditions, the productive capacity of these inaccessible timberlands is expected to be less than that of the accessible areas now being logged.

The predominant part that lumber and other forest products have played in the development of Canada has resulted in a tendency on the part of many to evaluate the forests in terms of timber alone. A growing realization of the economic importance of the non-timber values, however, is bringing about increasing recognition of their true value and thus developing a broader concept of forestry.

* Obtainable from the Queen's Printer, Ottawa, price $1.50.

Under the terms of the Canada Forestry Act, 1949, the Federal Government offers financial support to all provinces to assist them in completing an inventory of their forest resources by aerial photographic methods. This federal assistance is on a 50-50 basis and will assist in the preparation of a national forest inventory. The latest estimates of the total stand of timber, by province and region, appear in Table 1. These estimates are subject to constant revision as more accurate and complete inventories are compiled.

1.—Estimate of Total Stand of Timber, by Type and Size, and by Province and Region, 1952

Province and Region	Conifers			Broad-leaved			Totals		
	Saw Timber	Small Material	Total Equivalent Volume	Saw Timber	Small Material	Total Equivalent Volume	Saw Timber	Small Material	Total Equivalent Volume
Accessible	Million ft. b.m.	'000 cords	Million cu. ft.[1]	Million ft. b.m.	'000 cords	Million cu. ft.[1]	Million ft. b.m.	'000 cords	Million cu. ft.[1]
Newfoundland[2]	3,127	31,902	3,337	—	—	—	3,127	31,902	3,337
Prince Edward Island	65	560	61	40	240	28	105	800	89
Nova Scotia	4,849	23,167	2,939	1,261	5,363	708	6,110	28,530	3,647
New Brunswick	5,000	60,000	6,100	1,500	30,000	2,850	6,500	90,000	8,950
Totals, Atlantic Provinces[2]	13,041	115,629	12,437	2,801	35,603	3,586	15,842	151,232	16,023
Quebec	38,181	450,495	45,928	14,019	176,108	17,773	52,200	626,603	63,701
Ontario	62,378	495,452	54,589	14,109	196,944	19,562	76,487	692,396	74,151
Totals, Central Provinces	100,559	945,947	100,517	28,128	373,052	37,335	128,687	1,318,999	137,852
Manitoba	815	9,900	1,004	1,630	19,090	1,949	2,445	28,990	2,953
Saskatchewan	5,460	46,931	5,081	10,854	33,977	5,059	16,314	80,908	10,140
Alberta	7,000	74,400	7,724	2,080	36,000	3,476	9,080	110,400	11,200
Totals, Prairie Provinces	13,275	131,231	13,809	14,564	89,067	10,484	27,839	220,298	24,293
British Columbia—									
Coast	147,646	13,922	27,021	594	—	104	148,240	13,922	27,125
Interior	64,939	172,364	27,639	876	—	175	65,815	172,364	27,814
Totals, British Columbia	212,585	186,286	54,660	1,470	—	279	214,055	186,286	54,939
Totals, Accessible[2]	**339,460**	**1,379,093**	**181,423**	**46,963**	**497,722**	**51,684**	**386,423**	**1,876,815**	**233,107**
Totals, Inaccessible[2,3]	**151,854**	**888,273**	**104,293**	**4,531**	**132,712**	**12,180**	**156,385**	**1,020,985**	**116,473**
Canada[2,3]	**491,314**	**2,267,366**	**285,716**	**51,494**	**630,434**	**63,864**	**542,808**	**2,897,800**	**349,580**

[1] Cubic volumes do not include wood in stumps and unusable tops. [2] Exclusive of Labrador.
[3] Including estimates of inaccessible stands in the Yukon and Northwest Territories.

Forest Land Tenure.—Private individuals or corporations own 7 p.c. of Canada's total forest land. The remaining 93 p.c. is still in the possession of the Crown in the right of the Federal Government or of the provinces: rights to cut Crown timber under lease or licence have been granted on 16 p.c. of the total forest land. Some of the unalienated land has already been logged and has reverted to the Crown but, in the main, it is located in the inaccessible and less accessible areas.

Farm woodlots on the 623,000 farms across Canada cover about 22,780,000 acres (Census of 1951)—13 p.c. of the total farm area and over 7 p.c. of the total accessible productive forest. These small wooded tracts, ranging in size from three or four acres to 200 or more acres, are among the most accessible forests in Canada. Further, the woodlots of Eastern Canada are, in general, highly productive because they lie in the southern parts of the country and frequently occupy soils that are considerably higher in quality than those typical of the northern forests.

2.—Tenure of Occupied Forest Lands, by Province, 1952

(Square miles)

Province	Private Forest Land			Crown Forest Land					Total Occupied Forest Land
	Farm Woodlots	Other Private Lands	Total	Pulpwood Licences	Saw Timber Licences	Timber Sales	Permit Berths	Total	
Newfoundland[1]	58	4,024	4,082	15,923	1,193	—	—	17,116	21,198
P. E. Island	541	67	608	—	—	—	—	—	608
Nova Scotia	2,884	5,581	8,465	700	—	44	—	744	9,209
New Brunswick	3,194	7,946	11,140	3,833	6,912	—	—	10,745	21,885
Quebec	9,179	15,938	25,117	71,603	8,408	—	—	80,011	105,128
Ontario	6,020	12,888	18,908	80,460	10,372	—	—	90,832	109,740
Manitoba	2,832	4,084	6,916	2,620	257	904	24	3,805	10,721
Saskatchewan	4,602	2,745	7,347	—	48	—	—	48	7,395
Alberta	4,477	4,561	9,038	—	2,500	150	50	2,700	11,738
British Columbia	1,807	6,017	7,824	756	2,846	2,773	617	6,992	14,816
Canada[1,2]	**35,594**	**63,851**	**99,445**	**175,895**	**32,536**	**3,871**	**691**	**212,993**	**312,438**

[1] Exclusive of Labrador. [2] Exclusive of the Yukon and Northwest Territories.

3.—Forest Reserves and Parks, by Province, 1952

Province or Territory	National Parks	Provincial Parks	Provincial Forest Reserves	Federal Forest Experiment Stations	Total
	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles
Newfoundland	—	42	108	—	150
Prince Edward Island	7	—	—	—	7
Nova Scotia	390	—	—	—	390
New Brunswick	80	—	271	35	386
Quebec	[1]	20,026	6,142	7	26,175
Ontario	12	5,212	19,526	97	24,847
Manitoba	1,148	[2]	4,603	25[3]	5,751
Saskatchewan	1,496	1,685	140,857	—	144,038
Alberta	20,718	109	8,619	47	29,493
British Columbia	1,671	14,081	40,505	—	56,257
Northwest Territories	3,625	—	—	—	3,625
Canada	**29,147**	**41,155**	**220,631**	**186**	**291,119**

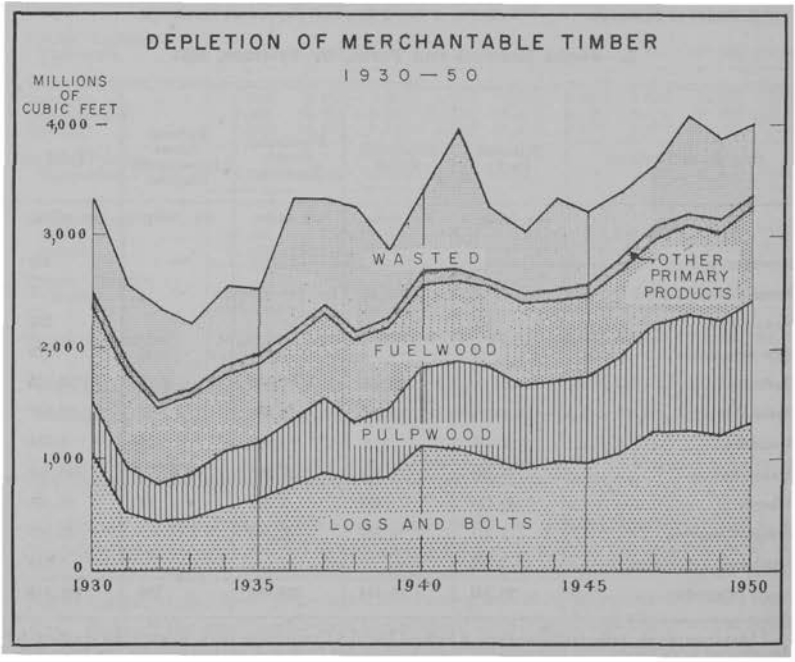
[1] Less than one sq. mile; Gatineau Park, a Federal District Commission Park, 50 sq. miles in extent, is also situated in Quebec. [2] Provincial Park development is carried out in certain of the Province's forest reserves. [3] Included in the National Parks figure.

Section 4.—Forest Depletion and Increment

A general account of forest depletion and increment is presented in this Section. Details of the scientific control of those influences that account for wastage, viz., forest fires, insect pests, etc., are dealt with in Section 5, Forest Administration.

Depletion.—The average annual rate and cause of depletion of reserves of merchantable timber during the ten years 1941-50 are given in Table 4. Of the total depletion, 79 p.c. was utilized and 21 p.c. was destroyed by fire, insects and disease. The utilization of 2,842,687,000 cu. feet comprised 39 p.c. logs and bolts, 31 p.c. pulpwood, 26 p.c. fuelwood, and the remaining 4 p.c. miscellaneous products. Approximately 6 p.c. of the logs and bolts and pulpwood were exported in unmanufactured form.

The more efficient utilization of timber that has been cut is one factor related to forest depletion. There is little doubt that in the past too high a percentage of the sawn log was discarded. Changes of great significance have been taking place in the uses of wood, permitting the utilization of sizes and qualities previously considered unmerchantable. The development of the manufacture of rayon, cellophane and numerous other products in the cellulose industry is rapidly extending the use of wood. Plastic-wood products, fibre board and laminated wood are providing an increasing demand for the formerly inferior classes of wood, resulting in the more complete utilization of forest resources and in the elimination of much waste.



4.—Average Annual Forest Depletion during the Ten-Year Period 1941-50

Item	Usable Wood	Utilization and Wastage	Depletion
	M cu. ft.	p.c.	p.c.
Products Utilized—			
Logs and Bolts—			
Domestic use	1,089,947	38·3	30·5
Exported	18,686	0·7	0·5
Pulpwood—			
Domestic use	739,365	26·0	20·7
Exported	153,503	5·4	4·3
Fuelwood	739,737	26·0	20·7
Hewn railway ties	5,890	0·2	0·2
Pit props	21,950	0·8	0·6
Poles, posts, rails	37,692	1·3	1·0
Miscellaneous products	35,917	1·3	1·0
Average Annual Utilization	**2,842,687**	**100·0**	**79·5**
Wastage—			
By forest fires	231,524	31·6	6·5
By insects and disease	500,000	68·4	14·0
Average Annual Wastage	**731,524**	**100·0**	**20·5**
Average Annual Depletion	**3,574,211**	...	**100·0**

Increment.—The area of occupied forests in the country totals about 312,000 sq. miles, or 200,000,000 acres. This area includes some land that cannot be classified as productive forest land as well as some water. While precise information is not available, the net land area of occupied productive forest is estimated to be approximately 70 p.c. of the total occupied area, or about 140,000,000 acres.

Almost all of Canada's primary forest products are obtained from these occupied productive regions. During the post-war period the average annual rate of felling on this area exceeded 25 cu. feet per acre. When an allowance for losses caused by fire, insects and disease is added, the average annual rate of depletion for the whole area approaches 30 cu. feet per acre. In many localities, however, this rate has been greatly exceeded; in others, it has been considerably less. Complete estimates of the rates at which the forests of Canada grow are not yet available. The vast size of the country, the diversity of growing conditions and the complex character of the forests place great difficulties in the way of estimating growth. However, the results of numerous studies indicate that over considerable tracts growth exceeds 25, 30 or even 40 cu. feet per acre per annum, but in other areas classed as productive the growth is much less. It seems probable, therefore, that considerable portions of Canadian forests are being cut too heavily at present. Large areas of productive forest still remain unoccupied and, while some unoccupied areas may prove to be quite as productive as those now occupied, a large proportion is difficult of access and is of relatively low productivity. The general situation emphasizes the urgent need for more intensive forest management.

Section 5.—Forest Administration

Subsection 1.—Administration of Federal and Provincial Timber-Lands

The summary information on forest administration, normally carried under this heading in the Year Book, has been replaced by a special treatment prepared by the Forest Economics Section of the Forestry Branch, Department of Resources and Development.

ADMINISTRATION OF CROWN FORESTS IN CANADA

Ninety-three per cent of the forests of Canada are owned by the people and are administered by either the Federal or Provincial Governments. In the Maritime Provinces, however, most of the forest has been retained under private ownership. In Prince Edward Island practically all the forest is in private holdings, chiefly farmers' woodlots. In Nova Scotia 73 p.c. of the forest land is privately owned, made up generally of areas exceeding 1,000 acres in extent. Fifty per cent of the forests of New Brunswick are owned by individuals and corporations. The remaining provinces have the following proportions of forest under private ownership: Newfoundland, 16 p.c.; Quebec, 7 p.c.; Ontario, 8 p.c.; Manitoba, 7 p.c.; Saskatchewan, 7 p.c.; Alberta, 7 p.c.; and British Columbia, 4 p.c.

The major proportion of the Crown forests are owned and administered by the provincial governments. The Federal Government administers the forest lands of the Yukon and Northwest Territories and all other federal lands such as the National Parks and forest experiment stations. Most of the provinces have established forest reserves, and seven provinces also maintain Provincial Parks. Forest reserves are set aside either as a source of supply of forest products for industry, or as protection to prevent soil erosion. In both instances, controlled logging operations are carried on and particular care is taken to prevent harmful depletion of the forest resources at any time. In the case of protection forests, the decision as to whether any particular area can be logged in a given year depends on its effect on erosion. No logging would be allowed on a hillside, for example, no matter how desirable from a commercial point of view, if it is likely to interfere with the control of streamflow.

Table 3, p. 455, gives the areas of National and Provincial Parks, forest reserves and forest experiment stations, by province. The National Parks, which range in size from a few acres to hundreds of square miles, are described at pp. 23-25 and Provincial Parks at pp. 26-30.

Federal Administration

The Canada Forestry Act, passed by the Federal Government in 1949, provides, among other things, authority for the operation of forest experiment stations and forest products laboratories, some of which have been in existence for many years. The Act also authorizes the granting of federal assistance to the provinces to enable them to improve the management of their own forests.

A conference, with representatives from all the provinces, was convened at Ottawa by the Minister of Resources and Development in May 1951 to consider the Federal Government's proposals in detail. The Conference approved, in principle, a draft agreement covering federal assistance to the provinces in forest inventory and reforestation, which provided that the Federal Government pay one-half the cost to the provinces of completing and maintaining their forest inventories during the next five years, and that the Federal Government pay one-fifth of the cost to the provinces of reasonable programs for the reforestation of provincial Crown lands, provided that the federal contribution would not exceed, in any year, the amount by which the combined expenditures for the reforestation of such lands exceeded the average of the province's own expenditures for such purposes during the previous three years.

Between Dec. 4, 1951, and June 12, 1952, the Federal Government entered into agreements with all the provinces, except Quebec and Newfoundland, based generally on the above provisions.

Federal Forestry Branch.—The chief functions of the Forestry Branch of the Department of Resources and Development are to provide information and assistance, in forestry matters of national importance, to the provincial authorities, who administer the publicly owned forests lying within provincial boundaries, and to the industries who depend on the forests for their raw materials. The Branch conducts research in forestry and in the utilization of forest products and provides financial help to the provinces in connection with the activities mentioned above.

The Forestry Branch organization comprises three Divisions concerned with Forest Research, Forest Products Laboratories and Forest Operations. A special Section concerned with Forest Economics constitutes a part of the Branch administration.

District Offices are maintained at St. John's, N'f'ld.; Fredericton, N.B.; Valcartier, Que.; Winnipeg, Man.; and Calgary, Alta. A special research unit at the headquarters at Ottawa serves as a district office for Ontario so far as forest research work is concerned. Forest Experiment Stations are located at Acadia near Fredericton, N.B.; Valcartier, Que.; Petawawa, Ont.; Riding Mountain National Park, Man.; and Kananaskis, Alta. Forest Products Laboratories are located at Ottawa and Vancouver.

The Forest Operations Division is concerned primarily with the administration of federal-provincial forestry agreements under the Canada Forestry Act. The duties involved include examination of programs for forest inventory and reforestation which are submitted annually by the provinces as a basis for federal participation in costs, and examination of work carried out in accordance with these programs prior to payment by the Federal Government under the terms of the agreements. A co-operative agreement between the Governments of Canada and New Brunswick, under which the Federal Government is paying one-third of the cost of an aerial spraying operation against the spruce budworm in northern New Brunswick, is also administered by the Forest Operations Division.

The work of the Forest Research Division and Forest Products Laboratories Division is described in Section 3, pp. 468-469.

Eastern Rockies Forest Conservation Board.—This joint Board, supported by the Federal and Alberta Governments, is responsible for protecting the eastern slopes of the Rocky Mountains. Federal participation in this project is based on the fact that the Saskatchewan River has its headwaters in the Rocky Mountains and flows through the Provinces of Saskatchewan and Manitoba, as well as Alberta.

Federal funds have been provided to finance construction of roads and other improvements needed in the protection program, but forestry operations in the area are carried out by the staff of the Alberta Department of Lands and Forests.

Department of Agriculture.—Investigation of outbreaks of injurious forest insects and of tree diseases are carried on by the Forest Biology Division, Science Service, Federal Department of Agriculture, because these lines of work are closely allied with the larger fields of general entomology and plant pathology. This work is done in close co-operation with the federal and provincial forest services. The

Department also maintains two tree-planting stations located at Indian Head and Sutherland, Sask., which provide farmers in the three Prairie Provinces with planting stock for the establishment of windbreaks and shelter-belts.

Provincial Administration

The responsibility for forest administration in each province is centred in a department of government headed by a Minister, who is an elected member of the legislature and a member of the Provincial Cabinet. The permanent head of the department, the Deputy Minister, is responsible for the execution of approved policies and for departmental administration. The name given the forestry department varies with the province; also, there are considerable differences in organization and in the titles and duties of the principal officers. The similarities, however, are of greater importance than the differences, and the functions performed by each forest administration are virtually the same.

In each province, the department responsible for forest administration usually performs other duties in connection with lands, mines or other natural resources. In most cases a branch form of organization is used, with the senior forestry officer directly responsible to the Deputy Minister. In Quebec there are separate services concerned with forestry and forest protection, each having its own chief. In Nova Scotia, Ontario and British Columbia, a divisional form of organization is used in which the Deputy Minister is, in effect, in direct charge of forestry work.

In addition to the departmental headquarters, usually located at the provincial capital, each forest service maintains administrative districts with a district officer in charge of each. Large districts may be further divided into sub-districts, each in charge of a field officer or forest ranger. The district chiefs and their field staffs carry on the administration according to instructions issued from head office, and important questions outside the ordinary routine are referred to head office for consideration. Ordinary business, however, can be conducted more efficiently by district officials who are thoroughly familiar with conditions in their own localities.

Senior staffs of the forest services are made up largely of men who have received university training in forestry. However, during the past 20 years several provinces have established special ranger-training schools, which give systematic instruction in the many and varied tasks the field men are called upon to perform. Increase in facilities for ranger-training is one of the most important forestry developments in recent years.

Forest Protection.—Protection of the forests against fire is the most urgent duty of any forest administration and, at the same time, the most difficult and costly. The vast extent of Canada's forests, lack of adequate access roads in many regions, and climatic conditions combine to make fire protection a problem of primary importance.

Although many improvements in fire-protection organization and methods have been effected over the past 30 years, the fire menace is still a major obstacle to the introduction of better forest management. Carelessness with camp fires and smoking materials, and improper burning of slash when clearing land, are still far too common in Canada. An average of over 5,000 fires are reported each year, almost 4,000 of which are known to be caused by human agency.

In Quebec and Newfoundland, forest protective associations have been formed to handle fire protection on licensed Crown lands. The other provincial fire-protection services provide protection for all forests except those lying within organized municipalities.

Field work in the provinces is controlled from District Offices, where these exist, or by district fire rangers. Subdivisions of districts are looked after by fire rangers, who may be assisted by lookout men and patrolmen. The observers in lookout towers report the appearance of smoke to a central office by telephone or radio. Patrolmen carry out regular patrols along roads or waterways and warn travellers against carelessness with fire, as well as suppress or report fires that break out. Special crews construct improvements needed for protection purposes, such as roads, trails, telephone lines, lookout towers and ranger cabins. Usually these crews are kept on duty throughout the fire season and are used as stand-by fire-fighting crews. All fire-protection services possess modern equipment such as portable fire pumps and hand tools, special vehicles and effective communication systems. Aircraft are used extensively for fire detection and to carry men and supplies to the scene of a fire.

Assistance to provincial forest fire-protection services along railway lines is given under the Railway Act, administered by the Board of Transport Commissioners for Canada. The Board has wide powers relating to fire protection along railway lines under its jurisdiction. Certain officers of the various forest authorities are appointed ex officio officers of the Board of Transport Commissioners and co-operate with the fire-ranger staffs that the railway companies are required to employ under the Railway Act.

Fires that start must be put out as quickly as possible, but the objective of all protection services is to prevent them from starting. Means taken to reduce the number of outbreaks include posting of warning notices along roads and portages and in camps, restriction or prohibition of travel in forest areas during periods of exceptional fire danger, radio addresses and plays, articles in the press advocating care with fire in the woods, and specially prepared talks to school children. Settlers are required by law to obtain permits to burn slash and to conduct their burning under supervision at times of low fire hazard.

For protection of the forests against injurious insects and tree diseases, the provincial forest services co-operate with the Division of Forest Biology of the Science Service of the Federal Department of Agriculture.

Disposal of Crown Timber.—The general policy in Canada is to maintain forest lands under public ownership. Industrial and private users of wood may be granted rights to cut standing timber under prescribed conditions, but title to the land itself remains with the Crown.

Many timber users need only relatively small quantities of timber from time to time. Others, including the larger lumber companies and the great pulp and paper concerns, must be assured of adequate supplies of wood for long periods in the future. Without this assurance they could not secure the huge capital investments essential to provide modern manufacturing plants.

Holders of timber-leases must pay annual ground rents for forest land, running from $5 to $20 per sq. mile east of the Rockies, but amounting to $140 per sq. mile on the west coast of British Columbia. Lease holders must also pay fire-protection taxes or other protection charges, the basis for which differs according to province.

Standing timber is usually paid for shortly after it has been felled and scaled. Rates are on a unit volume basis—so much per thousand board feet, cord, cunit (100 cubic feet), linear foot, or by the piece, such as a railway tie.

Prices paid for Crown timber are frequently made up of different kinds of charges—Crown dues, royalties and stumpage—depending on usage in a particular province. Payments of the kind described as Crown dues are officially called royalties in British Columbia and stumpage in New Brunswick. Charges described as stumpage are known in Ontario as bonus dues.

Crown dues are rates of payment for timber, established by statute or by Order in Council, and apply uniformly throughout whole provinces or in large regions. Varying rates are set for different species and, in British Columbia, for different grades of logs of the same species. They are, in effect, minimum prices for Crown timber and are not affected by such factors as extra high quality of timber, or very easy accessibility, which might justify higher prices for particular stands.

Stumpage (as the term is used here), when paid for Crown timber, consists of charges additional to Crown dues. Such charges reflect the difference between the real value of a particular stand of timber and the Crown dues rates. This additional value may arise from exceptionally high quality, easy accessibility, and a number of other factors. Stumpage charges may not be finally determined until a sale is completed. For example, the government of a province where Crown dues for white pine are set at $2.50 per M ft.b.m. may consider that a certain lot of better-than-average timber located near a good road is really worth at least $10. The block may then be offered for auction at an "upset price" of $10, made up of $2.50 for Crown dues and $7.50 for stumpage. If the timber is put up for auction and no bid as high as the upset price is received, there will be no sale. On the other hand, competition among bidders may force the final price up to $12. The selling price then represents Crown dues of $2.50 and stumpage of $9.50 per M ft.b.m.

There are a number of different ways of disposing of Crown timber which are reviewed briefly in the following paragraphs under the designations: timber berths, forest-management licences, pulpwood berths, timber sales and timber permits.

Timber berths are areas of Crown timber-lands held under lease by operators in the forest industries. It is customary to make berths renewable for a specified number of years, and many of the older berths were renewed for as long as 99 years. Annual renewals are granted if the holder takes out an annual licence to operate, pays his ground rent and timber charges, and observes the conditions relating to methods of operation, filing of returns, and so forth, under which the berth was granted. In several provinces, the maximum size of a single berth is limited by law. Timber berths are disposed of by public competition, the successful bidder usually paying a lump sum for the right to occupy the berth. Crown dues are payable as the timber is cut. Boundaries of timber berths are described in the leases.

Forest-management licences were established by the legislature of British Columbia in 1947 as a new form of tenure. Under the legislation, the Minister of Lands and Forests is authorized to enter into an agreement with any person whereby specified areas of Crown lands are reserved in perpetuity for the use of that person, provided he so manages the forests that a sustained-yield output will be assured.

If the person already owns or holds certain timber-lands within the areas prescribed, these are automatically included in the licence. The object is to ensure sufficient supplies of timber, in perpetuity, for established forest industries.

Royalties at regular rates are to be paid for all timber considered merchantable at the time the licence is issued. On all timber that attains merchantable size after the licence is issued, stumpage and royalty will be paid at the rate of 16 p.c. of the appraised stumpage value at the time of cutting. Land rental is at the rate of one cent per acre, one-sixth of the regular rate.

Pulpwood berths are large areas leased to pulp and paper companies. Erection of a pulp and paper mill requires a great deal of money. No company will build one unless assured of sufficient timber supplies to permit its operation for a considerable number of years. Thus, pulpwood berths are usually established by agreement between government and company. An important condition of such agreements is that the company must erect and operate a mill of specified size by a certain date or lose possession of the berth. Berths of this kind may be good for 21 to 50 years (99 years in Newfoundland), with renewal privileges at the end of the original agreement. Crown dues and ground rent are paid at stipulated rates.

Timber sales are made by public competition at upset prices per M ft. b.m., per cord, or other unit of measurement. Bidding above the upset price is also on a unit volume basis rather than in lump sums for the whole sale and is usually good for periods of one to five years. Ground rent may or may not be required on timber sales. Payment is made as timber is cut but the successful bidder may be required to furnish a guarantee deposit, a bond, or both at time of sale. The area of a timber sale is defined in the same way as that of a timber berth.

Timber permits give the holders the right to cut specified small quantities of wood from Crown lands, for their own use or for sale. Payment of dues for all the wood to be cut may be required when the permit is issued, final adjustments being made after the wood is scaled. Free permits are sometimes granted certain classes of people, such as settlers or non-profit organizations, to enable them to obtain building logs, saw timber or fuelwood, with the stipulation that it be for their own use.

The relative importance of these several methods of disposing of Crown timber differs in each province; and different names for the same sort of arrangement may be found in various parts of Canada.

Forest operators in Crown timber are required to observe certain regulations. Details vary from province to province and from time to time. The following are merely examples of the kind of requirements that might appear in a typical lease: the operator may be forbidden to cut trees of less than specified stump diameter; maximum stump heights may be prescribed; use of inferior kinds of timber in the construction of camps, culverts and bridges may be required; and burning of logging slash may be necessary. In addition, operators are required to keep book records that may be readily inspected and to maintain their camps in sanitary condition.

To ensure that operators comply with government regulations and any special conditions contained in a lease, logging operations on Crown lands are inspected periodically by officials of the Department. Definite evidence of failure to observe regulations may close down operations until the situation is corrected or, in extreme cases, the berth or sale may be cancelled.

Timber Scaling.—Since payment of government dues is based on the amount of material scaled, it is of considerable importance to both the government and the operator that scaling be accurate. Scalers may be employed by the government or the operator and, in both cases, must take oath that the measurements are fair and just to both parties.

Men wishing to become scalers are required to serve a term of apprenticeship with qualified scalers. They must then pass examinations set by government boards before they can become licensed scalers. Those of more than average experience and ability are employed as check scalers to remeasure a sample of each scaler's work, thus checking his efficiency. Licences of those who fail to maintain the required standard are cancelled.

The cord of 128 stacked cubic feet, standardized under the Federal Weights and Measures Act, is established as a unit of measurement throughout Canada. The board-foot content of sawlogs is calculated according to different log rules in different provinces. New Brunswick, Ontario and British Columbia use rules named after the individual province; Alberta uses the Scribner Rule; Quebec the Roy Rule; and Manitoba and Saskatchewan the International $\frac{1}{4}$" Kerf Rule.

Other Provincial Functions.—*Forest Surveys.*—Extensive forest inventory surveys on a large scale are being conducted by most provinces through special survey divisions. Mention has already been made of the financial assistance given for forest inventories and reforestation by the Federal Government under the terms of the Canada Forestry Act. Forest surveys, with the aid of air photography, provide the most economical and expeditious means of obtaining reliable information on the extent, character and volume of the forest resources.

Reforestation.—Most of the forests of Canada reproduce themselves, after logging, by natural means. Securing new growth of the most desirable species is usually a matter of proper management of logging operations. There are areas, however, from which all possible sources of seed supply have been removed and the existing young growth destroyed by fire. Here, forests can only be re-established by seeding or planting. Planting may also be necessary to check drifting sand or provide shelter for farm buildings and fields. Several provinces maintain large forest nurseries where stock is grown both for forest plantings and for the use of farmers. Permanent nursery stations are also maintained. These employ small permanent staffs and provide considerable local employment during the transplanting seasons; the output of these stations runs into millions of small trees annually.

Farm Forestry.—Farm woodlots are the most accessible of all forests. Although privately owned, their importance to the community justifies the advice and assistance to their owners provided by the provincial forest services. The latter are increasing their efforts to encourage farmers in improving the management of their woodlots. Most provinces employ qualified foresters for this purpose who also help in marketing forest products.

In British Columbia, legislative provision has been made for classifying as tree farms such privately owned land as the owner wishes to place under sustained yield. If a satisfactory working plan is submitted, the forest owner is given a preferred tax rate, which is approximately one-third of the rate that would apply if the land were held for liquidation purposes.

Wildlife Protection.—In most provinces, administration of laws respecting hunting and fishing is carried out by staffs specially appointed for that purpose. In others, forest officers are required to act as game and fish wardens in addition to their other duties. Whether responsible for wildlife or not, the forest ranger must always take an interest in the movements of hunters and fishermen in his district because their presence magnifies the danger of forest fires. The majority of men who go into the woods to hunt or fish are careful with their camp fires and with smoking, but there will always be a small number who may start conflagrations through ignorance or carelessness.

Education of the Public.—The development of public understanding of all phases of forestry from forest protection to utilization of forest products is of paramount importance. The appalling losses caused by forest fires resulting from carelessness continue to be emphasized in educational programs by government agencies, companies, and associations such as the Canadian Forestry Association. The federal and provincial forest services carry on extensive programs of public education in forest-fire prevention with invaluable aid from the press, the radio, the motion-picture industry and many industrial organizations. The Federal Forestry Branch has distributed to schools more than 350,000 copies of *The ABC's of Forest Fire Prevention*, in English and French editions, as well as other publications for school and general use.

One of the most practical methods of adult education is the Tree Planting Railway Car of the Canadian Forestry Association, which has been operating its prairie shelter-belt campaign for over 30 years. Its purpose is to demonstrate and encourage tree planting around prairie homes. The results to date show over 250,000,000 trees distributed by Federal Government and other forest nurseries.

Through many other media, such as 4-H Forestry Clubs, Boy Scout forestry badge work, Royal Canadian Mounted Police handbooks and school science textbooks, public interest is stimulated in Canada's forest resources and the cause of forestry thereby promoted.

Subsection 2.—Forest-Fire Protection

The Federal Government is responsible for fire-protection measures in the forests under its administration, chiefly those of the Yukon and Northwest Territories, the National Parks, Indian lands and forest experiment stations. Each of the provincial governments, except that of Prince Edward Island, maintains a fire-protection organization co-operating with owners and licensees for the protection of timbered areas, the cost being covered by special taxes on timber-lands.

A more detailed description of the administration of fire-protection organizations is given in the special article, "Administration of Crown Forests in Canada", pp. 458-465.

Forest-Fire Statistics.—The number of forest fires in 1951, which totalled 4,529, was appreciably lower than the average of 5,281 for the ten years 1941-50. Also, the total area burned in 1951 was 896,426 acres, an area considerably less than half the average loss for the ten-year period. Although the area burned was so much smaller, the actual costs of fire-fighting in 1951 were very high, amounting to almost three times the ten-year average. Almost two-thirds of the costs were incurred in British Columbia where expenditures for this activity were nearly ten times higher than usual.

The weather in Newfoundland was a little drier than normal during most of the season and it was only in June and July that the fire situation became serious. In Nova Scotia and New Brunswick, weather conditions were generally favourable for fire protection and each of these Provinces enjoyed a very favourable fire season. The weather in Quebec and Ontario was highly variable during the summer of 1951. More than half of the total number of fires in both those Provinces occurred in May. Manitoba, Saskatchewan and Alberta all had well-distributed rains throughout most of the fire season and, except in a few small areas, there were no prolonged, dangerous periods of drought. In British Columbia, the coastal regions experienced persistent dry weather in the early spring and the fire season opened about two weeks earlier than usual. Critically dry conditions developed about the end of June and continued until the end of September, necessitating complete forest closure to travel and industry over wide areas during this period.

5.—Summary Statistics of Forest-Fire Losses, 1951 compared with Ten-Year Average, 1941-50

Item	Provinces[1]		Yukon and Northwest Territories, 1951
	Annual Average 1941-50[2]	1951	
Fires under 10 acres ..... No.	3,803	3,478	68
Fires 10 acres or over ..... "	1,478	1,051	88
Totals, Fires ..... No.	**5,281**	**4,529**	**156**
Area Burned—			
Merchantable timber ..... acres	437,381	135,104	226,764
Young growth ..... "	440,004	301,392	55,717
Cut-over lands ..... "	280,068	222,957	37,750
Non-forested lands ..... "	801,898	236,973	331,729
Totals, Area Burned ..... acres	**1,959,351**	**896,426**	**651,960**
Size of average fire ..... acres	371	198	4,179
Merchantable Timber Burned—			
Saw-timber ..... M ft. b.m.	394,777	373,684	4,459
Small material ..... cords	1,782,386	630,389	1,146,369
Estimated Values Destroyed—			
Merchantable timber ..... $	2,318,492	1,219,079	720,247
Young growth ..... $	1,027,012	947,868	82,949
Cut-over lands ..... $	259,446	180,570	600
Other property burned ..... $	841,603	2,042,984	19,964
Totals, Damage ..... $	**4,446,553**	**4,390,501**	**823,760**
Actual cost of fire-fighting ..... $	1,393,199	3,643,320	43,355
Totals, Damage and Fire-Fighting Cost ..... $	**5,839,752**	**8,033,821**	**867,115**
Area under protection ..... sq. miles		1,046,000	122,000

[1] Includes federal lands within provincial boundaries. [2] Excludes Newfoundland.

6.—Forest-Fire Losses, by Province, 1951 compared with Ten-Year Average, 1941-50

Item	Annual Average 1941-50	1951	Item	Annual Average 1941-50	1951
Newfoundland—			**Alberta—**		
Forest fires..... No.	..	185	Forest fires..... No.	268	84
Area burned.....acres	..	13,646	Area burned.....acres	590,477	23,868
Fire-fighting cost and damage..... $	..	164,951	Fire-fighting cost and damage..... $	1,294,830	109,394
Nova Scotia—			**British Columbia—**		
Forest fires..... No.	266	165	Forest fires..... No.	1,472	1,923
Area burned.....acres	16,243	3,182	Area burned.....acres	337,962	420,954
Fire-fighting cost and damage..... $	137,621	60,742	Fire-fighting cost and damage..... $	849,072	5,207,979
New Brunswick—			**Federal Lands—**		
Forest fires..... No.	248	124	Yukon and Northwest Territories—		
Area burned.....acres	35,722	2,164	Forest fires..... No.		156
Fire-fighting cost and damage..... $	370,515	22,460	Area burned.....acres	..	651,960
Quebec—			Fire-fighting cost and damage..... $	..	867,115
Forest fires..... No.	1,210	869			
Area burned.....acres	302,781	267,660	National Parks—		
Fire-fighting cost and damage..... $	1,409,085	1,305,463	Forest fires..... No.	36	30
			Area burned.....acres	18,118	384
Ontario—			Fire-fighting cost and damage..... $	22,297	6,573
Forest fires..... No.	1,320	904			
Area burned.....acres	232,551	101,243	Indian Lands—		
Fire-fighting cost and damage..... $	1,330,733	1,027,693	Forest fires..... No.	49	27
			Area burned.....acres	23,277	411
Manitoba—			Fire-fighting cost and damage..... $	22,361	6,476
Forest fires..... No.	257	169			
Area burned.....acres	192,797	48,722	Forest Experiment Stations—		
Fire-fighting cost and damage..... $	249,992	90,002	Forest fires..... No.	4	3
			Area burned.....acres	112	4
Saskatchewan—			Fire-fighting cost and damage..... $	253	41
Forest fires..... No.	151	46			
Area burned.....acres	209,311	14,188			
Fire-fighting cost and damage..... $	152,993	32,047			

7.—Forest Fires, by Cause, 1951 compared with Ten-Year Average, 1941-50

Cause	Provinces[1]				Yukon and Northwest Territories, 1951	
	Annual Average 1941-50[2]		1951			
	No.	p.c.	No.	p.c.	No.	p.c.
Camp-fires	836	16	659	15	52	33
Smokers	1,105	20	905	20	7	4
Settlers	632	12	471	10	4	3
Railways	566	11	553	12	—	—
Lightning	937	18	843	18	50	32
Industrial operations	206	4	295	7	2	1
Incendiary	147	3	123	3	1	1
Public works	63	1	99	2	1	1
Miscellaneous known	451	9	427	10	—	—
Unknown	338	6	154	3	39	25
Totals	**5,281**	**100**	**4,529**	**100**	**156**	**100**

[1] Includes federal lands within provincial boundaries. [2] Excludes Newfoundland.

Subsection 3.—Research in Forestry

Forest research and forest products research facilities have been greatly expanded throughout Canada during the past five years. The Federal Government, several provincial governments, the Pulp and Paper Research Institute of Canada, the four universities with faculties of forestry, and a number of the larger industrial companies conduct research in these fields. The Forestry Branch of the Federal Department of Resources and Development conducts research in silviculture, management, forest inventory methods, forest-fire protection and forest economics. An extensive program of research is under way on the experiment stations and on other lands, where an increasing proportion of the total effort is being expended in co-operation with provincial authorities and industry.

Forest Research.—Research in silviculture and management has been concentrated since World War II upon problems of regeneration, growth and stand development, and on harvest cutting methods. A regeneration survey extending from the Rocky Mountains to the Atlantic Coast has provided information on the status of regeneration on cut-over and burned lands and has been followed by more intensive work to assess the factors responsible for the success or failure of regeneration and to devise practical methods of obtaining reproduction. Studies are made of growth and succession in the most important forest types and of development of a satisfactory basis for classifying forest sites for effective growth and productivity. Research in tree breeding is also carried on for artificial propagation by selection and development of superior strains. Research in forest management devises methods of applying the knowledge of silviculture, regulation of cut and protection in order to manage the forest at its highest production level.

In the field of forest-fire research, the Federal Forestry Branch is working towards full co-operation with the provincial forest services to achieve the best methods of forest-fire protection. The leading contributions of the Branch to date have been in the field of fire-hazard research and in the development of equipment and techniques for fire-fighting. Increasing attention, however, is being given to research in such fields as fire-control planning, visible area mapping, detection and communications equipment, and the training of fire crews. A number of provincial forest-protection services are also engaged in research activities. Notable advances have been made in several provinces in the development of forest communications equipment, the dropping of supplies to fire-fighters by parachute, and the design of mechanical fire-fighting equipment.

Research in forest inventory methods is of increasing importance because of the greatly expanded inventory programs being conducted in most provinces. Data from photographs are correlated with field work to develop new techniques of timber estimating. Various methods of sampling are being investigated and compared. Research is being continued in methods for measuring tree images and tree shadows to determine heights, crown widths, crown closure and other data from photographs taken in different seasons of the year under various conditions. Studies are also being made in the identification of species and sub-types and the classification

of forest sites by the use of air photographs. Construction of suitable photogrammetric and other scientific apparatus include the forestry tri-camera method of air photography, which has been developed to provide maximum forestry information at minimum cost, and the shadow height calculator, constructed to facilitate the determination of tree heights from shadows in air photographs.

Research in forest economics includes studies and analyses of forest taxation (federal and provincial), land tenure and forest land valuation. A study of the economics of forest management has been carried out on a pulpwood limit in Quebec in order to develop a technique for evaluating the results that may be expected from a program of sustained-yield forest management.

Forest-Products Research.—Two Forest Products Laboratories conduct forest-products research, one at Ottawa, Ont., and the other at Vancouver, B.C. The purpose of this research is to supply the basic and practical knowledge required for the best possible utilization of Canada's forest resources and includes studies of the factors affecting the quality of wood and of manufactured wood products; the factors causing wood waste in logging and manufacturing; the mechanical, physical and chemical properties of wood and their relation to adaptability in use; the treatment of wood and its use in the manufacture of fibre products, alcohol, turpentine, etc.; new and more valuable uses for woods; and the application of laboratory findings to the standardization of lumber grades and the improvement of timber specifications in the building codes of Canadian cities. The Forest Products Laboratories co-operate with similar organizations in other countries, with the provinces and with industry.

The Pulp and Paper Research Institute of Canada at Montreal, Que., a corporation supported by the Federal Government, the Canadian Pulp and Paper Association and McGill University, carries out research in the field of pulps and papers. The program of work includes studies of the structure and properties of wood and bark and their chemical components; the improvement of pulping processes; studies for the improved utilization of waste products; and the improvement in the design of industrial equipment.

Forest Biology.—The Division of Forest Biology of the Science Service, Federal Department of Agriculture, undertakes investigations dealing with the biology and control of insects and diseases affecting forest and shade trees. The Zoology Unit maintains ten regional laboratories at strategic points across the country. The Forest Pathology Unit operates six branch laboratories. An insect disease laboratory was recently established at Sault Ste. Marie, Ont., for fundamental research on virus, fungi, and bacterial diseases of insects.

A special article dealing with Noxious Forest Insects and Their Control appears in the 1947 Year Book, pp. 389-400. A detailed account of the activities in forest pathology in Canada may be found in the 1948-49 Year Book, pp. 416-417.

Section 6.—Forest Utilization

Forest utilization is concerned with the many industries employed in the hewing down of timber in the forest and its transformation into the numerous utilitarian shapes and forms required in modern living. The basic industries

provide the raw material for sawmills, pulp and paper mills and for the wide range of secondary industries that convert the products of the basic industries into more highly manufactured goods such as veneers and plywoods, sash and doors, furniture and all the vast range of industries that use wood in any form in their processes. These industries, especially the pulp and paper industry and the lumber industry, contribute substantially to the value of Canada's export trade and thereby provide the exchange necessary to pay for a large share of the imports purchased from other countries, particularly the United States.

Subsection 1.—Woods Operations

In connection with operations in the woods, it should be borne in mind that the forests not only provide the raw materials for the sawmills, pulp mills, wood distillation, charcoal, excelsior and other plants, but also provide logs, pulpwood and bolts for export in the unmanufactured state, and fuel, poles, railway ties, posts and fence rails, mining timber, piling and other primary products which are finished in the woods ready for use or exportation. A number of minor forest products help swell the total, such as Christmas trees, maple sugar and syrup, balsam gum, resin, cascara, moss and tanbark.

It has been estimated that operations in the woods during the logging season in 1951 gave employment amounting to 47,434,000 man days and distributed $503,000,000 in wages and salaries.

8.—Value of Woods Operations, by Product, 1946-51

Product	1946	1947	1948	1949	1950	1951
	$	$	$	$	$	$
Logs and bolts	150,933,681	205,259,855	215,108,932	207,789,335	253,649,547	316,027,115
Pulpwood	183,085,359	237,488,741	284,656,819	270,697,980	285,762,620	381,920,846
Fuelwood	49,544,756	46,206,336	49,535,855	48,816,965	49,804,328	50,521,011
Hewn railway ties	1,131,951	1,177,806	1,303,596	917,033	495,509	612,583
Poles	5,302,324	8,404,809	13,116,480	11,485,488	19,209,308	13,249,988
Round mining timber	12,149,767	10,082,458	10,268,435	10,376,305	3,767,076	6,420,818
Fence posts	3,091,268	2,832,783	2,489,286	2,640,576	2,906,249	2,920,922
Wood for distillation	452,196	544,746	497,286	467,997	425,918	466,491
Fence rails	605,503	628,804	591,484	644,844	705,106	671,491
Miscellaneous products	6,972,509	7,177,790	8,726,895	7,575,539	9,008,942	9,713,750
Totals	**413,269,314**	**519,804,128**	**586,295,068**	**561,412,062**	**625,734,603**	**782,525,015**

9.—Production and Consumption of Wood Cut in Woods Operations, 1942-51, and by Product, 1950 and 1951

NOTE.—Details by chief products and by provinces for the years 1926-50 will be found in the DBS Bulletin, *Annual Estimate of Operations in the Woods, 1950*, and earlier issues.

Year and Product	Production			Consumption		
	Quantity Reported or Estimated	Equivalent Volume of Merchantable Wood[1]	Total Value	Quantity Reported or Estimated	Equivalent Volume of Merchantable Wood[1]	Total Value
		M cu. ft.	$		M cu. ft.	$
1942	...	2,608,605	224,371,891	...	2,391,342	207,017,934
1943	...	2,475,906	268,615,283	...	2,312,200	243,737,886
1944	...	2,508,046	301,570,823	...	2,332,157	270,730,868
1945	...	2,566,058	334,324,901	...	2,375,780	298,992,227
1946	...	2,812,718	413,269,314	...	2,585,060	365,537,917
1947	...	3,091,086	519,804,128	...	2,854,481	466,722,041
1948	...	3,198,179	586,295,068	...	2,937,614	523,668,509
1949	...	3,140,137	561,412,062	...	2,954,454	515,324,829
1950						
Logs and bolts....M ft. b.m.	7,042,728	1,338,589	253,649,547	7,048,169	1,339,955	252,127,592
Pulpwood..... cord	12,873,476	1,094,245	285,762,620	11,166,798	949,178	252,664,002
Fuelwood..... "	10,103,869	808,309	49,804,328	10,082,850	806,627	49,530,937
Hewn railway ties.... No.	451,016	2,255	495,509	451,016	2,255	495,509
Poles and piling..... "	1,536,990	23,055	19,209,308	1,327,939	19,919	16,440,097
Round mining timber. cu. ft.	13,193,849	13,194	3,767,076	10,879,744	10,880	3,126,376
Fence posts..... No.	16,142,947	19,372	2,906,249	15,179,271	18,215	2,682,203
Wood for distillation.. cord	52,763	4,221	425,918	52,763	4,221	425,918
Fence rails..... No.	5,187,327	5,187	705,106	5,187,327	5,187	705,106
Miscellaneous products.....	...	33,972	9,008,942	...	11,801	2,687,994
Totals, 1950.....	...	**3,342,399**	**625,734,603**	...	**3,168,238**	**580,885,734**
1951						
Logs and bolts...M ft. b.m.	7,388,461	1,409,071	316,027,115	7,441,124	1,419,080	316,753,316
Pulpwood..... cord	15,053,910	1,279,582	381,920,846	12,229,371	1,039,496	316,600,016
Fuelwood..... "	10,217,175	817,374	50,521,011	10,203,773	816,302	50,316,468
Hewn railway ties.... No.	387,370	1,937	612,583	387,370	1,937	612,583
Poles and piling..... "	904,007	13,560	13,249,988	717,288	10,759	10,430,692
Round mining timber.cu. ft.	19,320,147	19,320	6,420,818	11,147,012	11,147	3,854,682
Fence posts..... No.	15,502,849	18,603	2,920,922	14,268,661	17,122	2,617,908
Wood for distillation.. cord	53,665	4,293	466,491	53,665	4,293	466,491
Fence rails..... No.	4,675,020	4,675	671,491	4,675,020	4,675	671,491
Miscellaneous products.....	...	34,542	9,713,750	...	10,894	2,949,654
Totals, 1951.....	...	**3,602,957**	**782,525,015**	...	**3,335,705**	**705,273,301**

[1] In estimating the annual drain on Canada's forest resources, certain converting factors have been used, each of which represents in cubic feet the quantity of merchantable wood used to produce one unit of the material in question. The factor for logs and bolts for the British Columbia coastal region is 175 and for the rest of Canada 200. Other factors: pulpwood 85, fuelwood 80, hewn railway ties 5, poles and piling 15, fence posts 1·2 and wood for distillation 80. A change in computing the converting factor was introduced in 1944-45 and is described in the 1946 Year Book, pp. 265-266.

10.—Equivalent Volume of Solid Wood Cut and Value of Products of Woods Operations, by Province, 1949-51

Province	Equivalent Volume of Solid Wood			Value of Products		
	1949	1950	1951	1949	1950	1951
	M cu. ft.	M cu. ft.	M cu. ft.	$	$	$
Newfoundland	87,436	92,086	103,953	18,114,275	19,397,276	22,084,403
Prince Edward Island	13,433	13,524	15,456	1,210,360	1,121,461	1,770,190
Nova Scotia	117,669	116,227	138,871	17,199,449	16,990,175	25,025,276
New Brunswick	225,927	220,328	273,420	43,256,801	40,279,504	64,635,365
Quebec	1,069,977	1,131,072	1,208,851	201,948,530	212,563,708	267,682,117
Ontario	632,202	652,886	695,877	125,912,035	133,953,112	150,920,968
Manitoba	76,147	77,468	87,198	7,680,752	9,441,487	11,551,887
Saskatchewan	86,390	90,734	88,656	6,494,857	8,590,115	8,736,785
Alberta	136,028	142,320	158,505	10,496,313	12,637,822	16,066,822
British Columbia	694,928	805,764	832,170	129,098,690	170,759,943	214,051,202
Totals	**3,140,137**	**3,342,399**	**3,602,957**	**561,412,062**	**625,734,603**	**782,525,015**

Subsection 2.—The Lumber Industry

The manufacture of sawn lumber is the second most important industry in Canada depending on the forest for its raw materials.

The total number of sawmills, tie, shingle, lath, veneer, stave, heading and hoop mills and mills for cutting-up and barking or rossing of pulpwood, reports of which were compiled for 1951, was 7,934 as compared with 7,551 for 1950. Mills sawing less than 15,000 ft. b.m. are excluded but account for less than one-half of one per cent of the total lumber production. Employees numbered 62,415 and wages and salaries amounted to $132,058,607. The logs, bolts and other materials and supplies of the industry were valued at $313,174,713, the gross value of production was $591,551,749 and net value $271,865,508.

Lumber production in Canada reached its maximum in 1951 at 6,948,697,000 ft. b.m. Average values were fairly uniform until 1916, but increased rapidly from 1917 to 1920, to decline gradually during the following years to the lowest level for the entire period in 1932. With the exception of 1938 and 1949, increases took place each year from 1933 to 1951.

11.—Quantity and Value of Lumber Production and Value of All Sawmill Products, by Province, 1950 and 1951

Province or Territory	Lumber Production				Value of All Sawmill Products	
	Quantity		Value			
	1950	1951	1950	1951	1950	1951
	M ft. b.m.	M ft. b.m.	$	$	$	$
Newfoundland	45,282	41,981	2,214,046	2,456,588	2,430,089	2,727,335
Prince Edward Island	11,569	10,465	564,831	543,019	632,758	610,578
Nova Scotia	281,222	331,906	14,456,475	19,987,788	15,772,588	21,534,108
New Brunswick	298,918	292,097	16,867,224	18,892,064	19,774,001	22,124,951
Quebec	1,129,404	1,182,986	64,294,496	78,867,947	73,571,302	89,401,801
Ontario	819,835	820,696	55,692,481	60,802,961	68,488,612	76,072,011
Manitoba	58,345	60,071	3,179,488	3,873,547	3,351,875	4,112,135
Saskatchewan	66,056	78,694	3,237,996	4,281,687	3,641,075	4,497,183
Alberta	331,097	398,295	14,986,473	20,405,750	16,005,403	22,667,881
British Columbia	3,508,787	3,723,877	246,729,414	296,883,313	293,022,294	347,147,390
Yukon and N.W.T.	3,383	7,629	257,776	655,577	258,401	656,376
Canada	**6,553,898**	**6,948,697**	**422,480,700**	**507,650,241**	**496,948,398**	**591,551,749**

12.—Quantity and Value of Lumber Cut, by Kind, 1950 and 1951

Kind of Wood	Quantity		Value	
	1950	1951	1950	1951
	M ft. b.m.	M ft. b.m.	$	$
Spruce	2,066,126	2,274,583	110,709,703	137,626,573
Douglas fir	1,782,272	1,778,048	121,243,611	143,413,098
Hemlock	813,475	880,354	53,664,060	68,120,805
White pine	437,405	449,686	33,536,717	37,825,447
Cedar	349,713	360,919	37,341,464	39,635,595
Yellow birch	177,551	189,754	12,895,526	15,688,629
Jack pine and lodgepole pine	287,885	309,449	14,110,807	17,018,456
Maple	97,986	123,150	7,835,097	10,442,033
Balsam fir	164,672	173,007	8,361,433	10,534,118
Red pine	82,855	84,467	5,718,491	6,452,850
Other kinds	293,958	325,280	17,063,791	20,892,637
Totals	**6,553,898**	**6,948,697**	**422,480,700**	**507,650,241**

13.—Quantity and Value of Lumber, Shingles and Lath Produced, 1942-51

NOTE.—Figures for 1908-41 are given in the corresponding table of previous Year Books, beginning with the 1931 edition.

Year	Lumber Cut		Shingles Cut		Lath Cut	
	Quantity	Value	Quantity	Value	Quantity	Value
	M ft. b.m.	$	Squares	$	M	$
1942	4,935,145	149,854,527	3,720,482	13,191,084	181,994	737,874
1943	4,363,575	151,899,684	2,565,752	10,020,804	114,029	551,278
1944	4,512,232	170,351,406	2,697,724	11,411,359	110,639	645,010
1945	4,514,160	181,045,952	2,665,432	11,737,224	117,731	752,245
1946	5,083,280	230,189,699	2,646,022	14,512,796	134,591	908,564
1947	5,877,901	322,048,356	3,107,248	24,449,305	151,151	1,239,824
1948	5,908,798	340,850,538	3,078,215	24,470,746	149,646	1,338,534
1949	5,915,443	334,789,873	2,825,261	19,568,633	129,895	1,136,208
1950	6,553,898	422,480,700	3,191,589	31,807,753	123,118	1,134,741
1951	6,948,697	507,650,241	2,982,362	27,977,418	104,872	1,042,196

Lumber Exports.—Exports of planks, boards and square timber are given in the Chapter on Foreign Trade.

Subsection 3.—The Pulp and Paper Industry*

The manufacture of pulp and paper has been the leading industry in Canada for many years and the post-war development of the industry has more than kept pace with the vast industrial growth of the nation. Pulp and paper stands first among all industries in value of production, in exports, in total wages paid and in capital invested. It is the largest consumer of electric energy and the largest industrial buyer of goods and services, including transportation, in the land. The industry has a newsprint output five times that of any other country and provides over one-half the world's newsprint needs. Canada is also the world's greatest wood-pulp exporter and stands second only to the United States as a producer of pulp. Thus, this Canadian industry, with four-fifths of its output moving abroad, ranks as one of the major industrial enterprises of the world.

There are three classes of mills in the industry. In 1951, 34 were making pulp only, 26 were making paper only and 66 were combined pulp and paper mills.

The industry includes three forms of industrial activity: operations in the woods with pulpwood as a product, the manufacture of pulp and the manufacture of paper. Some of the important pulp companies operate sawmills to utilize the larger timber on their limits to the best advantage, and some lumber manufacturers divert a proportion of their spruce and balsam logs to pulp-mills. Less than one-fifth of the pulpwood cut in Canada is exported in raw or unmanufactured form and a large proportion of such exports is cut from private lands.

*A special article on the pulp and paper industry appears in the 1952-53 Year Book, pp. 467-475.

14.—Production, Consumption, Exports and Imports of Pulpwood, 1942-51

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Year	Apparent Total Production of Pulpwood in Canada			Canadian Pulpwood Used in Canadian Pulp-Mills		Canadian Pulpwood Exported Unmanufactured		Imported Pulpwood Used in Canada	
	Quantity[1]	Total Value	Average Value per Cord	Quantity[1]	P.C. of Total Production	Quantity[1]	P.C. of Total Production	Quantity[1]	P.C. of Total Consumption
	cords	$	$	cords		cords		cords	
1942..	9,653,574	103,619,151	10·73	7,665,724	79·4	1,987,850	20·6	1,714	--
1943..	8,801,368	110,844,790	12·59	7,260,776	82·5	1,540,592	17·5	2,379	--
1944..	8,668,566	124,363,926	14·35	7,169,430	82·7	1,499,136	17·3	8,209	0·1
1945..	9,145,673	146,172,701	15·98	7,474,375	81·7	1,671,298	18·3	4,133	--
1946..	10,523,256	183,085,359	17·40	8,667,875	82·4	1,855,381	17·6	16,881	0·2
1947..	11,484,522	237,488,741	20·65	9,500,542	82·7	1,983,980	17·3	50,508	0·5
1948..	12,497,926	284,656,819	22·78	10,180,580	81·5	2,317,346	18·5	75,969	0·7
1949[2]..	11,850,254	270,697,980	22·84	10,237,976	86·4	1,612,278	13·6	5,491	--
1950[2]..	12,873,476	285,762,620	22·20	11,138,578	86·5	1,734,898	13·5	28,220	0·3
1951[2]..	15,053,910	381,920,846	25·37	12,182,737	80·9	2,871,173	19·1	46,634	0·4

[1] Given in terms of rough or unpeeled wood. [2] Includes Newfoundland.

The manufacture of pulp, the second stage in this industry, is carried on by mills producing pulp only and also by paper manufacturers operating pulp-mills in conjunction with paper-mills to provide their own raw material. Such mills usually manufacture a surplus of pulp for sale in Canada or for export. Spruce, supplemented by balsam fir in the east and by hemlock in the west, is the most suitable species of wood for the production of all but the best classes of paper.

The preliminary preparation of pulpwood is frequently carried on at the pulp-mill, but there are also a number of 'cutting-up' and 'rossing' mills operating on an independent basis, chiefly for the purpose of saving freight on material cut at a distance from the mill or on material intended for export. Pulpwood is measured by the cord (4′ by 4′ by 8′ of piled material). One cord of rough pulpwood contains approximately 85 cu. feet of solid wood, and one cord of peeled pulpwood 95 cu. feet.

Pulp Production.—Of the total 1951 pulp production, 70·7 p.c. was made in combined pulp and paper mills for their own use in manufacturing paper. The remainder was made for sale in Canada or for export. About 56 p.c. was groundwood pulp and over 18 p.c. unbleached sulphite fibre, these being the principal components of newsprint paper. Bleached sulphite, bleached, semi-bleached and unbleached sulphate, soda fibre, semi-chemical, other grades and groundwood and chemical screenings made up the remainder. A considerable market has developed for screenings in connection with the manufacture of rigid insulating boards.

The manufacture of the 9,314,849 tons of pulp produced in 1951 entailed the use of 12,229,371 cords of rough pulpwood valued at $316,600,016 and the equivalent of 324,693 rough cords of other wood (i.e., sawmill chips, slabs and edgings, sawdust, butt cores, etc.) valued at $8,522,006. The total value of materials used in the manufacture of pulp was $370,442,643.

15.—Pulp Production, Mechanical and Chemical, 1942-51

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Year	Mechanical Pulp[1]		Chemical Fibre		Total Production[1]	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1942	3,260,097	64,801,837	2,246,438	126,208,457	5,606,461	192,145,062
1943	2,998,913	63,426,919	2,188,026	130,010,210	5,272,830	194,519,152
1944	3,076,296	71,668,673	2,109,169	138,140,452	5,271,137	211,041,412
1945	3,341,920	86,375,001	2,154,267	144,084,969	5,600,814	231,873,122
1946	3,997,848	111,514,231	2,427,087	172,756,674	6,615,410	287,624,227
1947	4,275,269	147,423,552	2,755,977	251,273,372	7,253,671	403,853,235
1948	4,413,513	168,343,496	2,997,281	310,338,614	7,675,079	485,966,164
1949[2]	4,718,806	166,591,741	2,891,418	272,355,430	7,852,998	445,138,494
1950[2]	4,910,803	173,035,433	3,314,250	323,330,963	8,473,014	502,583,925
1951[2]	5,172,465	213,953,064	3,814,086	503,997,803	9,314,849	727,880,005

[1] Includes screenings and unspecified pulps. [2] Includes Newfoundland.

16.—Pulp Production, by Chief Producing Provinces, 1942-51

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Year	Quebec		Ontario		Canada[1]	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1942	2,896,440	97,632,408	1,518,967	51,936,704	5,606,461	192,145,062
1943	2,617,403	94,054,176	1,490,966	54,818,046	5,272,830	194,519,152
1944	2,767,081	105,042,991	1,316,365	54,934,993	5,271,137	211,041,412
1945	2,887,176	114,197,036	1,468,682	62,596,260	5,600,814	231,873,122
1946	3,460,853	140,930,891	1,837,975	84,049,038	6,615,410	287,624,227
1947	3,751,579	194,805,327	2,100,237	122,382,058	7,253,671	403,853,235
1948	3,902,072	227,425,545	2,226,124	153,870,832	7,675,079	485,966,164
1949	3,698,401	196,568,691	2,138,444	140,662,434	7,852,998[2]	445,138,494[2]
1950	3,922,543	216,299,900	2,297,518	156,390,753	8,473,014[2]	502,583,925[2]
1951	4,282,568	298,100,313	2,484,551	219,571,231	9,314,849[2]	727,880,005[2]

[1] Includes production in British Columbia, Manitoba, New Brunswick and Nova Scotia. [2] Includes Newfoundland.

Pulp Exports.—The chief market for Canadian newsprint and pulp is the United States. Prior to the War this market alone absorbed about 85 p.c. of the pulp exports and 80 p.c. of the newsprint exports. In 1945, the proportions were 76 p.c. and 83 p.c., respectively, and in 1951, 82 p.c. and 93 p.c., respectively.

17.—Exports of Pulp to the United Kingdom, United States and All Countries, 1942-51

Year	United Kingdom		United States		All Countries	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1942	294,056	17,950,527	1,197,425	76,087,788	1,510,746	95,266,873
1943	263,392	17,349,975	1,269,043	80,969,868	1,556,457	100,012,775
1944	292,808	21,393,993	1,077,811	77,081,637	1,408,081	101,563,024
1945	290,885	22,276,514	1,093,631	79,589,366	1,434,527	106,054,911
1946	119,973	10,122,012	1,252,648	99,972,972	1,418,558	114,020,659
1947	136,976	14,741,287	1,499,302	156,121,526	1,698,712	177,802,612
1948	170,227	21,359,288	1,591,043	184,983,027	1,797,998	211,564,384
1949[1]	181,828	20,137,715	1,305,334	141,641,380	1,557,348	171,504,163
1950[1]	117,921	13,128,894	1,694,444	191,005,507	1,846,143	208,555,549
1951[1]	217,250	37,770,627	1,831,410	276,760,578	2,243,307	365,132,884

[1] Includes Newfoundland.

World Pulp Statistics.—Figures of production, exports and imports of pulp for certain countries of the world have again become available after the interruption caused by World War II and are shown for 1951 in Table 18. It is estimated that these countries produce approximately three-quarters of the world supply of pulp.

18.—Production, Exports and Imports of Wood-Pulp, by Leading Countries, 1951

(Source: United States Pulp Producers Association)

Country	Production	Exports	Imports
	'000 tons	'000 tons	'000 tons
Canada	**9,219**[1]	**2,243**	**36**
United States	16,520	202	2,361
Finland	2,417	1,311	—
Norway	1,281	623	16
Sweden	3,708	2,217	—

[1] Slightly lower than DBS figures given in Table 15, p. 475, owing to the exclusion of certain types of pulp by the Association.

Paper Production.—During 1951 there were 92 establishments producing paper and paper board in Canada as compared with 91 in 1950. In addition to newsprint, Canadian mills have a highly developed production of fine paper, wrapping paper, tissues, paper board and other cellulose products.

19.—Paper Production, by Type, 1942-51

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Year	Newsprint Paper		Book and Writing Paper		Wrapping Paper	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1942	3,257,180	147,074,109	121,419	19,181,665	165,991	17,221,769
1943	3,046,442	152,962,868	122,174	19,047,039	145,545	15,614,453
1944	3,039,783	165,655,165	155,498	23,700,310	156,721	16,699,663
1945	3,324,033	189,023,736	162,198	24,468,409	162,175	17,558,552
1946	4,162,158	280,809,610	189,318	29,995,156	175,369	20,797,070
1947	4,474,264	355,540,669	210,762	39,727,187	188,742	26,009,996
1948	4,640,336	402,099,718	231,608	45,178,968	207,128	31,036,805
1949[1]	5,187,206	467,976,343	199,317	40,598,820	195,585	30,033,478
1950[1]	5,318,988	506,968,207	214,097	47,356,410	222,840	37,776,291
1951[1]	5,561,115	564,361,193	253,081	63,790,259	257,332	49,664,005

Year	Paper Boards		Tissue and Miscellaneous Paper		Totals	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1942	609,175	38,641,867	78,002	8,150,102	4,231,767	230,269,512
1943	568,101	37,528,257	84,082	8,883,535	3,966,344	234,036,152
1944	588,348	39,091,667	104,026	10,399,036	4,044,376	255,545,841
1945	595,131	40,100,872	116,039	11,686,045	4,359,576	282,837,614
1946	683,643	50,213,833	136,630	15,140,721	5,347,118	396,956,390
1947	744,377	66,126,302	156,937	19,697,123	5,775,082	507,101,277
1948	817,432	80,864,700	167,142	23,166,651	6,063,646	582,346,842
1949[1]	797,023	80,632,075	160,838	22,219,122	6,539,969	641,459,838
1950[1]	876,894	92,531,711	179,216	25,521,207	6,812,035	710,153,826
1951[1]	960,493	113,469,950	193,250	32,744,242	7,225,271	824,029,649

[1] Includes Newfoundland.

Quebec produced nearly 49 p.c. of the total paper made in 1951, Ontario almost 28 p.c., British Columbia 7 p.c. and Nova Scotia, New Brunswick, Manitoba and Newfoundland the remaining 16 p.c.

20.—Paper Production, by Province, 1950 and 1951

Province	1950		1951	
	Quantity	Value	Quantity	Value
	tons	$	tons	$
Quebec	3,315,631	339,748,513	3,511,669	389,554,493
Ontario	1,903,721	211,416,005	2,019,235	251,918,611
British Columbia	498,286	52,845,416	513,165	59,763,061
Nova Scotia, New Brunswick, Manitoba and Newfoundland	1,094,397	106,143,892	1,181,202	122,793,484
Totals	**6,812,035**	**710,153,826**	**7,225,271**	**824,029,649**

Exports of Newsprint.—Total exports of newsprint from Canada in the years 1942-51 are given in Table 21.

21.—Exports of Newsprint to the United Kingdom, United States and All Countries, 1942-51

Year	United Kingdom		United States		All Countries	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1942	35,123	1,704,069	2,792,181	130,519,094	3,005,291	141,065,618
1943	30,427	1,773,834	2,544,691	129,787,019	2,810,288	144,707,065
1944	41,908	2,557,791	2,408,960	133,398,723	2,805,776	157,190,834
1945	105,648	6,564,645	2,533,564	146,507,805	3,058,946	179,450,771
1946	82,888	5,954,814	3,323,238	224,782,463	3,858,467	265,864,969
1947	55,520	4,623,491	3,675,349	291,892,729	4,220,779	342,293,158
1948	60,690	5,319,660	3,917,366	340,334,045	4,328,184	383,122,743
1949[1]	108,213	9,930,070	4,346,414	395,259,575	4,789,296	440,054,067
1950[1]	19,095	1,861,980	4,724,937	463,155,927	4,938,069	485,746,314
1951[1]	72,205	7,488,187	4,774,947	496,852,197	5,112,061	536,372,498

[1] Includes Newfoundland.

World Newsprint Statistics.—Since 1913, Canada has led the world in the export of newsprint. Figures for the leading producing countries for the two latest years available are given in Table 22; 1939 figures are included for comparative purposes. The six countries listed accounted for 80 p.c. of the estimated world production in 1951, Canada contributing about 54 p.c.

22.—Estimated World Newsprint Production and Exports, by Leading Countries, 1939, 1950 and 1951

(Source: Newsprint Association of Canada)

Country	Production			Exports		
	1939	1950	1951	1939	1950	1951
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
Canada (including Newfoundland)	**3,175**	**5,279[1]**	**5,516[1]**	**2,935**	**4,938**	**5,112**
United States	939	1,015	1,125	13	44	71
United Kingdom	848	609	590	42	115	106
Finland	550	460	454	433	416	415
Sweden	306	358	365	199	226	222
Norway	222	175	180	188	148	145

[1] Slightly lower than DBS figures given in Table 19, p. 476, owing to the exclusion of certain paper not classed as newsprint by the Association.

Statistics of the Combined Pulp and Paper Industries.*—The manufacture of pulp, the manufacture of paper and the manufacture of products made of paper may, under certain conditions, be treated as three industries, for they are frequently carried on in separate plants by entirely independent companies. The manufacture of basic stock and the converting of this paper into stationery and other highly processed paper products are often combined in one plant. This further converting of paper within the pulp and paper industry itself represents only a small part of Canada's production of converted paper and boards, the bulk of which is still made in special converting mills classified in other industrial groups.

The presence of these different combinations in one mill makes it difficult to separate many of the statistics relating to the manufacture of pulp, basic paper and converted paper products. All converting operations carried on in paper mills in this industry are attributed to the particular industrial group of converting plants to which they properly belong. Including manufacturing operations as far as the basic paper-making stage, there were altogether 126 mills in operation in 1951. The employees numbered 57,291 and their salaries and wages amounted to $213,169,906. If the pulp made for their own use in combined pulp and paper mills is disregarded, the total value of materials and supplies used in the industry as a whole can be considered as amounting to $483,014,009 in 1951, $373,897,470 in 1950 and $348,662,719 in 1949; the gross value of production as $1,237,897,000 in 1951, $954,137,651 in 1950 and $836,148,393 in 1949; and net value of production, $679,257,743 in 1951 $511,142,983 in 1950 and $423,375,527 in 1949.

The pulp and paper industry is one of the leading single manufacturing industries in Canada. In 1951 it was first in net value of production, in gross value of production and in salaries and wages paid, and second in employment. Only the manufacturing stages of the industry are considered in these comparisons, no allowance being made for capital invested, men employed, wages paid or primary products sold in connection with the woods operations. These form an important part of the industry as a whole but cannot be separated from woods operations carried on in connection with sawmills and other industries. In world trade, generally speaking, pulp and paper are Canada's main commodities—usually greater than wheat and far greater than nickel. Newsprint alone, over a considerable period, has brought Canada more export dollars than wheat, nickel or any other single commodity.† The United States market absorbs, annually, practically all pulpwood exports and over 80 p.c. of the pulp and the paper shipments of Canada. About one-half of the paper consumed in the United States is either of Canadian manufacture or is made from wood or wood-pulp imported from Canada.

Subsection 4.—The Veneer and Plywood Industries‡

Plywood and veneer production in Canada continues to increase in volume and in value, an increase largely attributable to more general recognition of the many advantages to be gained by the application of larger units in construction of buildings and for other purposes.

All plywood produced prior to World War II was dependent upon cold-press adhesives. Then the discovery of relatively cheap synthetic resin glues permitted the manufacture of water-resistant and water-proof plywood. During the War,

* *See* Chapter XVI for further particulars regarding the pulp and paper and paper-converting industries.
† For reasons given in Section 1, Part II of the Foreign Trade Chapter, gold is excluded from Canadian trade statistics.
‡ Prepared by the Forest Products Laboratories, Forestry Branch, Department of Resources and Development, Ottawa.

hot-pressing methods were developed so that the industry was able to meet the rigid specifications for aircraft components. Later, many new hot presses were introduced and this method of manufacture has become almost universal throughout the industry.

The production of hardwood plywood is largely confined to the eastern provinces. The changes in manufacturing methods applied to hardwood plywood have resulted in its adaptation to many new uses, particularly to attractive wall finishes for homes and other buildings, flush doors, radio and television cabinets and other home and office furniture.

Softwood plywood is produced almost solely in British Columbia. Douglas fir is the type most commonly manufactured because of the availability of large-diameter logs of this species from which large sheets of clear veneer can be obtained. The use of synthetic resin adhesives is responsible for the production of a product that has become almost indispensable to the construction industry—for wall panels, concrete forms, roofing, sheeting, house sub-floors; for construction of silos, cribs and caissons; for box-car linings, bus bodies, trailers, power-driven and other types of watercraft; for box panels and crate linings, case goods and core-stock for furniture; for plywood-faced doors and for many other uses.

The heating of glued veneers in moulds by high-frequency electric fields (dielectric heating) permits the manufacture of shaped plywood, which is now being used for furniture, radio cabinets and similar products. This development is becoming more widely appreciated as its possibilities are better known.

Veneers of Canadian manufacture are not confined to species native to Canada. A number of imported woods of special decorative value are veneered successfully and provide the furniture industry with a wide choice of finishes. Exports of veneers and plywoods produced in Canada have increased in value from $969,256 in 1938 to a high of $18,655,285 in 1952.

23.—Veneer and Plywood Produced for Sale, by Type, 1949-51

Type		1949	1950	1951
Veneer (1/10 in. Basis)—				
Domestic softwood	M sq. ft.	139,092	194,845	331,148
	$	1,507,973	2,008,510	3,466,307
Domestic hardwood	M sq. ft.	156,462	164,719	203,521
	$	3,997,363	5,483,890	7,350,044
Imported wood	M sq. ft.	6,595	16,546	16,406
	$	481,303	1,359,118	1,442,139
Totals, Veneer	**M sq. ft**	**302,149**	**376,110**	**551,075**
	$	**5,986,639**	**8,851,518**	**12,258,490**
Plywood (1/4 in. Basis)—				
Domestic softwood	M sq. ft.	360,389	389,010	482,626
	$	19,749,658	22,860,818	34,047,694
Domestic hardwood	M sq. ft.	70,583	93,552	95,610
	$	8,082,851	11,888,675	13,078,960
Imported wood	M sq. ft.	3,246	2,386	5,247
	$	637,170	620,925	1,523,694
Totals, Plywood	**M sq. ft.**	**434,218**	**484,948**	**583,483**
	$	**28,469,679**	**35,370,418**	**48,650,348**

Subsection 5.—The Wood-Using Industries

The wood-using group comprises thirteen industries,* other than sawmills and pulp mills, using wood as their principal raw material. Most of these industries obtain from the sawmills the wood they transform into planed and matched lumber, boxes, barrels, furniture, caskets and other manufactured or semi-manufactured products, but the veneer and plywood and excelsior industries usually manufacture their products direct from logs and bolts.

This wood-using group does not include every industry into which wood enters as a raw material but only those producing commodities whose chief component is wood. There are a number of industrial groups in which wood is an important raw material, such as the manufacture of agricultural implements, musical instruments, etc., and others, such as the manufacture of machinery, in which wood is necessary but only in comparatively small proportions. There are also many cases where wood is used indirectly in the manufacture of all-metal products, as, for example, in the use of wooden patterns and wooden foundry boxes in making metal castings. Wood in the form of barrels, boxes and other containers also enters into the distribution of commodities of all kinds.

In 1951, the wood-using group, comprising 4,041 establishments, gave employment to 68,864 persons and paid out $151,003,467 in salaries and wages. The gross value of its products was $561,825,023 and the net value $257,412,502.

The importance of secondary industry in providing employment will be appreciated when it is noted that the number of employees in the wood-using group was more than 68,000, as compared with sawmills with approximately 62,000 employees and pulp and paper with about 57,000 in 1951.

24.—Wood Used by Wood-Using Industries, 1949-51

Item		1949	1950	1951
Sawn lumber	M ft. b.m.	1,759,834	1,893,861	1,981,239
	$	105,422,963	120,604,966	138,846,528
Sawlogs, veneer logs, flitches	M ft. b.m	248,292	274,275	316,517
	$	15,355,296	18,393,062	26,015,465
Veneers and plywoods	M sq. ft.	263,446	274,627	267,000
	$	14,435,898	17,087,654	19,314,591
Other wood used	$	3,582,162	3,959,258	4,101,186
Totals	$	**138,796,319**	**160,044,940**	**188,277,770**

Subsection 6.—The Paper-Using Industries

The paper-using group comprises three industries† engaged primarily in manufacturing commodities of paper and paperboard. Establishments engaged in printing, publishing, bookbinding and the allied graphic arts also consume large quantities of these materials, but, under the standard industrial classification adopted by the Dominion Bureau of Statistics in 1948, they are grouped separately.

* Furniture; sash, door and planing mills; veneer and plywood; hardwood flooring; boxes, baskets and crates; wood-turning; coffins and caskets; cooperage; woodenware; lasts, trees and wooden shoefindings; beekeepers' and poultrymen's supplies; excelsior; and other wood-using industries.

† Paper boxes and bags; roofing paper; and miscellaneous paper goods.

Some paper-using establishments purchase paper as a raw material from the pulp and paper industry and merely subject it to some form of treatment to fit it for further manufacture in some other industry. This occurs in the manufacture of coated, sensitized or corrugated paper. Other firms purchase paper and subject it to some treatment to fit it for some definite final use such as in the manufacture of asphalt roofing or waxed wrapping paper. Another large group uses paper and paperboard as a raw material for conversion into paper bags, boxes, envelopes, laminated wallboard and other commodities.

In recent years the manufacture of containers and packages of various kinds has grown very rapidly since ways have been found of converting tough and cheap paper stocks into strongly made boxes which compete very favourably with the wooden crates and packing cases formerly used. Small attractive paper containers for use in the retail trade are growing in favour with the purchasing public and constitute an important branch of the paper-using industries.

Composition roofing and sheathing, consisting of paper felt saturated with asphalt or tar and in some cases coated with a mineral surfacing, is being increasingly used as a substitute for metal roofing, wooden shingles and siding materials. Wood-fibre building boards, some of which are produced by lamination in the paper-using industries, are now used extensively in construction, especially for insulating purposes, replacing lumber and wood lath.

The growth of the paper-using industries in Canada since 1923 reflects these developments. In 1923, the 152 establishments in this group employed 6,870 persons, distributed $7,442,102 in salaries and wages and produced goods valued at $31,760,948. In 1951, these industries comprised 421 plants, provided employment for 25,598 persons whose earnings totalled $63,351,100 and produced products worth $351,944,692.

Subsection 7.—Printing, Publishing and Allied Industries

The Printing Trades Group is made up of five closely related industries: printing and publishing, comprised of publishers who operate printing plants; printing and bookbinding, including general or commercial printers and bookbinders; lithographing, comprised of plants specializing in that process; engraving, stereotyping and electrotyping, including photo-engraving; and trade composition or type-setting for printers. A sixth industry covering publishers of periodicals who do not print their publications has been included since 1949. Although, strictly speaking, these publishers are not manufacturers, they are closely related to the printing trades which produce the plates, cuts, etc., and print for them newspapers, magazines, directories, year-books, almanacs, house organs and other periodicals.

In 1951, the printing trades employed 60,076 persons whose earnings totalled $162,779,233. Their output was valued at $414,259,662 and the raw materials used and services received cost $133,525,783.

Periodicals valued at $166,384,319 accounted for 40 p.c. of the value of printed matter and other products, daily newspapers alone contributing $118,395,368. The value of periodicals is made up of $116,748,028 received from advertising and $49,636,291 received from subscriptions and sales of publications. In addition, the 1,354 publishers in the sixth industry reported revenues of $23,984,782 from advertising and $8,698,603 from sales of publications.

CHAPTER XII.—MINES AND MINERALS*

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—Canada's Mineral Resources

The tremendous expansion that has taken place in Canada's mineral industry from the end of World War II to 1951 is reviewed in the 1952-53 Year Book, pp. 476-495. The following special article brings that information up to June 1953.

DEVELOPMENTS IN CANADA'S MINERAL INDUSTRY, JANUARY 1952 TO JUNE 1953†

The period covered by this review has been one of the busiest in the history of Canada's mineral industry and thus there are many developments of interest and much solid accomplishment to report. Nothing quite so colourful as the discoveries of the Leduc and Redwater oil fields in Alberta in 1947 and 1948, respectively, occurred during this period. However, there were several developments of outstanding interest, among them being the discoveries of huge iron-bearing deposits in northern Ungava toward the close of the period and the discoveries of large base-metal deposits in the Bathurst area of northern New Brunswick. Another development, announced early in June, is the proposed Yukon-British Columbia power project by Ventures Limited which will involve the expenditure of hundreds of millions of dollars and will provide power for a metallurgical industry that will treat ores from many parts of the world. Uranium, too, has been sharing the limelight particularly as a result of activities in northern Saskatchewan. These developments, to which further reference is made elsewhere in this review, are indicative of the rapid growth of the mineral industry and they provide additional proof that Canada is still well to the fore in the opportunities it offers in the field of mineral resources development.

* Except where otherwise noted, this Chapter has been revised in the Mining, Metallurgical and Chemical Section, Industry and Merchandising Division, Dominion Bureau of Statistics.

† Prepared under the direction of Marc Boyer, Deputy Minister, Department of Mines and Technical Surveys, Ottawa, by G. H. Murray, Chief, Editorial and Information Division, and Mrs. M. J. Giroux of the Editorial Staff. In preparing this article the authors made free use of material contained in the preliminary annual mineral reviews for 1952 published by the Department of Mines and Technical Surveys.

Notable headway was made during the review period toward the completion of a number of mining and related projects that have been under way for several years. One of the largest of these is the Quebec-Labrador iron-ore development, involving an expenditure of approximately $200,000,000. The 358-mile railway to connect the deposits to the port of Seven Islands is scheduled for completion by the end of 1953 and shipments from the deposits are expected to commence in the summer of 1954. Thus, in a matter of months, one of the largest potential sources of iron ore in the world will have been brought into operation. Another large project within a few months of completion is the Trans Mountain pipeline which will carry crude oil from wells in the Edmonton area to the Vancouver area and also into northwestern United States.* The 711-mile pipeline will cost an estimated $90,000,000. Still another nearing completion is the Lynn Lake nickel-copper project of Sherritt Gordon Mines Limited, about 500 miles north and slightly west of Winnipeg, Man., and its related project at Fort Saskatchewan in Alberta. The whole project, including the 147-mile railway from Sherridon, Man., to Lynn Lake, and the refinery plants at Fort Saskatchewan, will cost an estimated $52,000,000.

The International Nickel Company of Canada Limited is bringing to completion a $150,000,000 program involving a changeover from open-pit and underground to entirely underground operations, a substantial increase in the annual tonnage of ore mined, the introduction of oxygen flash smelting of the Company's copper concentrates in which all smelting heat requirements are met by reacting the concentrates with oxygen, and the erection of a concentrator at the Creighton property capable of handling 12,000 tons of ore daily.

Nearing completion also is a program of plant expansion in the cement industry which was started in 1947 and was necessitated by the greatly accelerated post-war activities in the construction industries. It will raise Canada's cement-making capacity to approximately 22,000,000 bbl. a year.

At the same time, the asbestos industry has been undergoing considerable expansion, more particularly in the Eastern Townships of Quebec, source of over 97 p.c. of the Canadian output of asbestos. Here, the leading producer, Canadian Johns-Manville Company Limited, has been expanding and modernizing its facilities at Asbestos and is replacing the present milling plant. Asbestos Corporation is developing a new mine on a recently discovered deposit from which production is expected in 1954. Regular production of asbestos from Cassiar Asbestos Corporation's McDame mountain deposit in northern British Columbia is expected to commence in July 1953.

Throughout the period under review, crude oil and natural gas developments were prominently to the forefront, a main development being the decision of Interprovincial Pipe Line Company to extend the pipeline from its present terminus at Superior, Wis., to Sarnia, Ont., a distance of approximately 635 miles. Present indications are that the extension will be in operation by the spring of 1954. The construction of this extension and of the Trans Mountain pipeline to Vancouver will pave the way for an increase in the daily output of crude petroleum from fields in Western Canada to an eventual 600,000 bbl. There were several other developments of interest in connection with crude petroleum. These are covered in the special article, "Canadian Crude Petroleum Situation", at pp. 540-544, and, accordingly, little further reference is made to them in this review. Quite apart from actual developments in the various fields in Western Canada, much of the interest in natural gas was centred on the likelihood or otherwise of bringing the gas by pipeline into Ontario and

*The pipeline was officially opened Oct. 16, 1953.

Quebec. Such a line would cost an estimated $300,000,000 and the whole matter seems destined to receive increasing attention. The reserves of natural gas in Western Canada have been increasing at a considerably higher rate than has consumption and thus there is need of finding new market outlets. This is emphasized by the fact that the contemplated increases in crude-oil production to supply the Trans Mountain and Superior-to-Sarnia pipelines would result in a marked increase in the output of natural gas, which, unless market outlets are developed, would be mainly wasted.

For the mineral industry as a whole, the outlook in mid-1953 appeared to be bright, an encouraging feature being improved prospects for the gold industry. Among the many favourable factors in the outlook for the metals are: the arrangements by the United States Government to purchase large quantities of Canadian-produced nickel over lengthy periods; the scheduled production of iron ore from the Quebec-Labrador deposits and from the deposits at Marmora, Ont., in 1954; and the rising tempo of activities in the principal metal-consuming industries in Canada and abroad. Perhaps the most favourable factor in the outlook for the industrial minerals is the steady increase in activities in the construction and related industries. Huge quantities of these minerals are required also in Canada's rapidly expanding chemical and metallurgical industries.

The developments in the mineral industry during the review period on a regional basis follow.

British Columbia.—Lead, zinc, copper, gold, coal, silver and iron ore make up the bulk of the Province's mineral output. Declines in the prices of lead and zinc led to the closing of several marginal producers and thus contributed to the decrease in the value of the Province's mineral output from $176,279,000 in 1951 to $172,907,000 in 1952. However, mining activity in the main was at a high level.

In the base-metal field, the Consolidated Mining and Smelting Company of Canada Limited made good progress on its $65,000,000 modernization and expansion program. The rehabilitation of its lead smelter and the extension to its electrolytic zinc plant was nearing completion in June 1953 but, because of poor marketing conditions for lead and zinc, the Company decided not to place its H.B. property into production as planned. The mill extension to the Company's Tulsequah zinc-copper-lead mine in northern British Columbia was completed in January 1953 and the new fertilizer plant at Kimberley was ready for operation in mid-summer. Power generation at the Company's new Pend d'Oreille plant, scheduled to commence early in 1954, is expected to offset any further shortage of power such as that which forced a substantial reduction in the treatment of custom concentrates in the winter of 1952-53.

The mining of tungsten ore moved to the forefront as Canadian Exploration Limited, a subsidiary of Placer Development Limited, increased the capacity of its mill to 500 tons daily on ore being drawn from three sources—from its original Emerald orebody in the Salmo area, from the Dodger orebody discovered in 1951 about one-half mile east of the Emerald, and from the Feeney orebody to the north of the Emerald. The daily mill rate will be increased to 700 tons in 1953 as development and stoping become more advanced in the Dodger mine. One other property, the Red Rose mine south of Hazelton which is under lease to Western Tungsten Copper Mines Limited, came into production during the period and several others were under exploration.

The high quality of the asbestos fibre from the property of Cassiar Asbestos Corporation Limited in the McDame area of northern British Columbia makes production so distant from markets economically feasible. The entrance of this mine into production in July 1953 will, for the first time, add asbestos to the list of British Columbia's mineral products. The initial daily rate of 150 tons is expected to be increased to 500 tons by July 1954.

British Columbia has long had hopes of building up an iron-ore industry and these hopes now appear to be materializing. Argonaut Company Limited, the sole producer in January 1952, did considerable development work on its Quinsam Lake deposits and increased its production from 101,371 tons of magnetite concentrates in 1951 to 551,812 tons in 1952. This, coupled with the addition of a second producer, Texada Mines Limited, which brought two new orebodies on Texada Island into production, increased the Province's total output of magnetite concentrates to 760,828 tons in 1952. Meanwhile, extensive exploration was carried out on other known deposits including the Elk Lake magnetite property of Quatsino Copper Gold Mines Limited, where four orebodies were discovered.

Although copper production declined in volume in 1952, higher prices resulted in an increase in the value of output to $12,476,000 compared with $12,111,000 in 1951. Output, in the form of concentrate, comes mainly from the Copper Mountain copper-gold-silver mine of the Granby Consolidated Mining, Smelting and Power Company Limited, 12 miles from Princeton, and from the copper-zinc-gold-silver property of Britannia Mining and Smelting Company Limited at Britannia Beach. Concentrates are shipped to Tacoma, Washington, for refining. At Granby's Copper Mountain mine a substantial tonnage of ore was developed which can be mined economically by open-pit methods. The zinc content of the ore produced by Britannia Mining and Smelting exceeds that of the copper. Exploration was carried out on a number of copper showings throughout the Province. A recently discovered property in the area at the head of Portland Canal disclosed copper mineralization over a large area.

Other metal developments include the active exploration of the old Pacific Nickel Mines property near Choate and of a property 90 miles north of Kamloops on which uranium has been discovered.

The opening up of the Kitimat-Kemano district to industry and settlement by Aluminum Company of Canada's $550,000,000 project is focussing increasing attention on the mineral potential of the whole region. Initial production from the project is expected to commence in 1954 and will amount to 83,000 metric tons of aluminum annually from an installation of 450,000 h.p. generating capacity. The whole project involves the development of over 2,200,000 h.p. of hydro-electric energy for an eventual annual output of 500,000 metric tons of aluminum.

Production of coal decreased slightly in 1952 to 1,644,000 tons. Bituminous coking coals, ranging from high to low volatile, are mined on Vancouver Island and in the Crowsnest, Telkwa and Nicola areas. Minor quantities of subbituminous coal are produced, mainly in the Princeton field. In the Kootenay (Crowsnest) area, medium-temperature oven by-product coke is manufactured, chiefly for industrial consumption. Crow's Nest Pass Coal Company Limited completed the installation of 16 additional by-product coke ovens in 1952 bringing its total to 52 coke ovens with a combined capacity of 500 tons daily. The coke is shipped to Consolidated Mining and Smelting Company at Trail and to the United States.

The discovery of extensive reserves of natural gas in the British Columbia section of the Peace River district is of outstanding importance. Proven gas reserves were officially estimated at approximately 1,600,000,000,000 cu. feet as at Aug. 31, 1952. Over 32,000,000 acres are held under permit in the area. Altogether, over $8,000,000 was spent on exploration, drilling and geophysical work for natural gas and oil in the Province in 1952. A pipeline to bring the gas from the district into southern British Columbia and northwestern United States is under consideration (*see* under Alberta).

The construction of Trans Mountain's 711-mile, 24-inch oil pipeline from Edmonton to Vancouver is scheduled for completion in the autumn of 1953 and refinery facilities in the Vancouver area are being greatly extended to provide the extra capacity needed. The line will have an initial capacity of 120,000 bbl. a day which can be increased to 200,000 bbl. a day through the construction of additional pumping stations.

The Province's output of sulphur, gypsum, clay products, cement, sand and gravel, and other non-metallic minerals is, for the most part, used locally and, with the exception of cement, showed little change during the period. Cement production, however, advanced from 1,325,000 bbl. valued at $3,311,000 in 1951 to 1,528,000 bbl. valued at $4,046,000 in 1952.

Alberta.—Events in the oil and gas industry in Alberta, the heart of Western Canadian oil developments, moved more rapidly during the review period than at any other time since the discovery of Leduc in 1947. Over $300,000,000 was spent on exploration and development in the Province in 1952 with the result that important extensions were made to existing fields. Several outstanding wells were discovered, the chief of which was in the Bonnie Glen-Pigeon Lake district, and reserves of crude petroleum increased to nearly 2,000,000,000 bbl. Production of oil rose from 45,915,000 bbl. valued at $113,870,000 in 1951 to 58,677,000 bbl. valued at $139,886,000 in 1952. (For further details on Alberta oil developments, *see* pp. 541-542.)

The outstanding event in the natural gas industry in Alberta was the permission granted by the Alberta Government to Westcoast Transmission Company Limited to export gas from the Peace River area (of both Alberta and British Columbia) by a pipeline to be built to Vancouver and thence south into the northwest area of the United States. Approval for the building of this line in Canada was given by the Board of Transport Commissioners at Ottawa and the matter of extending the line into the United States is before the Federal Power Commission at Washington. The line will be economical only if a considerable market becomes available in the United States; the amount of gas that can be sold in Canada alone would not justify the expenditure involved in building a line 645 miles long from Peace River to Vancouver through mountainous terrain.

New and important natural gas discoveries were made in 1952-53. In the more central part of Alberta gas continued to be discovered in large quantities as wells were drilled for oil. One of the largest gas discoveries, with only limited amounts of oil present, was in the Nevis area, 12 miles west of Stettler. Several wells have been completed in this field which may have a reserve of 500,000,000,000 cu. feet. The Alberta Petroleum and Natural Gas Conservation Board stated, in its report of March 1952, that "with a continued incentive for exploration for oil and gas resulting in the drilling of some 400 to 500 wildcat wells a year, the Province of Alberta can safely anticipate the development of further established reserves of natural gas at an

average rate of at least 1 trillion cubic feet a year for at least the next 8 to 10 years". The Nevis discovery alone is likely to provide half of that amount for 1952 and it is but one of several important areas discovered during the year.

In the Pigeon Lake area of Alberta the Leduc-Wizard Lake-Bonnie Glen trend was extended southwestward with the finding of more oil overlain by extensive gas caps. West of this, at Minnehik, a large gas discovery was made in the Mississippian limestone which is the productive horizon of the foothills areas. In the area south of Calgary a large flow of gas occurred in three Shell Oil Company wells drilled near Okotoks. A feature of this gas is the abnormally large content of hydrogen sulphide.

There are few areas in Alberta where drilling is being done that gas does not occur, but in many of these the gas is presently not considered important. Wells in many areas, however, have provided substantial flows, as for example in the Lac La Biche, Clive, Fort Saskatchewan, Big Lake, and Morinville areas north and east of Edmonton, and at Chancellor and along the Stettler-Big Valley reef trend farther south. Also in the Peace River area of Alberta two fields, Gordondale and Rycroft, added new reserves to those previously proven. In all, about 155 potential gas wells were drilled in Alberta during 1952 and the reserves have been increased by perhaps 3,500,000,000,000 cu. feet.

The requirements for natural gas in Alberta continued to increase but the reserves increased at an appreciably higher rate than the consumption so that there is need of finding additional markets. At the end of the review period, increasing thought was being directed toward opening up Ontario and the Montreal area to natural gas from Alberta and the other Prairie Provinces via a pipeline over an all-Canadian route which would cost an estimated $300,000,000.

Developments in oil and gas have given rise to a rapid growth in refining capacity and to the establishment of a petrochemical industry in Alberta. To mention a few of the plants: Celanese Corporation of America by the end of June 1953 had nearly completed a $55,000,000 plant just east of Edmonton, the output from which will include various industrial organic chemicals; nearby, Canadian Industries Limited had started to build a $13,000,000 polythene plant; and at Fort Saskatchewan to the northeast of Edmonton, Sherritt Gordon Mines Limited was building a $17,000,000 refinery in which ore from its Lynn Lake deposits in northern Manitoba will be processed.

In the tar sands along the Athabasca River, Alberta has what is believed to be the largest single oil reserve in the world. These sands contain reserves of oil estimated at from 100,000,000,000 to 250,000,000,000 bbl. Economic methods of extracting the oil from the sands were worked out on a pilot-plant scale by the Federal Government at Ottawa and by the Provincial Government on its pilot plant at Bitumount, 60 miles north of Waterways on the Athabasca River. During the review period, nine different companies secured exploration permits and were carrying out extensive drilling operations. Some were doing research on the different production and refining problems.

Alberta is Canada's principal coal-producing province and in 1952 contributed 41 p.c. or 7,195,000 tons of the total Canadian output. Production, however, continues to decline because of the increasing use being made of diesel engines by the railways and of oil and gas for domestic and commercial purposes. Output includes almost all ranks of coal including a small tonnage of semi-anthracite. Bituminous coals ranging from high to low volatile, which form the bulk of the output, are produced in the Crowsnest, Nordegg and Mountain Park areas, lower-rank

bituminous non-coking coals in several areas of the foothills, subbituminous coal in the Drumheller, Edmonton, Brooks, Camrose, Castor and Carbon areas, and coal on the border of subbituminous and lignite is produced in the Tofield and Redcliff areas. The Cascade area was the only field that produced semi-anthracite in 1952.

The coal industry continued its mechanization of surface and underground operations with the twofold objective of reducing production costs and of producing better-quality coal for marketing. Increasing attention was paid to the production of prepared coal such as briquettes and fabricoal for which there is a growing demand. Over 37 p.c. of the output was strip mined in 1952, a 5-p.c. decrease from 1951 owing partly to the closing of nine strip mines.

The presence of large quantities of natural gas in the Province has assisted greatly in the expansion of output of some of the industrial minerals. Sulphur was produced during the period for the first time in Alberta's history when Shell Oil Company of Canada began to recover, early in 1952, elemental sulphur at a rate of about 10,000 tons annually from the scrubbing of sour natural gas from the Jumping Pound field. The gas contains about 3·5 p.c. by volume of hydrogen sulphide and a 90-p.c. recovery of the sulphur is made. Royalite Oil Company Limited began the recovery of from 9,000 to 10,000 tons of elemental sulphur annually from a similar plant in its Turner Valley gas field in June 1952.

The Province possesses a steadily expanding clay-products industry which is centred mainly in the Medicine Hat area close to supplies of natural gas. Brick and tile products are made from clays and shales obtained within the Province. However, clays are imported from Saskatchewan for the production of sewer pipe, stoneware, etc., and from the United States for the production of tableware. The output of clay products in 1952 was valued at $2,151,000 compared with $1,788,000 in 1951.

Alberta also produces salt, cement and structural materials. Canada Cement Company Limited installed new kilns in its wet-process plant at Exshaw which contributed largely to the increase in the output of cement from 1,649,909 bbl. valued at $3,898,043 in 1951 to 1,748,305 bbl. valued at $4,388,245 in 1952.

Saskatchewan.—Developments in crude oil, natural gas and uranium have made the period covered by this review one of the most significant and fruitful in Saskatchewan's mining history. However, owing mainly to a decrease in production from the Flin Flon deposits that straddle the Saskatchewan-Manitoba boundary, the Province's mineral production decreased to a value of $48,647,000 in 1952 compared with $51,033,000 in 1951.

The search for oil and gas and other related developments reached a new high with expenditures amounting to upwards of $40,000,000 in 1952 compared with $20,000,000 in 1951. Developments taking place in the crude petroleum field are dealt with at p. 542. Proven reserves of natural gas rose to nearly 225,000,000,000 cu. feet by the end of February 1953. Production, which comes from the Unity, Brock and Lloydminster-Lone Rock fields, increased from 860,000,000 cu. feet in 1951 to 950,000,000 cu. feet in 1952. Several discoveries were made in the Coleville-Brock area. The Brock field, which was discovered in 1951 and to which extensions were made in 1952, appears to be the largest and most favourable gas reserve so far found in the Province. A distribution system using gas from the Brock field and serving the town of Kindersley and the village of Brock was constructed during the review period and plans were made to build a pipeline from the field to Saskatoon.

The Crown-owned Eldorado Mining and Refining Company's uranium property, Ace-Fay, in the Beaverlodge area north of Lake Athabasca, was put into operation in April 1953, bringing Saskatchewan to the forefront as a source of uranium ore. The mill has an initial capacity of 500 tons a day but is designed to permit an expansion to 2,000 tons daily. Several private companies are also active in the Beaverlodge area and underground exploration is being carried out at different properties. A rush into the area during the review period resulted in the staking of more than 1,000 claims, bringing the total number to over 3,000. Pitchblende discoveries were made on several properties, chiefly in the Milliken Lake part of the region; the discovery made by Gunnar Gold Mines Limited in St. Mary's Channel is probably the most interesting.

The Beaverlodge district is opening up rapidly to settlement and three new communities are being built. Eldorado Mining and Refining Limited has nearly completed a large camp at Beaverlodge Lake including modern homes for its staff, a school and a hospital. A smaller settlement at Black Lake has been named Bushell. About midway between Beaverlodge and Bushell, the Saskatchewan Government has laid out a large townsite called Uranium City.

Several discoveries of uranium were also made in the Black Lake, Charlebois Lake and Lac La Ronge regions and, late in 1952, Eldorado staked a large block of claims in the Foster Lake area.

Until the entry of Eldorado's Ace-Fay mine into production, Hudson Bay Mining and Smelting Company Limited was Saskatchewan's only metal producer and in 1952 accounted for over 77 p.c. of the value of the Province's mineral output. More than half the production from the Company's Flin Flon copper-zinc-gold deposits comes from the Saskatchewan side of the boundary. The Company also produces cadmium, selenium and tellurium. During the review period, the Company brought its slag-fuming plant into production and dropped its milling rate from 5,000 to 4,000 tons of ore daily in line with plans to decrease its milling rate without reducing the value of the metal output through the re-treatment of zinc plant residues in the new plant. Through its subsidiary, Hudson Bay Exploration and Development Company Limited, the Company carried out extensive exploration in the Canadian Shield area of Saskatchewan, particularly in the Birch Lake area where it is engaged in shaft-sinking operations on a promising gold-copper property and at Annabella Lake where it has been exploring claims.

Aside from the production from the Flin Flon deposits and more recently from the Ace-Fay mine, the Saskatchewan portion of the Canadian Shield, which underlies the whole northern third of the Province, has yielded relatively little mineral wealth to date. However, whole areas of this region are being explored and much staking has been in progress in the Lake Athabasca area.

Saskatchewan accounted for over 11 p.c. of Canada's volume of coal output in 1952, all the coal mined in the Province being lignite. Almost all of the 1952 output was strip-mined and came chiefly from the Bienfait district in southeastern Saskatchewan, the other main producing fields being Estevan and Roche Percee in the same area. Production in 1952 at 2,083,000 tons was 6 p.c. lower than in 1951. Approximately 65 p.c. of the output is shipped to Manitoba for domestic and industrial use.

The Province's output of non-metallics in 1952 comprised sand and gravel, sodium sulphate, salt and clay products, in that order. With the exception of salt, each showed declines in volume and value from 1951. The demand for sodium

sulphate, which comes from highly concentrated brines and from alkali lakes in southwestern Saskatchewan, remained good but output was affected by unfavourable weather. Prairie Salt Company Limited, wholly-owned subsidiary of Dominion Tar and Chemical Company Limited, recorded a new high of 34,000 tons in the production of fine salt from its vacuum plant at Unity. The brine comes from a salt bed 3,500 feet underground.

Oil drilling has brought extensive deposits of potash to light in several areas of the Province. Exploratory activity on these has been widespread with over 1,000,000 acres covered by pre-exploration permits. Western Potash Corporation Limited has commenced shaft-sinking operations on a deposit near Unity and Potash Corporation of America is investigating a deposit in the Quill Lake area.

Manitoba.—Most of the interest in mineral developments in Manitoba during the review period has been centred in the Lynn Lake area, 500 miles northwest of Winnipeg, where Sherritt Gordon Mines Limited has been busily engaged in preparing its copper-nickel orebodies for production, and in southwestern Manitoba where the discovery of crude oil a few years ago has been followed by the successful drilling of a number of wells and by a daily production of 1,200 bbl. (March 1953).

Indications are that production from the Lynn Lake deposits will commence before the close of 1953. In the underground work, major attention has been given to preparing the "A" orebody for mining. By the end of June, foundations for the mill had been laid and construction of the plant was in progress. The Laurie River power development was completed, construction of the refinery at Fort Saskatchewan in Alberta was proceeding, and construction of the 147-mile railway from Sherridon to Lynn Lake was scheduled for completion before the close of 1953.

Initially, the nickel concentrate from the Lynn Lake deposits will be shipped to Fort Saskatchewan for refining and the copper concentrate to Noranda Mines Limited, Noranda, Que., for smelting. Eventually, however, both the copper and nickel will be refined at Fort Saskatchewan. Present plans call for an annual production of 8,500 tons of nickel, 4,500 tons of copper, 150 tons of cobalt and 70,000 tons of ammonium sulphate for fertilizer. The leach process to be used to treat concentrates is expected to result in higher recoveries at lower costs than would be possible by use of conventional methods. Most of the sulphur in the concentrates will be converted into ammonium sulphate. Natural gas will be used as fuel at the Fort Saskatchewan plant and the Company has contracted for its requirements from Midwestern Industrial Gas Limited.

Aside from developments at Lynn Lake, exploration in northern areas of Manitoba has revealed extensive deposits of low-grade nickel which, in the light of a continued heavy demand for the metal and improved metallurgical practices, may some day prove mineable on a commercial basis. Canadian Nickel Company Limited, subsidiary of the International Nickel Company of Canada Limited, is exploring low-grade nickel bodies in the area about Mystery Lake and in the Grass River area. Berens River Mines Limited has also been exploring a deposit in the Mystery Lake area and is having tests made of the ore using the Sherritt Gordon leach treatment.

From its operations at Flin Flon, Hudson Bay Mining and Smelting Company Limited and its subsidiary, Cuprus Mines Limited, in 1952 produced 61,783 tons of refined zinc at its electrolytic zinc plant at Flin Flon, about 7,000 tons more than was produced in 1951. The output of zinc oxide from the slag fuming plant

put into operation in 1951 accounted for the increase. At the Company's mine which straddles the Manitoba-Saskatchewan boundary at Flin Flon, 1,559,081 tons of copper-zinc ore were hoisted in 1952 and 118,610 tons of zinc concentrate were produced. Underground development at its Schist Lake copper-zinc mine, 3½ miles south of Flin Flon, is being continued and the Company is developing several other deposits in the Flin Flon area but these are reported to be essentially copper orebodies containing little or no zinc.

Manitoba's gold production, at 142,000 oz. t. in 1952, was close to 22,000 oz. t. lower than in 1951. About 85 p.c. of the output came from the Nor-Acme mine at Snow Lake and from the San Antonio mine in the Rice Lake area and the remainder as a by-product of base-metal operations at Flin Flon. The decrease in production was caused by the closing of the Ogama-Rockland mine in 1951, by a decline of 5,000 oz. t. in Nor-Acme's production, and by a decline in output from the Flin Flon operations. Production from San Antonio increased almost 4,000 oz. t. over that of 1951.

In addition to the exploratory activity in the search for nickel in the Precambrian areas of northern Manitoba, other companies explored copper and zinc prospects in the Herb and Dion Lake areas. In southeastern Manitoba, Falconbridge Nickel Mines Limited drilled a nickel-copper occurrence in the Bird River area and Gunnar Gold Mines Limited explored chromite bodies at Euclid Lake to the north of Bird River.

Of the several significant oil finds made, one—a Daly well near Virden—has developed into an oilfield and drilling results indicate the possibility of other producing areas. Production of crude petroleum increased from 10,698 bbl. valued at $26,500 in 1951 to 80,000 bbl. valued at $196,000 in 1952. No commercial finds of natural gas have been made as yet in Manitoba.

The Province's output of industrial minerals, including structural materials increased from $8,399,000 in 1951 to $8,820,000 in 1952 and comprised cement, sand and gravel, stone, lime, clay products, gypsum, and salt, in that order. Canada Cement Company Limited increased the output from its plant at Fort Whyte by 75,000 bbl. over that of 1951 to 1,615,000 bbl. in 1952. Manitoba's gypsum production, which showed a slight increase in both volume and value of output over that of 1951, is mined by Gypsum, Lime and Alabastine (Canada) Limited at Gypsumville, and by Western Gypsum Products Limited at Amaranth.

Salt production showed little change. During the review period, Canadian Salt Company Limited bought the Neepawa salt well property from which salt brine has been produced continuously since 1935.

Activity within the bentonite industry gave indication of an increased output in the near future. This included the taking over of the crushing and drying plant of Pembina Mountain Clays Limited at Morden and an activating plant at Winnipeg by Industrial Minerals Corporation of New York, and the exploration of deposits in the Miami-Morden district by Actiloids Limited of Winnipeg.

Ontario.—Ontario is Canada's leading mineral-producing province and in 1952 accounted for 34·3 p.c. of the value of the Canadian mineral output. Nickel, gold and copper, in that order, were the chief contributors, followed by sand and gravel, iron ore, the platinum metals, cement, clay products, lime, silver, salt and asbestos. Ontario produced all of the Canadian output of nickel in 1952, all of the

platinum metals, cobalt, nepheline syenite and graphite, and most of the salt. It also accounted for over half of the total Canadian output of iron ore and of gold, and approximately half of the copper.

Developments in the nickel industry point to a considerable expansion in Canada's nickel potential and, because of the short supply of the metal, have attracted much attention. They include: the continued expansion of facilities by the two main producers, International Nickel Company of Canada Limited and Falconbridge Nickel Mines Limited; the shipping of development ore by East Rim Nickel Mines Limited and Milnet Mines Limited in the Sudbury Basin to Falconbridge Nickel Mines; and the promise of production from a third company, Nickel Offsets Limited, during 1953.

Production of nickel in all forms in 1952 was 280,013,300 lb., valued at $150,908,900, an increase of slightly more than 4,200,000 lb. over 1951 and about 8,000,000 lb. short of 1943, the peak year. All but a small part of the output in 1952 came from the mines of International Nickel Company and Falconbridge Nickel Mines. The remainder originated in silver-cobalt ores from the Cobalt area, which were treated by Deloro Smelting and Refining Company Limited. About 55 p.c. of the nickel produced was refined at International Nickel Company's plant at Port Colborne, Ont.

With the full changeover to underground operations anticipated during 1953, International Nickel Company will have completed the $150,000,000 expansion program commenced five years ago. This changeover will mean the mining of approximately 13,000,000 tons of ore a year from underground for the production of approximately 250,000,000 lb. of refined nickel. The program includes the mining of low-grade ore at the Creighton mine and the erection of a 12,000-ton concentrator at that mine, the introduction of the flash-smelting of copper concentrates at the Company's plant at Copper Cliff, and extensive underground development in the Company's various mines, which now totals more than 325 miles.

Ore mined from underground and surface in 1952 amounted to 13,248,593 tons, the highest tonnage produced in the Company's history. Ore lifted from underground was 10,196,068 tons compared with 7,780,143 tons in 1951 and with 5,733,269 tons in 1950. Production of nickel in all forms amounted to 249,017,358 lb., an increase of over 5,000,000 lb. compared with 1951.

Falconbridge Nickel Mines produced over 28,000,000 lb. of nickel in 1952 and plans to greatly expand its output in the next few years. A fourth converter has been installed in the smelter and the preparation of the new Hardy mine for production is nearing completion. At Fecunis Lake in the Levack area on the north side of the Sudbury Basin, a large new orebody was discovered during the review period and initial results from extensive investigation indicate over 10,000,000 tons of copper-nickel ore with an average grade equal to the main Falconbridge body. Numerous additions were also made to the Company's refinery at Kristiansand in Norway.

With the prime purpose of developing its properties and of modernizing its treatment facilities, Falconbridge Nickel entered into contract (announced in February 1952) with the United States Defense Materials Procurement Agency to supply up to 75,000,000 lb. of nickel, 1,500,000 lb. of cobalt and up to 25,000,000 lb. of copper over a nine-year period. In a second contract (announced in April 1953) the Company agreed to furnish, by mid-1962 at market price, 100,000,000 lb. of nickel over and above the tonnage specified in the 1952 contract. The United States

Government will also buy from the Company an additional 50,000,000 lb. of nickel within this period, if available, and, at option, another 50,000,000 lb. at market price between 1962 and mid-1967 as well as up to 52,000,000 lb. of copper by the end of 1958 at prices ranging from 19·5 cents to 30 cents a lb., and large amounts of cobalt at $1.80 a lb. or at market price if higher. First deliveries of nickel, totalling 2,000,000 lb. under the second contract, were to be made in 1953.

The 1953 contract means a $42,000,000 expansion of mine and mill facilities and an increase in production of from 25,000,000 to 30,000,000 lb. of nickel per year for a regular annual output of from 55,000,000 to 60,000,000 lb. It involves development to production of the Company's Fecunis Lake property, an extension of its smelting facilities in the Sudbury area and a further expansion of the capacity of its Norway refinery from 30,000,000 to 40,000,000 lb. a year.

The United States Defense Procurement Materials Agency also signed contracts with East Rim Nickel Mines Limited and Milnet Mines Limited for over 4,000,000 lb. of nickel. In each case, Falconbridge Nickel Mines is the smelting and refining agent. East Rim Nickel Mines began shipping development ore to the Falconbridge mill for concentration during 1952, reaching a rate of 3,000 tons a month late in the year. East Rim's own 1,000-tons-per-day mill is expected to be completed in the autumn of 1953. Milnet Mines Limited began sinking a 400-foot shaft with plans to mine 300 tons a day. Nickel Offsets Limited has been doing underground development and has a 300-ton mill under construction.

Developments within the iron-ore industry at the various properties during the review period greatly enhanced Ontario's potentialities as a producer of iron ore. Steep Rock Iron Mines Limited continued to carry out a large-scale expansion program on its hematite deposits in northwestern Ontario. Major projects were the preparation of the Errington underground mine for operation and its Hogarth orebody for open-pit mining, both of which were scheduled to start in 1953. Production in 1952 totalled 1,274,666 long tons, a slight decrease from 1951, and was drawn entirely from the Errington open pit in which operations were expected to cease in mid-1953 after the removal of 800,000 tons of ore. Production in 1953 is estimated at from 1,250,000 to 1,500,000 tons and will be drawn from the Errington open pit, the Errington underground mine and the Hogarth open pit. The 1954, 1955 and 1956 tonnages for the Errington and Hogarth ore bodies are estimated at 2,000,000, 3,000,000 and 3,500,000 tons, respectively.

Caland Ore Company Limited, a subsidiary of Inland Steel Company, leased the "C" orebody of the Steep Rock deposits from Steep Rock Mines Limited and plans to spend $50,000,000 on the leased area to develop it toward production, possibly by 1960. Projected annual output is 3,000,000 tons.

Algoma Ore Properties Limited, Ontario's only other producer of iron ore at present, carried out extensive underground development at its Helen and Victoria mines in the Michipicoten area in preparation for mining at greater depth. Production consists of siderite which is sintered at Jamestown, three miles from the Helen mine. The Company is expanding its sintering facilities from 1,200,000 to 1,600,000 tons a year to handle the anticipated increase in ore production. The siderite contains about 35 p.c. iron. Algoma Ore Properties holds other properties in the Michipicoten area including the Alexander mine which is east of the Victoria mine, the Goulais River Iron Range, the Goudreau pyrite property, the Bartlett siderite property, the Johnson Location, and the Siderite Hill group.

In southeastern Ontario, Marmoraton Mining Company Limited proceeded with the removal of 20,000,000 tons of limestone capping on its magnetite deposit near Marmora about 32 miles east of Peterborough, with a view to production before the end of 1954. The construction of permanent repair shops, warehouses, change room and offices is nearing completion. Engineering plans are being prepared with a view to construction of the hoisting, crushing and magnetic concentration plants during 1953 and 1954. The concentrator is being designed for annual production of 500,000 net tons of concentrates, which will be agglomerated and shipped by rail to a new pier to be constructed on Lake Ontario, near Picton, Prince Edward County. Lake ore-carriers will transport the product to the Bethlehem Steel Company plant at Lackawanna, near Buffalo, New York. The Federal Government has completed hydrographic surveys at the port site and construction is expected to commence during 1953.

Several companies were engaged in exploratory and development activity on various properties but, up to the end of June 1953, none had announced definite production plans.

Despite increased operational costs, a fixed price for gold, and the exchange losses due to a strong Canadian dollar, Ontario's gold industry continued to be quite active. Output in 1952 decreased to 2,458,359 oz. t. valued at $84,247,963 compared with 2,462,979 oz. t. in 1951 valued at $90,760,776. There were 36 actual gold producers in the Province at the end of April 1953. During the review period, three new mines, Bonwhit, Hugh-Pam and Tisdale Ankerite, all in the Porcupine camp, came into production and one mine, Theresa of Theresa Gold Mines Limited in northwestern Ontario, resumed operations. Ten mines ceased operations.

Development work was carried out at several mines with encouraging results, particularly in the Porcupine area, Canada's greatest gold-producing camp, where most of the mines were engaged in underground exploration and development. In the Larder Lake camp, Kerr-Addison Gold Mines Limited obtained outstanding results in the development of high-grade ore at depth and recorded a new high in output. Production in the Kirkland Lake area dropped in 1952 mainly because of difficulties in operation at Lake Shore Mines Limited. In the Patricia and Thunder Bay areas several mines opened up better-grade ore and generally made up for losses incurred by other producers. Mines showing gains in output included Campbell Red Lake Mines Limited in the Patricia district and MacLeod-Cockshutt Gold Mines Limited in the Thunder Bay region.

Ontario's output of cobalt increased sharply to 1,303,400 lb. in 1952 from 951,607 lb. in 1951 while that of silver showed an increase of 1,750,000 oz. t. over the 1951 production to 6,274,359 oz. t. in 1952 despite a drop of 5 cents an oz. t. in the price of silver. Demand for cobalt continues to increase as new uses develop and the United States Government late in 1952 announced a further increase of 6,000,000 lb. in its projected cobalt needs for 1955 to 27,000,000 lb., more than two and a half times its 1950 requirements.

Output continued to come mainly from a small group of producers in the Cobalt camp, and partly as a by-product of base-metal operations in the Sudbury area. Shipments from the Cobalt camp were made in the form of straight cobalt concentrates and of cobalt-silver concentrates. A smelter is being built south of the town of Cobalt to turn out refined cobalt, silver and nickel.

Exploratory and development activity particularly for base metals remained at a high level. In the Sudbury area, Ontario Pyrites Company Limited entered into a broader program of development at its two zinc-copper-lead-silver-gold properties in the belief that operations on a larger scale than was originally intended may be warranted. Underground exploration greatly increased known ore reserves and metallurgical tests are being carried out on the ore to determine the most suitable method of treatment. Geneva Lake Mines installed a 150-ton mill at its zinc-lead property at Lake Geneva, 40 miles northwest of Sudbury, but the Company deferred commencement of production pending an improvement in metal prices.

In the Kenora district, Quebec Nickel Corporation Limited carried out surface exploration and diamond drilling on a copper-nickel deposit near Werner Lake and a nickel-copper prospect near Emo in the Rainy River district was diamond drilled by Ventures Limited and Falconbridge Nickel Mines. In the Temiskaming district, New Ryan Lake Mines Limited commenced the production of copper concentrates from a mill at Matachewan with a 100-ton-a-day capacity. Toward the end of the review period, columbium-tantalum-uranium deposits were discovered on the Manitou Islands in Lake Nipissing. Inspiration Mining and Development Company Limited is exploring the deposits and having tests made of the ore in order to work out possible methods of treatment.

Ontario's output of industrial minerals was valued at $76,839,000 in 1952 compared with $73,818,000 in 1951 and was comprised mainly of structural materials, salt, asbestos, nepheline syenite and gypsum.

A widespread search for new asbestos deposits was carried out in northern Ontario particularly in the vicinity of the Munro asbestos mine in Matheson township and in the Timmins area. Fibre from a deposit in the latter area was being tested at the end of the review period. Meanwhile, production at the Munro mine continued at about 2,000 tons a month. Fibre from the operations is short and is used by Canadian Johns-Manville Company Limited to make various asbestos products.

Ontario accounted for 77 p.c. of the Canadian volume of output of salt in 1952. Output, which that year amounted to 766,000 tons with a value of $4,518,000, comes from wells drilled into salt beds that lie from 800 to 1,500 feet below the surface at Goderich, Sarnia, Warwick and Sandwich in southwestern Ontario.

Cement production in 1952 declined in volume to 5,433,263 bbl. but advanced in value to $13,517,086 compared with the 1951 output of 5,438,101 bbl. valued at $12,494,677. Cement-producing facilities were expanded by Canada Cement Company Limited in its plant at Belleville and by St. Mary's Cement Company Limited in its St. Mary's plant.

American Nepheline Limited continued to be the sole producer of nepheline syenite in the Western Hemisphere. Output, which comes from extensive deposits on Blue Mountain in Peterborough County, increased by 4,000 tons over the 1951 output to 85,500 tons in 1952 valued at $1,116,500.

A significant development during the review period was the discovery of deposits of kyanite near Mattawa and in the Wanapitei area east of Sudbury. This mineral is of value as a ceramic refractory. Ore from deposits in both areas is being tested to ascertain whether commercial development is warranted.

Production of natural gas in 1952 amounted to 7,916,000,000 cu. feet valued at $3,166,400 and of crude petroleum to 192,000 bbl. with a value of $660,480. In all, 168 successful gas wells were completed in southwestern Ontario in 1952 of which

160 resulted from development drilling and eight from exploratory tests. The exploratory tests resulted in four gas discoveries, three of which are in Lambton County and the other in Elgin County. An estimated 32,000,000,000 cu. feet of gas was added to the reserves.

Three hundred and fifty-four wells were drilled for oil in 1952, of which 86 were exploratory tests and 268 were development wells. The exploratory tests resulted in three shallow oil wells, eight gas wells and 75 dry holes. The development drilling resulted in 25 oil wells, 160 gas wells and 83 dry holes. Exploratory drilling in 1952 added about 70,000 bbl. of oil to existing reserves.

Quebec.—Mining in Quebec, Canada's second largest mineral-producing province, has continued to forge ahead. During the review period the great new iron-ore industry on the Quebec-Labrador boundary moved much nearer to completion and, coupled with developments in copper and zinc and with exploratory achievements in Chibougamau and Ungava, give promise of a steadily increasing metal output in coming years. In 1952 the value of mineral production increased to $267,259,931 compared with $255,530,071 in 1951. Outstanding gains in value of output were made by asbestos, cement, lead, sulphur and titanium dioxide. The volume of output of zinc, gold and silver increased considerably in each case but, because of price declines, output values were lower than in 1951. Asbestos accounted for more than 32 p.c. of the total value of Quebec's mineral output in 1952.

Much progress is being made by Iron Ore Company of Canada on its $200,000,000 Quebec-Labrador iron-ore project. With a force of up to 6,300 men employed on various phases of the project, construction of the 358-mile railway and terminal, power, dock and townsite facilities was proceeding at a rapid rate at the end of the period. Every effort is being made to complete the railway in 1953. Work on the giant ore docks at Seven Islands was nearing completion and the construction there of staff houses, shops, warehouses, offices, etc., will continue throughout 1953. Work was started on the power site at Ste. Marguerite River, which will supply power for the docks and the townsite at Seven Islands and which will be completed in 1954.

Although the activities of the exploration and mining departments were dwarfed by the construction effort on other phases of the iron-ore project, considerable work was accomplished during the review period in readying the mines for production. Ferriman No. 3 deposit in Quebec and Ruth Lake No. 3 deposit in Labrador will be the first to be brought into production. Each contains an estimated 20,000,000 tons of ore available for open-pit operation. Although work on the Knob Lake townsite had been started, the major construction program on shops, warehouses, offices and residences will not get under way until 1954.

Total expenditure on the iron-ore project by the end of 1952 was $113,000,000 of which $62,000,000 was spent during 1952 for equipment, supplies and labour. Shipments of approximately 1,000,000 tons are expected to be made in 1954 and these are to be increased steadily until the minimum specified yearly rate of 10,000,000 tons is reached.

Exploratory activity north of Knob Lake in Ungava is revealing extensive iron-ore deposits. Fenimore Iron Mines Limited discovered a large deposit of siderite named Gossan Hill about 80 miles from tidewater at Fort Chimo and approximately 225 miles north of Knob Lake. The Company plans to carry out extensive drilling on the deposits and to test the ore to ascertain whether a concentrate of suitable grade can be produced. The ore can be mined by open-pit methods.

The Cyrus Eaton interests late in 1952 announced the discovery of large medium-grade deposits of hematite immediately north of the Fenimore deposits and about 300 miles north of Iron Ore Company's project. Pilot-plant tests show the ore to be amenable to beneficiation and shipments can be made by sea from Ungava Bay ports.

Fort Chimo Mines Limited, a subsidiary of Frobisher Limited, is carrying out geological mapping and trenching on its concession about 180 miles northwest of Knob Lake. A deposit of manganiferous hematite has been discovered about four miles south of the north boundary of the concession and, although the silica values in the ore are above the commercial limit for lean iron ore, further trenching and possibly drilling are considered justified.

Meanwhile, base-metal production decreased almost $1,000,000 in value from 1951 to 1952 because of the decline in the prices of zinc, gold and silver. Noranda Mines, Quebec's leading producer, reported a general gain in volume of output. From its Horne copper-gold-silver-pyrite mine at Noranda in western Quebec, it produced 50,760,000 lb. of copper and 200,280 oz. t. of gold during 1952 compared with 50,630,000 lb. of copper and 194,470 oz. t. of gold in 1951. In all, that is including its treatment of custom ores, it produced 141,115,000 lb. of new copper and 352,690 oz. t. of gold in 1952, an increase of 3,230,000 lb. of copper over that of 1951. The gold output was about the same.

Late in 1952 the Company made the necessary financial arrangements covering the bringing in of its Gaspe deposits by a subsidiary, Gaspe Copper Mines Limited, early in 1955. During the review period, development was continued on these deposits which contain an estimated 67,000,000 tons of ore. A modern townsite has been laid out and plans drawn up for a plant designed to treat 6,500 tons of ore daily and a smelter production of 125 tons of copper anodes. Arrangements have been completed for the supply of power from the Quebec Hydro-Electric Commission's power project on the Bersimis River on the north shore of the St. Lawrence River, which will involve the laying of a 31-mile submarine cable across the river and 135 miles of surface transmission lines to the Company's property by late 1954.

Noranda's proposed expenditure of $30,000,000 also includes the development of the Macdonald Mines Limited zinc-pyrite property about seven miles from Noranda, and the construction of a $4,000,000 plant at Welland, Ont., for the production of elemental sulphur, sulphur dioxide and high-grade iron sinter. The new Welland plant, which is expected to be in operation by mid-1954, will treat about 350 tons of pyrite concentrates a day. At the Macdonald property, the Company will design and supervise the construction of a mill with a minimum capacity of 1,500 tons a day and other necessary mine equipment.

Among Quebec's other base-metal producers, increases in volume of output were recorded by East Sullivan Mines Limited, where depth development revealed good values in both zinc and copper, and by Waite Amulet Mines Limited, which brought its East Waite mine into production during the review period. On the other hand, decreases in volume of output were reported by several companies including Quemont Mining Corporation Limited and Normetal Mining Corporation Limited. Ascot Metals Corporation Limited, which has been operating two mines, the Moulton Hill and the Suffield, has announced its intentions of closing down the Moulton Hill mine and of concentrating on production from the Suffield which is more economical to operate. In Montmagny township southeast of Quebec city,

Eastern Metals Corporation Limited is carrying out underground development on a nickel-zinc-copper deposit with interesting results. Tentative plans have been made to deepen the shaft to 1,000 feet.

Barvue Mines Limited, near Barraute in western Quebec, commenced tuning in its new 6,000-ton concentrator in November 1952 at about 50 p.c. capacity; gradually increasing this until, by the end of the review period, its average daily milling rate was 4,270 tons. The Barvue deposit, estimated to contain 18,000,000 tons averaging 3·3 p.c. zinc, is being mined by open-pit methods. Operations at the mine are not affected by the decline in the price for zinc as the Company still has about two years to go on a contract for the supply of 175,000 tons of concentrates at 17½ cents (U.S.) a pound.

Despite higher operating costs and lower profits, Quebec's gold output increased by 42,000 oz. t. to 1,109,677 oz. t. in 1952. However, the value of output at $38,029,000 in 1952 was more than 3 p.c. lower than in 1951. The increase in volume of output was due chiefly to the attainment by Lamaque Gold Mines Limited in the Val d'Or area of its objective of 2,000 tons a day early in 1952, and to the entry into production of the new 500-ton mill of Bevcourt Gold Mines Limited in Louvicourt township in mid-year. East Malartic Mines Limited, Fournière township, found good ore on the deeper levels and Barnat Mines Limited, in the same area, increased production from its north zone. Quebec's base-metal mines accounted for 25 p.c. of the total Canadian gold output in 1952. Two of the smaller mines, Quesabe Mines Limited, Duprat township, and Heva Gold Mines Limited, Rouyn district, were closed because of failure to find new ore.

Quebec Iron and Titanium Corporation made considerable headway in the mining and experimental treatment of ilmenite ore from its deposits in the Allard Lake area. Primary crushing commenced at the mine, following completion of an electric power line from Havre St. Pierre to the mine, instead of at Havre St. Pierre itself. At Sorel, the Corporation installed a conveyor belt and dock facilities for the loading and shipment of titanium dioxide slag by water, a new pig-casting machine for the production of iron in a size suitable for the primary iron and steel industry and it placed furnaces No. 2, No. 3 and No. 5 into operation. When all five furnaces are in operation, the plant capacity will be 1,500 tons of ore daily for an annual output of 250,000 tons of titanium dioxide slag and 175,000 tons of high-grade iron. The Corporation did no further work during the review period on the delineation of its orebodies in the Allard Lake area and ore reserves remain at from 125,000,000 to 150,000,000 tons of ilmenite.

The Chibougamau area, 210 miles northeast of Noranda, continued to receive major attention, having been made accessible by means of a 165-mile all-weather road from the Lake St. John district to the village of Chibougamau. Exploratory and development activity was at record levels. Four properties, Opemiska Copper Mines (Quebec) Limited, Campbell Chibougamau Mines Limited, Merrill Island Mining Corporation Limited, and Chibougamau Explorers Limited, were on the threshold of production and several other companies were exploring and developing properties throughout the district, many with promising results.

Chibougamau Explorers completed a 600-foot shaft to open three levels. Campbell Chibougamau Mines Limited was sinking a four-compartment shaft to a depth of 1,000 feet on the Merrill group in Obalski and McKenzie townships,

where ore reserves are estimated at 1,050,000 tons, and Opemiska Copper Mines began construction of a 400-ton mill with production planned in 1953. Connecting roads have been built into the properties from the highway.

Production of non-metallics increased in value from $135,284,079 in 1951 to $147,812,017 in 1952. Of this, the output of asbestos, which comes from seven producing companies, accounted for $85,025,942 in 1952, an increase of $7,398,079 over that of 1951 owing partly to an increase in prices and partly to the mining and marketing of better-grade material. Actual volume of output in 1952, however, amounted to 943,123 tons, a decrease of 3,487 tons below that of 1951.

During the past few years, much expansion has taken place in the asbestos industry. The leading producer, Canadian Johns-Manville Company Limited, is expanding and modernizing its facilities at Asbestos where it operates the Jeffrey mine, the world's largest asbestos mine. The Company is rebuilding and enlarging its mill and making a gradual changeover to underground mining. Expansion programs are also being carried out by: Asbestos Corporation Limited which has four producing mines, King and Beaver at Thetford Mines, British Canadian at Black Lake, and Vimy in Coleraine township; Johnson's Limited which operates an underground mine at Thetford Mines and an open pit at Black Lake; and Bell Asbestos Mines Limited which has converted its operation at Thetford to underground mining. Other producing companies comprise Flintkote Mines Limited a few miles east of Thetford Mines, Quebec Asbestos Corporation Limited at East Broughton, and Nicolet Asbestos Mines Limited at St. Remi de Tingwick.

Dominion Asbestos Mines Limited plans production in 1953 from a deposit near St. Adrien, Wolfe County. Exploratory and development work is being carried out at a number of other properties.

Cement and other structural materials, magnesitic dolomite, sulphur and titanium dioxide make up most of the remainder of non-metallic production. Cement production increased almost 260,000 bbl. in volume of output in 1952 over 1951 to a total of 7,312,537 bbl. valued at $19,027,592. Production comes from the wet-process plants of Canada Cement Company Limited at Montreal and Hull and from the new plant of Le Ciment Québec at St. Basile where new kilns are expected to go into production later in 1953 bringing plant capacity to 1,500,000 bbl. a year.

Increasingly large quantities of sand and gravel are being produced by Quebec's 52 operators for use in concrete works, buildings and road construction. Production in 1952 increased to 33,687,000 tons valued at $11,787,000 compared with 31,298,000 tons valued at $10,617,000 in 1951.

Quebec is the only source of magnesia minerals worked in Canada for magnesia products. Output rose in value from $2,438,000 in 1951 to $2,914,000 in 1952. Dolomitic magnesite is mined by underground methods at Kilmar in Argenteuil County to supply raw materials for the basic refractories plant of Canadian Refractories Limited. At Wakefield, Aluminum Company of Canada Limited recovers magnesia from a deposit of brucitic limestone.

Sulphur showed a marked increase in volume and value of output in 1952 increasing from 161,489 tons valued at $895,253 in 1951 to 219,738 tons valued at $1,519,149 in 1952. Output consisted of sulphuric acid which is produced from domestic by-product pyrite by Nichols Chemical Company Limited at its Valleyfield plant where current plant expansion will approximately double the previous plant output. This production was augmented during the review period by Aluminum

Company of Canada Limited when it began the manufacture of sulphuric acid at a new plant at Arvida from gases resulting from the roasting of zinc concentrates produced by Barvue Mines Limited.

New Brunswick.—Chief development in mining during the review period was the discovery, late in 1952, of what appears to be an important zinc-lead-silver-copper property near Bathurst in the northeastern part of the Province. Because of the fact that New Brunswick has never had a metal production of any consequence, the discovery has opened up whole new possibilities in mining and has raised much interest in the Province's base-metal potentialities.

The discovery was made as a result of drilling and geophysical surveys of an old iron-ore concession about 16 miles south of the town of Bathurst. Extensive reserves of good grade ore have been outlined and the presence of tin in the orebody has been confirmed. The Brunswick Mining and Smelting Corporation is planning to carry out extensive geophysical work on the property. It has leased from the Provincial Government an old railway into the property for a period of 10 years and has made tentative plans for an initial mill production of 5,000 tons.

Prior to this discovery, several companies were busily engaged in exploring and developing properties in northeastern New Brunswick. These include M. J. O'Brien Limited and Noranda Mines Limited with lead-zinc-silver-copper properties approximately 16 miles north of the Brunswick Mining and Smelting Corporation property; New Calumet Mines Limited on its Orvan brook deposit, 35 miles to the northwest; and Keymet Mines Limited with a lead-zinc prospect 32 miles to the north. News of the discovery gave rise to extensive staking in the vicinity and beyond and, by the end of May 1953, an estimated 25,000 to 30,000 claims had been staked in northern, western and southern New Brunswick. Promising occurrences are known in several of these areas and there is every likelihood that others will be found as a result of such widespread exploratory activity.

Mining has always been one of New Brunswick's lesser industries, the value of mineral production having ranged from a low of $420,227 in 1899, the first year of recorded production in the Province, to a high of $12,756,975 in 1950. In 1952 New Brunswick ranked tenth among the Canadian provinces and territories with an output valued at $12,035,360. This represented a 25-p.c. increase over the 1951 value owing mainly to the introduction of a cement industry and to an increase in the output of coal, the chief mineral product.

Coal in 1952 accounted for over 46 p.c. of the total value of output. Production, which has been increasing steadily, reached a new high of 742,823 tons valued at $5,836,736 compared with 653,439 tons valued at $4,822,869 in 1951, the previous high. Production comes from in and around the Minto area, about 40 miles from Fredericton, and is a high volatile bituminous coking coal. About 90 p.c. of the output is strip-mined.

Other mineral production consists of sand and gravel, cement, clay products, gypsum, lime and minor quantities of natural gas and crude petroleum. Production of these minerals in 1952 was valued at $6,419,360.

Cement appeared on the list of New Brunswick's mineral products during the review period for the first time in the Province's history when Canada Cement Company Limited put its new plant at Havelock, the only dry process plant in

Canada, into operation early in 1952. Production that year totalled over 592,000 bbl. valued at more than $1,500,000. Plant capacity is 800,000 bbl. a year. Limestone and shale for the manufacture of the cement are drawn from deposits in the vicinity of the plant.

Gypsum production, which in 1952 totalled almost 108,000 tons, showed little change and came from deposits in the Hillsborough area. Output was manufactured within the Province into all grades of plaster and wallboard including high-quality plasters for specialized uses.

Small quantities of natural gas and crude petroleum are produced in the Stony Creek field about nine miles south of Moncton. Output of natural gas in 1952 amounted to 200,200,000 cu. feet valued at $148,710 compared with 261,579,000 cu. feet in 1951 valued at $194,312. Crude petroleum production in 1952 totalled 14,500 bbl. valued at $20,300.

Nova Scotia.—Coal-mining forms the core of the mineral industry in Nova Scotia and in 1952 accounted for almost 80 p.c. of the total value of the Province's mineral output. Industrial minerals—particularly gypsum of which Nova Scotia is the leading Canadian producer, barites most of the Canadian output of which is produced within the Province, and salt—account for the bulk of the remaining output. Total production in 1952 increased $3,814,217 over 1951 to a total value of $63,541,473 owing mainly to the addition of the output of zinc, lead, copper, silver and gold from the reopened Stirling mine of Mindamar Metals Corporation Limited in Richmond County and to an increase in the output value of coal.

High and medium volatile bituminous coking coals are produced in the Sydney, Cumberland and Pictou areas, and some non-coking bituminous coal is mined in the Inverness area. Coal output increased in value from $49,113,932 in 1951 to $51,227,678 in 1952 but decreased in volume from 6,307,629 tons to 5,905,265 tons. It is used mainly to supply the requirements of the railways of the area, the steel and paper industries, for local domestic use and to produce electric power.

The largest operator, Dominion Steel and Coal Corporation Limited, operates a group of mines in the Sydney area for the production of coke for its steel plants and for commercial purposes. In order to overcome steadily increasing costs of haulage into submarine workings, the Corporation is building a 6,225-foot inclined tunnel into its workings to transport men, material and coal to and from the surface. Mechanization of the coal mines continues and most of the main coal mines are now fully mechanized. Nine Dosco 'miners', a machine recently developed by the Dominion Steel and Coal Corporation which cuts and loads coal at the rate of 500 tons in eight hours, are now in use in the Province.

The Federal and Provincial Governments continue to carry out extensive research on coal in Nova Scotia. This includes co-operative stratigraphic, structural and petrographic studies of the coal deposits of the Sydney coalfield and is intended essentially to assist development and prolong the productive life of the field.

In the industrial minerals field, production in the main showed little change in 1952 from 1951. Gypsum declined in volume from 3,190,030 tons in 1951 to 2,968,537 tons in 1952 but increased in value from $4,107,822 in 1951 to $4,192,858 in 1952. Nova Scotia that year accounted for over 82 p.c. of the total Canadian output. Canadian Gypsum Company Limited, the largest producer, operates quarries at Wentworth near Windsor in Hants County and ships the output to its plants in the United States. National Gypsum Company (Canada) Limited operates

quarries for export purposes at Walton in Hants County and at Dingwall in Victoria County. The output is shipped to Company plants in the United States. A small percentage of the output from Dingwall is shipped to gypsum plants in Quebec and to cement plants in Eastern Canada. Windsor Plaster Company Limited produces raw gypsum from a small quarry near Brooklyn for its plaster mill at Windsor, and Victoria Gypsum Company Limited operates a quarry at Little Narrows and ships the gypsum to the United States and to the West Indies.

Nova Scotia possesses Canada's largest known reserves of barites and one of the largest barites deposits in the world in the Pembroke-Walton area of Hants County. The deposit was discovered in 1940 and went into production in 1941. In 1952, the Province accounted for over 99 p.c. of the total Canadian production of barites and Canadian Industrial Minerals Limited with mine and mill at Walton produces most of the output. Production in 1952 increased to 118,630 tons valued at $1,355,564 from 96,865 tons valued at $1,115,693 in 1951 and comprised crude barites for the chemical trade and ground barites for industrial filler, paint and drilling mud. Almost the entire output is exported, more than half as crude. During the review period the Company set under way a stripping program which has made available 1,000,000 tons of ore for open-pit operations.

Salt is produced in Nova Scotia by the mining of rock salt and by the brining process. The only salt mine in Canada is operated at Malagash in Cumberland County by Canadian Salt Company Limited and the mined rock salt is crushed, screened and sold as a de-icing salt for roads and railways. It is also used as fishery, refrigerator, hay and dairy salts, as stock licks and for dust laying. Fine salt from vacuum pan evaporators is produced near Amherst by Dominion Salt Company Limited from brine obtained from massive salt beds, 860 feet below the surface at this point. Total production increased from 127,252 tons valued at $1,631,904 in 1951 to 149,924 tons valued at $1,681,683 in 1952.

Other industrial minerals produced are silica brick and structural materials including clay products. Quartzite from Chegoggin Point, Yarmouth County, is used by the Dominion Steel and Coal Corporation Limited to produce silica bricks.

Over half of the $3,800,000 increase in the value of the Province's mineral output from 1951 to 1952 came from the zinc, lead, copper, silver and gold produced at the Stirling mine of Mindamar Metals Corporation following its reopening in June 1952, after being idle for 20 years. The mill operated at a 500-ton per day rate and the mine workings were deepened from 500 to 1000 feet. The indicated ore reserves are estimated at 780,000 tons.

Elsewhere, exploratory work was being done on a lead property at Gay River in Colchester County and on a copper occurrence at Cap d'Or in Cumberland County.

Newfoundland.*—Interest in Newfoundland's mineral potentialities continued to increase and exploratory and development activity reached new levels during the review period. Mineral production in 1952 was valued at $32,898,734, approximately the same as in 1951. Output comprises mainly zinc, iron ore, lead, fluorspar and copper, in that order. The Province also produces some silver and gold, sand and gravel, stone, cement and gypsum. The entire output of iron ore comes from the Bell Island mines of Dominion Wabana Ore Limited, and the zinc, lead, copper, gold and silver from the mine of Buchans Mining Company Limited at Red Indian Lake.

* For developments in the Quebec-Labrador iron-ore field, *see* p. 496.

The mechanization and modernization program under way at Dominion Wabana Ore Limited, wholly-owned subsidiary of Dominion Steel and Coal Corporation Limited, was originally scheduled for completion in 1952 but difficulties hampered operations and resulted in a decrease in output from 1,724,991 tons in 1951 to 1,634,500 tons in 1952. However, the program is nearing completion and shipments in 1953 are expected to show substantial increases. The Company operates four mines, all production coming from submarine workings under the Atlantic Ocean with some haulages extending four miles. The main part of the mechanization program consists of the installation of a belt-conveyor hoisting system. The Company's production goal remained at 2,500,000 tons a year.

Production from the Buchans mine was valued at $28,183,921 in 1952 compared with $28,953,585 in 1951 and comprised concentrates containing 64,112,000 lb. of zinc valued at $11,197,802; 36,696,600 lb. of lead valued at $5,933,840; 5,696,870 lb. of copper valued at $1,625,887; 8,030 oz. t. of gold valued at $275,188; and 584,505 oz. t. of silver at $488,354. The Company is continuing the development of its Rothermere orebodies from which a substantial percentage of the production came in 1952. As a result of this development work, output is expected to increase from approximately 27,000 tons per month in 1952 to at least 30,000 tons per month in 1953.

Various companies are carrying out exploratory and development work on properties in different parts of the Island. Newfoundland and Labrador Corporation, which was originally formed as a Crown company early in 1951 but which now comprises both government and private interests, has been actively engaged in carrying out a large-scale exploration and development program on its 24,000 sq. miles of mineral holdings in five concessions in Newfoundland Island and Labrador. A second company, British Newfoundland Corporation, comprising British and Canadian firms, plans to do similar work on mineral holdings consisting of 50,000 sq. miles in Labrador and 10,000 sq. miles in Newfoundland Island. Falconbridge Nickel Mines Limited is doing extensive work on its concession in the Notre Dame Bay area, giving major attention to the Gull Lake, Tilt Cove, Rambler, Little Bay and South West Arm copper deposits, and New Jersey Zinc Explorations Limited is investigating an area south of Corner Brook. In the same area, Independent Mining Corporation Limited is investigating an old copper-zinc property. Buchans Mining Company Limited is actively exploring and developing occurrences on its concession area. In Labrador, Frobisher Limited continues to investigate copper deposits in the Seal Lake area.

Newfoundland has extensive reserves of fluorspar and in 1952 accounted for over 98 p.c. of the total Canadian output with a production of 82,503 tons valued at $2,473,167. All the commercial fluorspar veins occur in the vicinity of St. Lawrence, a town on the southeast coast of Newfoundland, most of the veins being within six miles of St. Lawrence Harbour. St. Lawrence Corporation of Newfoundland Limited supplies about 75 p.c. of the production. By means of a combination gravity and flotation mill, it turns out one of the highest grade concentrates in the world and sells its output in the metallurgical and chemical markets in

Canada and the United States. Output from Newfoundland Fluorspar Limited, a subsidiary of Aluminum Company of Canada Limited, is used mainly in the production of aluminum.

Elsewhere in the non-metallic field, North Star Cement Limited brought its quarries at Humbermouth into production and began operations at a rated capacity of 600,000 bbl. annually. Production in 1952 amounted to 122,000 bbl. valued at $500,000.

Development of the extensive deposits of gypsum on the west coast of the Island in the Bay St. George area was begun during the review period and production in 1952 amounted to 8,100 tons which was processed in a new factory erected in 1951 by the Provincial Government at Humbermouth near Corner Brook. One section of the plant is for the manufacture of gypsum plaster, and the other is for the manufacture of gypsum wallboard and lath. Capacity of the plaster mill is about 200 tons per day and that of the wallboard mill about 250,000 sq. feet daily.

Newfoundland has promise of the production of asbestos in the development work being done on a deposit of the mineral near Bluff Head on the west coast by Newfoundland Asbestos Limited. A 100-ton mill is being built on the property and production is expected to begin during 1953.

Yukon Territory.—Mineral production in Yukon Territory comprises silver, lead, zinc and cadmium from the Mayo district, gold from placer operations mainly in the Dawson mining region and coal from the Carmacks area. Production in 1952 was valued at $11,276,221 or almost $1,500,000 more than in 1951 owing to increasingly successful operations in the Mayo district. This, plus the discovery of what appears to be an important deposit of nickel in the Kluane Lake area in southwestern Yukon, has greatly increased interest in the Territory's mineral potential.

The continued provision of transportation and power facilities has meant much to the opening up of the Territory to exploration and development. During the review period, a 3,000-h.p. hydro-electric power development on the Mayo River was placed in operation to provide power to the Keno Hill camp and to the Mayo landing area. The project was financed by the Federal Government at a cost of over $4,000,000. A 110-mile all-weather highway is being built to connect Dawson with the Whitehorse-Mayo road at the Stewart River crossing. The estimated cost of the highway is $500,000 of which the Federal Government is paying $300,000 and the Territorial Government, $200,000. The latter will carry out the actual construction of the highway. A 10-mile truck road from Keno to the top of Keno Hill was built during the review period at a cost of $200,000 which was borne jointly by the Federal Government and United Keno Hill Mines Limited.

The Mayo district through United Keno Hill Mines Limited, Canada's second largest producer of silver, accounted for over 75 p.c. of the total value of mineral production in the Territory in 1952. Until April 1953, when a mill jointly owned by three companies in the area was brought into production, United Keno Hill Mines was the only producer in the Mayo area. As the result of an expansion program now almost completed, and the provision of hydro-electric power, its output of lead and zinc concentrates and silver precipitates which it ships to Trail, B.C., has shown marked gains. During 1952, the lead content of its concentrates increased to 18,246,339 lb. from 12,533,071 lb. in 1951; the zinc to 10,865,797 lb. from 5,678,999 lb.; the silver to 3,967,506 oz. t. from 3,442,788 oz. t., and the cadmium content to 126,489 lb. from 66,452 lb. During the first quarter of 1953, the output of silver

increased 66 p.c. over the same quarter of 1952, that of lead 107 p.c., and of zinc over 135 p.c. Substantial reserves of high-grade ore have been established in new deeper levels at the Hector mine and considerable development has been carried out at other mines on the Company's extensive property, particularly at the Onek mine.

Production from the district will be further increased with the placing in operation in April 1953 of a 100-ton mill jointly owned by Mackeno Mines Limited, Yukeno Mines Limited and Bibis Yukon Mines Limited. The mill, which is to be operated on a custom basis, was temporarily closed in May 1953 for adjustment. Initial mill feed will be drawn from the Mackeno mine and from Bellekeno Mines Limited. Several other companies have been doing exploration and development work on properties in the district.

All the gold produced in Yukon Territory is from placer operations, the largest being that of the Yukon Consolidated Gold Corporation Limited. The Corporation operates seven dredges in the vicinity of Dawson. Smaller operators are Yukon Gold Placers Limited, Clear Creek Placers Limited, Kluane Dredging Company, Yukon Explorations Limited and Burwash Mining Company Limited. Total placer production in 1952 amounted to 78,869 oz. t. valued at $2,702,841.

The possibility of adding nickel and copper to Yukon's mineral output looms large with the discovery by Hudson Bay Exploration and Development Company Limited, a subsidiary of Hudson Bay Mining and Smelting Company Limited, of a nickel-copper deposit in the Kluane Lake district. Initial drilling has indicated 67,000 tons of good-grade nickel-copper ore with cobalt, platinum and palladium values. The discovery has led to widespread staking in and beyond the area and Prospectors Airways Company Limited, one of several companies actively engaged in exploration, has reported the discovery of copper-nickel at Quill Creek adjoining the Hudson Bay holdings and at White River about 40 miles to the southeast.

Yukon's output of coal, which comes from the Carmacks area, is small and ranges from bituminous to anthracite. Output, which is for local use, totalled 8,000 tons in 1952 compared with 3,696 tons in 1951.

Near the close of the review period tentative plans for a Yukon-British Columbia power development project of great promise were announced by Ventures Limited. The project will involve the expenditure of hundreds of millions of dollars for the development of a minimum of 4,300,000 h.p. to serve as the basis of a great metallurgical industry for the treatment of ores from around the world. The project will take years to complete. The Company is now carrying out surveys to determine the power potential available.

Northwest Territories.—Mineral production in the Northwest Territories has increased steadily in value since gold was first produced in the Yellowknife area in 1938, and in 1952 reached a record of $9,033,714 compared with $8,288,747 in 1951 and $471,000 in 1945. This is exclusive of pitchblende products which are not reported. Gold accounted for almost 94 p.c. of the output in 1952 and crude petroleum, silver, natural gas and copper, in that order, for most of the remainder. Small amounts of tungsten concentrates were also produced during the review period by Tungsten Corporation of Canada Limited from the re-treatment of mill tailings at its mines at Outpost Island.

A record gold production of 246,245 oz. t. was produced in 1952, an increase of 34,000 oz. t. over 1951, the previous peak year. Gold mining activity is centred in the rich Yellowknife area where Giant Yellowknife Gold Mines Limited, Canada's

fifth largest gold producer, accounts for the greater part of the output. Output in 1952 also came from the Con mine of the Consolidated Mining and Smelting Company of Canada Limited, Consolidated Discovery Yellowknife Mines Limited, and from Negus Mines Limited.

Giant Yellowknife Gold Mines continued to carry out an extensive expansion program which, during the review period, included the extension of its milling rate from 420 to over 700 tons and expanded mill facilities to permit the removal of arsenic from fumes, it has also provided additional living accommodation at the mine and at Yellowknife townsite. Underground development at the Con mine revealed several orebodies of good grade. Consolidated Discovery Yellowknife Mines Limited maintained a daily milling rate of 92 tons of ore averaging 1·12 oz. t. per ton, this being the highest grade mill feed of any gold mine in Canada. Development of the Company's deepest level (950-foot) shows ore of higher grade than mine average and greater tonnage per vertical foot. It is expected that hydro-electric power will reach the mine by May 1953. The Negus mine was closed in September 1952. Other gold properties in the Yellowknife district and some in the McKay-Courageous Lake area have been receiving exploratory attention.

At Port Radium on Great Bear Lake, Crown-owned Eldorado Mining and Refining Limited completed the construction of a leaching plant for the treatment of mill tailings and rebuilt the crushing plant and gravity mill which were destroyed by fire in November 1951. It is estimated that the new mill and leaching plant will increase production by 75 p.c. The Company expects to complete the sinking of the new internal shaft from the eleventh level to open up five new levels in the northeast section of the mine by June 1953.

At Hottah Lake, about 60 miles south of Great Bear Lake, Indore Gold Mines Limited installed a mill with a rated capacity of 50 tons daily and reported that production began late in 1952. Ridley Mines Holding Company carried out underground exploration on its Rex property near the East Arm of Great Slave Lake. Radiore Uranium Mines Limited did development work on a pitchblende showing in the same region.

Much work was done on base metal properties in the Northwest Territories during the period. Pine Point Mines Limited, a subsidiary of the Consolidated Mining and Smelting Company of Canada Limited, continued to outline its large lead-zinc deposit at Pine Point on the south shore of Great Slave Lake with encouraging results. The bringing of this property into production is dependent upon the establishment of sufficient reserves of ore to justify the construction of about 350 miles of railway. A 70-mile truck road was built to connect the property to the MacKenzie Highway at Alexandra Falls. On the B.B. property north of McLeod Bay, Great Slave Lake, Joe Indian Mountain Metal Mines Limited was reported to have outlined, by exploratory drilling, over 1,000,000 tons of ore averaging 10 p.c. zinc.

On the west coast of Hudson Bay, Rankin Inlet Nickel Mines Limited is doing extensive drilling and further exploration of its property near Rankin Inlet. At Ferguson Lake, Canadian Nickel Company Limited, a subsidiary of International Nickel Company of Canada Limited, is carrying out extensive exploration on nickel-copper showings on a 1,152 sq. mile concession.

Section 2.—Government Aid to the Mineral Industry*

Subsection 1.—Federal Government Aid

The Department of Mines and Technical Surveys.—The Federal Department of Mines and Technical Surveys, which came into being on Jan. 20, 1950, as a result of a departmental reorganization at Ottawa, continues the services, but in larger measure, rendered to the mineral industry by the former Department of Mines and Resources. The Department has five branches—Surveys and Mapping Branch, Geological Survey of Canada, Mines Branch, Dominion Observatories, and Geographical Branch. The Department's functions include the administration of the Emergency Gold Mining Assistance Act and of the Explosives Act.

Surveys and Mapping Branch.—The Branch provides the base maps required for use in the development of Canada's natural resources, produces and distributes all Canadian aids to navigation, is responsible for all legal surveys of federal lands, and provides a national system of levelling and precision surveys for use as geodetic control by federal, provincial and private agencies.

The Geodetic Survey provides the original surveys that form the framework or basic control for mapping throughout Canada and for engineering and surveying projects related to natural resources development. Survey stations are established at fairly regular intervals across Canada and are marked by permanent monuments whose latitudes, longitudes and elevations above mean sea-level are determined with a high degree of accuracy. The determination of geographical position by astronomical observations for mapping purposes in northern areas is being superseded by Shoran trilateration in which the adaptation of radar is meeting with success.

The Topographical Survey provides base topographical maps that show all significant natural and artificial features fundamental to the study and economic development of mineral and other natural resources. The Topographical Mapping Section is responsible for the field surveys that provide ground control for mapping from aerial photographs, and the Air Survey Section plots and produces maps from these aerial photographs. The National Air Photographic Library indexes, preserves and distributes prints for all aerial photography done by or for the Federal Government. The Topographical Survey administers the Canadian Board on Geographical Names.

The Legal Surveys and Aeronautical Charts Division makes and records legal surveys of federal Crown lands in the Yukon and Northwest Territories, the National Parks and Indian lands and reserves. This Division prepares and distributes aeronautical charts (the preparation of the base maps for which involves planimetry derived from tri-camera aerial photography and altimetry derived from radar measurements), flight manuals and electoral maps.

The Canadian Hydrographic Service is responsible for the charting of the coastal and inland navigable waters of Canada, the analyses of tides and tidal current phenomena and the investigation of water-surface elevations of the St. Lawrence-Great Lakes waterway. The resultant data are published in the form of official navigation charts, volumes of Sailing Directions, Tide Tables and Water Level Bulletins.

* Revised under the direction of Marc Boyer, Deputy Minister, in the Editorial and Information Division, Department of Mines and Technical Surveys, Ottawa.

The Map Compilation and Reproduction Division prepares, draughts and reproduces maps, charts and plans for lithographic printing and multi-colour. The work includes the preparation and photo-reproduction of air-chart bases, the reproduction and printing of air information for aeronautical charts, the preparation and printing of topographical maps, and the reproduction and printing of hydrographic charts.

The Branch had 16 geodetic, 46 topographic and 17 legal survey parties in the field in 1953. Nine ships and nine motor launches were engaged in charting operations.

Geological Survey of Canada.—The primary function of the Geological Survey is to obtain information on the geology of Canada that will be of assistance in the search for and development of mineral deposits. The results of its activities also provide a basis for the appraisal and conservation of Canada's mineral resources generally, including water supplies, for soil surveys and for the solution of geological problems that frequently arise in construction projects. Reports issued by the Geological Survey include: memoirs with fairly complete descriptive accounts of the geology of particular areas and accompanied, as a rule, by geological maps; bulletins dealing with problems rather than areas; papers issued as soon as possible after the close of the field season, treating separately of each area and summarizing the information acquired; and the Economic Geology Series reports, dealing in a comprehensive way with mineral deposits of a particular type. Coloured geological maps are issued on various scales from one inch equalling a few hundred feet to one inch equalling eight or more miles, the common standard scales being one inch to one mile and one inch to four miles. Preliminary maps showing the geology in pattern are issued shortly after the field season ends for those areas where the search for metals or minerals is active.

In 1953, the Geological Survey had 77 parties in the field, the same number as in 1952. The work undertaken included an aerial reconnaissance by conventional aircraft in northern Ungava covering the northern continuation of the Quebec-Labrador iron belt, and the investigation of a folded belt of metamorphic rocks in northern Ellesmere Island, less than 500 miles from the North Pole.

The Regional Geology Division carries out geological surveys of the bedrock formations and associated ores and economic materials of Canada by means of annual programs of systematic investigations and geological mapping, mainly of areas that have been mapped topographically. It conducts airborne magnetometer surveys as an aid to regional geological mapping and prospecting.

The Stratigraphic Palæontology Division carries out palæontological and stratigraphical investigations and studies that are of great importance in geological mapping, interpretation of structures, and exploration for natural fuels and minerals.

The Mineralogy Division prepares and distributes mineral and rock collections for use of prospectors and educational institutions, organizes and maintains a systematic collection of minerals for reference and exchange, and identifies mineral specimens sent in by the public.

The Radioactivity Resources Division is concerned with the field and laboratory investigation of Canadian resources of radioactive raw materials and maintains free testing and advisory services for uranium prospectors. As agent of the Atomic Energy Control Board, the Division receives the results of analyses for uranium and thorium and reports on the development of radioactive mineral deposits, which information is incorporated in a confidential inventory.

The Pleistocene and Engineering Geology Division makes studies of the unconsolidated materials that mantle the bedrock throughout the greater part of Canada. The geological study of these materials is a prerequisite for many types of engineering and agricultural projects.

The Fuels Resources Division is engaged in the technical study and interpretation of rock cuttings from wells drilled for oil and natural gas with a view to directing exploration for these minerals to localities offering the greatest promise of production. The Division also investigates the geology of coal deposits as a basis for estimating Canada's coal reserves and conducts research into the microscopic character of individual seams.

The Geological Cartography Division prepares cartographical representations for the reproduction of preliminary and standard geological maps, compiles and edits geological and related maps, prepares drawings for maps in the Airborne Magnetic series, and provides drawings, tracings, diagrams, designs, etc., as required.

The technical editing of all reports and map manuscripts published by the Geological Survey is conducted by the Geological Manuscripts Division, which also prepares quarterly and annual reports on the progress of field and office projects, supervises papers prepared for publication and supervises and assists in the preparation of geological map compilations.

Mines Branch.—The Branch is concerned in the main with the technological problems of the mineral industry and maintains well-equipped ore-testing, mineral-dressing, fuel-research, ceramic, radioactivity and industrial minerals laboratories.

The Mineral Dressing and Process Metallurgy Division serves Canada's mineral industry through its tests, investigations and research on all types of Canadian ores. The main purposes of these activities are to devise economic and efficient methods of processing ores—a service of special benefit to new mining ventures and particularly to those developing low-grade or complex deposits—and to assist mine operators in solving problems encountered in mill practice. Much of the Division's recent research has been on the extraction of gold from complex ores and on the processing of titanium ores. As a service to industry and to assist the Department of National Defence, extensive investigations have been conducted on the corrosion of metals.

The Radioactivity Division is concerned with investigations of radioactive ores, particularly with the development and application of methods whereby marketable concentrates may be produced from individual uranium ores. The primary purposes of the Division's technical services and laboratory facilities are to help bring new properties into production by determining methods suitable for treatment of particular ores and to encourage the search for uranium deposits. Extensive experimental and development work is conducted on the treatment of ores and products from the properties of Eldorado Mining and Refining Limited, a Crown company.

The work of the Industrial Minerals Division is related to the development and processing of industrial minerals, including water used for industrial purposes. The Division makes field studies of deposits, examines industrial processes utilizing them and conducts research into methods of beneficiating minerals from deposits of marginal and submarginal quality to bring them up to the standards demanded by modern industry.

The Fuels Division studies the type, quality and uses of all fuels. It makes studies of production methods, largely for the purpose of devising cheaper and more efficient methods of mining, preparing, processing and utilizing coals. Work in the field or laboratories includes: the investigation of methods of mining, particularly of rock pressures in relation to the economical mining of coal at depth, and of coal preparation such as the cleaning and utilization of the low-grade finer sizes of bituminous coal which predominate in Canadian mining operations; the development of a coal-fired gas-turbine; investigations into the making of coke for foundry and other metallurgical uses and into the increased use of Canadian coal in domestic stokers; high-pressure hydrogenation tests on coal for the production of synthetic liquid fuel, and hydrogenation as applied to the refining of oil from the bituminous sands of Alberta; and analyses of crude oils and natural-gas products.

The Physical Metallurgy Division aids the metal industries through the development of new alloys, new manufacturing techniques and new applications, and in activities aimed toward improving present practices in metal fabrication. It serves the Department of National Defence by extensive research and investigative work concerned broadly with the development of defence materials and prototype equipment and with the metallurgical problems of that Department. The Division also handles the metallurgical problems of the atomic energy project at Chalk River.

The Mineral Resources Division provides a mineral information service that is freely used by government departments, mining and allied industries, and others interested in mining or its significance in the Canadian economy. A mineral resources index inventory is maintained of all known occurrences and of mines, both active and potential, special attention being given to those minerals in which Canada is deficient. The Division makes specific economic studies of various phases of the mining industry. It gives technical advice as required for the administration of the Emergency Gold Mining Assistance Act and prepares reports, on request, to aid in the administration of such matters as: tax exemptions on new mining properties; tax deductions as an encouragement to prospecting for base metals, other minerals and petroleum; and tax allowances for the drilling of deep-test wells for oil in unproven fields.

Dominion Observatories.—The two main units of the Dominion Observatories are the Dominion Observatory at Ottawa, Ont., and the Dominion Astrophysical Observatory at Victoria, B.C. Permanent magnetic observatories are maintained at Agincourt, Ont., Meanook, Alta., and at Resolute Bay and Baker Lake, N.W.T. Seismic stations for recording earthquakes are operated at Victoria, Horseshoe Bay and Alberni, B.C.; Ottawa and Kirkland Lake, Ont.; Seven Falls and Shawinigan Falls, Que.; Halifax, N.S.; Saskatoon, Sask.; and Resolute Bay, N.W.T.

The Dominion Observatory at Ottawa is responsible for the time service of Canada, which involves nightly astronomical observations of accurate star positions and radio-broadcast services for distributing accurate time to all parts of Canada. Other astronomical activities centred at Ottawa include upper atmospheric studies by means of meteor observations, studies of the sun and its effect on earthly conditions, and mathematical studies of the atmospheres of the sun and stars. The geophysical work, also administered from Ottawa, includes the magnetic survey of Canada, with emphasis on aids to air and sea navigation, as well as field and observatory work of interest to the geophysical prospector. The methods of seismology are employed not only to study interesting and economically important aspects of the earth's crust in Canada, but also as part of world-wide investigations of the

earth's interior. Gravity observations are carried on throughout Canada with a generally similar purpose, special attention being paid to methods of locating mineral deposits.

The Dominion Astrophysical Observatory at Victoria is devoted to fundamental research into the physical characteristics of the sun, stars, planets and the material of interstellar space. The 73-inch reflecting telescope is one of the largest in the world and through its use many important contributions have been made to astronomical knowledge.

The Geographical Branch.—The function of the Branch is to organize and make available all the geographical data on Canada and on foreign countries that might be of use in promoting the economic, commercial and social welfare of Canada. The work is of two kinds—the compilation of geographical material of national significance, and geographical surveys in the field. The chief project at present is the compilation, in co-operation with various Departments of the Federal Government, of a new Atlas of Canada to replace the Atlas issued in 1915.

The Dominion Coal Board.—The Dominion Coal Board was established by the Dominion Coal Board Act (R.S.C. 1952, c. 86) which was proclaimed on Oct. 21, 1947. By this Act, the Board was constituted a Department of Government to advise on all matters relating to the production, importation, distribution and use of coal in Canada. The Board is also charged with the responsibility of advising upon and administering transportation subventions.

Ancillary to these principal duties, the Board is empowered to undertake research and investigations with respect to:—

(1) the systems and methods of mining coal;
(2) the problems and techniques of marketing and distributing coal;
(3) the physical and chemical characteristics of coal produced in Canada with a view to developing new uses therefor;
(4) the position of coal in relation to other forms of fuel or energy available for use in Canada;
(5) the cost of production and distribution of coal and the accounting methods adopted or used by persons dealing in coal;
(6) the co-ordination of the activities of Government Departments relating to coal;
(7) such other matters as the Minister may request or as the Board may deem necessary for carrying out any of the provisions or purposes of the Act.

In addition, the Dominion Coal Board Act provides authority in the case of a national fuel emergency to ensure that adequate supplies of fuel are made available to meet Canadian requirements.

Assistance by transportation subventions, which has been maintained in varying degrees during the past twenty-four years, was designed to further the movement of Canadian coals to some portions of Central Canada by equalizing as far as possible the laid-down costs of Canadian coals with imported coals. As these costs and the conditions of the Canadian coal industry are subject to variation, the Board must review from time to time the rates of subvention and the areas where the assistance is required. The Orders in Council presently governing assistance on the shipment of coals from the several coal-producing provinces are as follows: Nova Scotia—P.C. 3253 of June 11, 1952, as amended; New Brunswick—P.C. 3252 of June 11, 1952; Saskatchewan—P.C. 912 of Feb. 21, 1951, as amended; Alberta and Crowsnest Pass area of British Columbia—P.C. 1953-64 of Jan. 16, 1953. In addition, Order

in Council P.C. 1094 of Mar. 15, 1949, provides assistance on coal mined in the Provinces of Alberta and British Columbia where exported from Canadian seaports to foreign countries other than the United States and its territorial possessions or sold as fuel for ships' stores. During the year ended Mar. 31, 1953, a total of 2,586,042 tons was shipped under subvention and $4,623,696 was paid in assistance.

Because of the growing impact of oil and natural gas on the markets for Canadian coal, the Board and its staff intensified its study of the relation of these competing sources of energy and of possible new outlets for the solid fuel.

On the matter of technical research as related to marketing and distribution, the Board continued to maintain close liaison with the Division of Fuels of the Department of Mines and Technical Surveys. Under the auspices of the Board, a fourth Dominion-Provincial Conference on Coal Research was held at Ottawa on June 4 and 5, 1952, for the purpose of co-ordination and exchange of ideas. It was attended by delegates from the provincial governments and research bodies of Nova Scotia, Saskatchewan, Alberta and British Columbia, representatives from the Canadian National Railways and the Canadian Pacific Railway Company, together with federal representatives from the Dominion Coal Board and Department of Mines and Technical Surveys.

The Interdepartmental Committee on the Supply to the Armed Forces of Fuel and Equipment for Heating continued its activities during the year. Furthermore, at the request of several government departments for advice on coal matters, a Committee composed of senior purchasing agents of the various government departments was established and meetings were held throughout the year under the auspices of the Dominion Coal Board.

The Board maintained its efforts to create a uniform system of coal-mine cost accounting which would provide an accurate presentation of the costs of production.

Pursuant to the recommendations of the Royal Commission on Coal (1946), the Board continued to work for a reduction in customs duties and sales tax on coal-mining machinery. As agent of the Minister of Mines and Technical Surveys, the Board continued to handle applications for loans under the Maritime Coal Production Assistance Act (R.S.C. 1952, c. 173) and administer the loans granted thereunder. The Board also continued to administer payments under the Coke Bounty Act (1930, c. 6) which provides a subsidy on Canadian coal used in the manufacture of coke for metallurgical purposes. During the year ended Mar. 31, 1953, 801,890 tons had been bonused at a cost of $396,935.

The Dominion Coal Board consists of seven members including the Chairman who is its Chief Executive Officer with the status of a deputy-minister. The Board is responsible to, and subject to the direction of, the Minister of Mines and Technical Surveys.

Subsection 2.—Provincial Government Aid*

Nova Scotia.—Under the provisions of the Mines Act (S.N.S., 1950, c. 3), the Government of Nova Scotia may assist a mining company or operator in the sinking of shafts, slopes, deeps and winzes and the driving of adits, tunnels, crosscuts, raises and levels. This assistance may take the form of work performed under contract, the payment of bills for materials and labour, or the guarantee of bank loans. Any such work must be approved by the Department of Mines. The Government is also authorized to assist the mining industry to procure power on

* Information supplied by the Departments of Mines or Mines Branches of the various provinces.

the most economical basis, and may guarantee the Nova Scotia Power Commission against any loss incurred on account of capital investments made for that purpose or revenue. Mining machinery and equipment that may be used in searching for, testing and mining minerals may be made available through the Government. Such equipment is under the direct supervision of the Chief Mining Engineer.

The Government of Nova Scotia is also empowered to make any regulations considered necessary for increasing the output of coal. Such regulations cover the appropriation, on payment, of unworked coal lands, operation of coal mines, loans or guarantees for loans. Close co-operation is maintained with the Federal Government in carrying out federal regulations made to secure increased production and economical distribution of coal from the mines of the Province.

New Brunswick.—The Mines Branch of the New Brunswick Department of Lands and Mines examines mineral and rock specimens for prospectors and makes preliminary examinations of mineral prospects where requested. In addition, the Mines Branch distributes maps.

Quebec.—The Mining Act (R.S.Q. 1941, c. 196) authorizes the Quebec Department of Mines to build, maintain and improve roads needed for mining development. Such work is done by contract under the supervision of departmental engineers. The Act gives the Department considerable latitude in this respect. In certain cases, major roads have been built to new mining districts and completely paid for; on the other hand, if a particular property requires a branch road from an established highway, the owner may be required to contribute a portion of the cost. To prevent the development of uncontrolled settlements in the vicinity of operating mines, the Department regulates the use of land and permits the establishment of well-organized communities. The municipal organization of such communities is jointly administered by the Department of Mines and the Department of Municipal Affairs.

The Department maintains well-equipped laboratories for the benefit of prospectors, geologists, engineers and mine operators. The facilities include equipment for mineralogy, petrography, ore-dressing, and analysis by wet or dry assays, spectrography or X-ray. Quantitative and mineralogical determinations are made free, but quantitative analyses are made for a fee according to a tariff schedule. The Mining Act provides coupons to be used by prospectors in paying for such analyses.

At Val d'Or in western Quebec, the Department maintains a sampling and treatment plant where tests may be made on bulk samples and where precious metals may be recovered for prospectors at cost price. The treatment plant, which is fully equipped to carry out a wide variety of pilot-scale ore-dressing tests, is at the disposal of mine owners wanting to establish mill-flow sheets. At Thetford Mines, in the heart of the asbestos district, the Department maintains a laboratory where classification of asbestos is made according to standard designations or grades. The Province has authorized the establishment of research laboratories to assist mining and metallurgical enterprises in the processes and techniques of extracting, transforming and utilizing ores.

The Department undertakes geological mapping and inspection. The work is divided between two branches, one responsible for reconnaissance aerial mapping, the other doing detailed mapping in mining districts and inspection of individual deposits or properties. Field parties are headed by geologists or mining engineers.

The published reports on these investigations are distributed free upon request. During the field season, about 30 parties are maintained in different sections of the Province. In mining districts, offices in charge of resident geologists are maintained to collect, preserve and compile geological information disclosed by mining explorations. The individual sheets of the compiled geology are made available to the public.

The Department employs inspectors whose duties are almost exclusively concerned with the safety of workmen in operating mines. Two Mobile Mine Rescue Stations are also operated and a mine rescue training program conducted.

In the field of education for prospectors, five-week courses at university level are organized each year at Laval and Montreal Universities. University scholarships are granted each year to deserving undergraduates and post-graduates in mining, geology and metallurgy, thus contributing to the training of qualified engineers for the benefit of the mining industry. Lectures are given to prospectors at different localities throughout the Province.

Ontario.—The Ontario Department of Mines renders a multiplicity of services of direct assistance to the mining industry within the Province, as briefly enumerated below.

Mining Lands Branch.—This Branch handles all matters dealing with the recording of mining claims, assessment work, etc., and the final issuance of title to mining lands. As a service to the mining public, individual township maps are prepared and kept up to date showing lands open for staking and recorded and patented claims therein. As new surveys are made or later data become available, maps are revised in line with such information. District Mining Recorders maintain offices at strategic locations throughout the Province.

Geological Branch.—A continuing program of geological mapping and investigation is carried out by the geological staff of the Department. Detailed reports and geological maps of the areas studied are made available to the public. In many of the active areas of the Province, resident geologists are engaged to gather, and make available to the public, information concerning geological conditions, exploration and development within their respective districts. One geologist specializing in industrial minerals is maintained on the staff to examine deposits of this order, investigate methods of treatment and recovery of such minerals, and to compile data on the uses, specifications and markets for such products. Collection and dissemination of information on ground water resources is also a function of a section of the Geological Branch. During the winter months courses of instruction for prospectors are held in various centres throughout the Province.

Laboratories Branch.—The Provincial Assay Office, located in the East Block of the Parliament Buildings, Toronto, carries out wet analyses and assays of metal and rock constituents on a custom fee basis and also renders the same service free of charge to holders of valid assay coupons issued for the performance of assessment work on mining claims. The Timiskaming Testing Laboratories situated at Cobalt, in addition to performing fire assays and chemical analyses, conducts a bulk sampling plant mainly to assist the producers of the area in the marketing of the cobalt-silver ores. A Cable Testing Laboratory, wherein all hoisting ropes in use at the mines are periodically tested, is operated under the supervision of the Inspection Branch.

Inspection Branch.—The main function of this Branch is the regular examination of all operating mines, quarries, sand and gravel pits and certain metallurgical works with a view to ensuring proper conditions of health and safety to the men employed. District offices to serve the local areas are maintained in the major mining centres of the Province. Mine rescue stations in the principal mining sections are operated under the supervision of the Inspection Branch.

Exhibitions.—The Department each year presents displays pertaining to mining within the Province at such exhibitions as the Central Canada at Ottawa, the Canadian National at Toronto, and the Northern Ontario at Schumacher.

Publications Branch.—All maps and reports of the Department are distributed through the agency of the Publications Branch located at the main office of the Department.

Library.—A mining library for departmental reference only is maintained within the Department. This library is comprised mainly of publications and maps of the Federal and Provincial Governments of Canada as well as of numerous periodicals and bulletins from the United States.

Mining Roads.—The most recent service of the Department is the provision of mining roads. In general, two classes of road-building are envisioned under this program. The first class of road contemplated is a mining access road, financed solely by the Department, for the purpose of opening up favourable areas for exploration; the second class of road, undertaken jointly by the Department and local mining operators, is intended to assist in the provision of required service roads to such operators.

Manitoba.—The Mines Branch of the Manitoba Department of Mines and Natural Resources offers four main services of assistance to the mining industry: (1) maintenance, by the Mining Recorder's office at Winnipeg and The Pas, of all records essential to the granting and retention of titles to every mineral location in Manitoba; (2) compilation, by the geological staff of the Branch, of information pertinent to mineral occurrences of interest both in the past and the present and expansion of this information by a continuing program of geological mapping; (3) enforcement of mine safety regulations and, by collaboration with industry, initiation of new practices, such as those concerned with mine ventilation and the training of mine rescue crews, which contribute to the health and welfare of mine workers; and (4) maintenance of a chemical and assay laboratory to assist the prospector and professional man alike in the classification of rocks and minerals and the evaluation of mineral occurrences.

Saskatchewan.—The assistance given to the mining industry by the Saskatchewan Government consists of: (1) the maintenance of a geology department, under a principal geologist; (2) resident geologists stationed in or near the principal mining areas; (3) geological survey parties and reports; (4) prospectors' school; (5) prospectors' assistance plan; and (6) native trainees plan.

The Geology Department has its headquarters at Regina. The principal geologist and staff are available at all times to give information and other help to interested parties.

Resident geologists are stationed at Uranium City, Goldfields and Prince Albert to give all possible assistance to prospectors in those areas. During the summer months, geological survey parties study and map attractive areas and prepare reports which are made available to anyone interested.

The prospectors' school gives basic training in geology, mineralogy and prospecting and exploration techniques to future prospectors. Prospecting has become a skilled and specialized trade and instruction in this field will help young men to get a start in a profession very vital to the mining industry of Canada.

The prospectors' assistance plan, which is intended to encourage prospecting, assists bona fide prospectors by way of equipment and transportation and provides technical advice regarding geologically favourable areas.

The native trainees plan has a twofold purpose: (1) to train the Indians and Metis in the northern part of the Province to recognize the common minerals so that, as they go about their usual work, they will be aware of mineral indications that may be of value; (2) to train them to a point where they may be used as prospectors for the exploration companies and, by so doing, extend their means of livelihood beyond the hunting and trapping field.

Alberta.—Alberta Government assistance to the mining industry is diversified in character. The Mines Division of the Department of Mines and Minerals regulates coal mines and quarries and maintains standards of safety by inspection and certification of workers. The Workmen's Compensation Board also maintains safety standards and trains mine-rescue crews. The oil and gas industries are served in a similar way by the Petroleum and Natural Gas Conservation Board. Its regulatory measures, however, are also concerned with the prevention of waste of oil and gas resources and with giving each owner of oil and gas rights the opportunity of obtaining a fair share of production. This Board also compiles periodic reports and annual records which are of invaluable assistance in oil development in Alberta. The mining industry is also served by the Research Council of Alberta which has made geological surveys of most of the Province and has carried forward projects concerned with the uses and development of minerals. The Council has studied the occurrence, uses and analysis of Alberta coals and their particular chemical and physical properties, the use of coals in the generation of power, the upgrading and the cleaning of coal and has also studied briquetting, blending, abrasion loss, shatter and crushing strength, asphalt binders and dust-proofing of coal. The Council's work with bituminous sands has helped with the development of the hot-water separation process and the operation of pilot plants. Studies have been made of glass sands, salt, fertilizers, cement manufacture and brick and tile manufacture.

The Province from time to time has had commissions examine various aspects of the mining industry when it was considered that their findings would be of assistance in developing such industries. In a recent move, the Province, together with the Canadian Association of Oil Well Drilling Contractors and the Western Canada Petroleum Association, has maintained a detailed supervisory and safety training program concerned with the drilling of oil and gas wells.

Of assistance also to mining companies and oil companies are the special deductions provided for in the Alberta Corporation Income Tax Act. These follow the parallel provisions in the Federal Income Tax Act.

British Columbia.—The Department of Mines of British Columbia provides the following services: (1) detailed geological mapping as a supplement to the work of the Geological Survey of Canada; (2) free assaying and analytical work for prospectors registered with the Department; (3) assistance in the field to the

prospector by departmental engineers and geologists; (4) grubstakes, limited to a maximum of $500, for prospectors; (5) assistance in the construction of mining roads and trails; and (6) inspection of mines to ensure safe operating conditions.

Section 3.—Mining Legislation

Federal Mining Laws and Regulations.*—The Federal Government administers the mineral lands of the Yukon and Northwest Territories as well as those within Indian reserves and in National Parks.

Mining laws and regulations covering the Yukon and Northwest Territories are administered by the Northern Administration and Lands Branch, Department of Resources and Development. Grants issued for federal lands, the property of the Federal Government, in these regions reserve to the Crown the mines and minerals that may be found on or under such lands, together with the right of operation.

Mining rights on vacant and certain other federal lands may be acquired by lease for a period usually of 21 years, renewable for further periods of like duration, on the terms and conditions specified in the various Acts and regulations relating to federal lands.

The disposal of minerals occurring in Indian reserves is subject to the consent of the Indians owning the reserve.

The Acts and regulations governing mining and quarrying on federal lands are summarized in Report No. 828, entitled *Mining Laws of Canada*, issued in 1951 by the Mines Branch, Department of Mines and Technical Surveys, Ottawa. This publication also lists all the laws and regulations pertaining to mining on federal lands. Copies of these individual laws and regulations may be obtained by applying to the Northern Administration and Lands Branch, mentioned above. Another publication of interest in connection with mining regulations and available from the aforementioned Mines Branch is entitled *Summary Review of Dominion Tax and Other Legislation Affecting Mining Enterprises in Canada.*

Provincial Mining Laws and Regulations.†—All mineral lands lying within the boundaries of the several provinces (with the exception of those within Indian reserves and National Parks which are under the jurisdiction of the Federal Government) are administered by the respective provincial governments.

The granting of land in any province, except Ontario and Nova Scotia, no longer carries with it mining rights upon or under such land. In Ontario, mineral rights are expressly reserved if they are not to be included. In Nova Scotia, all minerals belong to the Crown except limestone, gypsum and building materials and, in granting land from the Crown, the right to these minerals goes with the title. Some early grants in British Columbia, Alberta, Saskatchewan, Manitoba, New Brunswick and Quebec also included certain mineral rights. Otherwise, mining rights must be separately obtained by lease or grant from the provincial authority administering the mining laws and regulations. Mining activities may be classified as placer,

* Revised under the direction of Marc Boyer, Deputy Minister, in the Editorial and Information Division, Department of Mines and Technical Surveys, Ottawa.

† Compiled from material supplied by the provincial governments.

general minerals (or veined minerals and bedded minerals), fuels (coal, petroleum, gas) and quarrying. Under these divisions of the provincial mining industry, regulations may be summarized as follows:—

Placer.—In those provinces in which placer deposits occur there are regulations defining the size of placer holdings, the terms under which they may be acquired and held, and the royalties to be paid.

General Minerals.—These minerals are sometimes described as quartz, lode, or minerals in place. With the exception of British Columbia, the most elaborate laws and regulations apply in this division. In all provinces, except Alberta, a prospector's or miner's licence, valid for one year, must be obtained to search for mineral deposits, the licence being general in some cases but limited in others. A claim of promising ground of a specified size may then be staked. This claim must be recorded within a time limit, with the payment of recording fees, except in Quebec where no fees are required. Work to a specified value per annum must be performed upon the claim for a period of up to ten years. There is no time limit in British Columbia but $500 assessment work, of which a survey may represent one-fifth, must be performed and recorded before a Crown grant may be obtained. In Quebec, a specified number of man-days of work must be performed and the excess may be carried forward for renewals of licence. Before mining can be commenced, a mining concession must be purchased for which it is necessary to produce an engineer's report indicating the presence of an orebody. The taxation applied most frequently is a percentage of net profits of producing mines or royalties. In the case of Newfoundland, the provincial mining tax has been modified since Confederation on Mar. 31, 1949, to conform with the provincial obligations under the Federal-Provincial Tax Agreement and no other form of taxation or royalties exists.

Fuels.—In provinces where coal occurs, the size of holdings is laid down together with the conditions of work and rental under which they may be held. In Quebec, ordinary mining claims give rights to all mineral substances and to their development, but stakings for combustible natural gas, salt, coal, mineral oil or naphtha, or iron sands may cover 1,280 acres per claim. In some cases royalties are provided for. Acts or regulations govern methods of production. In the cases of petroleum and natural gas, an exploration permit or reservation is usually required. However, in Alberta, leases usually follow the exploration reservation whether or not any discovery is made, because exploration costs are applicable in part on the first year's rental. In other provinces, except Manitoba, the discovery of oil or gas is usually prerequisite to obtaining a lease or grant of a limited area subject to carrying out drilling obligations and paying a rental, fees or a royalty on production.

Quarrying.—Regulations under this heading define the size of holdings and the terms of lease or grant. On Quebec private lands, the quarry belongs to the owner; on Crown lands, mineral rights belong to the Crown and may be obtained in accordance with the provisions of the law, although the rights to exploit peat or marl must be obtained by special licence. In British Columbia quarry rights are not reserved in Crown grants.

Copies of mining legislation including regulations and other details may be obtained from the provincial authorities concerned.

Section 4.—Statistics of Mineral Production

The importance of mineral production, as compared with other primary industries in Canada, is indicated in Chapter IX, while its part in the foreign trade of Canada is dealt with in Chapter XXI.

Subsection 1.—Value and Volume of Mineral Production

Historical Statistics.—Definite records of the annual value of mineral production go back to 1886 only, although actual production began with the earliest settlements. The figures given in Table 1 are not strictly comparable throughout the whole period, minor changes having been adopted in methods of computing both the metallic content of ores sold and the valuations of the products. Earlier methods resulted in a somewhat higher value than those now in use would have shown. However, the changes do not interfere with the general usefulness of the figures in showing the broad trends in the mineral industry.

Except for the 1920-30 period, the value of Canada's mineral production practically doubled each decade since the turn of the century. From $64,000,000 in 1900, it rose to $107,000,000 in 1910 and $228,000,000 in 1920. In 1930 it was $280,000,000, rising to $530,000,000 in 1940 and $1,045,000,000 in 1950. Similarly, the revised index of physical volume of output from Canadian mines (*see* p. 523) advanced from 37·6 (average 1935-39=100) in 1920 to 63·9 in 1930 and 125·7 in 1940. In the next decade, however, the volume gain was not quite so rapid, the index standing at 145·4 in 1950 and 174·7 in 1952.

1.—Value of Mineral Production, 1886-1952

Year	Total Value	Value per Capita	Year	Total Value	Value per Capita	Year	Total Value	Value per Capita
	$	$		$	$		$	$
1886	10,221,255	2·23	1931[1]	230,434,726	22·21	1942	566,768,672	48·63
1890	16,763,353	3·51	1932	191,228,225	18·19	1943	530,053,966	44·94
1895	20,505,917	4·08	1933	221,495,253	20·83	1944	485,819,114	40·67
1900	64,420,877	12·15	1934	278,161,590	25·90	1945	498,755,181	41·32
1905	69,078,999	11·51	1935	312,344,457	28·80	1946	502,816,251	40·91
1910	106,823,623	15·29	1936	361,919,372	33·05	1947	644,869,975	51·38
1915	137,109,171	17·18	1937	457,359,092	41·41	1948	820,248,865	63·97
1920	227,859,665	26·63	1938	441,823,237	39·62	1949[2]	901,110,026	67·01
1925	226,583,333	24·38	1939	474,602,059	42·12	1950	1,045,450,073	76·24
1929	310,850,246	31·73	1940	529,825,035	46·55	1951	1,245,483,595	88·33
1930	279,873,578	27·42	1941	560,241,290	48·69	1952[p]	1,278,365,516	90·66

[1] Beginning with 1931, exchange equalization on gold production is included. [2] Includes value of Newfoundland production from 1949.

Current Production.—Mineral production during 1952 was valued at $1,278,000,000, according to a preliminary estimate. This was the highest output value on record, being $33,000,000 or 2·6 p.c. above the 1951 total of $1,245,000,000. The outstanding gain was made by crude petroleum which was $27,000,000 above the 1951 value, but asbestos and cement were each up about $7,000,000 and iron ore about $3,000,000. On the other hand, the output values for the principal metals, including gold, nickel, copper, zinc and lead, were all below the corresponding totals for the previous year.

The total output value of all metals was $728,000,000 in 1952 compared with $746,000,000 in 1951, a drop of 2·4 p.c. In volume of output the gains outnumbered the losses but these advances were not sufficient to offset the price

declines during the year. The tonnage of zinc was up 12 p.c. but the total value declined nearly 2 p.c.; lead production increased 4 p.c. but the value dropped 8 p.c.; output of nickel was greater by 1·5 p.c. but the value was slightly lower than for the previous year; and gold production was up 0·6 p.c. in quantity but down 6 p.c. in value, the average price being $34·27 in 1952 compared with $36·85 in 1951. Copper production declined 4·5 p.c. and the increase in average price during the year was not sufficient to offset this decline, the value being down by nearly 1 p.c.

The value of mineral fuels rose 13 p.c. to $262,000,000 in 1952. Crude petroleum gained 28 p.c. in quantity and 23 p.c. in value, and natural gas rose 10 p.c. in volume and 30 p.c. in value. The tonnage of coal declined 6·6 p.c. but the value was about the same as in 1951.

The value of the non-metallics group was $124,000,000 in 1952, an increase of 7 p.c. over 1951. The tonnage of asbestos shipments was slightly lower than in the previous year owing to decreased demand for short fibres, but the increase in the price of the longer fibres brought the total value to a new high. Sulphur in the form of pyrite, sulphuric acid and elemental sulphur gained 18·6 p.c. in quantity. The output of barite and fluorspar increased; gypsum, salt and nepheline syenite remained about the same; and feldspar and mica declined as compared with 1951.

The value of most structural materials continued to rise, the group reaching a total of $164,000,000 in 1952 compared with $151,000,000 in 1951. Three new cement plants, one in each of the Provinces of Newfoundland, New Brunswick and Quebec, contributed to a record output of that product, which advanced 8 p.c. in quantity and 18 p.c. in value over 1951. Brick and clay products, sand and gravel, and stone all advanced but the output of lime was nearly 3 p.c. lower than in 1951 in both tonnage and dollars.

2.—Quantity and Value of Minerals Produced, 1950-52

Mineral		1950		1951		1952[p]	
		Quantity	Value	Quantity	Value	Quantity	Value
Metallics			$		$		$
Antimony	lb.	643,540	215,586	6,702,164	1,436,713	2,500,000	1,125,000
Beryllium ore	ton	29	7,882	—	—	—	—
Bismuth	lb.	191,621	431,147	230,298	543,504	180,217	405,488
Cadmium	"	848,406	1,968,302	1,326,920	3,556,145	1,004,623	2,971,511
Cobalt	"	583,806	964,003	951,607	1,999,612	1,303,400	2,806,000
Copper	"	528,418,296	123,211,407	539,941,589	149,026,216	515,413,485	147,849,770
Gold	oz. t.	4,441,227	168,988,687	4,392,751	161,872,873	4,419,570	151,458,564
Indium	"	4,952	12,083	582	1,368	400	900
Iron ore	ton	3,605,261	23,413,547	4,680,510	31,141,112	5,205,058	34,186,286
Iron ingots	"	1,697	138,284	15,554	777,142	31,500	1,302,000
Lead	lb.	331,394,128	47,886,452	316,462,751	58,229,146	329,758,679	53,321,978
Magnesium and calcium	"	...	1,545,011	...	3,618,219	...	4,613,995
Molybdenite	"	103,550	60,059	381,596	228,958	497,735	298,641
Nickel	"	247,317,867	112,104,685	275,806,272	151,269,994	280,013,300	150,908,900
Palladium, rhodium, iridium, etc	oz. t.	148,741	7,578,144	164,905	7,950,107	149,600	7,311,407
Pitchblende products		[1]	[1]	[1]	[1]	[1]	[1]
Platinum	oz. t.	124,571	10,255,929	153,483	14,542,515	120,300	10,736,775
Selenium	lb.	261,973	633,975	382,603	1,239,633	265,600	841,100
Silver	oz. t.	23,221,431	18,767,561	23,125,825	21,865,467	24,375,853	20,366,026
Tellurium	lb.	10,075	19,143	8,913	16,400	13,700	30,200
Tin	"	796,403	828,259	346,718	494,073	212,000	254,400
Titanium ore	ton	1,253	7,706	1,674	9,790	51	456
Tungsten concentrates	lb.	284,078	160,343	2,833	7,098	1,222,262	3,666,786
Zinc	"	626,454,598	98,040,145	682,224,335	135,762,643	764,112,772	133,459,938
Totals, Metallics		...	**617,238,340**	...	**745,588,728**	...	**727,916,221**

[1] Not released for publication.

2.—Quantity and Value of Minerals Produced, 1950-52—concluded

Mineral	1950		1951		1952[p]	
	Quantity	Value	Quantity	Value	Quantity	Value
		$		$		$
Non-metallics (excluding Fuels)						
Arsenious oxide..... lb.	794,091	52,029	2,353,362	129,435	1,530,000	98,000
Asbestos..... ton	875,344	65,854,568	973,198	81,584,345	966,382	88,823,271
Barite..... "	77,177	750,378	98,113	1,131,917	119,333	1,364,703
Diatomite..... "	49	1,665	92	3,148	25	1,100
Feldspar..... "	35,548	428,401	40,749	551,097	21,760	346,048
Fluorspar..... "	64,213	1,553,004	74,211	2,189,875	83,353	2,503,167
Garnets rock..... "	3	240	—	—	—	—
Graphite..... "	3,586	390,815	1,569	231,167	2,030	255,426
Grindstone..... "	100	10,000	60	6,000	12	720
Gypsum..... "	3,666,336	6,707,506	3,802,692	5,880,853	3,592,917	6,073,389
Iron oxide..... "	13,696	262,632	13,342	262,277	11,847	226,037
Magnesitic dolomite, brucite	...	1,717,879	...	2,437,773	...	2,914,272
Mica..... lb.	3,879,209	252,611	4,961,508	447,650	1,990,827	139,884
Mineral water.....imp. gal.	318,829	158,897	325,300	146,971	322,500	145,450
Nepheline syenite..... ton	65,638	842,886	81,108	1,114,943	85,500	1,116,500
Peat moss..... "	75,195	2,256,870	76,809	2,433,008	77,258	2,372,168
Phosphate rock..... "	129	1,069	6	94	—	—
Quartz..... "	1,730,695	1,740,268	1,904,885	2,258,468	1,783,267	2,467,267
Salt..... "	858,896	7,011,306	964,525	7,905,977	992,007	7,507,315
Silica brick..... M	3,126	408,813	3,510	465,229	3,506	586,413
Soapstone and talc.... ton	32,604	364,635	24,846	283,624	26,048	297,516
Sodium sulphate..... "	130,730	1,615,867	192,371	2,383,770	156,308	1,709,140
Sulphur[1]..... "	301,172	2,189,660	371,790	3,120,785	441,271	4,096,615
Titanium dioxide..... "	1,596	149,565	14,123	738,577	42,000	1,260,000
Totals, Non-metallics....	...	**94,721,564**	...	**115,706,983**	...	**124,304,401**
Fuels						
Coal..... ton	19,139,112	110,140,399	18,586,823	109,038,835	17,360,000	109,420,000
Natural gas.....M cu. ft.	67,822,230	6,433,041	79,460,667	7,158,920	87,591,200	9,305,610
Peat..... ton	58	580	50	1,100	10	100
Petroleum, crude... bbl.	29,043,788	84,619,937	47,615,534	116,655,238	60,864,500	143,372,540
Totals, Fuels.....	...	**201,193,957**	...	**232,854,093**	...	**262,098,250**
Structural Materials						
Clay products, brick, tile, etc.....	...	21,790,888	...	23,527,656	...	24,418,693
Cement..... bbl.	16,741,826	35,894,124	17,007,812	40,446,288	18,350,964	47,623,129
Lime..... ton	1,124,188	12,281,084	1,241,041	14,082,520	1,209,653	13,683,485
Sand and gravel..... "	73,095,163	36,434,759	92,972,821	44,627,559	96,470,881	49,121,048
Stone..... "	18,087,064	25,895,357	18,676,706	28,649,768	17,811,808	29,200,289
Totals, Structural Materials.....	...	**132,296,212**	...	**151,333,791**	...	**164,046,644**
Grand Totals.....	...	**1,045,450,073**	...	**1,245,483,595**	...	**1,278,365,516**

[1] Sulphur content of pyrite shipped and estimated sulphur contained in the sulphuric acid made from smelter gases.

Analysis of Current Value and Volume.—In order to interpret more clearly and simply the trends in mineral production in Canada over the past ten years, Table 3 gives the percentage of the total value contributed by each principal mineral in each year. Values upon which percentages in this table are based are the annual values of mineral production, expressed in Canadian currency, as shown in Tables 1 and 2.

3.—Percentage of the Total Value Contributed by Principal Minerals, 1943-52

Mineral	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952[p]
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p c.
METALLICS										
Copper	12·7	13·4	11·9	9·3	14·2	13·1	11·6	11·8	11·9	11·6
Gold	26·5	23·2	20·8	20·7	16·7	15·1	16·5	16·2	13·0	11·8
Lead	3·1	2·8	3·5	4·8	6·9	7·3	5·6	4·6	4·7	4·2
Nickel	13·5	14·2	12·4	9·0	11·0	10·6	11·0	10·7	12·1	11·8
Platinum metals	2·6	1·7	5·4	2·6	1·5	2·0	2·2	1·7	1·8	1·4
Silver	1·5	1·2	1·2	2·1	1·4	1·5	1·5	1·8	1·8	1·6
Zinc	4·6	4·9	6·7	7·3	7·2	8·0	8·5	9·4	10·9	10·4
TOTALS, METALLICS[1]	67·3	63·5	63·6	57·8	61·3	59·6	59·8	59·0	59·9	57·0
NON-METALLICS (EXCLUDING FUELS)										
Asbestos	4·4	4·2	4·6	5·0	5·1	5·1	4·4	6·3	6·5	6·9
Gypsum	0·3	0·3	0·4	0·7	0·7	0·7	0·6	0·6	0·5	0·5
Quartz	0·3	0·3	0·3	0·3	0·3	0·3	0·2	0·2	0·2	0·2
Salt	0·8	0·8	0·8	0·7	0·7	0·6	0·6	0·7	0·6	0·6
Sulphur	0·3	0·4	0·4	0·4	0·3	0·2	0·2	0·2	0·2	0·3
TOTALS, NON-METALLICS[1]	7·3	7·7	8·0	8·7	8·5	8·2	7·1	9·0	9·3	9·7
FUELS										
Coal	11·9	14·5	13·5	15·0	12·0	13·0	12·3	10·5	8·7	8·6
Natural gas	2·5	2·3	2·5	2·4	2·1	1·9	1·3	0·6	0·6	0·7
Petroleum	3·1	3·2	2·7	3·0	3·0	4·6	6·8	8·1	9·4	11·2
TOTALS, FUELS	17·5	20·0	18·7	20·4	17·1	19·5	20·4	19·3	18·7	20·5
STRUCTURAL MATERIALS										
Clay products	1·2	1·4	1·8	2·4	2·2	2·1	2·0	2·1	1·9	1·9
Cement	2·2	2·4	2·9	4·0	3·4	3·4	3·6	3·4	3·2	3·7
Lime	1·3	1·4	1·3	1·4	1·3	1·3	1·3	1·2	1·1	1·1
Sand and gravel	1·7	2·1	2·1	3·1	3·6	3·7	3·5	3·5	3·6	3·8
Stone	1·5	1·5	1·6	2·2	2·6	2·2	2·3	2·5	2·3	2·3
TOTALS, STRUCTURAL MATERIALS	7·9	8·8	9·7	13·1	13·1	12·7	12·7	12·7	12·1	12·8
Grand Totals	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**

[1] Includes minor items not specified.

A revised index of the physical volume of mineral production has been prepared by the Dominion Bureau of Statistics, based on the period 1935–39.* This index supersedes, from 1935 to 1952, the index published in previous editions of the Year Book.

* The construction of this index, which is a component of the revised index of industrial production, is described in DBS Reference Paper, *Revised Index of Industrial Production, 1935-51.*

The total volume of mineral output attained a wartime peak in 1941 when the production index stood at 132. Principally because of the steady recession in the mining of gold and other principal metals during the next five years, the index gradually declined and reached a ten-year low point of 97 in 1946. Since then, sharp gains in the production of petroleum and other non-metals, together with a moderate increase in metals output, resulted in a sustained advance to a record high level of 175 in 1952.

4.—Indexes of the Volume of Production of the Principal Mining Industries, 1935-52

(1935-39=100)

Mineral	1935	1936	1937	1938	1939	1940	1941	1942	1943
Metallics—									
Gold	78·3	89·5	97·7	112·7	121·6	126·8	127·6	115·7	87·3
Silver	80·3	88·7	111·0	107·4	111·9	115·5	105·2	100·1	84·1
Copper	82·2	82·6	103·9	112·1	119·3	128·6	126·2	118·4	112·9
Nickel	71·4	87·6	116·0	108·7	116·6	126·7	145·6	147·1	148·6
Lead	87·3	98·7	106·0	107·8	100·0	121·5	118·5	132·0	114·5
Zinc	89·0	92·4	102·7	106·0	109·4	117·7	142·2	161·2	169·7
Non-metallics—									
Gypsum	61·3	86·5	107·6	106·1	138·5	148·5	167·7	89·3	83·8
Asbestos	66·8	90·6	127·5	97·3	117·8	109·2	142·2	129·4	137·1
Salt	86·4	94·5	110·6	105·9	102·5	112·0	135·9	157·3	164·8
Fuels—									
Coal	92·2	101·1	105·9	95·2	105·6	118·5	122·0	125·9	116·8
Petroleum	35·0	36·3	71·2	168·4	189·2	207·7	245·0	250·6	243·0
Natural gas	80·7	95·4	103·7	105·9	114·3	126·8	121·4	114·5	97·4
Total Mining	**79·5**	**89·2**	**103·8**	**109·4**	**118·0**	**125·7**	**132·0**	**129·5**	**116·1**

Mineral	1944	1945	1946	1947	1948	1949	1950	1951	1952p
Metallics—									
Gold	69·8	64·4	67·6	73·3	84·3	98·3	105·8	104·0	106·5
Silver	66·1	62·7	60·7	60·5	77·9	81·2	104·8	102·7	113·3
Copper	107·3	93·2	72·2	88·5	94·5	99·0	93·4	95·1	91·2
Nickel	141·6	126·5	99·1	122·2	135·9	132·8	127·7	141·2	144·2
Lead	78·6	89·4	91·2	83·3	86·1	67·7	64·6	61·6	65·1
Zinc	153·1	143·8	130·8	115·5	130·1	141·5	145·9	153·0	170·6
Non-metallics—									
Gypsum	98·5	117·3	210·1	280·0	349·3	346·4	403·6	371·4	370·3
Asbestos	120·9	135·5	150·3	163·1	176·9	141·8	218·5	245·3	245·2
Salt	168·3	161·8	129·5	178·9	177·7	181·2	207·2	233·1	234·6
Fuels—									
Coal	112·3	106·6	115·6	101·7	120·6	124·4	122·9	119·4	112·9
Petroleum	244·1	205·1	183·4	186·0	297·0	515·0	703·4	1,161·0	1,490·6
Natural gas	93·1	96·5	94·0	102·6	112·7	110·6	116·9	150·8	188·3
Total Mining	**104·1**	**100·9**	**97·1**	**106·2**	**122·2**	**131·7**	**145·4**	**161·8**	**174·7**

Subsection 2.—Provincial Distribution of Mineral Production

Since 1907, Ontario has been the principal mineral-producing province of Canada. In 1943, that Province accounted for 44 p.c. of Canada's total, but its share has declined steadily to 34 p.c. in 1952. Alberta's share of the total showed the greatest increase in the ten-year period, rising from 9 p.c. to 15 p.c. accounted for by the tremendous increase in the crude petroleum output of that Province. The proportion contributed by Quebec increased in the same period from 19 p.c. to 21 p.c. and by British Columbia from 12·9 p.c. to 13·5 p.c. In the same comparison, Saskatchewan's share decreased from 5·0 p.c. to 3·8 p.c., Manitoba's from 2·5 p.c. to 1·9 p.c., and Nova Scotia's from 5·6 p.c. to 5·0 p.c. Newfoundland produced about 3 p.c. of the total mineral production of Canada in 1952. As compared with 1951, gains in value were registered for all provinces except Ontario, Manitoba, Saskatchewan and British Columbia.

5.—Value of Mineral Production, by Province, 1943-52

NOTE.—Figures for 1899–1910 are given in the 1933 Year Book, p. 345; for 1911–28 in the 1939 edition, p. 323; and for 1929–42 in the 1946 edition, p. 323.

Year	Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba
	$	$	$	$	$	$
1943	...	29,979,837	3,676,834	101,610,678	232,948,959	13,412,266
1944	...	33,981,977	4,133,902	90,182,553	210,706,307	13,830,406
1945	...	32,220,659	4,182,100	91,518,120	216,541,856	14,429,423
1946	...	35,350,271	4,813,166	92,785,148	191,544,429	16,403,549
1947	...	34,255,560	5,812,943	115,151,635	249,797,671	18,236,763
1948	...	56,400,245	7,003,285	152,038,867	294,239,673	26,081,349
1949	27,583,615	56,092,830	7,134,009	165,021,513	323,368,644	23,839,638
1950	25,824,047	59,482,173	12,756,975	220,176,517	366,801,525	32,691,173
1951	32,410,443	59,727,256	9,564,617	255,530,071	444,667,203	30,045,992
1952p	32,898,734	63,541,473	12,035,360	267,259,931	438,535,875	24,897,069

Year	Saskatchewan	Alberta	British Columbia	Yukon Territory	Northwest Territories	Canada
	$	$	$	$	$	$
1943	26,735,984	48,941,210	68,442,386	1,625,819	2,679,993	530,053,966
1944	22,291,848	51,066,662	57,246,071	939,319	1,440,069	485,819,114
1945	22,336,074	51,753,237	64,063,842	1,239,058	470,812	498,755,181
1946	24,480,900	60,082,513	74,622,846	1,693,904	1,039,525	502,816,251
1947	32,594,016	67,432,270	116,772,621	2,095,508	2,720,988	644,869,975
1948	34,517,208	93,211,229	148,223,614	4,265,910	4,267,485	820,248,865
1949	36,054,536	113,728,425	136,385,911	5,099,176	6,801,729	901,110,026
1950	35,983,923	135,758,940	138,888,205	9,035,696	8,050,899	1,045,450,073
1951	51,032,953	168,144,211	176,278,932	9,793,170	8,288,747	1,245,483,595
1952p	48,646,557	197,333,166	172,907,416	11,276,221	9,033,714	1,278,365,516

6.—Detailed Mineral Production, by Province, 1951

NOTE.—Although preliminary figures for 1952 were available in bulletin form at the time of going to press, it was considered desirable to include here the latest available final figures.

Mineral		Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Northwest Territories	Yukon Territory	Canada
Metallics													
Antimony	lb.	—	—	—	—	—	—	—	—	6,702,164	—	—	6,702,164
	$	—	—	—	—	—	—	—	—	1,436,713	—	—	1,436,713
Bismuth	lb.	—	—	—	23,827	15,000	—	—	—	191,471	—	—	230,298
	$	—	—	—	56,232	35,400	—	—	—	451,872	—	—	543,504
Cadmium	lb.	—	—	—	—	—	47,333	99,835	—	1,113,300	—	66,452	1,326,920
	$	—	—	—	—	—	126,852	267,558	—	2,983,644	—	178,091	3,556,145
Cobalt	lb.	—	—	—	—	951,607	—	—	—	—	—	—	951,607
	$	—	—	—	—	1,999,612	—	—	—	—	—	—	1,999,612
Copper	lb.	5,798,674	—	—	137,731,906	257,616,806	31,677,863	63,250,444	—	43,863,962	1,934	—	539,941,589
	$	1,606,233	—	—	38,151,738	70,861,789	8,774,768	17,520,373	—	12,110,779	536	—	149,026,216
Gold	oz. t.	8,515	17	—	1,067,306	2,462,979	163,914	110,216	97	289,992	212,211	77,504	4,392,751
	$	313,778	626	—	39,330,226	90,760,776	6,040,231	4,061,460	3,574	10,686,205	7,819,975	2,856,022	161,872,873
Indium	oz. t.	—	—	—	—	—	—	—	—	582	—	—	582
	$	—	—	—	—	—	—	—	—	1,368	—	—	1,368
Iron ore	ton	1,724,991	—	—	—	2,841,984	—	—	—	113,535	—	—	4,680,510
	$	9,145,960	—	—	—	21,205,152	—	—	—	790,000	—	—	31,141,112
Iron ingots	ton	—	—	—	15,554	—	—	—	—	—	—	—	15,554
	$	—	—	—	777,142	—	—	—	—	—	—	—	777,142
Lead	lb.	32,888,189	—	—	15,512,623	—	—	—	—	255,528,868	—	12,533,071	316,462,751
	$	6,051,427	—	—	2,854,323	—	—	—	—	47,017,311	—	2,306,085	58,229,146
Magnesium and calcium	$	—	—	—	—	3,618,219	—	—	—	—	—	—	3,618,219
Molybdenite	lb.	—	—	—	381,596	—	—	—	—	—	—	—	381,596
	$	—	—	—	228,958	—	—	—	—	—	—	—	228,958
Nickel	lb.	—	—	—	—	275,806,272	—	—	—	—	—	—	275,806,272
	$	—	—	—	—	151,269,994	—	—	—	—	—	—	151,269,994
Palladium, rhodium, etc.	oz. t.	—	—	—	—	164,905	—	—	—	—	—	—	164,905
	$	—	—	—	—	7,950,107	—	—	—	—	—	—	7,950,107
Platinum	oz. t.	—	—	—	—	153,461	—	—	—	22	—	—	153,483
	$	—	—	—	—	14,540,430	—	—	—	2,085	—	—	14,542,515
Selenium	lb	—	—	—	165,575	82,409	25,955	108,664	—	—	—	—	382,603
	$	—	—	—	536,463	267,005	84,094	352,071	—	—	—	—	1,239,633
Silver	oz. t.	534,519	1	—	4,154,290	4,520,094	613,141	1,454,341	9	8,342,414	64,228	3,442,788	23,125,825
	$	505,388	1	—	3,927,881	4,273,749	579,725	1,375,079	8	7,887,752	60,728	3,255,156	21,865,467
Tellurium	lb.	—	—	—	—	6,301	505	2,107	—	—	—	—	8,913
	$	—	—	—	—	11,594	929	3,877	—	—	—	—	16,400
Tin	lb.	—	—	—	—	—	—	—	—	346,718	—	—	346,718
	$	—	—	—	—	—	—	—	—	494,073	—	—	494,073
Titanium ore	ton	—	—	—	1,674	—	—	—	—	—	—	—	1,674
	$	—	—	—	9,790	—	—	—	—	—	—	—	9,790
Tungsten concentrates	lb.	—	—	—	—	—	—	—	—	—	—	2,833	2,833
	$	—	—	—	—	—	—	—	—	—	—	7,098	7,098
Zinc	lb.	56,938,689	—	—	172,725,823	—	30,221,016	79,148,484	—	337,511,324	—	5,678,999	682,224,335
	$	11,330,799	—	—	34,372,439	—	6,013,982	15,750,548	—	67,164,754	—	1,130,121	135,762,643
Totals, Metallics[1]	$	**28,953,585**	**627**	—	**120,245,192**	**366,793,827**	**21,620,581**	**39,330,966**	**3,582**	**151,028,556**	**7,881,239**	**9,732,573**	**745,588,728**

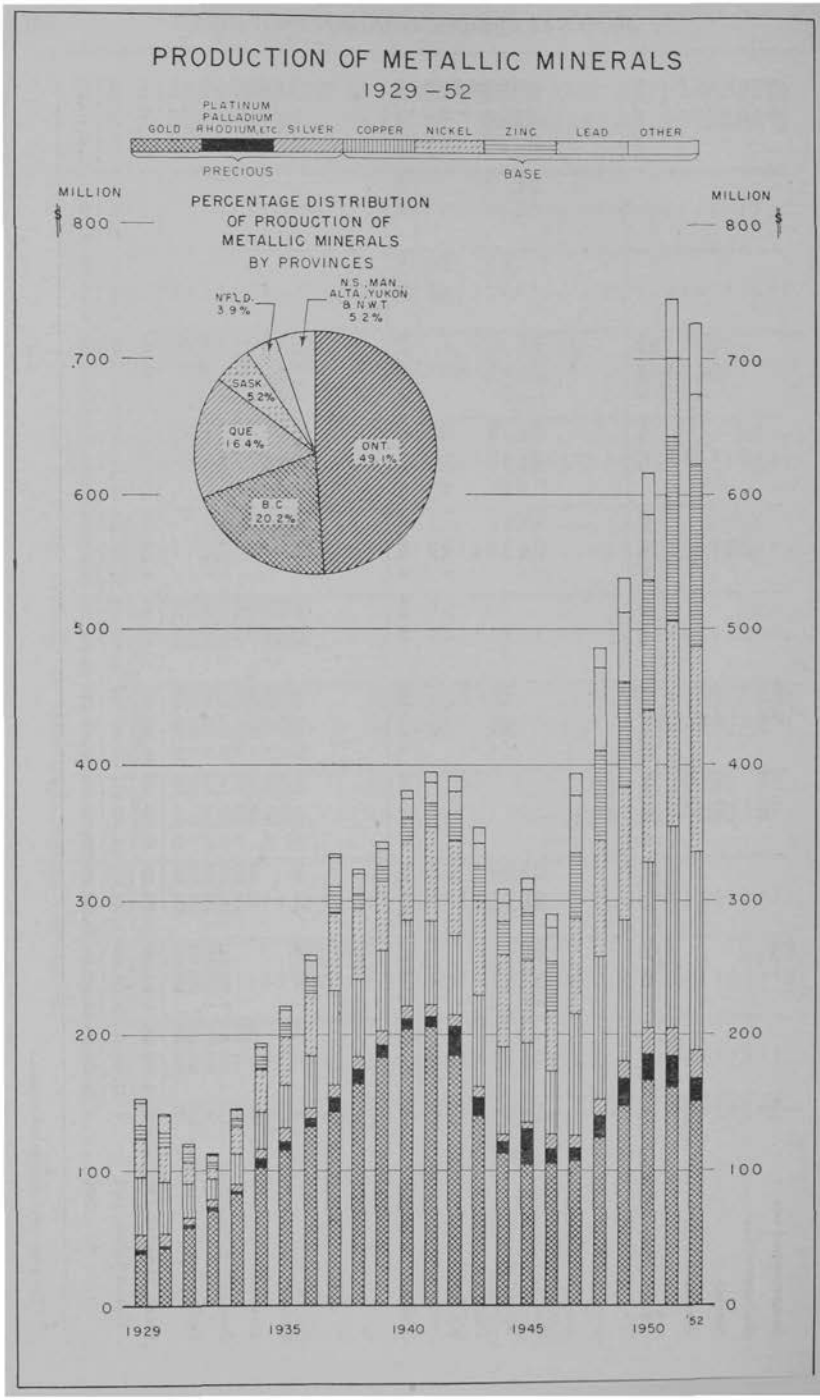
[1] Figures for pitchblende not released for publication.

6.—Detailed Mineral Production, by Province, 1951—concluded

Mineral	New-foundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	British Columbia	North-west Terri-tories	Yukon Territory	Canada
Non-metallics												
Arsenious oxide.....lb.	—	—	—	636,896	1,716,466	—	—	—	—	—	—	2,353,362
$	—	—	—	35,029	94,406	—	—	—	—	—	—	129,435
Asbestos.....ton	—	—	—	946,610	26,588	—	—	—	—	—	—	973,198
$	—	—	—	77,627,863	3,956,482	—	—	—	—	—	—	81,584,345
Barite.....ton	—	96,865	—	—	—	—	—	—	1,248	—	—	98,113
$	—	1,115,693	—	—	—	—	—	—	16,224	—	—	1,131,917
Diatomite.....ton	—	84	—	—	—	—	—	—	8	—	—	92
$	—	2,925	—	—	—	—	—	—	223	—	—	3,148
Feldspar.....ton	—	—	—	28,000	12,749	—	—	—	—	—	—	40,749
$	—	—	—	425,370	125,727	—	—	—	—	—	—	551,097
Fluorspar.....ton	67,925	—	—	—	6,286	—	—	—	—	—	—	74,211
$	1,966,477	—	—	—	223,398	—	—	—	—	—	—	2,189,875
Graphite.....ton	—	—	—	—	1,569	—	—	—	—	—	—	1,569
$	—	—	—	—	231,167	—	—	—	—	—	—	231,167
Grindstone.....ton	—	—	60	—	—	—	—	—	—	—	—	60
$	—	—	6,000	—	—	—	—	—	—	—	—	6,000
Gypsum.....ton	—	3,190,030	109,469	—	262,581	134,704	—	—	105,908	—	—	3,802,692
$	—	4,107,822	328,407	—	672,276	509,276	—	—	263,072	—	—	5,880,853
Iron oxide.....ton	—	—	—	13,342	—	—	—	—	—	—	—	13,342
$	—	—	—	262,277	—	—	—	—	—	—	—	262,277
Magnesitic dolomite, brucite[1].$	—	—	—	2,437,773	—	—	—	—	—	—	—	2,437,773
Mica.....lb.	—	—	—	3,329,418	1,025,090	—	—	—	607,000	—	—	4,961,508
$	—	—	—	125,753	314,435	—	—	—	7,462	—	—	447,650
Mineral water.....imp. gal	—	—	—	322,800	2,500	—	—	—	—	—	—	325,300
$	—	—	—	146,521	450	—	—	—	—	—	—	146,971
Nepheline syenite.....ton	—	—	—	—	81,108	—	—	—	—	—	—	81,108
$	—	—	—	—	1,114,943	—	—	—	—	—	—	1,114,943
Peat moss.....ton	—	578	4,587	21,657	1,804	1,236	—	—	46,947	—	—	76,809
$	—	17,556	161,934	436,833	72,557	44,098	—	—	1,700,030	—	—	2,433,008
Phosphate rock.....ton	—	—	—	—	6	—	—	—	—	—	—	6
$	—	—	—	—	94	—	—	—	—	—	—	94
Quartz.....ton	—	—	—	220,698	1,545,137	—	120,769	—	18,281	—	—	1,904,885
$	—	—	—	579,633	1,497,811	—	67,631	—	113,393	—	—	2,258,468
Salt.....ton	—	127,252	—	—	772,585	16,778	28,192	19,718	—	—	—	964,525
$	—	1,631,904	—	—	4,789,990	358,391	653,130	472,562	—	—	—	7,905,977
Silica brick.....M	—	2,293	—	—	1,217	—	—	—	—	—	—	3,510
$	—	260,398	—	—	204,831	—	—	—	—	—	—	465,229

Soapstone and talc.....ton	—	—	—	11,148	13,698	—	—	—	—	—	—	24,846
$	—	—	—	123,084	160,540	—	—	—	—	—	—	283,624
Sodium sulphate.....ton	—	—	—	—	—	—	192,371	—	—	—	—	192,371
$	—	—	—	—	—	—	2,383,770	—	—	—	—	2,383,770
Sulphur.....ton	—	—	—	161,489	15,605	—	—	—	194,696	—	—	371,790
$	—	—	—	895,253	156,050	—	—	—	2,069,482	—	—	3,120,785
Titanium dioxide.....ton	—	—	—	14,123	—	—	—	—	—	—	—	14,123
$	—	—	—	738,577	—	—	—	—	—	—	—	738,577
Totals, Non-Metallics..... $	**1,966,477**	**7,136,298**	**496,341**	**83,833,966**	**13,615,157**	**911,765**	**3,104,531**	**472,562**	**4,169,886**	—	—	**115,706,983**
Fuels												
Coal.....ton	—	6,307,629	653,439	—	—	—	2,223,318	7,659,329	1,739,412	—	3,696	18,586,823
$	—	49,113,932	4,822,869	—	—	—	4,361,677	40,981,581	9,698,179	—	60,597	109,038,835
Natural gas.....M cu. ft	—	—	261,579	—	8,442,842	—	860,082	69,876,831	—	19,333	—	79,460,667
$	—	—	194,312	—	3,377,137	—	86,008	3,493,842	—	7,621	—	7,158,920
Peat.....ton	—	—	—	20	30	—	—	—	—	—	—	50
$	—	—	—	800	300	—	—	—	—	—	—	1,100
Petroleum, crude.....bbl.	—	—	15,551	—	197,171	10,698	1,249,281	45,915,384	—	227,449	—	47,615,534
$	—	—	21,771	—	677,905	26,478	1,659,045	113,870,152	—	399,887	—	116,655,238
Totals, Fuels..... $	—	**49,113,932**	**5,038,952**	**800**	**4,055,342**	**26,478**	**6,106,730**	**158,345,575**	**9,698,179**	**407,508**	**60,597**	**232,854,093**
Structural Materials												
Clay products..... $	32,183	1,202,428	740,861	6,776,430	10,484,341	673,698	616,655	1,787,731	1,213,329	—	—	23,527,656
Cement.....bbl.	—	—	—	7,055,164	5,438,101	1,539,612	—	1,649,909	1,325,026	—	—	17,007,812
$	—	—	—	16,633,377	12,494,677	4,108,752	—	3,898,043	3,311,439	—	—	40,446,288
Lime.....ton	436	—	20,954	460,842	619,769	53,024	—	30,670	55,346	—	—	1,241,041
$	17,533	—	369,681	4,612,387	6,921,916	778,490	—	395,452	987,061	—	—	14,082,520
Sand and gravel.....ton	1,483,951	1,756,641	2,966,210	31,297,949	39,218,058	2,832,110	2,951,813	4,289,021	6,177,068	—	—	92,972,821
$	648,346	1,527,052	2,229,258	10,616,701	19,905,293	929,989	1,874,071	3,194,446	3,702,403	—	—	44,627,559
Stone.....ton	466,440	270,181	879,504	7,177,263	8,080,087	383,134	—	13,310	1,406,787	—	—	18,676,706
$	792,319	746,919	689,524	12,811,218	10,396,650	996,239	—	46,820	2,170,079	—	—	28,649,768
Totals, Structural Materials $	**1,490,381**	**3,476,399**	**4,029,324**	**51,450,113**	**60,202,877**	**7,487,168**	**2,490,726**	**9,322,492**	**11,384,311**	—	—	**151,333,791**
Grand Totals, 1951..... $	**32,410,443**	**59,727,256**	**9,564,617**	**255,530,071**	**444,667,203**	**30,045,992**	**51,032,953**	**168,144,211**	**176,278,932**	**8,288,747**	**9,793,170**	**1,245,483,595**
1950..... $	**25,824,047**	**59,482,173**	**12,756,975**	**220,176,517**	**366,801,525**	**32,691,173**	**35,983,923**	**135,758,940**	**138,888,205**	**8,050,899**	**9,035,696**	**1,045,450,073**

[1] Includes some magnesium metal.


PRODUCTION OF METALLIC MINERALS
1929 – 52
GOLD
PLATINUM PALLADIUM RHODIUM, ETC.
SILVER
COPPER
NICKEL
ZINC
LEAD
OTHER
PRECIOUS
BASE
MILLION $
800
700
600
500
400
300
200
100
0
PERCENTAGE DISTRIBUTION OF PRODUCTION OF METALLIC MINERALS BY PROVINCES
NFLD. 3.9%
N.S., MAN., ALTA., YUKON & N.W.T. 5.2%
SASK. 5.2%
QUE. 16.4%
ONT. 49.1%
B.C. 20.2%
1929
1935
1940
1945
1950
'52

Subsection 3.—Production of Metallic Minerals

The metals of chief importance in Canada are copper, gold, iron, lead, nickel, those of the platinum group, silver and zinc. These metals are dealt with individually in the following paragraphs. In addition, there are a number of metals produced in minor quantities, principally as by-products in the treatment of metalliferous ores (*see* Tables 2 and 6).

Copper.—Copper production declined about 4·5 p.c. in 1952 to 258,000 tons from 270,000 tons in 1951, owing mainly to the closing of the Sherritt Gordon mine on the Manitoba-Saskatchewan border in September 1951. In Nova Scotia, a new mill began operations in April 1952, producing about 416 tons of contained copper before the year-end. In each of the other provinces the tonnage estimated for 1952 was slightly less than that for 1951.

About 48 p.c. of Canada's copper comes from the nickel-copper mines in the Sudbury district of Ontario. Converter copper is produced and further treated at Copper Cliff, and nickel-copper matte produced at Falconbridge is exported to Norway for refining. Mines in northern Quebec account for 26 p.c. of Canada's copper output. These ores are treated at Noranda to produce copper anodes which are shipped to Montreal for refining. Mines in the Flin Flon area of northern Manitoba and Saskatchewan accounted for 16 p.c. of the 1952 copper production. As already mentioned, Sherritt Gordon Mines Limited ceased operations completely at Sherridon, Man., in September 1951 and expect to be in full operation at Lynn Lake, Man., in the latter part of 1953. Lynn Lake copper concentrates will be processed at Fort Saskatchewan, Alta., where a $17,000,000 refinery is under construction, also scheduled for operation in the last quarter of 1953. British Columbia mines account annually for about 8 p.c. of Canada's copper, and concentrates produced in that area are exported to the United States for treatment. Concentrates from Newfoundland, amounting to about 1 p.c. of the total, are exported to Belgium and to the United States.

Output of refined copper at 197,000 tons in 1952 was about 20 p.c. below the 1951 production. Because of a strike at a Montreal refinery, some blister anodes were exported to the United States for refining.

The use of refined copper in Canada in 1952 was estimated at 132,000 tons, about 60 p.c. being rolled into wire rods and 40 p.c. utilized for brass, bronze and miscellaneous purposes. Exports amounted to 114,000 tons, a 6-p.c. increase over the 107,000 tons exported in the previous year. Shipments to the United Kingdom dropped to 41,600 tons from 52,000 tons in 1951.

7.—Copper Production, by Province, with Total Value, 1943-52

NOTE.—Figures for 1866-1910, inclusive, will be found in the 1916-17 Year Book, p. 272; for 1911-28 in the 1939 edition, p. 335; and for 1929-42 in the 1946 edition, p. 331.

Year	Newfoundland	Quebec	Ontario	Manitoba	Saskatchewan	British Columbia	Canada	
							Quantity	Value
	tons	tons	tons	tons	tons	tons	tons	$
1943	...	65,582	138,920	19,007	42,974	21,112	287,595	67,170,601
1944	...	54,027	142,654	21,939	36,757	18,152	273,535[1]	65,257,172[1]
1945	...	51,342	119,726	20,563	32,950	12,876	237,457	59,322,261
1946	...	34,899	89,712	19,250	31,356	8,750	183,968	46,632,093
1947	...	42,561	113,934	15,316	33,151	20,900	225,862	91,541,888
1948	...	48,813	120,383	18,960	31,074	21,502	240,732	107,159,756
1949	3,617	67,822	113,042	16,960	34,960	27,055	263,457	104,719,151
1950	3,221	72,891	117,210	20,817	28,982	21,086	264,209	123,211,407
1951	2,899	68,866	128,808	15,839	31,625	21,932	269,971[1]	149,026,216[1]
1952p	2,848	68,299	124,737	9,190	30,356	21,857	257,707[2]	147,849,770[2]

[1] Includes 6 tons valued at $1,428 produced in N.W.T. in 1944 and 1 ton valued at $536 in 1951. [2] Includes 416 tons valued at $237,387 produced in Nova Scotia and 2 tons valued at $1,427 produced in N.W.T.

Gold.—Despite a drop in value in 1952 of $10,400,000 to $151,500,000, gold was still Canada's leading mineral although it exceeded nickel only by a very narrow margin. Quantity production was up slightly to 4,420,000 oz. t. from 4,393,000 oz. t. in 1951. However, because of the favourable exchange position of the Canadian dollar in relation to the United States dollar, the price realized by gold producers in Canada averaged only $34.27 per oz. t. in 1952 compared with $36.85 per oz. t. in 1951. Beginning at $35.19 per oz. t. in January, the price, in Canadian dollars, declined to a low of $33.59 in September and closed out the year at $33.97. Gains in output of 16 p.c. in the Northwest Territories and 4 p.c. in Quebec more than offset slight declines in Ontario and the other producing provinces. Ontario's mines accounted for 55·6 p.c. of the total output and Quebec's mines for 25·1 p.c.

8.—Quantity and Value of Gold Produced, by Province, 1943-52

NOTE.—Values are calculated at world prices in Canadian funds. Figures for 1862-1910, inclusive, will be found in the 1916-17 Year Book, pp. 268-270; for 1911-28 in the 1939 edition, pp. 336-337; and for 1929-42 in the 1946 edition, p. 332.

Year	Newfoundland		Nova Scotia		Quebec		Ontario	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	oz. t.	$	oz. t.	$	oz. t.	$	oz. t.	$
1943	...	...	4,129	158,967	922,533	35,517,521	2,117,215	81,512,777
1944	...	...	5,840	224,840	746,784	28,751,184	1,731,836	66,675,686
1945	...	...	3,291	126,704	661,608	25,471,908	1,625,368	62,576,668
1946	...	...	4,321	158,797	618,339	22,723,958	1,813,333	66,639,988
1947	...	...	1,271	44,485	598,127	20,934,445	1,944,819	68,068,665
1948	...	...	188	6,580	770,625	26,971,875	2,095,377	73,338,195
1949	9,269	333,684	64	2,304	964,184	34,710,624	2,354,509	84,762,324
1950	9,254	352,115	65	2,473	1,094,645	41,651,242	2,481,110	94,406,236
1951	8,515	313,778	17	626	1,067,306	39,330,226	2,462,979	90,760,776
1952p	8,030	275,188	1,564	53,598	1,109,677	38,028,631	2,458,359	84,247,963

Year	Manitoba		Saskatchewan		Alberta		British Columbia	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	oz. t.	$	oz. t.	$	oz. t.	$	oz. t.	$
1943	91,775	3,533,337	174,090	6,702,465	21	808	241,346	9,291,821
1944	74,168	2,855,468	122,782	4,727,107	51	1,963	196,857	7,578,994
1945	70,655	2,720,218	108,568	4,179,868	7	269	186,854	7,193,879
1946	79,402	2,918,024	112,101	4,119,712	110	4,042	136,242	5,006,893
1947	72,906	2,551,710	93,747	3,281,145	78	2,730	249,011	8,715,385
1948	106,176	3,716,160	87,927	3,077,445	78	2,730	306,998	10,744,930
1949	137,399	4,946,364	94,208	3,391,488	115	4,140	304,307	10,955,052
1950	191,725	7,295,136	79,784	3,035,781	152	5,784	290,490	11,053,144
1951	163,914	6,040,231	110,216	4,061,460	97	3,574	289,992	10,686,205
1952p	142,003	4,866,443	89,190	3,056,541	88	3,016	285,545	9,785,627

Year	Yukon Territory		Northwest Territories		Canada	
	Quantity	Value	Quantity	Value	Quantity	Value
	oz. t.	$	oz. t.	$	oz. t.	$
1943	41,160	1,584,660	59,032	2,272,732	3,651,301	140,575,088
1944	23,818	916,993	20,775	799,838	2,922,911	112,532,073
1945	31,721	1,221,258	8,655	333,218	2,696,727	103,823,990
1946	45,286	1,664,260	23,420	860,685	2,832,554	104,096,359
1947	47,745	1,671,075	62,517	2,188,095	3,070,221	107,457,735
1948	60,614	2,121,490	101,625	3,556,875	3,529,608	123,536,280
1949	81,970	2,950,920	177,493	6,389,748	4,123,518	148,446,648
1950	93,339	3,551,549	200,663	7,635,227	4,441,227	168,988,687
1951	77,504	2,856,022	212,211	7,819,975	4,392,751	161,872,873
1952p	78,869	2,702,841	246,245	8,438,816	4,419,570	151,458,664

Iron Ore.—Production of iron ore in 1952 at 5,200,000 tons was the largest on record, being about 11 p.c. over the 1951 figure. This gain was almost all accounted for by an increase in shipments from British Columbia mines. The tonnage mined in Newfoundland and Ontario decreased about 5 p.c. to 1,600,000 tons and 2,700,000 tons, respectively.

Developments under way in the iron-ore industry give promise of greatly increased production within the next few years. The Wabana mine in Newfoundland was closed down on Apr. 1, 1953, in order that radical improvements might be made in production methods. Operations on an increased scale will be commenced later in the year. In Ontario, heavy development programs were prosecuted in the Steep Rock and Michipicoten fields during 1952 and production gains will be registered in the near future. There is definite evidence that Ontario is becoming a major source of iron ore and that other fields will be added to those now in production, including the low-grade deposit near Marmora in eastern Ontario which will be producing in 1954. Most encouraging progress is being made in the enormous task of developing the Quebec-Labrador iron deposits for production, a project involving the expenditure of $200,000,000. Its initial objective of 10,000,000 tons annually is expected to begin in 1954. New deposits of medium-grade iron ore have been discovered near Ungava Bay, nearly 1,000 miles north of Quebec city. The area is stated to possess almost unlimited tonnage, mainly on the surface and easily mined.

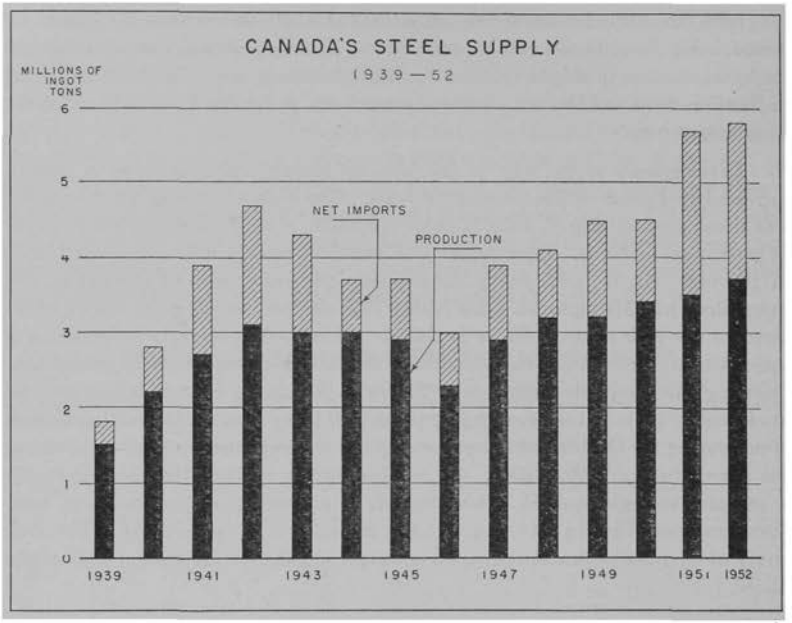
Exports from Canadian iron mines totalled 3,800,000 tons in 1952, including 700,000 tons to the United Kingdom, 337,000 tons to Germany, 794,000 tons to Japan and 2,000,000 tons to the United States. Imports were in excess of 4,000,000 tons, mostly from the United States.

9.—Iron-Ore Shipments and Production of Pig-Iron, Ferro-Alloys and Steel Ingots and Castings, 1943-52

NOTE.—Figures for 1886-1910, inclusive, will be found in the 1936 Year Book, p. 373; for 1911-28 in the 1939 edition, p. 340; and for 1929-42 in the 1946 edition, p. 333.

Year	Iron-Ore Shipments from Canadian Mines	Production of Pig-Iron			Production of Ferro-Alloys	Production of Steel Ingots and Castings
		Nova Scotia	Ontario	Canada		
	short tons	short tons	short tons	short tons	short tons	short tons
1943	641,294	345,722	1,412,547	1,758,269	197,094	3,004,124
1944	553,252	395,802	1,456,826	1,852,628	182,428	3,024,410
1945	1,135,444	374,302	1,403,647	1,777,949	178,214	2,877,927
1946	1,549,523	317,180	1,089,072	1,406,252	137,822	2,327,283
1947	1,919,366	354,789	1,606,787	1,962,848[1]	227,123	2,945,952
1948	1,337,244	438,430	1,687,309	2,125,739	232,734	3,200,480
1949	3,675,096	472,885	1,681,600	2,154,485	202,092	3,190,377
1950	3,605,261	513,029	1,804,092	2,317,121	180,499	3,383,575
1951	4,680,510	485,900	2,066,993	2,552,893	266,252	3,568,720
1952[p]	5,205,058	395,262	2,286,803	2,682,065	232,036	3,721,692

[1] Includes production of 1,272 tons in British Columbia.



Lead.—Although lead production in British Columbia, the principal producing province, was slightly lower in 1952 than in 1951, substantial advances in other areas brought about an over-all increase of 4 p.c. The total production, which includes refined lead and recoverable lead in ores and concentrates exported, was 164,879 tons in 1952 as compared with 158,231 tons in 1951. Newfoundland showed an increase of 12 p.c. to 18,348 tons, Quebec an increase of 34 p.c. to 10,401 tons and Yukon Territory an advance of 45 p.c. to 9,123 tons. Nova Scotia had a production of 871 tons in 1952, the first since 1939.

The Canadian price for refined lead was 19·50 cents per lb. in January 1952, dropping to 15·98 in May, 14·08 in October and 13·50 in December. Because of these recessions, the value of output, amounting to $53,300,000, was about 8 p.c. below the 1951 total.

Exports of refined lead increased to 130,000 tons in 1952 from 106,000 tons in 1951. Shipments to the United States rose to 100,000 tons from 60,000 tons in 1951 while sales to the United Kingdom dropped to 27,000 tons from 35,000 tons.

10.—Quantity and Value of Lead Produced from Canadian Ores, 1943-52

NOTE.—Figures for 1887-1910, inclusive, will be found in the 1929 Year Book, p. 367; for 1911-28 in the 1939 edition, p. 341; and for 1929-42 in the 1946 edition, p. 333.

Year	Quantity	Value	Year	Quantity	Value
	tons	$		tons	$
1943	222,030	16,670,041	1948	167,251	60,344,146
1944	152,291	13,706,199	1949	159,775	50,488,879
1945	173,497	17,349,723	1950	165,697	47,886,452
1946	176,987	23,893,230	1951	158,231	58,229,146
1947	161,668	44,200,124	1952P	164,879	53,321,978

Nickel.—About 90 p.c. of the world's nickel comes from the Sudbury area in northern Ontario. There are two large operators in this district, International Nickel Company of Canada Limited which has a smelter at Copper Cliff and a nickel refinery at Port Colborne, Ont., and Falconbridge Nickel Mines Limited which operates a smelter at the mine site but exports the matte to Norway for refining. Some nickel was recovered in the form of oxides and salts from cobalt ores treated at the Deloro smelter of Deloro Smelting and Refining Company.

Output of nickel in all forms in 1952 was 140,000 tons compared with 138,000 tons in 1951, including refined nickel, nickel in oxide and the recoverable nickel in matte shipped for export. The 1952 figure was close to the record of 144,000 tons produced in 1943. Because of the exchange situation, the average price for refined nickel at 55 cents per lb., Canadian funds, was slightly lower than for 1951 so that the output value of $150,900,000 was slightly below the 1951 total.

Exports of refined nickel in 1952 totalled 77,000 tons, going mostly to the United States. Shipments of nickel in matte and oxide for export amounted to 65,000 tons including 28,000 tons to the United Kingdom, 21,000 tons to the United States and 15,000 tons to Norway. Canadian consumption of refined nickel amounts to about 2,500 tons annually.

11.—Quantity and Value of Nickel Produced, 1943-52

NOTE.—Figures for 1889-1910, inclusive, will be found in the 1929 Year Book, p. 368; for 1911-28 in the *1939 edition, p. 342; and for 1929-42 in the 1946 edition, p. 333.*

Year	Quantity	Value	Year	Quantity	Value
	tons	$		tons	$
1943	144,009	71,675,322	1948	131,740	86,904,235
1944	137,299	69,204,152	1949	128,690	99,173,289
1945	122,565	61,982,133	1950	123,659	112,104,685
1946	96,062	45,385,155	1951	137,903	151,269,994
1947	118,626	70,650,764	1952p	140,007	150,908,900

Metals of the Platinum Group.—This group of metals includes platinum, palladium, rhodium, ruthenium, osmium and iridium. These metals occur in the nickel-copper ore of the Sudbury district and are recovered in the tank residues from the nickel refinery at Port Colborne, Ont. The crude residues are sent to Acton, England, for refining. The large increase in the output of nickel-copper ores has made Canada the leading producer of platinum since 1934, when it displaced the U.S.S.R. The industrial uses of the platinum metals have expanded considerably in recent years, particularly in electrical and chemical equipment, in jewellery and in medical and dental appliances. Canada produced 269,900 oz. t. of platinum metals with a total value of $18,048,182 in 1952.

12.—Quantity and Value of Platinum and Palladium[1] Produced, 1943-52

NOTE.—Records of the platinum production in Canada go back to 1887 but, prior to 1921, the amounts were comparatively small and the basis of calculation was not comparable with that now used. Figures for 1921-39 will be found in the 1940 Year Book, p. 340, and for 1940-42 in the 1951 edition, p. 513.

Year	Platinum		Palladium[1]		Year	Platinum		Palladium[1]	
	oz. t.	$	oz. t.	$		oz. t.	$	oz. t.	$
1943	219,713	8,458,951	126,004	5,233,068	1948	121,404	10,622,850	148,343	6,295,132
1944	157,523	6,064,635	42,929	1,960,085	1949	153,784	11,603,002	182,233	8,289,915
1945[2]	208,234	8,017,010	458,674	18,671,074	1950	124,571	10,255,929	148,741	7,578,144
1946	121,771	7,672,791	117,566	5,162,801	1951	153,483	14,542,515	164,905	7,950,107
1947	94,570	5,582,467	110,332	4,387,740	1952p	120,300	10,736,775	149,600	7,311,407

[1] Includes also iridium, rhodium, ruthenium and osmium. [2] Figures include an accumulated revision for previous years.

Silver.—Silver production in 1952 at 24,376,000 oz. t. was the highest since 1930 and, except for that one year, it was greater than at any time since the period from 1909 to 1916 when operations in the Cobalt district were at their height. Renewed activity in that area brought about a notable increase in Ontario's output in recent years; that output amounted to 6,274,000 oz. t. in 1952 as compared with 2,563,000 oz. t. in 1949.

Silver mining is not a distinct industry in Canada as the silver-bearing minerals occur in association with other metals of economic value. Most of the metal is obtained from the treatment of base-metal ores although substantial amounts are recovered from gold-quartz ores and from alluvial gold deposits. In 1952, approximately 31 p.c. of Canada's silver came from British Columbia, 26 p.c. from Ontario, 17 p.c. from Quebec and 16 p.c. from Yukon Territory.

13.—Quantity of Silver Produced, by Province, with Total Value, 1943-52

NOTE.—Figures for 1887-1910, inclusive, will be found in the 1916-17 Year Book, p. 271; for 1911-28 in the 1939 edition, p. 345; and for 1929-42 in the 1946 edition, p. 334.

Year	Average Price per oz. t. (Canadian funds)	Newfoundland	Nova Scotia	Quebec	Ontario	Manitoba
	cts.	oz. t.	oz. t.	oz. t.	oz. t.	oz. t.
1943	45·84	...	144	2,212,115	2,671,320	587,279
1944	43·00	...	188	2,500,681	3,143,275	569,873
1945	47·00	...	112	2,149,570	3,185,369	533,883
1946	83·65	...	146	1,916,453	2,485,215	528,017
1947	72·00	...	97	2,134,189	2,342,032	424,365
1948	75·00	...	8	2,376,754	3,210,107	737,298
1949	74·25	585,966	3	3,250,578	2,562,859	554,266
1950	80·82	575,524	2	4,343,379	4,408,620	893,099
1951	94·55	534,519	1	4,154,290	4,520,094	613,141
1952p	83·52	584,505	100,668	4,265,858	6,274,359	397,923

Year	Saskatchewan	British Columbia	Yukon Territory	Northwest Territories	Canada[1]	
	oz. t.	oz. t.	oz. t.	oz. t.	oz. t.	$
1943	2,812,624	8,995,488	52,348	13,250	17,344,569	7,849,111
1944	1,735,773	5,631,572	32,066	13,677	13,627,109	5,859,656
1945	1,426,457	5,620,323	25,158	2,033	12,942,906	6,083,166
1946	1,498,496	6,078,419	31,230	6,112	12,544,100	10,493,139
1947	1,282,546	5,903,367	372,051	45,355	12,504,018	9,002,893
1948	1,323,900	6,717,908	1,718,618	25,382	16,109,982	12,082,487
1949	1,482,009	7,573,506	1,562,730	70,505	17,641,493	13,098,808
1950	1,207,796	8,528,107	3,202,779	62,111	23,221,431	18,767,561
1951	1,454,341	8,342,414	3,442,788	64,228	23,125,825	21,865,467
1952p	1,138,908	7,587,560	3,967,506	58,558	24,375,853	20,366,026

[1] Includes relatively small quantities produced in Alberta.

Zinc.—A record for zinc production was established in 1952 when 382,000 tons were produced, an amount 12 p.c. above the 1951 total. Output was higher in all producing provinces, the percentage gains being as follows: Newfoundland, 12; Quebec, 11; Manitoba and Saskatchewan, 12; British Columbia, 9; and Yukon Territory, 91. There was a substantial production in Nova Scotia for the first time since 1940. Owing to a reduction in the price of zinc, which averaged 17·46 cents per lb. for the year, the total value of production at $133,500,000 was about 2 p.c. below the 1951 value.

In 1952 about 167,000 tons of zinc were exported, 14 p.c. more than in 1951. The United Kingdom took the greater share, exports to that country amounting to 87,000 tons as compared with 55,000 in 1951. Shipments to the United States were 71,000 tons compared with 84,000 tons in 1951. The zinc content of ores and concentrates exported in 1952 totalled 182,000 tons, mostly from Eastern Canada to the United States but with some shipments to France, Belgium and the United Kingdom.

Output of refined zinc totalled 222,000 tons, nearly 7 p.c. above the 1951 figure, but consumption in Canada dropped 16 p.c. to about 51,000 tons.

14.—Quantity and Value of Zinc Produced, 1943-52

NOTE.—Figures for 1911-28 are given in the 1939 Year Book, p. 347, and for 1929-42 in the 1946 edition, p. 335.

Year	Quantity[1]	Value	Average Price per lb.	Year	Quantity[1]	Value	Average Price per lb.
	tons	$	cts.		tons	$	cts.
1943	305,377	24,430,174	4·00	1948	234,164	65,237,956	13·93
1944	275,412	23,685,405	4·30	1949	288,262	76,372,147	13·25
1945	258,607	33,308,556	6·44	1950	313,227	98,040,145	15·65
1946	235,310	36,755,450	7·81	1951	341,112	135,762,643	19·90
1947	207,863	46,686,010	11·23	1952p	382,056	133,459,938	17·46

[1] Estimated foreign smelter recoveries and refined zinc produced in Canada.

Subsection 4.—Production of Non-Metallic Minerals (Excluding Fuels)

The most important minerals in this group are asbestos, salt, gypsum and sulphur, but it also includes numerous other items such as peat moss, quartz, magnesitic dolomite, sodium sulphate, fluorspar, barite, nepheline syenite, feldspar, silica brick, mica, soapstone and talc, and graphite (*see* Tables 2 and 6).

Asbestos.—Production of asbestos was lower in tonnage but higher in value in 1952 than in 1951. Higher prices for the longer fibres accounted for the value gain. Quebec produced 943,000 tons in 1952 compared with 947,000 in 1951 and Ontario 23,000 tons compared with 27,000. Exports of asbestos were valued at $86,000,000 in 1952 and included 340,000 tons of milled fibres, 561,000 tons of shorts and 692 tons of crude.

Three new mills were under construction at the year-end, one at McDame Mountain, B.C., one at St. Adrien, Que., and the third at Lewis Brook, N'f'ld.

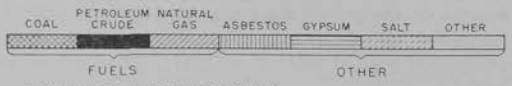
15.—Quantity and Value of Asbestos Produced, 1943-52

NOTE.—Figures for 1896-1910, inclusive, will be found in the 1911 Year Book, p. 424; for 1911-28 in the 1939 edition, p. 354; and for 1929-42 in the 1946 edition, p. 353.

Year	Quantity	Value	Year	Quantity	Value
	tons	$		tons	$
1943	467,196	23,169,505	1948	716,769	42,231,475
1944	419,265	20,619,516	1949	574,906	39,746,072
1945	466,897	22,805,157	1950	875,344	65,854,568
1946	558,181	25,240,562	1951	973,198	81,584,345
1947	661,821	33,005,748	1952p	966,382	88,823,271

PRODUCTION OF NON-METALLIC MINERALS

1929 – 52



MILLION $

400

350

300

250

200

150

100

50

0

PERCENTAGE DISTRIBUTION OF PRODUCTION OF NON-METALLIC MINERALS BY PROVINCES

Salt.—Salt is obtained from brine wells in the Provinces of Ontario, Manitoba and Alberta, but in Nova Scotia it is recovered by mining rock-salt and by evaporation from brine. Domestic production is sold principally to the dairy, meat-curing and canning industries, to fisheries, to highways and transport departments, to agriculturists for use as a soil sweetener, to chemical industries, and as table salt. About 50 p.c. of the salt production is used in making caustic soda, soda ash and related chemicals.

16.—Quantity of Salt Produced, by Province, with Total Value, 1943-52

NOTE.—Figures for the years 1926-42 are given in the 1946 Year Book, p. 354.

Year	Nova Scotia	Ontario	Manitoba	Saskatchewan	Alberta	Canada	
	tons	tons	tons	tons	tons	tons	$
1943	47,775	594,889	27,523	—	17,499	687,686	4,379,378
1944	38,809	603,806	27,267	—	25,335	695,217	4,074,021
1945	37,825	578,697	27,133	—	29,421	673,076	4,054,720
1946	38,371	441,679	26,166	—	31,769	537,985	3,626,165
1947	40,107	633,766	24,974	—	29,698	728,545	4,436,930
1948	61,799	619,598	25,251	—	34,613	741,261	4,836,028
1949	86,612	607,206	18,734	8,103	28,359	749,015	5,566,725
1950	101,930	696,582	16,592	18,186	25,606	858,896	7,011,306
1951	127,252	772,585	16,778	28,192	19,718	964,525	7,905,977
1952p	149,924	766,083	18,000	34,000	24,000	992,007	7,507,315

Gypsum.—The use of gypsum in the building trades has increased rapidly and Canada has extensive deposits of gypsum favourably situated for commercial development. A production peak was reached in 1951 at 3,803,000 tons, the 1952 output being slightly lower. Nova Scotia produces approximately 85 p.c. of the Canadian annual output, most of which is exported to the United States in crude form.

17.—Quantity of Gypsum Produced, by Province, with Total Value, 1943-52

NOTE.—Figures for 1926-42 are given in the 1943-44 Year Book, p. 321.

Year	Nova Scotia	New Brunswick	Ontario	Manitoba	British Columbia	Canada	
	tons	tons	tons	tons	tons	tons	$
1943	255,736	36,263	92,448	37,989	24,412	446,848	1,381,468
1944	401,284	42,040	90,288	38,330	24,222	596,164	1,511,978
1945	634,960	46,755	92,174	42,275	23,617	839,781	1,783,290
1946	1,538,738	38,839	122,524	63,187	47,649	1,810,937	3,671,503
1947	2,137,704	65,939	155,249	79,356	58,736	2,496,984	4,734,853
1948	2,795,848	61,534	182,303	94,698	82,426	2,216,809	5,548,245
1949	2,555,795	80,436	203,187	94,918	79,913	3,014,249	5,423,690
1950	3,185,199	82,641	199,314	114,555	84,627	3,666,336	6,707,506
1951	3,190,030	109,469	262,581	134,704	105,908	3,802,692	5,880,853
1952p	2,968,537	107,840	286,392	134,780	87,268	3,592,917[1]	6,073,389[1]

[1] Includes 8,100 tons valued at $56,700 produced in Newfoundland.

Sulphur.—Sulphur production, including the content of smelter gases used for making sulphuric acid and liquid sulphur dioxide, the sulphur in pyrite, and elemental sulphur amounted to 441,000 tons in 1952. The two plants in Alberta that commenced production of sulphur from natural gas during 1952 have a combined capacity of 20,000 tons of high-grade sulphur annually. A new unit at Copper

Cliff, Ont., which produces liquid sulphur dioxide from smelter gases, also came into operation toward the end of 1952 with a potential annual capacity of 90,000 tons of sulphur dioxide. A plant has been completed at Arvida, Que., which will make about 45,000 tons of sulphuric acid yearly from gases derived from the roasting of zinc concentrates. In addition, plans are under way for the erection of a plant near Niagara Falls, Ont., to utilize pyrite to make about 50 tons of elemental sulphur and 300 tons of sulphuric acid daily, and a new fertilizer plant is being built at Kimberley, B.C., which will require a sulphuric acid plant with a capacity of about 300 tons daily.

18.—Quantity and Value of Sulphur Produced, 1943-52

NOTE.—Figures for 1926-42 are given in the 1946 Year Book, p. 355.

Year	Quantity	Value	Year	Quantity	Value
	tons	$		tons	$
1943	257,515	1,753,425	1948	229,463	1,836,358
1944	248,088	1,755,739	1949	261,871	2,039,384
1945	250,114	1,881,321	1950	301,172	2,189,660
1946	234,771	1,784,666	1951	371,790	3,120,785
1947	221,781	1,822,867	1952p	441,271	4,096,615

Subsection 5.—Production of Fuels

Coal.—Information on the coal reserves of Canada is given in the 1950 Year Book, pp. 516-518.

In 1952, coal production was lower in all the principal producing areas compared with the previous year. In Alberta the decline amounted to nearly 7 p.c., in Nova Scotia to 8 p.c., in Saskatchewan 9 p.c., and in British Columbia 7 p.c. Increases in output were recorded for New Brunswick and Yukon Territory only. Total production for Canada declined 7 p.c. but increased prices resulted in a slightly higher value.

19.—Coal Production, by Province, with Total Value, 1943-52

NOTE.—Figures for 1874-1910, inclusive, will be found in the 1911 Year Book, p. 419; for 1911-28 in the 1939 edition, p. 348; and for 1929-42 in the 1946 edition, p. 347.

Year	Nova Scotia	New Brunswick	Saskatchewan	Alberta	British Columbia	Yukon Territory	Canada	
	tons	tons	tons	tons	tons	tons	tons	$
1943	6,103,085	372,873	1,665,972	7,676,726	2,039,402	—	17,859,057[1]	62,877,549
1944	5,745,671	345,123	1,372,766	7,428,708	2,134,231	—	17,026,499	70,433,169
1945	5,112,615	361,184	1,532,995	7,800,151	1,699,768	—	16,506,713	67,588,402
1946	5,452,898	366,735	1,523,786	8,826,239	1,636,792	—	17,806,450	75,361,481
1947	4,118,196	345,194	1,571,147	8,070,430	1,763,899	—	15,868,866	77,475,017
1948	6,430,991	522,136	1,589,172	8,123,255	1,780,334	3,801	18,449,689	106,684,008
1949	6,181,779	540,806	1,870,487	8,616,855	1,906,963	3,156	19,120,046	110,915,121
1950	6,478,405	607,116	2,203,223	8,116,220	1,730,445	3,703	19,139,112	110,140,399
1951	6,307,629	653,439	2,223,318	7,659,[illegible]	[illegible]7,9[illegible]12	3,696	18,586,823	109,038,855
1952p	5,905,265	742,823	2,083,465	7,194,757	1,644,250	8,442	17,579,002	111,026,149

[1] Includes 999 tons produced in Manitoba.

20.—Imports[1] of Anthracite, Bituminous and Lignite Coal, 1943-52

NOTE.—Anthracite dust is included under anthracite coal. Figures for 1868-1910, inclusive, will be found in the 1911 Year Book, p. 420; for 1911-28 in the 1939 edition, p. 349; and for 1929-42 in the 1946 edition, p. 348.

Year	Anthracite		Bituminous[2]		Lignite		Totals[2]	
	tons	$	tons	$	tons	$	tons	$
1943	4,480,285	30,918,555	23,628,300	70,325,413	337	1,487	28,108,922	101,245,455
1944	4,452,991	33,417,990	24,270,692	79,718,988	171	1,038	28,723,854	113,138,016
1945	3,412,739	27,568,369	21,648,350	74,861,376	467	2,229	25,061,556[3]	102,431,974[3]
1946	4,631,387	41,987,460	21,475,040	78,366,184	172	776	26,106,599[3]	120,354,420[3]
1947	4,281,682	41,012,759	24,610,045	97,935,771	203	1,255	28,891,930[3]	138,949,785[3]
1948	5,244,837	56,380,098	25,614,443	129,929,580	14,632	78,073	30,873,912[3]	186,387,751[3]
1949	3,945,135	45,656,328	18,233,528	95,403,106	16,547	89,629	22,195,210[3]	141,149,063[3]
1950	4,286,383	54,285,320	22,660,969	120,443,963	7,471	34,848	26,954,823[3]	174,764,131[3]
1951	3,853,431	51,244,639	22,938,824	116,802,323	9,150	42,486	26,801,405[3]	168,089,448[3]
1952p	3,894,863	49,433,409	21,030,503	101,203,443	7,487	33,403	24,932,853[3]	150,670,255[3]

[1] Entered for consumption. [2] Includes coal ex-warehoused for ships' stores. [3] Canada also imported 142,435 tons of briquettes of coal or coke valued at $1,114,617 in 1945, 182,231 tons valued at $1,449,221 in 1946, 245,678 tons valued at $2,233,654 in 1947, 308,753 tons valued at $3,204,839 in 1948, 186,971 tons valued at $2,185,707 in 1949, 191,134 tons valued at $2,316,570 in 1950, 170,157 tons valued at $2,061,798 in 1951, and 155,597 tons valued at $1,868,619 in 1952.

21.—Exports of Coal Produced in Canada, 1943-52

NOTE.—Figures for 1868-1910, inclusive, will be found in the 1911 Year Book, p. 421; for 1911-28 in the 1939 edition, p. 349; and for 1929-42 in the 1946 edition, p. 348.

Year	Quantity	Value	Year	Quantity	Value
	tons	$		tons	$
1943	1,110,101	5,428,362	1948	1,273,262	11,555,985
1944	1,010,240	5,984,827	1949	432,043	3,563,892
1945	840,708	5,303,543	1950	394,961	3,198,040
1946	862,489	5,946,224	1951	435,083	3,495,664
1947	714,549	5,440,788	1952p	388,960	3,203,522

The sources of coal consumed in Canada in the years 1943–52 are shown in Table 22 and detailed figures of coal made available for consumption in 1951 and 1952 are given in Table 23; the difference between the totals of the two tables in the same year is accounted for by the fact that coal received may be held in bond at Canadian ports and not cleared for consumption until required, while coal received in previous years may be taken out of bond (cleared for consumption) in a later year. Normally, the coal made available for consumption is greater than the apparent domestic consumption, since coal is landed at Canadian ports and re-exported or ex-warehoused for ships' stores without being taken out of bond but, while remaining in bond at the port, it is available for domestic consumption if required.

22.—Consumption of Canadian and Imported Coal in Canada, 1943-52

NOTE.—Figures for 1886-1910, inclusive, will be found in the 1921 Year Book, p. 354; for 1911-28 in the 1939 edition, p. 350; and for 1929-42 in the 1946 edition, p. 349.

Year	Canadian Coal[1]		Imported Coal 'Entered for Consumption'				Grand Total	Consumption Per Capita[3]
			From United States	From United Kingdom	Total[2]			
	tons	p.c.	tons	tons	tons	p.c.	tons	tons
1943	16,321,006	37·1	27,303,776	391,475	27,695,098	62·9	44,016,104	3·73
1944	15,660,808	35·7	27,948,008	218,511	28,166,201	64·3	43,827,009	3·68
1945	15,227,819	38·3	24,505,241	28,388	24,521,528	61·7	39,749,347	3·29
1946	16,502,508	39·0	25,639,541	101,580	25,740,704	61·0	42,243,212	3·45
1947	14,673,967	34·0	28,410,149	52,777	28,462,242	66·0	43,136,209	3·45
1948	16,928,028	36·0	30,295,841	162,550	30,454,917	64·0	47,382,945	3·70
1949	18,104,626	45·3	21,501,583	331,457	21,833,057	54·7	39,937,683	2·97
1950	18,224,944	40·6	26,224,893	423,874	26,649,049	59·4	44,873,993	3·27
1951	17,571,154	39·8	26,232,211	291,656	26,523,921	60·2	44,095,075	2·92
1952p	16,749,416	40·5	24,248,804	356,032	24,603,789	59·5	41,353,205	2·87

[1] The sum of Canadian coal mines' sales, colliery consumption, coal supplied to employees and coal used in making coke, etc., less the tonnage of coal exported. [2] Includes small tonnages from countries other than the United Kingdom and the United States. Deductions have been made from this column to take account of foreign coal re-exported from Canada and bituminous coal ex-warehoused for ships' stores. [3] Figures based on estimates of population given at p. 129.

23.—Coal Made Available for Consumption in Canada, 1951 and 1952

NOTE.—For details by provinces, *see* DBS annual report, *The Coal Mining Industry*.

Grade	Canadian Coal				Coal Imported[1]		Coal Made Available for Consumption	
	Produced		Exported					
	1951	1952	1951	1952	1951	1952	1951	1952
	tons	tons	tons	tons	tons	tons	tons	tons
Anthracite	—	—	—	—	3,891,832	3,732,973	3,891,832	3,732,973
Bituminous	13,363,488	12,679,402	303,667	246,144	22,459,357	20,697,298	35,519,178	33,130,556
Subbituminous	3,000,017	2,816,135	294	133	—	—	2,999,723	2,816,002
Lignite	2,223,318	2,083,465	957	515	—	—	2,222,361	2,082,950
Totals	**18,586,823**	**17,579,002**	**304,918**	**246,792**	**26,351,189**	**24,430,271**	**44,633,094**[2]	**41,762,481**[2]

[1] Coal reaching Canadian ports whether or not it is cleared through customs. [2] Exclusive of 134,928 tons of imported briquettes in 1951 and 104,553 tons in 1952.

Petroleum.—A special article on the Canadian Crude Petroleum Situation up to the end of 1951 is given in the 1952-53 Year Book, pp. 524-527. The following article extends the survey to the end of 1952. A special article on the construction of pipelines in Canada will be found in the Transportation Chapter of this volume.

CANADIAN CRUDE PETROLEUM SITUATION*

During 1952, significant progress was made in establishing new crude oil reserves in the Prairie Provinces. The long-established fields like Turner Valley, 35 miles southwest of Calgary, where the discovery of crude oil in 1936 caused an upsurge of drilling activity, continued to produce at a declining rate. However, the production from the older fields is now a relatively small part of the yield that has resulted from the newer fields found following the discovery of Leduc in 1947.

* Prepared by Dr. G. S. Hume, Director General of Scientific Services, Department of Mines and Technical Surveys, Ottawa.

Since Leduc began to produce there has been an ever-increasing tempo to exploration activity both in the number of geological and geophysical surveys followed by drilling and in the extent of the areas under active development. Exploration activity necessarily slows down during the winter but, so far, each seasonal decline has been succeeded by a period of even greater activity than at any previous time. This has resulted in larger sums of money being risked in the drilling of more wildcat wells and in more discoveries being made in a region now extending across the whole of the prairies and northwestward into northeastern British Columbia and into the southern part of the Northwest Territories, south and west of Great Slave Lake.

Although Leduc was the first major discovery in the present surge of exploration, the area surrounding it continues to be quite active. The Woodbend field, discovered late in 1947 on the north side of the North Saskatchewan River opposite the Leduc field, has been found to be a continuation of that field, and a northward trend for the productive Devonian reef formation was indicated by the discovery in 1950 of the Acheson field, west of Edmonton. To the south of the Leduc field a number of small isolated Devonian reef fields have been found but the trend of the reef, slightly southwest from Leduc, was indicated by the discovery of the Wizard Lake field in 1951 and the Bonnie Glen field, a few miles farther south, late in the same year. This trend was confirmed by more drilling at Bonnie Glen in 1952 and by developments to the southwest in the Pigeon Lake area. Early in 1953 the trend was extended still farther to Homeglen, 30 miles from the southern part of the Leduc field and 14 miles south and slightly west of the Pigeon Lake area.

Thus, this trend has now been extended for a length of more than 60 miles and the oil contained within the various fields that comprise it amounts to several hundred million barrels. In fact, the Bonnie Glen-Pigeon Lake discoveries in 1952 added about 250,000,000 bbl. of recoverable reserves to 50,000,000 bbl. in the Wizard Lake field, 230,000,000 bbl. in the Leduc field, and 66,000,000 bbl. in the Stony Plain-Acheson field, placing the total so far discovered on this trend at some 600,000,000 bbl. This is about 100,000,000 bbl. less than the original recoverable reserves in the Redwater field, 30 miles northeast of Edmonton, found in 1948 and now almost wholly drilled on 40-acre spacing. The Redwater oil field, so far the largest found in Western Canada, comprises more than 37,000 acres and has about 925 wells producing or capable of production.

The other major reef trend in Alberta under active development extends from south of Camrose through Stettler, Caprona, and Big Valley to Drumheller on Red Deer River, a distance of about 100 miles. To the north and slightly west of Camrose is the Camrose-Armena field and, about 10 to 15 miles farther north, the Joseph Lake field. Both of these produce oil from the Upper Cretaceous Viking sand rather than from the deeper Devonian reef limestone. This shallower productive sand has been particularly prolific in natural gas yield in other areas, as in the Viking-Kinsella field which supplies Edmonton and other cities and towns as far south as Red Deer. In 1952 there were several important discoveries on the Stettler-Big Valley reef trend, including Malmo at Red Deer Lake, perhaps the most significant being the gas-distillate field at Nevis, 12 miles west of Stettler. There are now several wells of high potential yield in this area and the natural gas reserves are expected to be large. There is also some oil in the field but the wells are shut in pending the development of a market for the gas.

In addition to these discoveries on the two outstanding reef trends, there were numerous discoveries in 1952 in other areas of Alberta that bear no particular structural relationship to one another. A few miles northwest of Edmonton, oil was found in the St. Albert area, and at Sturgeon Lake about 200 miles northwest in the Peace River area, a discovery was made in a Devonian reef that is of more than ordinary interest in that it means a field in the Peace River area of the same type as Leduc, Redwater, and the other more southerly reef fields. The extent of the Sturgeon Lake reef area cannot be judged as yet but there can be no doubt of its importance. Its discovery has led to renewed interest in the Peace River area and will result in much drilling activity.

In Saskatchewan, there has been much more exploration activity than previously and several new oil fields were discovered in 1952. In the southwestern part of the Province there has been a very considerable extension of the Coleville field and new pools at Midway, Cantuar, Success and Java have been found in the general vicinity of the Fosterton field. The oil from these areas is heavier than the reef oil from the Alberta fields and all production is from formations younger than the Devonian. In the Coleville field the production is of Mississippian age but the producing beds are somewhat older than the productive Turner Valley Rundle limestone. In the Midway field the production comes from a Jurassic sand which overlies the Mississippian, and in the Cantuar and Success fields production is from still younger Lower Cretaceous beds. Jurassic oil has also been found in the Eastend area, 65 miles south of Fosterton. In 1952, a further discovery of medium heavy oil, also from Jurassic sands, was made at Frontier, 15 miles south of Eastend, and still another at Rapdan about five miles east of Eastend.

In the southeastern part of Saskatchewan, an oil discovery at Wapella, about 20 miles west of the Manitoba boundary, appears to be of considerable importance. Subsequent drilling has revealed that oil occurs not only in the Lower Cretaceous, as in the discovery well, but is present also in this field in Jurassic sands. Perhaps the most spectacular find in Saskatchewan, however, was made in the Forget area, about 60 miles southwest of Wapella. Production in this discovery was made in Mississippian beds of similar age as those that produce in the Daly field at Virden in Manitoba. Some light oil has been found at Driver, near the Coleville field, and at Ratcliffe, 40 miles south and slightly west of Weyburn. In the Ratcliffe area two wells have shown considerable promise although the present yield is small.

In Manitoba, the Daly field at Virden has been expanded and in 1952 discoveries were made at Linklater near the Saskatchewan boundary, at Tilston 12 miles south of Linklater, and at Waskada in the extreme south of the Province. All of these discoveries are in Mississippian strata. The Tilston discovery was the first flowing well in Manitoba and hence gives promise of being of greater importance than the others. Considerable water was present with the oil in the Waskada well. Another small discovery was made at a well near Coulter, also in the extreme southwest part of the Province, and still another at Lulu Lake on the top of Turtle Mountain.

Manitoba now has a production of more than 1,000 bbl. a day and, although no discovery to date in the Province rates as high as Forget in Saskatchewan, 65 miles west of the Manitoba-Saskatchewan boundary, the whole of southwestern Manitoba and southeastern Saskatchewan has become a region of intense interest because it is 600 miles closer to the eastern market than are the fields in the Edmonton area.

In 1952 there were 1,573 wells drilled in Alberta, 488 in Saskatchewan, 74 in Manitoba and 15 in northeastern British Columbia, a total of 2,150. Many of these were development wells drilled within the boundaries of oil fields. Consequently, 1,177 new oil wells were completed, of which 922 were in Alberta, 214 in Saskatchewan, and 40 in Manitoba; one in British Columbia has not been produced. There were also 138 dry gas wells, of which 121 were in Alberta and 17 were in Saskatchewan. In addition, there were 27 wet gas wells containing distillate—17 in Alberta and 10 in British Columbia. The number of dry holes drilled was 808, of which 513 were in Alberta, 257 in Saskatchewan, 34 in Manitoba, and 4 in British Columbia.

In 1952, there was some exploratory activity in the Northwest Territories west and south of Great Slave Lake. Several wells were drilled, in some of which oil shows were found but no well had sufficient oil to produce. However, the results are encouraging for further exploration. The only production in the Northwest Territories at present is from the Norman Wells field where the oil is refined for local use and for mining enterprises in the Territories. In 1952, production from the Norman Wells field was 301,000 bbl., an increase of nearly 73,500 bbl. over 1951.

The year 1952 was important in the development of new markets for oil from Western Canada in that work began on the building of a new oil pipeline from the Edmonton area to Vancouver across the Cordillera. When completed in 1953, the line will have an initial capacity of 120,000 bbl. a day, and extensions of the line to new refineries in the State of Washington are already planned. Also during the year an announcement was made by Interprovincial Pipeline Company that the pipeline now terminating at Superior, Wisconsin, would be extended along the south shore of Lake Superior, across Mackinac Straits at the north end of Lake Michigan, and thence to Sarnia. This line will be 30 inches in diameter and will be capable of handling 300,000 bbl. a day. This is more than the capacity of the line now terminating at Superior so that the original line to Superior will be duplicated to bring its capacity to the necessary amount. Imperial Oil Limited built three large tankers to handle the oil from Superior to Sarnia during the navigation season and British American Oil Company Limited built a tanker to supply its refineries in Central Canada. The proposed pipeline will make it possible to deliver oil to the Sarnia area on a year-round basis uninterrupted by winter conditions.*

The building of pipeline outlets from the Prairie Provinces, as proposed, will make it possible to produce oil in amounts up to about 600,000 bbl. a day. During 1952, peak production exceeded 200,000 bbl. a day and there was potential production of possibly 300,000 bbl. a day. Thus, the new outlets will allow considerable expansion, a situation quite in harmony with the excellent prospects for further discoveries.

Oil production continues in relatively small amounts in Ontario and New Brunswick. In 1952, Ontario produced 192,000 bbl. as compared with 197,171 bbl. in 1951, and New Brunswick yielded 14,500 bbl. compared with 15,551 bbl. In Gaspe the search for oil is being continued but there is no production at present. Some further interest has also been shown in the prospects of the sedimentary basin south and west of Hudson and James Bays but no drilling was done in 1953 in actual prospecting. Information as to the thickness and character of the sediments has been obtained by drilling done by the Ontario Department of Mines.

* More detailed information regarding Canadian oil and gas pipelines is given in the Transportation Chapter (*see* Index.)

In 1952, Canadian crude oil production totalled 60,864,500 bbl., an increase of 27·8 p.c. over the 1951 production of 47,615,534 bbl. Western Canada accounted for 99 p.c. of the total with Alberta yielding 58,677,000 bbl. or 96 p.c. There was an increase in Saskatchewan in 1952 with a yield of 1,600,000 bbl., and Manitoba, which had no production previous to 1951, showed a yield of 80,000 bbl.

Thus, the main expansion in oil production has been in the Prairie Provinces and, with drilling activity at a high rate, it is expected that further discoveries will be made in 1953 and that the increase in yield over 1952 will be substantial.

24.—Quantity and Value of Crude Petroleum Produced, by Province, 1943-52

NOTE.—Figures for 1936-42 will be found in the 1948-49 Year Book, p. 476.

Year	New Brunswick	Ontario	Saskatchewan	Alberta	Northwest Territories	Canada
	QUANTITY					
	bbl.	bbl.	bbl.	bbl.	bbl.	bbl.
1943	24,530	132,492	—	9,601,530	293,750	10,052,302
1944	23,296	125,067	—	8,727,366	1,223,675	10,099,404
1945	30,140	113,325	14,374	7,979,786	345,171	8,482,796
1946	28,584	123,082	118,686	7,137,921	177,282	7,585,555
1947	23,129	131,295	540,117	6,770,477	227,474	7,692,492
1948	21,372	176,989	849,166	10,888,592	350,541	12,286,660
1949	19,544	260,670	782,188	20,087,418	155,528	21,305,348
1950	17,137	250,655	1,041,098	27,548,169	186,729	29,043,788
1951	15,551	197,171	1,249,281	45,915,384	227,449	47,615,534[1]
1952p	14,500	192,000	1,600,000	58,677,000	301,000	60,864,500[2]
	VALUE					
	$	$	$	$	$	$
1943	34,342	311,356	—	15,724,518	400,201	16,470,417
1944	32,832	296,420	—	14,468,061	632,587	15,429,900
1945	42,413	268,478	15,362	13,169,692	136,303	13,632,248
1946	40,018	291,719	135,990	14,347,933	173,392	14,989,052
1947	32,381	350,000	614,156	18,078,907	500,238	19,575,682
1948	29,920	608,109	976,541	35,127,751	676,574	37,418,895
1949	27,362	901,143	836,941	58,999,936	353,108	61,118,490
1950	23,992	892,000	1,134,797	82,216,492	352,656	84,619,937
1951	21,771	677,905	1,659,045	113,870,152	399,887	116,655,238[1]
1952p	20,300	660,480	2,080,000	139,886,000	529,760	143,372,540[2]

[1] Includes 10,698 bbl. valued at $26,478 produced in Manitoba. [2] Includes 80,000 bbl. valued at $196,000 produced in Manitoba.

Natural Gas Production.—Alberta accounts for almost 90 p.c. of Canada's production of natural gas. It is estimated that the total output for all provinces was almost 88,000,000,000 cu. feet in 1952, of which 79,000,000,000 cu. feet was from Alberta's wells. Ontario's production amounted to almost 8,000,000,000 cu. feet in 1952. (See also the special article on the construction of pipelines in Canada, Chapter XIX.

25.—Quantity and Value of Natural Gas Produced, by Province, 1943-52

NOTE.—Figures for 1920-28 are given in the 1940 Year Book, p. 347, and for 1929-42 in the 1946 edition, p. 350.

Year	New Brunswick		Ontario		Alberta		Canada[1]	
	M cu. ft.	$	M cu. ft.	$	M cu. ft.	$	M cu. ft.	$
1943	675,029	327,787	7,914,408	6,543,913	35,569,078	6,241,815	44,276,216	13,159,418
1944	702,464	341,636	7,082,508	4,694,097	37,161,570	6,339,817	45,067,158	11,422,541
1945	653,230	317,568	7,199,970	4,837,586	40,393,061	7,095,910	48,411,585	12,309,564
1946	541,010	262,441	7,051,309	4,656,528	40,097,096	7,184,006	47,900,484	12,165,050
1947	489,810	279,790	7,785,921	5,334,991	44,106,643	7,745,886	52,656,567	13,429,558
1948	420,352	287,446	8,590,429	6,958,247	48,965,217	8,324,087	58,603,269	15,632,507
1949	375,035	146,864	8,024,213	8,826,634	51,179,779	2,558,989	60,457,177	11,620,302
1950	361,877	214,665	8,009,488	3,203,795	58,603,976	2,930,199	67,822,230	6,433,041
1951	261,579	194,312	8,442,842	3,377,137	69,876,831	3,493,842	79,460,667	7,158,920
1952p	200,200	148,710	7,916,000	3,166,400	78,500,000	5,887,500	87,591,200	9,305,610

[1] Includes small amounts produced in Saskatchewan and the Northwest Territories.

Subsection 6.—Production of Structural Materials

Production of structural materials is dependent upon the activity of the construction industry; output in 1952 reached a record value of $164,046,644. This group includes clay and clay products (brick, drain tile, sewer pipe, etc.), cement, lime, sand, gravel and stone.

26.—Value of Structural Materials Produced, by Province, 1943-52

NOTE.—Figures for 1926-42 are given in the 1946 Year Book, p. 355.

Year	Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario
	$	$	$	$	$
1943	...	1,597,791	911,121	15,430,999	15,020,990
1944	...	1,081,805	1,637,409	14,597,540	15,716,361
1945	...	1,310,214	1,489,210	17,051,353	17,437,552
1946	...	1,671,504	1,817,401	22,615,910	24,293,081
1947	...	2,724,003	2,397,433	29,236,137	30,447,055
1948	...	3,419,820	2,456,778	39,415,625	35,208,061
1949	1,683,483	3,445,872	2,508,033	38,735,128	40,755,195
1950	1,619,068	3,370,622	7,597,036	42,586,473	49,701,917
1951	1,490,381	3,476,399	4,029,324	51,450,113	60,202,877
1952p	2,184,946	3,344,550	5,751,110	54,946,106	64,017,714

Year	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
	$	$	$	$	$
1943	2,288,339	932,412	2,661,834	3,166,768	42,010,254
1944	2,546,722	864,082	3,044,236	3,496,782	42,984,937
1945	3,212,917	834,564	3,305,941	3,777,922	48,419,673
1946	4,235,389	1,322,107	4,765,108	5,399,721	66,120,221
1947	4,772,908	1,632,625	4,726,752	8,639,872	84,576,785
1948	6,050,453	1,426,836	7,089,427	10,060,246	105,127,246
1949	5,791,820	2,341,354	6,963,395	11,678,799	113,903,079
1950	6,507,817	2,021,376	8,377,256	10,514,647	132,296,212
1951	7,487,168	2,490,726	9,322,492	11,384,311	151,333,791
1952p	7,986,543	2,357,072	11,330,176	12,128,427	164,046,644

Clay Products.—The sales value of clay products produced in 1952 was the highest recorded. Increases in Nova Scotia, Ontario and Alberta more than offset decreases in the other provinces. Common clays suitable for the production of building bricks and tile are found in all the provinces; production is greatest in Ontario and Quebec. Stoneware clays are produced largely from the Eastend and Willows areas in Saskatchewan and shipped to Medicine Hat, Alta., where, utilizing the cheap gas fuel, they are manufactured into stoneware, sewer pipe, pottery, tableware, etc. Stoneware clay also occurs in Nova Scotia and, although it has not been developed extensively for ceramic use, some is used for pottery. Two

large plants and a few small plants manufacture fireclay refractories from domestic clay in British Columbia, Saskatchewan and Nova Scotia. Deposits of high-grade, plastic, white burning clays occur in northern Ontario and deposits yielding high-grade china clay have been found along the Fraser River in British Columbia but these have not been used on a commercial scale. Ball clays of high bond strength occurring in the white mud beds of southern Saskatchewan have not been developed to any extent.

27.—Value (Total Sales) of Clay Products Produced, by Province, 1943-52

NOTE.—Figures for 1926-42 are given in the 1946 Year Book, p. 356.

Year	Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario
	$	$	$	$	$
1943	...	478,571	216,446	1,504,428	2,453,829
1944	...	402,694	207,051	1,881,791	2,347,396
1945	...	433,455	232,783	2,534,630	3,107,189
1946	...	671,466	336,971	3,457,168	4,288,780
1947	...	752,126	381,184	4,257,423	5,289,528
1948	...	1,031,685	434,772	5,123,908	6,563,754
1949	25,450	1,053,845	515,767	5,580,421	7,435,439
1950	31,089	1,126,969	681,139	6,324,387	9,323,263
1951	32,183	1,202,428	740,861	6,776,430	10,484,341
1952p	27,260	1,210,865	656,000	6,742,609	11,252,285

Year	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
	$	$	$	$	$
1943	132,382	348,725	978,649	495,163	6,608,193
1944	197,383	330,907	1,143,577	486,626	6,997,425
1945	269,917	271,288	1,401,875	661,955	8,913,092
1946	372,920	411,446	1,808,971	859,645	12,207,367
1947	392 518	495,016	1,771,250	1,147,144	14,486 189
1948	517,181	509,593	2,055,738	1,392,417	17,629,048
1949	514,705	545,588	1,603,199	707,295	17,981,709
1950	690,730	581,506	1,950,309	1,081,496	21,790,888
1951	673,698	616,655	1,787,731	1,213,329	23,527,656
1952p	577,178	595,000	2,150,726	1,206,770	24,418,693

Cement.—The production of cement has increased greatly since the end of World War II and imports have also been relatively high during the same period. The largest production is in Quebec and Ontario although there are active plants in Manitoba, Alberta and British Columbia. Three new plants, one in each of the Provinces of Newfoundland, Quebec and New Brunswick, have raised the annual rated capacity for Canada to about 22,000,000 bbl.

28.—Quantity and Value of Production, Imports, Exports and Apparent Consumption of Portland Cement, 1943-52

NOTE.—Figures for 1910-28 are given in the 1939 Year Book, p. 356, and for 1929-42 in the 1946 edition, p. 356.

Year	Production[1]		Imports		Exports		Apparent Consumption	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	bbl.[2]	$	bbl.[2]	$	bbl.[2]	$	bbl.[2]	$
1943	7,302,289	11,599,033	18,577	83,975	172,601	344,004	7,148,265	11,339,004
1944	7,190,851	11,621,372	14,004	76,838	210,449	377,434	6,994,406	11,320,776
1945	8,471,679	14,246,480	32,653	141,539	281,944	535,012	8,222,388	13,853,007
1946	11,560,483	20,122,503	350,057	1,098,532	114,370	236,276	11,796,170	20,984,759
1947	11,936,245	21,968,909	1,248,625	3,843,652	88,030	198,354	13,096,840	25,614,207
1948	14,127,123	28,264,987	1,120,671	3,995,173	72,999	200,575	15,174,795	32,059,585
1949	15,916,564	32,901,936	2,284,001	6,877,939	19,212	51,733	18,181,353	39,728,142
1950	16,741,826	35,894,124	1,386,219	3,788,981	23,909	111,351	18,104,136	39,571,754
1951	17,007,812	40,446,288	2,327,431	7,447,859	2,590	12,386	19,332,653	47,881,761
1952p	18,350,964	47,623,129	2,913,981	9,068,181	4,305	20,686	21,260,640	56,670,624

[1] 'Production' as used here means quantity and value of sales. [2] The barrel of cement equals 350 lb.

Sand, Gravel and Stone.—Deposits of sand and gravel are numerous throughout Eastern Canada, with the exception of Prince Edward Island where gravels are scarce. The local needs for these materials are usually supplied from the nearest deposits as their cost to the consumer is governed largely by the length of the haul. This accounts for the large number of small pits and the small number of large plants. Every province, except New Brunswick and Prince Edward Island, produces natural bonded sand but some grades particularly suitable for certain industries demand a much higher price than ordinary sand. Quebec and Ontario contributed 75 p.c. of the total quantity of sand and gravel in 1951. The greater part of the output is used in road improvement, concrete works and railway ballast, and most of the commercial plants are equipped for producing crushed gravel, a product that can compete with crushed stone.

The stone industry has two main divisions, stone quarrying and the stone-products industry. The granite, limestone, marble, sandstone and slate quarries of Canada yield high-grade structural and decorative materials and also supply requirements for chemical and other allied industries. The gross value of stone of all varieties produced in Canada in 1951 totalled $28,649,768 as compared with $25,895,357 in 1950.

29.—Quantity and Value of Sand, Sand and Gravel, and Stone Produced, 1949-51

Material and Purpose	1949		1950		1951	
	Quantity	Gross Value	Quantity	Gross Value	Quantity	Gross Value
	tons	$	tons	$	tons	$
Sand—						
Moulding sand	70,693	99,668	40,274	108,855	36,421	86,900
For building, concrete, roads, etc.	6,931,874	3,556,130	6,850,339	4,151,672	7,972,740	5,116,901
Other	118,566	29,121	127,867	41,475	365,635	162,189
Sand and Gravel—						
For railway ballast	5,322,728	1,358,523	5,132,371	1,361,439	6,991,189	2,291,532
For concrete, roads, etc.	42,086,698	19,758,109	49,768,234	24,512,834	62,305,240	27,941,202
For mine filling	2,157,346	530,185	3,385,384	800,988	3,412,226	950,941
Crushed gravel	6,668,403	5,849,805	7,790,694	5,457,496	11,889,370	8,077,894
Totals, Sand and Gravel	**63,356,308**	**31,181,541**	**73,095,163**	**36,434,759**	**92,972,821**	**44,627,559**
Stone—						
Building	89,702	2,439,600	118,840	3,266,937	124,185	4,575,321
Monumental and ornamental	22,946	1,370,856	13,799	1,073,681	14,116	1,086,159
Limestone for agriculture	649,470	1,303,191	568,280	1,256,094	571,018	1,368,320
Chemical Uses—						
Flux	976,766	1,190,128	937,625	1,184,113	1,038,650	1,411,501
Pulp and paper	323,098	821,090	381,513	955,066	464,773	1,158,099
Other	82,691	157,071	75,081	145,198	29,279	54,011
Rubble and riprap	2,152,969	2,412,995	1,845,973	2,009,971	1,600,180	2,123,705
Crushed	9,438,685	9,649,872	13,944,649	14,713,321	14,592,830	16,518,445
Totals, Stone[1]	**13,928,039**	**20,528,073**	**18,087,064**	**25,895,357**	**18,676,706**	**28,649,768**

[1] Includes minor items not specified.

Section 5.—Industrial Statistics of the Mineral Industry

The scope of the annual statistics on mineral production published by the Dominion Bureau of Statistics includes a general review of the principal mineral industries, such as the copper-gold, silver-lead-zinc, and nickel-copper industries, as well as a section on metallurgical works. Additional data published at irregular intervals include such features as capital employed, numbers of employees, wages and salaries paid and net value of sales.

The figures for 'net value of shipments' of industries given in Tables **30** and **31** are, in each case, the settlements received for shipments by producers and the additional values obtained when the smelting of ores is completed in Canada, less the cost of materials, fuel, etc. The totals indicate more nearly the actual returns to the different industries than do the values for the minerals in Table **2** of this Chapter where, in the case of copper, lead, zinc and silver, the values are computed by applying the average prices for the year in the principal metal markets to the total production from mines and smelters with no reduction for fuel, electricity and other supplies consumed in the production process. Some imported ores and concentrates are treated in Canadian non-ferrous smelting and refining works, especially in the production of aluminum, where imported ore only is used, and of cobalt which comes mainly from African ores. The net sales of these plants include, therefore, the net value of the metals recovered from these imported ores and, to this extent, the net sales shown in Tables **30** and **31** include products of other than Canadian origin.

30.—Summary Statistics of the Mineral Industry, by Province, 1951

Province or Territory	Plants or Mines	Employees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies[1]	Net Value of Shipments[2]
	No.	No.	$	$	$
Newfoundland	769	4,114	10,984,035	8,781,988	25,331,153
Nova Scotia	615	13,799	37,388,122	10,963,266	49,170,075
New Brunswick	383	1,526	3,283,050	1,530,021	8,086,267
Quebec	4,288	30,349	92,213,392	294,306,681	270,477,503
Ontario	6,832	43,451	138,056,626	246,976,014	365,526,388
Manitoba	218	2,632	9,091,188	23,795,085	23,181,449
Saskatchewan	517	2,930	10,891,010	38,256,009	42,577,100
Alberta	3,493	12,198	37,095,311	11,097,643	156,633,663
British Columbia	981	16,273	51,117,166	176,552,011	140,575,198
Northwest Territories	35	904	3,822,078	1,800,882	6,466,033
Yukon Territory	26	695	3,219,555	1,973,301	7,063,914
Canada	**18,157**	**128,871**	**397,161,533**	**816,032,901**	**1,095,088,743**

[1] Includes freight and smelter charges and cost of ores treated. [2] Gross value of shipments less cost of process supplies, fuel, electricity, freight and smelter charges.

A summary of the industrial statistics of the principal mineral industries operating in Canada in the years 1947 to 1951 is presented in Table 31.

31.—Summary Statistics of the Principal Mineral Industries, 1947-51

Industry and Year	Plants or Mines	Employees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies[1]	Net Value of Shipments[2]
	No.	No.	$	$	$
Metallics					
Alluvial gold 1947	46	458	1,684,449	238,079	1,635,086
1948	47	495	1,603,065	483,149	2,286,413
1949	56	398	1,509,423	579,533	2,920,290
1950	58	411	1,598,875	532,348	3,612,183
1951	47	362	1,553,103	621,174	2,951,342
Auriferous quartz 1947	517	22,906	54,612,474	26,398,328	69,727,950
1948	282	22,566	59,515,678	28,277,570	80,386,512
1949	247	22,358	61,293,334	32,970,157	96,580,304
1950	281	22,491	64,533,114	35,204,245	108,840,362
1951	211	22,126	68,739,531	36,643,949	100,059,503
Copper-gold-silver 1947	32	5,220	13,149,093	18,125,109	52,173,584
1948	37	6,401	17,919,526	22,178,942	85,652,206
1949	33	7,395	21,776,150	31,402,838	74,591,660
1950	56	7,554	23,489,366	38,671,894	83,181,924
1951	82	6,223	21,545,660	30,830,233	92,331,995
Silver-cobalt 1947	12	183	359,963	90,374	253,563
1948	17	172	413,095	177,653	321,415
1949	18	264	607,782	319,309	503,572
1950	20	364	883,281	631,933	2,308,213
1951	22	514	1,406,783	899,494	3,640,348
Silver-lead-zinc 1947	62	3,240	8,304,915	18,262,337	59,862,251
1948	84	4,040	11,421,086	22,923,228	85,993,977
1949	111	5,438	15,676,043	33,241,764	67,108,165
1950	112	5,939	17,632,755	36,872,621	85,845,870
1951	168	9,324	30,380,859	53,783,766	131,909,215
Nickel-copper 1947	24	6,144	15,685,963	8,284,711	46,211,129
1948	15	6,920	20,492,920	5,976,740	50,976,280
1949	11	7,053	22,517,855	6,981,288	45,963,772
1950	10	7,713	25,313,838	7,914,476	46,028,054
1951	11	9,831	34,974,971	10,182,069	54,170,666
Miscellaneous metals 1947	19	1,183	2,970,903	4,472,117	5,710,222
1948	26	1,296	3,878,527	4,100,667	4,624,994
1949	21	3,275	8,894,642	5,776,330	15,689,997
1950	16	3,225	8,578,969	8,538,649	15,108,311
1951	31	3,891	12,251,755	9,708,893	21,765,843
Smelting and refining 1947	16	17,449	40,767,871	337,235,290	115,798,652
1948	16	19,701	52,276,837	429,553,076	146,830,891
1949	16	19,150	55,133,065	417,280,288	181,907,847
1950	17	19,863	58,748,362	447,171,025	202,711,781
1951	17	22,814	75,474,505	598,343,141	262,972,789
Totals, Metallics 1947	**728**	**56,783**	**137,535,631**	**413,106,345**	**351,372,437**
1948	**524**	**61,591**	**167,520,734**	**513,671,025**	**457,072,688**
1949	**513**	**65,331**	**187,408,294**	**528,551,507**	**485,265,607**
1950	**570**	**67,560**	**200,778,560**	**575,537,191**	**547,636,698**
1951	**589**	**75,085**	**246,327,167**	**741,012,719**	**669,801,701**

For footnotes, *see* end of table, p. 551.

31.—Summary Statistics of the Principal Mineral Industries, 1947-51—continued

Industry and Year	Plants or Mines	Employees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies[1]	Net Value of Shipments[2]
	No.	No.	$	$	$
Non-metallics (excluding Fuels)					
Asbestos.....1947	12	4,885	9,165,450	6,824,465	26,191,500
1948	15	4,959	12,136,615	7,856,902	34,421,819
1949	17	4,053	10,569,071	6,168,308	33,616,343
1950	19	5,552	15,848,829	10,267,587	55,640,809
1951	24	5,923	20,024,208	13,073,794	68,550,215
Feldspar, quartz and nepheline syenite.....1947	39	593	1,134,107	719,986	1,921,871
1948	36	562	1,184,257	666,906	2,598,159
1949	31	442	946,268	465,253	2,184,782
1950	36	476	1,056,129	467,968	2,553,587
1951	33	532	1,402,294	741,571	3,184,952
Gypsum.....1947	13	908	1,695,711	1,049,297	3,733,132
1948	14	995	2,272,358	1,871,868	3,771,013
1949	14	925	2,226,703	1,481,874	3,943,171
1950	13	1,004	2,412,698	1,775,427	4,935,137
1951	13	1,018	2,648,803	2,160,584	3,720,962
Iron oxides.....1947	6	54	82,369	40,904	217,418
1948	7	55	84,559	38,265	165,126
1949	8	44	73,111	40,406	167,481
1950	6	44	70,404	37,360	225,272
1951	5	43	87,283	42,425	219,852
Mica.....1947	38	118	147,351	28,595	172,308
1948	34	109	118,982	32,850	187,098
1949	34	96	115,667	20,516	87,942
1950	26	100	136,727	47,388	205,223
1951	31	138	182,033	32,728	414,922
Peat (moss and fuel).....1947	42	1,224	1,602,265	672,144	2,136,495
1948	41	1,032	1,532,977	810,071	2,597,754
1949	43	1,129	1,510,105	700,260	2,287,072
1950	39	1,118	1,530,866	767,110	2,101,092
1951	37	859	1,247,619	831,434	2,318,010
Salt.....1947	10	700	1,399,693	1,872,839	3,493,193
1948	11	673	1,367,353	2,062,682	3,765,785
1949	12	698	1,565,210	1,904,760	4,716,723
1950	13	643	1,521,593	2,180,610	5,919,503
1951	12	689	1,633,222	2,569,376	6,631,889
Talc and soapstone.....1947	5	73	110,527	41,690	224,687
1948	5	58	102,087	29,250	280,573
1949	3	59	105,736	64,252	256,541
1950	6	58	116,547	66,775	297,860
1951	3	50	109,522	62,955	242,383
Miscellaneous[3].....1947	42	1,038	2,004,489	1,651,544	3,479,428
1948	40	1,161	2,497,918	1,977,985	4,056,367
1949	37	1,160	2,632,808	1,774,881	4,461,930
1950	42	1,121	2,640,013	1,888,255	4,821,324
1951	39	1,359	3,699,789	2,704,474	6,209,886
Totals, Non-metallics.....1947	**207**	**9,593**	**17,341,962**	**12,901,464**	**41,570,032**
1948	**203**	**9,604**	**21,297,106**	**15,346,779**	**51,843,694**
1949	**199**	**8,606**	**19,744,679**	**12,620,510**	**51,721,985**
1950	**200**	**10,116**	**25,333,806**	**17,498,480**	**76,699,807**
1951	**197**	**10,611**	**31,034,773**	**22,219,341**	**91,493,071**
Fuels					
Coal.....1947	350	22,227	46,312,295	11,701,500	61,617,921
1948	351	24,319	58,503,607	16,226,321	85,624,145
1949	328	24,230	61,204,632	15,496,981	95,418,140
1950	363	23,418	60,938,980	14,464,916	95,675,483
1951	315	22,647	63,127,966	16,547,467	92,491,368

For footnotes, *see* end of table.

31.—Summary Statistics of the Principal Mineral Industries, 1947-51—concluded

Industry and Year	Plants or Mines	Employees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies[1]	Net Value of Shipments[2]
	No.	No.	$	$	$
Fuels—concluded					
Natural gas....1947	3,799	1,784	3,057,249	240,319	12,093,013
1948	3,833	1,831	2,918,941	67,065	14,622,672
1949	3,927	2,223	4,713,266	63,512	17,519,000
1950	3,991	2,618	5,703,524	186,180	6,258,035
1951	3,985	2,658	6,491,234	174,884	6,516,339
Petroleum....1947	2,296	1,296	3,055,108	876,592	18,666,709
1948	2,581	1,641	4,391,929	2,052,808	35,336,167
1949	3,166	2,142	6,304,601	985,707	60,105,421
1950	3,849	2,417	7,848,539	1,714,101	82,881,844
1951	4,761	3,185	11,518,781	3,210,493	113,155,236
Totals, Fuels....1947	**6,445**	**25,307**	**52,424,652**	**12,818,411**	**92,377,643**
1948	**6,765**	**27,791**	**65,814,477**	**18,346,194**	**135,582,984**
1949	**7,421**	**28,595**	**72,222,499**	**16,546,200**	**173,042,561**
1950	**8,203**	**28,453**	**74,491,043**	**16,365,197**	**184,815,362**
1951	**9,061**	**28,490**	**81,137,981**	**19,932,844**	**212,162,943**
Structural Materials					
Clay products....1947	124	3,552	6,204,705	3,219,256	11,266,933
1948	117	3,746	7,505,765	4,026,603	13,602,445
1949	124	3,603	7,924,841	3,904,967	14,076,742
1950	134	3,663	8,583,912	4,655,254	17,135,634
1951	129	3,737	9,731,657	5,208,555	18,319,101
Cement....1947	8	1,650	3,679,446	10,132,574	13,449,437
1948	8	1,723	4,356,086	12,857,198	17,704,519
1949	8	1,721	4,754,611	13,987,830	21,077,322
1950	8	1,781	5,235,735	15,109,409	23,091,104
1951	10	1,931	6,242,900	16,392,344	26,631,501
Lime....1947	42	1,038	2,052,801	3,086,779	5,763,244
1948	42	1,121	2,459,299	3,790,233	7,284,638
1949	42	1,060	2,485,601	3,572,730	8,223,272
1950	43	1,133	2,760,960	4,052,688	8,774,233
1951	44	1,096	3,053,802	4,279,967	10,390,230
Sand and gravel....1947	5,458	3,430	4,941,148	813,027	22,301,404
1948	6,102	4,197	7,057,193	1,101,024	29,528,572
1949	6,952	3,863	7,491,081	1,500,164	29,681,377
1950	7,348	4,120	8,712,440	1,907,445	34,527,314
1951	7,591	4,060	10,414,559	2,309,809	42,317,750
Stone....1947	483	3,166	5,380,259	2,255,930	14,208,819
1948	554	3,082	5,990,922	2,617,663	15,330,890
1949	549	3,728	7,615,572	3,399,603	17,128,470
1950	589	3,562	7,548,241	3,614,585	22,280,772
1951	536	3,861	9,218,694	4,677,322	23,972,446
Totals, Structural Materials.1947	**6,115**	**12,836**	**22,258,359**	**19,507,566**	**66,989,837**
1948	**6,823**	**13,869**	**27,369,265**	**24,392,721**	**84,451,964**
1949	**7,675**	**13,975**	**30,271,706**	**26,365,294**	**90,187,183**
1950	**8,122**	**14,259**	**32,841,288**	**29,339,381**	**105,809,057**
1951	**8,310**	**14,685**	**38,661,612**	**32,867,997**	**121,641,028**
Grand Totals....1947	**13,495**	**104,519**	**229,560,604**	**458,333,786**	**552,309,949**
1948	**14,315**	**112,855**	**282,001,582**	**571,756,719**	**727,950,430**
1949	**15,808**	**116,507**	**309,647,178**	**584,083,511**	**800,217,336**
1950	**17,095**	**120,388**	**333,444,697**	**638,740,249**	**914,960,924**
1951	**18,157**	**128,871**	**397,161,533**	**816,032,901**	**1,095,088,743**

[1] Includes freight and smelter charges and cost of ores treated.
[2] Gross value of shipments less cost of process supplies, fuel, electricity, freight and smelter charges.
[3] Includes natural abrasives.

Section 6.—World Production of Certain Metallic Minerals and Fuels

Table 32 shows the production of certain metallic minerals and fuels in the different countries of the world for the year 1951. These figures are taken from the *United Nations Statistical Year Book 1952*, which presents production figures for 1932–51 for a much more extensive list of mining and quarrying industries. The 1951 figures are provisional and have been converted from kilogrammes in the case of gold and metric tons in the case of the other metals and fuels shown.

32.—World Production of Certain Metallic Minerals and Fuels, 1951[p]

NOTE.—Dashes used throughout this table indicate that no figures were given in the *United Nations Statistical Year Book* in those cases, either because there was no production or because the quantity was not available.

Country	Gold	Silver	Copper	Iron	Lead	Zinc	Coal	Crude Petroleum
	'000 oz. t.	'000 oz. t.	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
Algeria	.	9·6		1,649·1	3·2	10·4	247·3	8·4
Anglo-Egyptian Sudan	1·5	-	.	-	-	-	-	
Angola	.	-	1·7[1]		-	-	-	-
Argentina	8·0[1]	1,253·9	-	-	28·0	18·1	43·5	3,902·2
Australia	871·0	10,793·0	17·7	1,633·6	231·2	207·6	19,721·4	-
Austria	-	-	2·0	828·9	5·4	5·2	216·1	2,535·3
Bahrein	.		.	-	.	.	-	1,662·3
Bechuanaland	0·2	-	-			-	-	-
Belgian Congo	352·3	3,793·8	211·6[2]	-		97·8	240·3	
Belgium	-	-	-	30·9	-	-	32,702·3	.
Bolivia	3·2[3]	7,137·5[4]	5·4[4]	-	33·6[4]	33·6[4]	-	74·5
Brazil	135·8	-	.	1,489·2[1]	-	-	2,138·5	99·5
British West Africa[5]	-	51·4[4]		-			-	-
Brunei		-					-	5,484·0
Bulgaria	.	-			.		360·5[6]	-
Burma	0·2	73·9[7]			6·5		-	106·9
Cameroons, French	5·4	-	-	-	-	-	-	-
Canada	**4,364·3**	**24,244·8**	**270·5**	**2,604·8**	**152·4**	**333·9**	**16,341·8**	**6,818·9**
Chile	173·6	983·8	418·5	2,161·6	4·5	-	2,437·2[8]	106·5
China[9]	107·5[10]	-	-	-	.		15,211·9[6]	-
Colombia	430·7	128·6	-	-			589·7[11]	5,961·3
Cuba	-	-	21·5				-	20·3
Cyprus	-	-	19·5	-			-	-
Czechoslovakia	2·1[10]	1,543·2[6]	-	582·0	-		19,731·4	104·7
Ecuador	12·6	32·2		-	0·3[1]		-	392·4
Egypt	15·2	-			.			2,570·6
El Salvador	24·2	324·7						-
Eritrea	1·1[1]	-						
Ethiopia	15·0			-			-	
Federation of Malaya	15·6			607·4			428·8	
Fiji	93·7[4]	-	-	-	-	-	-	
Finland	18·1	157·5	23·0		0·4	9·2	-	.
Formosa	30·5	-	-	-	-	-	1,545·4[1]	3·5[1]
France	67·7	733·0	0·6[1]	12,621·5	11·9	14·0	58,388·3[12]	324·1
French Equatorial Africa	52·9	-	.	-	2·8	-	-	-
French West Africa	1·8	-	.	-	-	-	-	-
Germany (Western only)	1·4[7]	4,137·8	1·9	3,829·4	55·6	83·0	131,092·3[12]	1,506·9
Gold Coast	698·7	-	.	-	-	-	-	-
Greece	-	209·0		28·7	1·7	9·3		
Guiana—								
British	13·5							
French	12·1							
Netherlands (Surinam)	6·5	-		-				
Honduras	33·4[4]	4,018·8		-			-	-
Hong Kong	-	-		80·5	.		-	-
Hungary	2·0[10]	-	-	110·2	0·3[1]		1,653·5	551·2
India[13]	226·2	16·1	10·1[1]	2,615·8			38,424·4	-
Indochina	-	-	-	-			688·9	-
Indonesia	41·8[1]						955·7	8,206·7
Iran	-						330·7[14]	18,567·3
Iraq							-	9,205·4

For footnotes, *see* end of table.

32.—World Production of Certain Metallic Minerals and Fuels, 1951[p]—concluded

Country	Gold	Silver	Copper	Iron	Lead	Zinc	Coal	Crude Petroleum
	'000 oz. t.	'000 oz. t.	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
Ireland	-	-	.	-	-	-	195·1	.
Italy	9·3	826·3	0·2	287·7	43·0	112·5	1,286·4	19·5
Japan	189·1	5,465·6	47·2	522·5	14·2	71·0	47,743·3	370·4
Kenya	26·5[4]	-	-	-	-	-	-	-
Korea (South only)	9·9				0·1		123·5	-
Kuwait	-				.		-	31,225·2
Liberia	9·8[4]			-				-
Luxembourg	-			1,860·7				
Madagascar	2·0			-			-	
Manchuria	-	-	-	-	-	-	12,125·4[7,8]	-
Mexico	393·4	43,798·9	74·3	345·0	248·6	198·5	1,217·0	12,102·3
Morocco—								
French		1,382·5		272·3	75·1	21·5	434·3	83·4
Spanish	.	-		632·7	0·2[4]	-	-	-
Mozambique	0·9			-	.		86·3	-
Netherlands, The	-	-					13,695·1	787·4
New Guinea	94·1	38·6[15]		-			-	288·8
New Zealand	75·1	131·8		2·8			758·4	-
Nicaragua	258·7	-		-	.	-	-	
Nigeria	1·6	-	-		0·1	-	617·3	
Northern Rhodesia	0·1	173·6[1]	346·2[2]	-	16·1[2]	25·4[2]	-	
Norway	.	157·5	16·5	275·6	0·4	6·0	518·1	-
Pakistan	.	-	-	-	.	.	566·6[8]	167·9
Papua	0·3	-	-		-	-	-	-
Peru	144·4	14,856·8	35·9	-	90·7	111·7	230·4	2,367·8
Philippines	393·5	273·3	14·0	537·9	-	-	166·1	-
Poland	-		-	-	-		90,380·7	218·3
Portugal	18·4		0·2		1·8		459·7	-
Qatar	-	-	-		-		-	2,612·5
Roumania	112·5[7]	482·3[10]		237·0	3·6[2,10]		330·7	7,259·8
Saar	-	-		-	-		17,779·2	-
Sarawak	0·7						-	57·3
Saudi Arabia	73·1							41,310·2
Sierra Leone	3·2	-		766·1			-	-
Southern Rhodesia	486·9	80·4	-	27·1	-	-	2,535·3	
South-West Africa	[16]	868·1	12·9	-	43·5	16·3	-	
Spain	.	736·3	6·1	1,280·9	45·0	83·2	12,492·5	
Swaziland	0·3	-	-	-	-	-	-	
Sweden	80·8[1]	1,276·4[1]	15·9	10,361·7	16·6	42·5	307·5	
Switzerland	-	-	-	29·8[1]	-	-	-	
Tanganyika	65·6[4]			-				-
Trinidad	-	-		-	-	.		3,331·2
Tunisia		61·1	-	542·3	23·4	3·9	-	-
Turkey	.	-	19·3[2]	157·6	-	1·7	5,213·9	20·9
Uganda	0·2[4]	-	-	-	.	.	-	-
Union of South Africa	11,516·5	1,163·9	36·0	943·6	1·0		29,356·7	
Union of Soviet Socialist Republics		-		-		.	313,056·3[8]	46,627·8
United Kingdom	-	19·3[1]	-	4,921·8	4·6	0·3	249,632·7[17]	50·6
United States of America	1,894·7[18]	39,908·7[18]	928·6	65,461·8	388·2	671·5	573,185·2	338,927·6
Venezuela	0·7	-	-	*896·2*	-	-	*30·3*	*98,135·4*
Yugoslavia	41·9	3,031·8	40·7	306·4	88·2	48·6	1,093·5	171·5

[1] 1950 figure. [2] Smelter production. [3] Exports plus purchases by the Central and Mining Banks. [4] Exports. [5] Consists of Nigeria, Gold Coast, and Sierra Leone. [6] 1948 figure. [7] 1949 figure. [8] Includes lignite. [9] Excludes Formosa and Manchuria, shown separately. [10] 1947 figure. [11] Only that coal transported by rail. [12] Excludes the Saar, shown separately. [13] Excludes Burma and Pakistan, shown separately. [14] Fiscal year beginning Mar. 20, 1951. [15] Fiscal year ended June 30, 1951. [16] Less than 50 oz. t. in 1951. [17] Great Britain only. Excludes coal produced at quarries but includes open-cast coal. [18] Includes Alaska.

CHAPTER XIII.—POWER GENERATION AND UTILIZATION

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—Water-Power Resources and Their Development*

Canada, a land of many lakes and rivers, has been abundantly endowed by nature with great water-power resources which are well distributed across the country. In most sections, adequate precipitation and favourable topography result in numerous rivers on which falls and rapids frequently occur and offer excellent opportunities for the development of hydraulic power; with the exception of the prairies of the middle west, water-power resources of importance are found in virtually every part of the country. In British Columbia, where precipitation is high, the rivers flowing down the Pacific slope of the Rocky Mountains offer many fine power sites. Alberta, although a prairie province, also has mountain streams from the Rockies as well as great reserves of undeveloped power on its large northern rivers. The great Canadian Shield of Precambrian rock, which forms an arc around Hudson Bay, covers a portion of the Northwest Territories and northern Saskatchewan as well as a large part of Manitoba, Ontario, Quebec and Labrador; it is a rough, forest-covered, well-watered area characterized by innumerable lakes and by rivers with many falls and rapids. The potential power of the Great Lakes-St. Lawrence River System forms part of the great resources of Ontario and Quebec upon which their status as the principal manufacturing provinces of Canada is dependent and which compensates in large degree for the lack of indigenous coal. In New Brunswick, Nova Scotia and on the Island of Newfoundland, the precipitation is moderately heavy and the rivers, while not large, afford numerous possibilities for power developments of moderate size. In Labrador, the potential resources of the Hamilton River are outstanding.

An accurate comparison of Canada's water-power resources and their development with those of other countries† is not possible owing to incomplete world statistics and differing bases of tabulation. However, from available figures as at the end of 1950, it appears that Canada ranks second among the countries of the world in total installed capacity, being exceeded only by the United States; in

* Revised in the Water Power Division, Department of Resources and Development, Ottawa.

† More detailed information on the water-power resources of other countries is given in the 1951 Year Book, pp. 531-533.

installation per thousand population, Canada is exceeded only by Norway. Canada is in approximately sixth place in potential power resources but those resources are, on the whole, more readily available to prospective markets than is the case in other countries that outrank Canada, an exception being the United States. In particular might be mentioned the enormous potential resources of the great river systems of Africa and Asia.

Subsection 1.—Available and Developed Water Power in Canada

Table 1 gives a summary of the water-power resources of Canada and their development as at Dec. 31, 1952.

1.—Available and Developed Water Power, by Province, as at Dec. 31, 1952

Province or Territory	Available 24-Hour Power at 80 p.c. Efficiency		Turbine Installation[1]
	At Ordinary Minimum Flow	At Ordinary Six-Months Flow	
	h.p.	h.p.	h.p.
Newfoundland	958,500	2,754,000	292,660
Prince Edward Island	500	3,000	2,299
Nova Scotia	25,500	156,000	162,455
New Brunswick	123,000	334,000	135,511
Quebec	10,896,000	20,445,000	7,263,621
Ontario	5,407,000	7,261,000	3,948,466
Manitoba	3,333,000	5,562,000	716,900
Saskatchewan	550,000	1,120,000	111,835
Alberta	508,000	1,258,000	207,825
British Columbia	7,023,000	10,998,000	1,432,858
Yukon and Northwest Territories	382,500	814,000	31,450
Canada	**29,207,000**	**50,705,000**	**14,305,880**

[1] Includes water wheels and hydraulic turbines installed.

The figures given in the first and second columns of the above table represent 24-hour power and are based upon rapids, falls and power sites of which the actual drop, or the head of possible concentration, has been measured or at least carefully estimated. Recent revisions in power estimates for the Provinces of Quebec and Newfoundland, resulting from the tabulation of some new sites, the use of higher run-off factors in computing available flows and changed flow conditions on controlled rivers, have appreciably increased the total of available power at average flow. Tabulations of potential power in Canada are still not complete as many unrecorded rapids and falls of undetermined power capacity exist on rivers and streams throughout the country, particularly in the less-explored northern districts. Apart from cases where definite studies have been carried out and the results recorded, no consideration has been given to the power concentrations that are feasible on rivers and streams of gradual gradient, where economic heads possibly may be created by the construction of dams. Thus, the figures in Table 1 of available power, under the two conditions of stream flow, represent only the *minimum* water-power possibilities of Canada.

The third column gives the total capacity of the water wheels actually installed. These figures should not be placed in direct comparison with those in the first and second columns to deduce the percentage of the available water-power resources that has been developed. At developed sites, the water-wheel installation averages 30 p.c. greater than the corresponding calculated maximum available power at

the same sites. Figures of Table 1, therefore, indicate that the *at present recorded* water-power resources will permit of a turbine installation of nearly 66,000,000 h.p. and that the turbine installation at Dec. 31, 1952, represents approximately 22 p.c. of recorded water-power resources.

The development from year to year of Canada's water-power resources is a good index of the country's industrial growth and of the change in its economic life since the beginning of the present century. In 1900, prior to the inception of long-distance transmission of electricity, Canada's economy was based largely on agriculture and the total of hydraulic installations, mostly small mills, was only 173,000 h.p. With the successful solution of the problems of transmission of electric energy for use in distant communities, the development of large hydraulic projects became practicable and, by 1910, total installation had risen to 977,000 h.p. In ensuing decades, the growth in installed capacity, partly speeded by war demands, proceeded at an accelerated rate.

The figures in Table 2, and the graph on p. 557, show clearly the consistent and accelerating growth in the total capacity of hydraulic installations since the beginning of the century. In the period 1900-05, the average annual increase was about 56,000 h.p., a rate that was stepped up sharply in subsequent years because of improvements in the transmission of electricity and the building of large central electric stations. During the period 1906-22, development proceeded at a fairly uniform rate of 150,000 h.p. per annum. The heavier demand for electricity during the prosperous 1920's increased the rate of installation sharply in 1923 and it continued at about 377,000 h.p. per annum for the period 1923-35. As an aftermath to the economic depression, the rate of installation was low during the years 1936-39 after which the power required for war purposes accounted for the high average rate of increase of 481,000 h.p. per annum during the period 1940-43. Few developments were undertaken in the later war years or in the immediate post-war period, so that only a small amount of new capacity came into operation in the 1944-47 period. However, the results of the later post-war program of construction are apparent in the large growth in the years 1948-52 when the average rate was about 857,000 h.p. per annum. Present programs of expansion indicate a continuation of this rate of growth for some years.

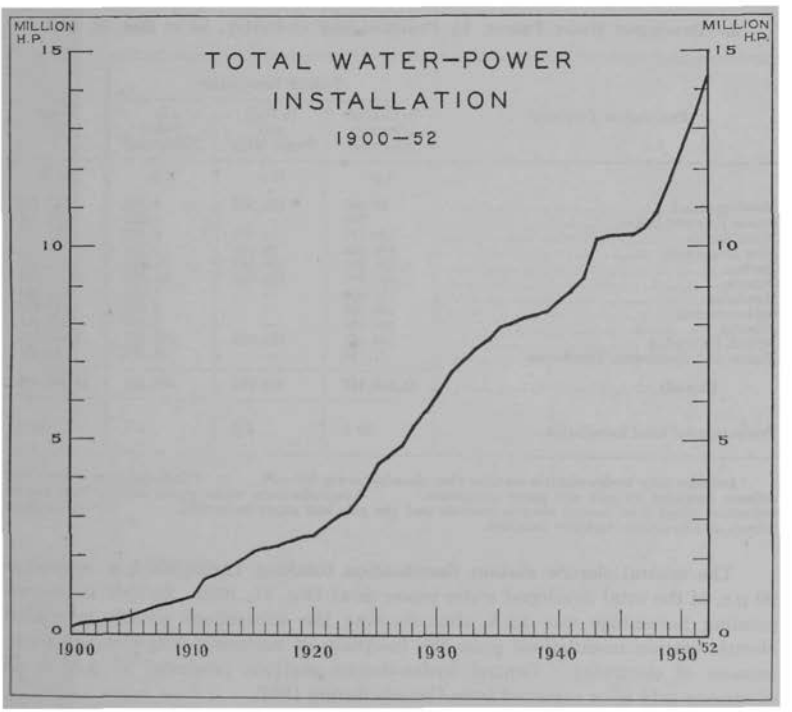
2.—Hydraulic Turbine Horse-Power Installed, by Province, as at Dec. 31, 1900-52

NOTE.—Figures for each year 1900-30 are given in the 1939 Year Book, p. 361, and for 1931-39 in the 1946 edition, p. 362.

Year	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	h.p.	h.p.	h.p.	h.p.	h.p.	h.p.
1900	...	1,521	19,810	4,601	82,864	53,876
1910	...	1,760	31,476	11,197	334,763	490,821
1920	...	2,233	37,623	21,976	955,090	1,057,422
1930	...	2,439	114,224	133,681	2,718,130	2,088,055
1940	...	2,617	139,217	133,347	4,320,943	2,597,595
1941	...	2,617	139,217	133,347	4,556,943	2,617,495
1942	...	2,617	143,717	133,347	4,839,543	2,684,395
1943	...	2,617	133,384	133,347	5,847,322	2,673,443
1944	...	2,617	133,384	133,347	5,848,572	2,673,443
1945	...	2,617	133,384	133,347	5,848,572	2,673,290
1946	...	2,617	133,384	133,347	5,848,572	2,679,740
1947	...	2,617	133,384	133,347	5,878,872	2,749,740
1948	...	2,617	140,884	133,347	5,939,697	2,894,240
1949	262,050	2,617	145,384	133,347	6,130,097	2,896,540
1950	262,810	2,299	150,960	133,111	6,372,812	3,513,840
1951	279,160	2,299	150,960	132,911	6,755,351	3,718,505
1952	292,660	2,299	162,455	135,511	7,263,621	3,948,466

2.—Hydraulic Turbine Horse-Power Installed, by Province, as at Dec. 31, 1900-52
—concluded

Year	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	h.p.	h.p.	h.p.	h.p.	h.p.	h.p.
1900	1,000	—	280	9,366	5	173,323
1910	38,800	30	655	64,474	3,195	977,171
1920	85,325	35	33,122	309,534	13,199	2,515,559
1930	311,925	42,035	70,532	630,792	13,199	6,125,012
1940	420,925	90,835	71,997	788,763	18,199	8,584,438
1941	420,925	90,835	71,997	788,763	22,899	8,845,038
1942	420,925	90,835	94,997	792,563	22,899	9,225,838
1943	422,825	90,835	94,997	796,024	19,719	10,214,513
1944	422,825	90,835	94,997	864,024	19,719	10,283,763
1945	422,825	90,835	94,997	864,024	19,719	10,283,610
1946	446,825	90,835	93,060	864,024	19,719	10,312,123
1947	458,825	90,835	106,560	917,024	19,719	10,490,923
1948	503,700	111,835	106,560	1,009,769	28,069	10,870,718
1949	557,700	111,835	107,225	1,238,069	28,469	11,613,333
1950	595,200	111,835	107,225	1,284,208	28,450	12,562,750
1951	596,400	111,835	207,825	1,358,808	28,450	13,342,504
1952	716,900	111,835	207,825	1,432,858	31,450	14,305,880



The availability of large amounts of hydro-electric energy has so fostered the economical utilization of the natural products from land, forest and mine that Canada has become a highly industrialized nation. Low-cost power is fundamental in

meeting the enormous requirements of the pulp and paper industry—Canada's largest industry and one of the world's great industrial enterprises; it also allows the economical mining, milling and refining of base and precious metals and facilitates their fabrication into a multitude of manufactured articles. Canada's outstanding growth in the post-war period has been made in conjunction with accelerated development of water-power resources. From hydro-electric plants ranging in capacity from a few hundred to more than 1,000,000 h.p., networks of transmission line carry power to most urban centres and to an increasing number of rural districts. This wide distribution of power has facilitated the decentralization of industry, enabling manufacturing processes to be carried on in many of the smaller centres of population. Economical domestic electrical service, too, contributes in no small measure to the high standard of living enjoyed in Canada.

With a total capacity of 14,305,880 h.p., present water-power plants in Canada, if operated at full load, would produce energy at a rate corresponding to the output of more than 143,000,000 manual workers, on the commonly accepted basis of one mechanical horse-power equalling the working capacity of ten men.

Table 3 shows, under three classifications, the purposes for which the developed water power is primarily utilized.

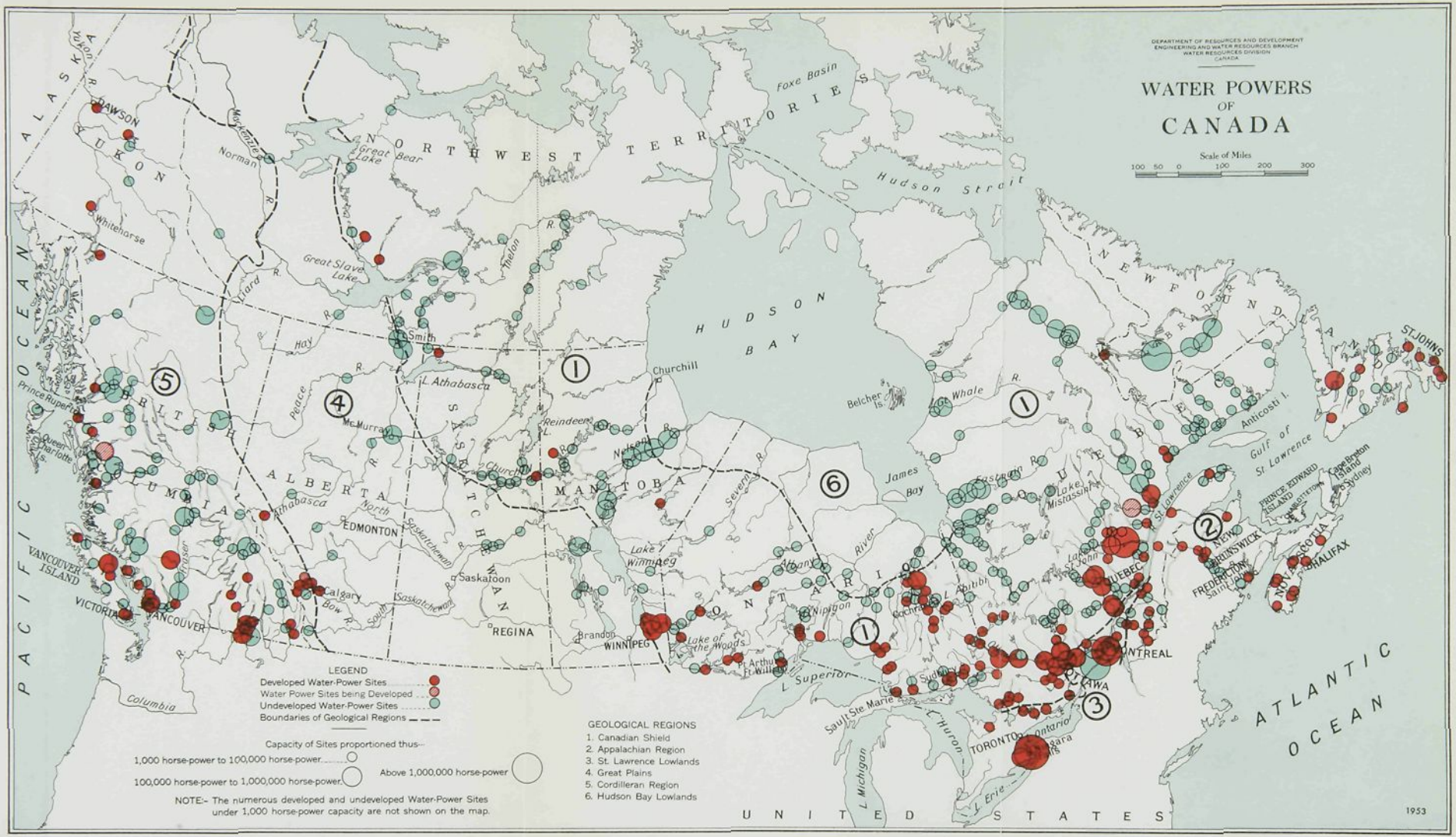
3.—Developed Water Power, by Province and Industry, as at Dec. 31, 1952

Province or Territory	Turbine Installation			Total[4]
	In Central Electric Stations[1]	In Pulp and Paper Mills[2]	In Other Industries[3]	
	h.p.	h.p.	h.p.	h.p.
Newfoundland	58,450	230,900	3,310	292,660
Prince Edward Island	704	—	1,592	2,299
Nova Scotia	146,777	10,270	5,408	162,455
New Brunswick	106,660	22,060	6,791	135,511
Quebec	6,954,252	230,780	78,589	7,263,621
Ontario	3,641,247	225,937	81,282	3,948,466
Manitoba	715,000	—	1,900	716,900
Saskatchewan	108,500	—	3,335	111,835
Alberta	205,765	—	2,060	207,825
British Columbia	910,851	134,400	387,607	1,432,858
Yukon and Northwest Territories	11,750	—	19,700	31,450
Canada	**12,859,956**	**854,347**	**591,574**	**14,305,880**
Percentages of total installation	89·9	6·0	4·1	100·0

[1] Includes only hydro-electric stations that develop power for sale. [2] Includes only water power *actually developed* by pulp and paper companies. [3] Includes only water power *actually developed* by industries other than central electric stations and the pulp and paper industries. [4] Includes water wheels and hydraulic turbines installed.

The central electric station classification totalling 12,859,956 h.p. represents 90 p.c. of the total developed water power as at Dec. 31, 1952. In 1900 the corresponding percentage was 33·5, thus showing the tremendous growth in central electric station installations since the inception of successful long-distance transmission of electricity. Central hydro-electric stations produced 97 p.c. of all electricity sold in or exported from Canada during 1952.

The pulp and paper turbine installation total of 854,347 h.p. includes only water power *actually developed* and directly used by pulp and paper companies. In addition, this industry is the greatest purchaser of central electric station power,


DEPARTMENT OF RESOURCES AND DEVELOPMENT
ENGINEERING AND WATER RESOURCES BRANCH
WATER RESOURCES DIVISION
CANADA
WATER POWERS OF CANADA
Scale of Miles
100 50 0 100 200 300
PACIFIC OCEAN
ALASKA
YUKON
DAWSON
Whitehorse
NORTHWEST TERRITORIES
Foxe Basin
Hudson Strait
HUDSON BAY
Great Bear Lake
Great Slave Lake
Mackenzie R.
Norman
Liard R.
Hay R.
Peace R.
Smith
L. Athabasca
Churchill
Belcher Is.
Whale R.
Reindeer L.
Nelson R.
Churchill R.
Severn R.
James Bay
Eastmain R.
Lake Mistassini
St. Lawrence R.
Gulf of St Lawrence
Anticosti I.
NEWFOUNDLAND
ST JOHNS
Cape Breton Island
Sydney
PRINCE EDWARD ISLAND
Charlottetown
NOVA SCOTIA
HALIFAX
NEW BRUNSWICK
FREDERICTON
Saint John
QUEBEC
MONTREAL
OTTAWA
Lake St John
Lake Abitibi
Ogoki R.
Nipigon
ONTARIO
Albany River
Lake of the Woods
Lake Winnipeg
Ft. William
Port Arthur
L. Superior
Sault Ste Marie
L. Huron
TORONTO
Niagara
L. Michigan
L. Erie
UNITED STATES
ATLANTIC OCEAN
BRITISH COLUMBIA
Prince Rupert
Queen Charlotte Is.
VANCOUVER ISLAND
VICTORIA
VANCOUVER
Fraser R.
Columbia R.
ALBERTA
EDMONTON
Athabasca R.
North Saskatchewan R.
Calgary
Bow R.
South Saskatchewan R.
SASKATCHEWAN
Saskatoon
REGINA
MANITOBA
Brandon
WINNIPEG
1
2
3
4
5
6
LEGEND
Developed Water-Power Sites
Water Power Sites being Developed
Undeveloped Water-Power Sites
Boundaries of Geological Regions
Capacity of Sites proportioned thus—
1,000 horse-power to 100,000 horse-power
100,000 horse-power to 1,000,000 horse-power
Above 1,000,000 horse-power
NOTE:- The numerous developed and undeveloped Water-Power Sites under 1,000 horse-power capacity are not shown on the map.
GEOLOGICAL REGIONS
1. Canadian Shield
2. Appalachian Region
3. St. Lawrence Lowlands
4. Great Plains
5. Cordilleran Region
6. Hudson Bay Lowlands
1953

buying more than 15 p.c. of all power sold for industrial purposes. Part of the purchased power is classed as secondary, being used for steam generation by electric boilers.

The 'other industries' group develops 591,574 h.p. solely for its own use. These diversified industries also provide a broad market for the power sold by the central electric stations.

The figure of total hydraulic installation in Canada, 14,305,880 h.p., is the cumulative total of all existing installations of water wheels and hydraulic turbines irrespective of whether or not the equipment has been in use during the year. It has been adjusted to Dec. 31, 1952, by the inclusion of new installations completed during the year and by deletion of those old units which were dismantled.

Subsection 2.—Water-Power Developments in the Provinces and Territories, 1952

Keeping pace with the expansion of general industrial activity throughout Canada, a record-high total of 1,066,250 h.p. of new hydraulic turbine capacity was brought into operation in 1952; active construction proceeded on other developments with a total ultimate capacity of more than 3,000,000 h.p. New developments were widely distributed throughout Canada, although the greater number were located in Quebec. Projects that have been undertaken in rather remote locations indicate the future economic value of other undeveloped sites in unsettled regions. Construction was also active in the field of power distribution and in the building of thermal-electric plants. Over-all progress in each province, principally covering hydro-electric development, is outlined below.

Atlantic Provinces.*—The Newfoundland Light and Power Company Limited brought into operation in December its new plant of 7,500 h.p. at tidewater on the Horse Chops River, Cape Broyle. Farther upstream, a second plant which will have a capacity of 10,000 h.p. was under construction for 1953 operation. Investigations are being made towards a new development of about 20,000 h.p. on Piper's Hole River at the head of Placentia Bay. The Anglo-Newfoundland Development Company Limited proceeded with the modernization of its two plants on the Exploits River: at Grand Falls, four 4,000-h.p. turbines were replaced by 5,500-h.p. units for an increase in capacity of 6,000 h.p.; at its Bishop's Falls plant, the replacement of two 1,700-h.p. turbines by units of 2,700 h.p. is expected to be completed early in 1953 and additional changes at both plants will be made at a later date. The Union Electric Light and Power Company is planning the building of two plants, one on Georges Brook of 1,200 h.p., and one on the Trinity River at Lockston of 4,000 h.p. In Labrador, the Iron Ore Company proceeded with a development for 1954 operation of 12,000 h.p. on the Ashuanipi River.

The Nova Scotia Power Commission completed its Gulch development on the Bear River, consisting of one unit of 8,600 h.p. under 225-foot head. Investigations are being made covering a development of 5,000 h.p. on the Mersey River at Lower Great Brook. The Nova Scotia Light and Power Company Limited brought into operation a 4,000-h.p. plant at White Rock on the Gaspereau River, replacing a plant of 1,105 h.p. A development on the Nictau River of 9,000 h.p. under 400-foot head is under construction for 1953 operation.

*In addition to water-power development, the construction of fuel-electric plants included: Newfoundland Light and Power Company Limited, a 3,580-h.p. diesel at St. John's; Nova Scotia Light and Power Company at Halifax, a unit of 22,500 kw. for 1953 operation; Seaboard Power Corporation Limited at Glace Bay, N.S., a unit of 18,750 kw. for 1953 operation; New Brunswick Power Commission at Grand Lake, a unit of 6,250 kw. completed and one of 18,750 kw. under installation.

Construction of the 27,000-h.p. development on the Tobique River by the New Brunswick Electric Power Commission was up to schedule for completion early in 1953. Investigations covering power sites were continued on the St. John River. The Maine and New Brunswick Electrical Power Company Limited increased its installed capacity by replacing a unit of 2,400 h.p. with one of 5,000 h.p.

Quebec.—The orderly development of the Province's great water-power resources continued, with 597,000 h.p. of new capacity completed in 1952 and with other large projects under construction.

The Quebec Hydro-Electric Commission was actively engaged on several developments. At Beauharnois on the St. Lawrence River, capacity was increased by 222,000 h.p. in four units and two other units were under installation for 1953 operation, which will bring total capacity of the over-all development to 1,408,000 h.p.; ultimate capacity of the site is about 2,000,000 h.p. On the upper Ottawa River, good progress was made on the two-unit 16,000-h.p. development at Rapid II for 1953 operation. On the Bersimis River, a northern tributary of the lower St. Lawrence, a large development below Lake Casse, initially of 300,000 h.p. by 1956 and ultimately of 1,000,000 h.p., is being undertaken. It is planned to transmit power across the St. Lawrence River by submarine cable to the Gaspe Peninsula and the plant will also be tied in with Beauharnois by a high-voltage line. Two obsolete plants, 28,800 h.p. at St. Timothee and 21,600 h.p. at Chambly, have been permanently closed.

The Aluminum Company of Canada completed its five-unit 275,000-h.p. development at Chute-du-Diable on the Peribonka River, and brought into operation one unit of 55,000 h.p. at Chute-à-la-Savanne, a few miles downstream. The latter plant, also of 275,000 h.p., will be completed in 1953 and both plants will be tied in with the Saguenay River generating stations.

The Manicouagan Power Company brought into operation in December 1952 the first unit of 45,000 h.p. in its development near the mouth of the Manicouagan River, and the second unit is expected to be completed early in 1953. Power is being supplied to Baie Comeau and later may be transmitted south across the St. Lawrence River by submarine cable. Ultimate capacity is 270,000 h.p.

Price Brothers and Company made good progress on two hydro-electric developments on the Shipshaw River, one of 70,000 h.p. and the other of 9,000 h.p., with operation scheduled for 1953.

The Ste. Marguerite Power Company is proceeding with the construction of a two-unit 17,000-h.p. plant on the Ste. Marguerite River for 1954 operation. The City of Mégantic has undertaken the development of 4,500 h.p. on the Chaudière River, with operation of one unit of 2,250 h.p. expected in 1953.

The Shawinigan Water and Power Company has completed the necessary works to enable the diversion of run-off from 260 sq. miles of the drainage basins of northward flowing rivers into the Gouin Reservoir, which will increase the firm capacity of its seven power plants on the St. Maurice River. The Quebec Streams Commission carried out storage and power studies and successfully continued its extensive storage-dam operations for the regulation of river flow.

Ontario.—The Hydro-Electric Power Commission of Ontario continued construction during 1952 on two major hydro-electric projects.* In the Otto Holden Generating Station on the Ottawa River above Mattawa, seven of the total of eight units, each of 33,000 h.p., were brought into operation in 1952 and the final unit was expected to be on line early in 1953. On the Niagara River at Queenston, good progress was made on many phases of construction concerned with the Sir Adam Beck-Niagara Generating Station No. 2, which will have an ultimate capacity of 1,260,000 h.p. in 12 units and is scheduled for initial operation in 1954 and for completion in 1956. The intake works for the first of the two tunnels, the excavation of this tunnel and associated canal, headworks and power-house foundations are well advanced. On the Nipigon River, the installation of a third unit of 45,000 h.p. is being undertaken in the Pine Portage station for 1954 operation.

The Great Lakes Power Company is constructing a two-unit 20,000-h.p. plant at Scott Falls on the Michipicoten River for 1953 operation. It is also undertaking, for 1954 operation, the development of 15,000 h.p. in two units at McPhail Falls, a few miles upstream.

Prairie Provinces.†—The Manitoba Hydro-Electric Board completed the final two units of its six-unit 114,000-h.p. Pine Falls development on the lower Winnipeg River, and has begun preliminary construction on the development of 80,000 h.p. at McArthur Falls for 1955 operation; contracts have been awarded for power-house equipment. The Winnipeg Electric Company completed in September 1952 the installation of the sixth and final unit of 37,500 h.p. in its Seven Sisters plant on the Winnipeg River. Sherritt Gordon Mines Limited brought into operation its 7,000-h.p. plant on the Laurie River and power is now being supplied to the Lynn Lake mining field; preliminary construction towards a second development will begin in 1953.

Calgary Power Limited has undertaken the installation of a unit of 30,000 h.p. in its Ghost plant on the Bow River for 1954 operation. The Company has also begun preliminary construction at the Bearpaw site, near Calgary, of a 22,000-h.p. plant for 1955 operation. The installation is being planned of a new unit of 1,000 h.p. in the Astoria plant at Jasper, which is operated by Northland Utilities Limited; the Company is considering also a development of 1,150 h.p. on the Hart River, near McLennan, Alta.

British Columbia.—In British Columbia, two new developments were completed in 1952 and construction was active on other extensions and major new projects.

The British Columbia Electric Company Limited completed its power house at Wahleach Lake with operation of the single unit of 82,000 h.p. at 2,000-foot head beginning in December. The Company has placed an order for the fourth

* The Commission also had under construction two large steam-electric stations; at Windsor the second 66,000-kw. unit was placed on line in February 1952 and the plant of 264,000 kw. in four units will be completed in 1953. At Toronto, two units totalling 188,000 kw. were brought into operation and the fourth unit scheduled for May 1953; two units will operate temporarily at 25 cycles but, when these are converted to 60-cycle operation, the plant will be rated at 400,000 kw.

† The City of Winnipeg brought into operation a steam turbine of 15,000 kw. and a second unit of 25,000 kw. is being installed for 1953 operation. The Manitoba Hydro-Electric Board is planning a steam-electric plant of 60,000 kw. at Brandon for 1956 operation. The Saskatchewan Power Corporation increased the capacity of its thermal generating plants by 37,565 kw., the principal additions being 25,000 kw. at Saskatoon, 10,000 kw. at Prince Albert, and 1,865 kw. at Unity; present plans call for additions of 20,000 kw. at Estevan during 1954-56 and of 50,000 kw. at Saskatoon during 1954-57. Steam-electric plant additions in Alberta comprised 7,500 kw. completed at Drumheller by Canadian Utilities, 30,000 kw. under construction by the City of Edmonton for 1953, and 30,000 kw. by the City of Medicine Hat, also for 1953 operation.

unit of 62,000 h.p. to be installed in its Bridge River plant for 1954 operation; preliminary work has been undertaken to raise the level of the Lajoie Dam to provide increased storage.

The British Columbia Power Commission brought into operation its two-unit 4,000-h.p. Clowhom Falls plant; ultimate capacity is 12,000 h.p. In its John Hart plant on the Campbell River, installation is under way on two additional units, each of 28,000 h.p., with operation scheduled for early 1953, which will bring total capacity to 168,000 h.p. Surveys and investigations were made covering proposed small hydro-electric developments on the Kokish River on Vancouver Island and on the Spillimacheen River, near Golden.

The Aluminum Company of Canada made good progress on its great Nechako-Kitimat development and work was well up to schedule for anticipated 1954 initial operation. The Kenney Dam on the Nechako River at Grand Canyon has been completed and storage of water begun. About four miles of the 10-mile 25-foot-diameter tunnel through the Coastal Range and about one-half of the excavation for the underground power house have been completed. Ultimate capacity is estimated at more than 2,000,000 h.p., the present program comprises 420,000 h.p. in three equal units.

The Consolidated Mining and Smelting Company Limited made rapid progress on its Waneta development on the Pend d'Oreille River and it is now expected that the plant will be brought into service in 1953. Initial capacity will comprise two turbines, each of 105,000 h.p.; ultimate capacity is 420,000 h.p.

A minor addition of 50 h.p. was made by the Ashcroft Water, Electric and Improvement Company by unit replacement in its Bonaparte River plant. New undertakings planned for 1953 include 1,200 h.p. on Wilson Creek by Violamac Mines, and 3,200 h.p. at Port Alice by Alaska Pine and Cellulose Limited.

Yukon Territory.—In November, the Northwest Territories Power Commission brought into operation its Mayo River development of 3,000 h.p. to serve the Galena and Keno Hill mining areas. The project includes an earth-fill dam on the Mayo River and a storage dam on Mayo Lake.

The Yukon Hydro Company Limited is planning to increase, in 1953, the capacity of its Porter Creek plant near Whitehorse from 500 h.p. to 1,440 h.p.

Section 2.—The Central Electric Station Industry

Central electric stations are companies, municipalities or individuals selling or distributing electric energy, whether generated by themselves or purchased for resale. Stations are divided into two classes according to ownership, viz., (1) commercial—those privately owned and operated by companies or individuals, and (2) municipal—those owned and operated by municipalities or provincial governments. These are subdivided according to the kind of power used into (*a*) hydraulic, (*b*) fuel, and (*c*) non-generating. This last sub-class purchases practically all the power it resells; a few of these stations have generating equipment that is held for emergencies. The hydraulic stations contain water turbines and wheels with approximately 88 p.c. of the total capacity of hydro installations in all industries in Canada. The generators driven by this hydraulic equipment generate 97 p.c. of the total output of all central electric stations.

4.—Electric Energy Generated, by Type of Station, 1937-51, and by Province, 1951

Year	Generated by—		Total	Year, Province or Territory	Generated by—		Total
	Water Power	Thermal Engines			Water Power	Thermal Engines	
	'000 kwh.	'000 kwh.	'000 kwh.	**1951**	'000 kwh.	'000 kwh.	'000 kwh.
1937	27,175,722	511,923	27,687,645	N'f'ld	170,898	1,538	172,436
1938	25,690,785	463,375	26,154,160	P.E.I.	565	32,203	32,768
1939	27,836,691	501,339	28,338,030	N.S.	495,672	392,236	887,908
1940	29,537,459	571,824	30,109,283	N.B.	517,908	238,179	756,087
1941	32,628,930	688,733	33,317,663	Que.	29,677,046	13,040	29,690,086
1942	36,582,953	772,226	37,355,179	Ont.	15,845,064	139,992	15,985,056
1943	39,660,312	819,281	40,479,593	Man.	2,560,322	4,215	2,564,537
1944	39,553,352	1,045,427	40,598,779	Sask.	516,142	462,631	978,773
1945	39,131,020	999,034	40,130,054	Alta.	501,027	495,918	996,945
1946	40,692,395	1,044,592	41,736,987	B.C.	2,607,839	115,615	2,723,454
1947	42,273,167	1,151,632	43,424,799	Yukon and N.W.T.	62,519	1,275	63,794
1948	41,070,095	1,319,586	42,389,681				
1949	42,779,199	1,639,374	44,418,573				
1950	46,624,218	1,869,500	48,493,718	**Canada, 1951**	**52,955,002**	**1,896,842**	**54,851,844**
1951	52,955,002	1,896,842	54,851,844				

Subsection 1.—Statistics of Central Electric Stations*

The growth of the central electric station industry has been practically continuous since 1919, when statistics of kilowatt hours generated were first made available. Minor hesitations in output occurred in years of recession but the general movement has been strongly upward and, based on monthly data, the output of central stations during 1952 was more than eleven times that of 1919. The central electric station industry is one that is particularly suited to large-scale operation because of the huge outlay of capital necessary. Total horse power installed increased almost continuously even during the depression years, mainly because large power projects planned before the depression were in process of construction. Expansion since the end of World War II has been spectacular and large additional developments are currently under way (*see* pp. 559-562). Installed capacity of the industry in hydro and thermal units is now about equal to one horse-power for every Canadian.

* Revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

5.—Summary Statistics of Central Electric Stations, 1942-51

NOTE.—Figures for 1917-31 are given in the 1940 Year Book, p. 369, and for 1932-41 in the 1950 edition, p. 564.

Year	Stations	Revenue from Sale of Power[1]	Power Equipment Capacity[2]	Kilowatt Hours Generated	Customers	Persons Employed	Salaries and Wages
	No.	$	h.p.	'000	No.	No.	$
1942	616	203,914,608	8,613,696	37,355,179	2,125,558	19,764	34,285,870
1943	622	204,801,508	9,602,794	40,479,593	2,169,148	19,120	35,785,932
1944	626	215,246,391	9,713,791	40,598,779	2,238,023	19,770	36,945,295
1945	600	215,105,473	9,666,947	40,130,054	2,333,230	21,283	39,521,365
1946	600	226,096,273	9,825,459	41,736,987	2,476,830	24,577	52,380,686
1947	607	243,705,976	9,601,157	43,424,799	2,643,327	26,704	67,417,317
1948	635	257,377,490	10,038,541	42,389,681	2,822,027	29,349	68,765,222
1949[3]	650	280,311,624	10,637,798	44,418,573	3,076,369	31,746	78,272,815
1950[3]	665	323,833,465	11,703,161	48,493,718	3,269,824	32,873	88,988,681
1951[3]	647	374,643,376	12,781,610	54,851,844	3,439,750	34,228	101,856,252

[1] Excludes duplications. [2] Excludes auxiliary-plant equipment. [3] Includes Newfoundland.

6.—Electric Energy Generated in Central Electric Stations, by Province, 1947-51

Province or Territory	1947	1948	1949	1950	1951
	'000 kwh.	'000 kwh.	'000 kwh.	'000 kwh.	'000 kwh.
Newfoundland	...	...	200,610	147,470	172,436
Prince Edward Island	20,382	21,932	24,950	29,050	32,768
Nova Scotia	617,111	677,661	717,473	762,339	887,908
New Brunswick	592,458	591,636	651,253	696,519	756,087
Quebec	25,930,171	24,566,682	25,530,923	27,323,311	29,690,086
Ontario	11,191,693	11,095,608	11,324,407	12,718,518	15,985,056
Manitoba	2,031,754	2,055,709	2,159,998	2,449,383	2,564,537
Saskatchewan	762,882	804,994	858,088	903,144	978,773
Alberta	641,331	724,498	800,729	869,064	996,945
British Columbia	1,637,017	1,820,271	2,105,186	2,535,412	2,723,454
Yukon and N.W.T.	[1]	30,690	44,956	59,508	63,794
Canada	**43,424,799**	**42,389,681**	**44,418,573**	**48,493,718**	**54,851,844**

[1] Included with British Columbia.

Domestic Service.—The power used by domestic customers or for residential purposes amounts to over 14 p.c. of the total production of central electric stations. Details of the number of domestic customers served, the kilowatt hours delivered and the costs to the customers, exclusive of direct federal, provincial and municipal taxes on such service, are shown in Table 7. The average consumption per customer and average cost per kilowatt hour vary considerably as between municipalities and also as between provinces, but the differences in the average bills are smaller. The availability of low-cost power to domestic users contributes greatly to the high standard of living enjoyed in Canada. Average consumption per customer is double that of 15 years ago and costs are 19 p.c. lower per kilowatt hour.

7.—Summary Statistics of Domestic Consumption of Electricity, 1942-51

Year	Customers	Consumption	Average Consumption per Customer	Average Charge per Annum	Average Charge per kwh.
	No.	'000 kwh.	kwh.	$	cts.
1942	1,803,708	2,716,895	1,506	28·11	1·87
1943	1,852,367	2,843,612	1,535	27·70	1·80
1944	1,906,452	3,046,980	1,598	27·96	1·75
1945	1,987,360	3,365,497	1,693	28·05	1·66
1946	2,104,549	3,881,677	1,844	29·85	1·62
1947	2,246,253	4,383,222	1,951	31·28	1·60
1948	2,398,847	4,984,280	2,078	33·32	1·60
1949	2,619,831	5,678,847	2,168	34·47	1·59
1950	2,797,378	6,750,303	2,413	38·97	1·61
1951	2,951,988	7,726,114	2,617	43·25	1·65

Farm Service.—Table 8 shows the number of farm customers, the average annual consumption, average annual revenue and the average revenue per kilowatt hour sold to these customers in each province in 1951. Rural electrification has made considerable progress since the end of World War II. Farm customers added during 1951, totalled 32,618 and the national total at 336,345 increased by 10·7 p.c. over 1950. The relatively large numbers of farm customers in Ontario and the low average revenue per kilowatt hour is evidence of the assistance given in this field by the Ontario Government. It is estimated that about 54 p.c. of the farms in Canada now enjoy the benefits of power-line service. Many other farms generate their own electricity by the use of engines, windmills, etc.

8.—Farm Service Furnished by Central Electric Stations, 1950 and 1951

NOTE.—Farm service was not reported separately in Newfoundland, Yukon Territory or the Northwest Territories.

Year and Province	Customers	Consumption of Electric Energy		Revenue Received		
		Total Kilowatt Hours	Average kwh. per Customer	Total	Average per Customer	Average per kwh.
	No.	'000	No.	$	$	cts.
1950						
Prince Edward Island	4,916	4,446	904	273,508	55·64	6·2
Nova Scotia	18,371	13,788	751	545,182	29·68	4·0
New Brunswick	31,721	23,382	737	1,160,836	36·60	5·0
Quebec	83,618	78,472	938	2,654,548	31·75	3·4
Ontario	119,018	371,218	3,119	6,848,172	57·54	1·8
Manitoba	16,964	40,017	2,359	1,238,866	73·03	3·1
Saskatchewan	4,057	3,572	880	247,133	60·92	6·9
Alberta	7,866	17,699	2,250	598,608	76·10	3·4
British Columbia	17,196	34,155	1,986	748,781	43·54	2·2
Totals, 1950	**303,727**	**586,749**	**1,932**	**14,315,634**	**47·13**	**2·4**
1951						
Prince Edward Island	3,956	3,292	832	190,181	48·07	5·8
Nova Scotia	21,433	18,397	858	759,475	35·43	4·1
New Brunswick	34,085	28,083	824	1,659,719	48·69	5·9
Quebec	90,492	93,772	1,036	3,105,925	34·32	3·3
Ontario	127,595	422,296	3,310	8,351,550	65·45	2·0
Manitoba	23,777	58.841	2,475	1,684,036	70·83	2·9
Saskatchewan	5,594	7,084	1,266	478,404	85·52	6·8
Alberta	11,415	28,088	2,461	822,999	72·10	2·9
British Columbia	17,998	41,278	2,293	931,110	51·73	2·3
Totals, 1951	**336,345**	**701,131**	**2,085**	**17,983,399**	**53·47**	**2·6**

Equipment of Central Electric Stations.—Auxiliary equipment includes only thermal engines and generators operated by them in hydraulic stations and in non-generating plants and does not include spare equipment in thermal stations or spare hydraulic equipment in hydraulic stations. Such equipment is classed as main-plant equipment. The capacities of the equipment are the manufacturers' ratings and, for water wheels and turbines, the kilowatt hour capacities vary with the supply of water. The majority of the hydraulic stations are large, serving wide areas over transmission lines, whereas most of the plants with thermal engines are small, serving the needs of the local municipality. In 1951, the number of thermal engines decreased as compared with previous years. Larger units are being installed to replace, in some instances, two or three small units. Equipment data were not included for small industries or firms, particularly in Saskatchewan and Alberta, where output was largely consumed by their own plants.

9.—Main-Plant Equipment of Central Electric Stations, by Province, and Total Auxiliary-Plant Equipment, 1950 and 1951

NOTE.—Kva. means kilo-volt-amperes.

Year, Type of Equipment, Province or Territory	Generating Power Plants	Water Wheels and Turbines		Thermal Engines		Generators	
		No.	Capacity	No.	Capacity	No.	Capacity
	No.		h.p.		h.p.		kva.
1950							
Main-Plant Equipment							
Newfoundland	18	28	54,715	4	264	33	46,308
Prince Edward Island	7	5	369	16	11,240	20	9,035
Nova Scotia	50	63	143,958	36	117,849	99	222,851
New Brunswick	19	14	104,260	32	82,636	46	161,330
Quebec	99	281	5,904,389	17	2,840	298	5,031,893
Ontario	139	360	3,248,752	9	47,205	370	2,636,072
Manitoba	9	44	594,300	10	2,182	53	442,488
Saskatchewan	139	6	106,500	201	206,625	205	253,488
Alberta	92	11	105,300	135	173,096	143	241,039
British Columbia	86	71	757,526	95	27,993	164	671,081
Yukon and N.W.T.	7	3	9,730	13	1,432	16	9,808
Totals, Main Plant	**665**	**886**	**11,029,799**	**568**	**673,362**	**1,447**	**9,725,393**
Auxiliary-Plant Equipment	...	...	...	141	273,080	136	234,824
Grand Totals, 1950	**665**	**886**	**11,029,799**	**709**	**946,442**	**1,583**	**9,960,217**
1951							
Main-Plant Equipment—							
Newfoundland	19	30	71,215	4	264	35	60,088
Prince Edward Island	7	5	369	17	21,240	21	17,368
Nova Scotia	51	61	136,158	41	185,121	102	271,739
New Brunswick	16	12	101,600	29	90,456	41	165,017
Quebec	99	289	6,350,481	13	2,520	301	5,339,864
Ontario	141	373	3,376,240	11	253,705	384	2,921,307
Manitoba	9	37	594,500	7	2,115	44	445,870
Saskatchewan	118	6	106,500	189	257,371	198	297,383
Alberta	93	15	205,900	115	150,414	132	300,602
British Columbia	86	64	834,086	74	29,933	137	734,947
Yukon and N.W.T.	8	3	9,990	13	1,432	16	9,976
Totals, Main Plant	**647**	**895**	**11,787,039**	**513**	**994,571**	**1,411**	**10,564,161**
Auxiliary-Plant Equipment	...	...	...	149	248,982	146	215,920
Grand Totals, 1951	**647**	**895**	**11,787,039**	**662**	**1,243,553**	**1,557**	**10,780,081**

Export and Import of Electric Power.—Electric energy is exported from Canada only under licence and an export tax of 0·03 cents per kilowatt hour is levied with some exceptions. The export duties for the years ended Mar. 31, 1949 to 1952, were $435,867, $431,895, $608,602 and $743,407, respectively.

Exports for the years 1949-52 are shown in Table **10**. There are also large interprovincial movements of electric energy from Quebec to Ontario, and smaller movements from Nova Scotia and Quebec to New Brunswick, Manitoba to Ontario, Saskatchewan to Manitoba and British Columbia to Alberta.

The water allowed to be diverted at Niagara Falls for power purposes was increased by 5,000 cu. feet per second to the Canadian side in November 1940, owing to a diversion of water from Long Lake and the Ogoki River from the James Bay watershed to the Great Lakes watershed. In 1941, a further increase of 9,000 c.f.s. to the Canadian plants and 12,500 c.f.s. to the United States plants was permitted,

and in 1943 an additional 4,000 c.f.s. to Canadian plants, bringing the totals up to 54,000 c.f.s. for Canada and 32,500 c.f.s. for the United States. This increased water, with greater development of plants on the St. Lawrence River, made possible the increased export of both firm and secondary power to the United States (5,000 c.f.s. will produce about 150,000 h.p. at the Queenston, Ont., plant). During 1948 and 1949, increased demands from domestic consumers and low water reduced the surplus energy available for export but exports increased again in 1950 to 1952.

10.—Electric Energy Exported from Canada, by Companies, and Imported from the United States, 1949-52

Company	1949	1950	1951	1952
	'000 kwh.	'000 kwh.	'000 kwh.	'000 kwh.
Exported to United States—				
Hydro-Electric Power Commission of Ontario	301,037	361,458	392,036	374,772
Hydro-Electric Power Commission of Ontario (surplus)	335,141	347,246	717,387	744,878
Canadian Niagara Power Company	267,802	264,955	303,660	321,188
Canadian Niagara Power Company (surplus)	39,560	35,171	37,966	93,218
Ontario and Minnesota Power Company	22,069	36,867	39,340	42,312
Maine and New Brunswick Electric Power Company	34,126	36,830	39,129	27,610
Maine and New Brunswick Electric Power Company (surplus)	3,491	4,086	2,113	4,956
British Columbia Electric Railway Company	93,898	191,878	188,186	209,982
Southern Canada Power Company	2,109	2,308	2,976	3,220
Southern Canada Power Company (surplus)	—	—	—	11,616
Quebec Hydro-Electric Commission	648,904	639,464	644,017	650,142
Fraser Companies, Limited	8,251	5,212	8,319	8,893
Northport Power and Light Company	47	52	43[1]	46[1]
Northern B.C. Power Company	36	22	19	18
Detroit and Windsor Subway Company	320	317	325	352
Manitoba Power Commission	—	1	6	7
Totals, Exports	**1,756,791**	**1,925,867**	**2,375,522**	**2,493,210**
Imported from United States[2]	**26,099**	**1,434**	**7,776**	**18,488**

[1] Northport Power and Light Company was taken over by West Kootenay Power and Light Company in 1951. [2] Mainly by British Columbia Electric Railway Company.

Subsection 2.—Ownership and Regulation of Central Electric Stations*

Water power is developed in Canada by provincial commissions, by municipalities and by private companies—hydro-electric plants. The first such provincial commission was formed in Ontario in 1906 to act as trustee for a group of municipalities to develop and distribute electricity. The Hydro-Electric Power Commission of Ontario now generates and purchases power, transmits it to rural and urban municipalities and serves large power customers. Similar commissions have been formed in most of the other provinces.

* The information included under the provincial headings of this Subsection has been revised by the various provincial commissions or authorities concerned.

11.—Summary Statistics of Publicly Owned Central Electric Stations, 1942-51

Year	Power Plants	Customers	Electric Energy Generated	Power Equipment (main-plant only)	
				Water Wheels and Turbines	Total
	No.	No.	'000 kwh.	h.p.	h.p.
1942	188	1,140,499	9,177,792	2,134,845	2,344,310
1943	197	1,159,545	9,397,354	2,135,395	2,362,858
1944	202	1,484,784	14,910,198	3,092,295	3,340,268
1945	208	1,566,676	14,599,195	3,118,324	3,372,826
1946	203	1,650,739	14,739,271	3,274,484	3,523,463
1947	230	1,772,919	15,759,275	3,380,900	3,665,032
1948	242	1,884,642	16,692,388	3,632,636	3,993,323
1949[1]	259	2,033,418	17,686,684	3,784,484	4,208,495
1950[1]	270	2,200,957	20,061,314	4,558,449	4,987,095
1951[1]	270	2,315,309	24,380,802	4,955,247	5,648,638

[1] Includes Newfoundland.

A large portion of the power development in Quebec is connected with pulp and paper plants and with the aluminum industry. Such power plants are operated as separate organizations and deliver power to the parent companies at relatively low rates. Substantial blocks of power are also produced in Quebec for export to Ontario.

Table 12 shows statistics of municipally or publicly owned central electric stations, by province, for 1950 and 1951. Table 14 shows comparable statistics for commercial stations.

12.—Publicly Owned Central Electric Stations, by Province, 1950 and 1951

Year and Province or Territory	Generating Power Plants	Customers	Electric Energy Generated	Power Equipment (main-plant only)	
				Water Wheels and Turbines	Total
	No.	No.	'000 kwh.	h.p.	h.p.
1950					
Newfoundland	1	230	173	—	264
Prince Edward Island	1	2,227	7,083	—	4,190
Nova Scotia	28	56,356	263,661	96,880	104,460
New Brunswick	12	84,307	233,718	12,860	94,241
Quebec	24	416,052	6,676,885	1,247,835	1,248,015
Ontario	93	1,223,460	11,031,003	2,853,304	2,853,784
Manitoba	4	128,513	832,399	201,000	202,270
Saskatchewan	59	109,387	337,149	—	173,013
Alberta	9	103,136	369,055	—	138,126
British Columbia	37	77,203	283,329	138,840	160,482
Yukon and Northwest Territories	2	86	26,859	7,730	8,250
Canada, 1950	**270**	**2,200,957**	**20,061,314**	**4,558,449**	**4,987,095**
1951					
Newfoundland	1	263	237	—	264
Prince Edward Island	1	2,435	8,526	—	4,190
Nova Scotia	30	58,497	349,873	95,980	119,032
New Brunswick	10	88,224	262,072	12,600	101,801
Quebec	23	435,689	7,462,343	1,446,935	1,446,935
Ontario	97	1,285,756	14,237,987	2,982,592	3,189,572
Manitoba	6	141,200	867,680	239,000	240,270
Saskatchewan	56	115,077	391,768	—	227,779
Alberta	9	107,649	362,679	—	116,726
British Columbia	35	80,407	407,365	170,600	194,009
Yukon and Northwest Territories	2	112	30,272	7,540	8,060
Canada, 1951	**270**	**2,315,309**	**24,380,802**	**4,955,247**	**5,648,638**

Summary statistics of privately owned central electric stations are given for the years 1942 to 1951 in Table 13.

13.—Summary Statistics of Privately Owned Central Electric Stations, 1942-51

Year	Generating Power Plants	Customers	Electric Energy Generated	Power Equipment (main plant only)	
				Water Wheels and Turbines	Total
	No.	No.	'000 kwh.	h.p.	h.p.
1942	428	985,059	28,177,387	6,099,440	6,269,386
1943	425	1,009,603	31,082,239	7,069,774	7,239,936
1944	424	753,239	25,688,581	6,175,674	6,373,523
1945	392	766,554	25,530,857	6,098,240	6,294,121
1946	397	826,091	26,997,716	6,104,383	6,301,996
1947	377	870,408	27,665,524	5,750,950	5,936,125
1948	393	937,385	25,697,293	5,837,670	6,045,218
1949[1]	391	1,042,951	26,731,889	6,188,921	6,429,303
1950[1]	395	1,068,867	28,432,404	6,471,350	6,716,066
1951[1]	377	1,124,441	30,471,042	6,831,792	7,132,972

[1] Includes Newfoundland.

The predominant position of Quebec in the electric-power field can be seen from the figures of Table 14. Of the total power generated in Canada by all central electric stations in 1951, 41 p.c. was generated by privately owned or commercial stations in the Province of Quebec; this percentage decreased from 57 in 1943 as a result of the transfer in 1944 of the Montreal Light, Heat and Power Company and the Beauharnois Power Company to the publicly owned Quebec Hydro-Electric Commission.

14.—Privately Owned Central Electric Stations, by Province, 1950 and 1951

Year and Province or Territory	Generating Power Plants	Customers	Electric Energy Generated	Power Equipment (main plant only)	
				Water Wheels and Turbines	Total
1950	No.	No.	'000 kwh.	h.p.	h.p.
Newfoundland	17	33,396	147,297	54,715	54,715
Prince Edward Island	6	10,140	21,967	369	7,419
Nova Scotia	22	89,143	498,678	47,078	157,347
New Brunswick	7	26,308	462,801	91,400	92,655
Quebec	75	484,412	20,646,426	4,656,554	4,659,214
Ontario	46	38,207	1,687,515	395,448	442,173
Manitoba	5	50,750	1,616,984	393,300	394,212
Saskatchewan	80	12,266	565,995	106,500	140,112
Alberta	83	68,862	500,009	105,300	140,270
British Columbia	49	253,219	2,252,083	618,686	625,037
Yukon and Northwest Territories	5	2,164	32,649	2,000	2,912
Canada, 1950	**395**	**1,068,867**	**28,432,404**	**6,471,350**	**6,716,066**
1951					
Newfoundland	18	38,311	172,199	71,215	71,215
Prince Edward Island	6	10,517	24,242	369	17,419
Nova Scotia	21	92,161	538,035	40,178	202,247
New Brunswick	6	27,065	494,015	89,000	90,255
Quebec	76	507,145	22,227,743	4,903,546	4,906,066
Ontario	44	39,878	1,747,069	393,648	440,373
Manitoba	3	52,968	1,696,857	355,500	356,345
Saskatchewan	62	11,675	587,005	106,500	136,092
Alberta	84	78,145	634,266	205,900	239,588
British Columbia	51	264,295	2,316,089	663,486	670,010
Yukon and Northwest Territories	6	2,281	33,522	2,450	3,362
Canada, 1951	**377**	**1,124,441**	**30,471,042**	**6,831,792**	**7,132,972**

In 1951, all stations in Ontario produced a little more than one-half as much power as the Quebec stations and only 11 p.c. of the total for Ontario stations was produced by privately owned stations.

Because of the absence of free market determination of prices and regulation of services in an industry that is semi-monopolistic, regulation of electrical utilities has been attempted in most provinces. The governing bodies of the provincial electric-power commissions, their functions and activities are summarized by provinces in the following paragraphs. In certain cases, privately owned utilities are also covered.

Newfoundland.—There are no publicly owned hydro-electric systems in Newfoundland. The largest water power development in the Province is located at Deer Lake. The plant, which is operated by Messrs. Bowater's Newfoundland Pulp and Paper Company Limited, has a total capacity of 150,000 h.p. This Company develops hydro-electric energy at Deer Lake mainly for its own use in the manufacture of pulp and paper and also supplies electric power to the Buchans Mining Company for its mining operations and to the Newfoundland Light and Power Company Limited which distributes electricity to consumers in Corner Brook and adjacent communities in the Bay of Islands sections.

The Anglo-Newfoundland Development Company Limited develops hydro-electric power at two plants situated at Grand Falls and Bishop's Falls with a total capacity of 43,340 h.p. The Company utilizes most of its hydro-electric power in the manufacture of pulp and paper and supplies light and power to the towns of Grand Falls, Bishop's Falls, Botwood and adjacent communities.

The Newfoundland Light and Power Company Limited has five plants that develop hydro-electric energy, with a total installed capacity of 37,900 h.p. It distributes electricity to the city of St. John's and the town of Bell Island and the iron mining operations there. The Company has a new plant at Horse Chops River, Cape Broyle, with an installed capacity of 7,500 h.p. and another situated about four miles upstream at Horse Chops River with a capacity of 10,000 h.p. for operation in 1953. Investigations are also being carried on by the Company towards a new development of about 20,000 h.p. on the Piper's Hole River which empties into the head of Placentia Bay.

The United Towns Electric Company Limited operates seven plants, of which five are located at Conception Bay and two on the Burin Peninsula. The Company sells light and power to communities on the Avalon and Burin Peninsulas and to the fluorspar mining operations at St. Lawrence on the Burin Peninsula. It developed 22,022,347 kwh. during 1952. The West Coast Power Company, a subsidiary of the United Towns Electric Company, operates a plant on Lookout Brook, a tributary of Flat Bay Brook which flows into St. George's Bay. It generated 8,371,400 kwh. in 1952.

Two small companies, the Clarenville Light and Power Company and the Union Electric Company, operate plants at Clarenville and Port Union, respectively.

Nova Scotia.—Legislation relating to the use of water power was first enacted in Nova Scotia in 1909 under "An Act for the Further Assistance of the Gold Mining Industry" In 1914, legislation was passed initiating the development of water power in the Province and this was carried on in an investigatory manner in co-operation with the Federal Government until 1919 when the Nova Scotia Power Commission was created under the Power Commission Act. Certain investigatory work is still carried on in Nova Scotia by the Federal Government in close association with the Commission. The control of the water resources of the Province is vested in the Crown and is administered under the provisions of the Nova Scotia Water Act of 1919. The Commission pays the regular fees for water rights.

The function of the Commission is to supply electric power and energy by the most economical means available. The Rural Electrification Act of 1937 greatly increased the possibilities for retail service by providing for financial assistance to equalize cost and revenue of extensions, the construction of which has been approved by the Governor in Council as qualifying under the Act. In 1941, an amendment to the Power Commission Act authorized the Commission, subject to the approval of the Governor in Council, to regulate and control the generation, transmission, distribution, supply and use of power in the Province.

Financially, the Commission is self-supporting, repaying borrowings from revenue. The balance sheet at Nov. 30, 1952, showed total fixed assets of $34,950,158 including work in progress amounting to $2,551,147. Current assets amounted to $483,603. Liabilities are shown as follows: fixed $26,376,272; current $3,683,718; contingency and renewal reserves $3,249,675; sinking fund reserves $5,269,776; and general reserves and special reserves $1,927,832.

The initial development of the Commission was an 800-h.p. installation on the Mushamush River which went into operation in 1921 and delivered 192,000 kwh. in the first complete year of operation. Succeeding years showed a marked growth in installed capacity, reaching 101,450 h.p. in hydraulic turbines, 3,962 h.p. in diesel units and 21,125 kw. in steam turbines by Nov. 30, 1952, with a total generation for that year of 390,724,748 kwh.

The territory of the Commission extends over the entire Province and embraces nine systems which include 25 generating stations and 3,888 miles of transmission and distribution lines, through which 49 wholesale and 25,493 retail customers received 374,846,087 kwh. during the year ended Nov. 30, 1952.

The installed capacity and annual output of the various systems of the Nova Scotia Power Commission are given in Table **15**.

The Trenton steam station of the Sheet Harbour System is being augmented by a 20,000-kw. unit which is expected to start operations some time in 1955, and a 6,000-h.p. hydro development is scheduled to start operations in 1954.

15.—Capacity and Output of the Nova Scotia Power Commission, 1952

Systems	First Year of Operation	Installed Capacity		Annual Generation	
		Initial	1952	Initial	1952
		h.p.	h.p.	kwh.	kwh.
Hydro					
Mushamush	1921	800	330	208,752	832,500
St. Margaret	1922	10,700	15,700	19,538,000	24,483,800
Sheet Harbour—					
Malay Falls	1924	5,550	5,550	6,536,860	7,973,327
Ruth Falls	1925	6,290	10,590	7,361,117	25,960,760
Liscomb		..	700	..	..
Mersey—					
Original development	1928	29,400	29,400	85,863,390	111,945,100
Cowie Falls	1938	10,200	10,200	37,866,000	37,105,000
Deep Brook	1950	12,800	12,800	11,154,000	11,154,000
Tusket	1929	2,820[1]	2,820[1]	3,680,540	9,847,240
Roseway	1930	560	1,060	365,600	4,011,800
Markland	1931	1,400	1,200	5,813,555	3,737,805
Harmony		..	1,200		
Gulch		..	8,500		..
Antigonish	1931	[2]	...	389,520[3]	...
Barrie Brook	1940	500	500	1,780,734	2,128,950
Dickie Brook	1948	3,500	3,500	8,920,000	6,675,950
Thermal					
Tusket Diesel	...	..	720	...	...
Canseau Diesel	1937	72	3,142	21,650	718,338
Canseau Steam	1945	1,125[4]	1,125[4]	4,437,280	6,484,300
Sheet Harbour Steam	..	..	20,000[4]	..	..

[1] Minimum head. [2] Distribution only. [3] Purchased energy. [4] Rated in kilowatts.

New Brunswick.—The New Brunswick Electric Power Commission was incorporated under the Electric Power Act, 1920. Generating stations owned and operated by the Commission are as follows:—

Plant	*Type*	*Capacity*
		h.p.
Musquash	Water power	10,000
Grand Lake	Steam	43,550
Saint John	Steam	25,500
Chatham	Steam	16,750
Grand Manan	Diesel	1,045
St. Quentin	Diesel	950
St. Stephen	Diesel	2,500
Campobello	Diesel	335
Shippegan	Diesel	2,680
TOTAL CAPACITY		103,310*

The Musquash, Grand Lake, Saint John, Tobique and Chatham plants are interconnected and operate in parallel at all times. The St. Stephen and Shippegan plants also may be paralleled with the system as required.

A new steam plant was placed in operation at Grand Lake in the autumn of 1951, adding 16,750 h.p. to the Commission's generating capacity. A 25,000-h.p. unit will be in service in this same plant in May 1953 and a water-power installation of 27,000 h.p. will be in operation in April 1953 at the Tobique Narrows for an additional total of 53,000 h.p. and a then-installed capacity of 156,310 h.p.

High-voltage transmission was increased from 694 miles in 1951 to 749 miles in 1952. Power is sold "en bloc" to the cities of Saint John, Moncton and Fredericton and to the town of Sussex.

* The Tobique 27,000-h.p. development will be completed early in 1953.

The statistical information given in Table 16 shows the growth of the Commission's undertakings since 1924.

16.—Growth of the New Brunswick Electric Power Commission, Years Ended Oct. 31, 1924, 1945 and 1949-52

Item	1924	1945	1949	1950	1951[1]	1952[2]
High-voltage transmission line.....miles	138	348	566	646	694	749
Distribution line..... "	67	2,326	4,334	5,255	5,623	5,938
Direct customers..... No.	1,129	24,166	44,822	52,255	53,777	57,016
Plant capacities..... h.p.	11,100	37,590	87,295	87,295	87,095	103,310
Power generated..... kwh.	15,500,000	122,508,320	222,951,910	242,302,755	114,373,065	282,405,310
Capital invested..... $	3,780,000	11,509,962	27,175,441	31,357,828	33,857,407	38,286,374
Revenue..... $	310,000	2,024,468	4,073,979	4,768,746	2,385,054	6,255,615

[1] Five months—Nov. 1, 1950, to Mar. 31, 1951. The Commission's fiscal year-end changed in 1951 from Oct. 31 to Mar. 31. [2] Year ended Mar. 31.

Quebec.—*The Quebec Streams Commission.*—Created by S.Q. 1 Geo. V, c. 5, and given additional powers by 3 Geo. V, c. 6 (R.S.Q. 1925, c. 46) and 20 Geo. V, c. 34, the Quebec Streams Commission was authorized to ascertain the water resources of the Province, to make recommendations regarding their control, and to construct certain storage dams and operate them so as to regulate the flow of streams. It has assisted companies engaged in such work by the systematic collection of data on the flow of the principal rivers and on meteorological conditions, by investigation of numerous water-power sites and determination of the longitudinal profile of a large number of rivers, but mainly by the regulation of the flow of the principal power streams through the construction of storage dams.

From 1912 to 1925, a number of storage reservoirs were built or acquired by the Commission, charges being made to benefiting companies to cover interest and amortization on the capital invested as well as the cost of operation. Since 1925, companies or persons have availed themselves of the latitude given them by R.S.Q. 1925, c. 46, to build the necessary dams; such storages have been transferred to and are operated by the Commission, the cost of operation only being charged annually to the interested companies or persons. The Commission now controls and operates 28 storage-reservoirs in the Province.

Among the rivers controlled by the Commission, either by means of dams on the rivers or by controlling the outflow of lakes at the headwaters, are: the St. Maurice, now developing 1,110,550 h.p.; the Gatineau, 528,000 h.p.; the du Lièvre, 274,000 h.p.; the St. Francis, 100,000 h.p.; the Chicoutimi, 41,400 h.p.; the Au Sable, 33,200 h.p.; and the Metis, 15,700 h.p. The Commission also operates nine reservoirs on North River, two in the watershed of the Ste. Anne-de-Beaupré River, and one at the outlet of Lake Morin, on Rivière-du-Loup (lower).

Reservoirs not Controlled by the Quebec Streams Commission.—Among storage-reservoirs not controlled or operated by the Commission are: the Lake St. John, the Lake Manouane and Passe Dangereuse on the Peribonca River, and the Onatchiway on the Shipshaw River; the Témiscouata Lake on Madawaska River, controlled by the Gatineau Power Company; Memphremagog Lake on the Magog River, controlled by the Dominion Textile Company; Témiscamingue and Quinze Lakes on the Ottawa River, controlled by the Federal Department of Public Works;

Kipawa Lake on the Ottawa River, controlled by the Gatineau Power Company; and Dozois Lake on the Upper Ottawa River, controlled by the Quebec Hydro-Electric Commission.

Power developments on the Saguenay River, benefiting from the Peribonca and Lake St. John reservoirs, amount to 1,950,000 h.p. since the Chute-à-Caron (Shipshaw) project has been completed.

The Quebec Hydro-Electric Commission.—The Quebec Hydro-Electric Commission was established by S.Q. 8 Geo. VI, c. 22, with the object of supplying power to the municipalities, industrial and commercial undertakings and to citizens of the Province of Quebec at the lowest rates consistent with sound financial administration.

On Apr. 15, 1944, in accordance with the provisions of this Act, the Commission took over: (*a*) the system of Montreal Light, Heat and Power Consolidated for the generating and distribution of electricity; (*b*) the undertaking of the Montreal Island Power Company for the generating and distribution of electricity; and (*c*) all the shares of the capital stock of the Beauharnois Light, Heat and Power Company. Thus, the Quebec Hydro-Electric Commission now controls, among other assets, the following hydro-electric plants:*—

Plant	*River*	*Installed Capacity*
		h.p.
Cedars	St. Lawrence	200,000
Sault-au-Recollet	Rivière-des-Prairies	45,000
Beauharnois	St. Lawrence	1,241,000
Rapid VII	Upper Ottawa	64,000

The Commission operates a public utility system which supplies electric light and power requirements to Greater Montreal and surrounding districts, embracing a population of nearly 1,500,000. From the Cedars plant, electric energy is supplied to the Aluminum Company of America at Massena, N.Y., and through Beauharnois Light, Heat and Power Company power is sold to the Hydro-Electric Power Commission of Ontario. Sales involved are in the neighbourhood of 100,000 h.p. to Massena, N.Y., and 250,000 h.p. to Ontario.

* The Commission also purchases 135,000 h.p. from the Shawinigan Water and Power Company.

17.—Growth of the Quebec Power Systems, 1943-52

NOTE.—Figures for the years 1935-42 will be found in the 1950 Year Book, p. 572.

Year	Municipalities Served	Customers Served	Power Distributed	
			Total	Primary
	No.	No.	h.p.	h.p.
1943	61	293,005	1,044,000	942,000
1944	61	298,767	1,060,000	897,000
1945	61	305,049	1,045,000	883,000
1946	61	309,022	1,085,000	947,000
1947	61	318,984	1,127,000	980,000
1948	61	330,799	1,202,000	1,034,000
1949	61	349,347	1,233,000	1,119,000
1950	64	368,026	1,296,000	1,182,000
1951	66	387,218	1,312,000	1,312,000
1952	67	400,779	1,620,000	1,462,000

18.—Distribution of Quebec Primary Power, by System, 1947-52

(Coincident with Montreal System peak)

System	1947	1948	1949	1950	1951	1952
	h.p.	h.p.	h.p.	h.p.	h.p.	h.p.
Montreal System	567,000	620,000	669,000	730,000	803,000	873,000
Beauharnois Local System	35,000	36,000	70,000	65,000	171,000	189,000
Beauharnois 25-cycle System (H.E.P.C. of Ontario)	250,000	250,000	250,000	250,000	250,000	250,000
Massena System	128,000	128,000	130,000	137,000	80,000	135,000
Shawinigan System	—	—	—	—	8,000	15,000
Totals	**980,000**	**1,034,000**	**1,119,000**	**1,182,000**	**1,312,000**	**1,462,000**

In addition to the ownership and operation of these generating and distributing systems, the Quebec Hydro-Electric Commission administers the 64,000-h.p. Upper Ottawa River plant at Rapid VII and also the Dozois Reservoir. Average primary power statistics for this Northern Quebec System (Cadillac-Noranda district) are as follows: 1947, 18,140 h.p.; 1948, 21,270 h.p.; 1949, 34,790 h.p.; 1950, 35,500 h.p.; 1951, 30,550 h.p.; and 1952, 29,200 h.p.

Ontario.—The Hydro-Electric Power Commission of Ontario is a separate entity, a self-sustaining public concern endowed with broad powers to produce, buy and deliver electric power throughout the Province and to perform certain regulatory functions with respect to the municipal electrical utilities that it serves. The enterprise represented by the Commission is generally known and referred to as the Ontario Hydro.

The members of the Commission, a Chairman and two Vice-Chairmen, are appointed by the Lieutenant-Governor in Council to hold office during pleasure. One Commissioner must be a member, and two may be members, of the Executive Council of the Province of Ontario.

The Commission was created in 1906 by an enactment of the Ontario Legislature after consideration of recommendations made by advisory commissions. These had been appointed in response to public demand that the water powers of Ontario should be conserved and developed for the benefit of all the people of the Province. The Commission operates under the authority of the Power Commission Act (7 Edw. VII, c. 19) passed in 1907 as an amplification of the Act of 1906 and subsequently modified by numerous amending Acts (R.S.O., 1950, c. 281).

The 1940 Year Book contains a general article which deals with the early history of the Hydro-Electric Power Commission of Ontario and its later development both in organization and resources following the lines so well established by the first Chairman, Sir Adam Beck.

The undertaking initially proposed to purchase a block of 100,000 h.p. from the Ontario Power Company Limited at Niagara Falls and to distribute this to 13 municipalities which had signed the original contracts with the Commission to take power at cost. In 1909 the task of constructing a transmission system to distribute power to the member municipalities was begun and, by the end of the following year, power was being supplied to several of them. Similarly, and at about the same time, the Commission built a short transmission line and a substation to serve Port Arthur with power purchased from the Kaministiquia Power Company. These two pioneer systems eventually grew into the two co-operative systems—the Southern Ontario and the Thunder Bay Systems.

The Southern Ontario System developed through a series of consolidations of various smaller systems. The establishment of the original Niagara System was followed in 1911 by the formation of the Severn System. Subsequently, the establishment of other systems to serve groups of municipalities in various sections of the Province had brought, by 1919, the number of systems to eleven. In 1924, the Severn and two other systems were consolidated to form the Georgian Bay System and in 1929 and 1930 a consolidation of four systems created the Eastern Ontario System. In 1944, the Southern Ontario System came into being through the consolidation of the Niagara, Georgian Bay and Eastern Ontario Systems.

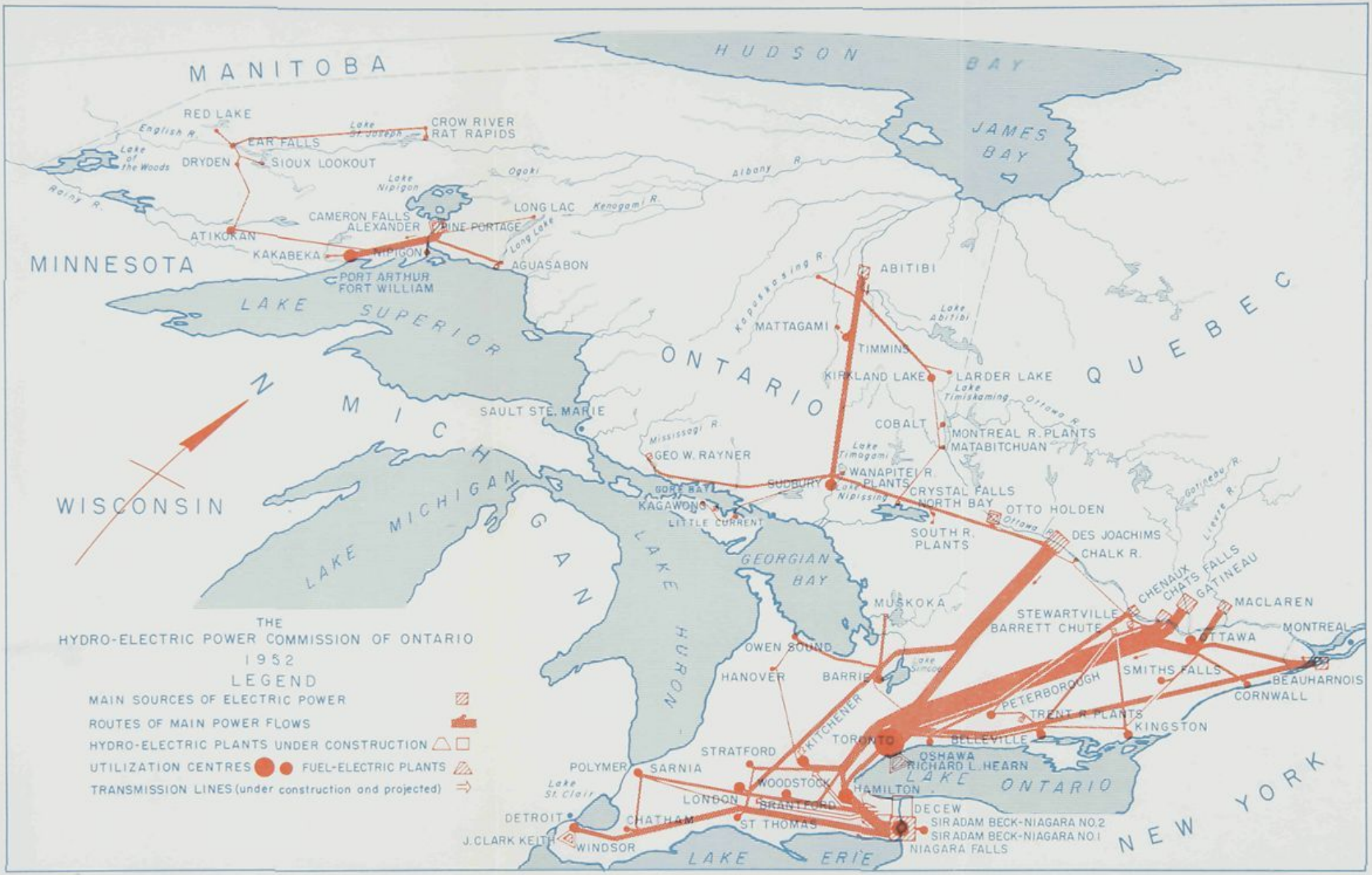
In the northern part of the Province the Commission continued to operate the Thunder Bay System. In addition, it undertook during the 1930's to operate, in trust for the Provincial Government, a group of unconnected systems serving mainly mining and pulp and paper industries and known as the Northern Ontario Properties. On Jan. 1, 1952, the Northern Ontario Properties and the Thunder Bay System were merged for financial and administrative purposes and the consolidation continues to be known as the Northern Ontario Properties.

In each of the Southern Ontario System and the Northern Ontario Properties, as at present constituted, the Commission's customers include municipal electrical utilities, certain large industrial users, and retail customers in a small group of local municipal systems and in rural municipalities.

The Southern Ontario System serves the older and more populous part of Ontario lying south of a line drawn from Mattawa on the upper Ottawa River approximately west to Georgian Bay. Primarily it serves a group of 312 municipalities receiving power at cost under contracts established according to the provisions of the Power Commission Act. It is, therefore, referred to as a co-operative system.

The Northern Ontario Properties is not a co-operative system in the same sense, though it continues to serve the municipalities that were formerly members of the Thunder Bay co-operative system. It also continues to operate, in trust for the Province, a large part of the facilities serving the industrial and mining areas of northern Ontario. The territory served by the Northern Ontario Properties extends in the northern part of the Province from the Quebec boundary to the boundary of Manitoba. Though it is not a wholly integrated power system, the Northern Ontario Properties comprises two Divisions which in themselves are integrated operational and administrative units, the Northeastern and the Northwestern Divisions. No power-line connection exists between these two divisions but the Northeastern Division has been interconnected since 1950 with the Southern Ontario System.

The growth of Ontario Hydro's resources, both physical and financial, reflects the remarkable industrial and social development of the Province. In 1914, the Commission purchased its first generating station, Big Chute on the Severn River. Later in the same year, the first Commission-built generating station at Wasdell Falls, also on the Severn River, was placed in service. The program of purchase and construction of generating stations thus launched reached a climax between 1917 and 1925 in the construction of the great Queenston-Chippawa development, later renamed Sir Adam Beck-Niagara Generating Station No. 1 in honour of the first Chairman. This station first delivered power in 1922. Yet, commencing four years later, the Commission found it necessary to negotiate for the extensive purchase of power from large Quebec suppliers in order to satisfy Ontario's steadily growing power demands.


MANITOBA
HUDSON BAY
JAMES BAY
RED LAKE
English R.
Lake St. Joseph
CROW RIVER
RAT RAPIDS
EAR FALLS
Lake of the Woods
DRYDEN
SIOUX LOOKOUT
Ogoki
Albany R.
Lake Nipigon
Rainy R.
LONG LAC
Kenogami R.
CAMERON FALLS
ALEXANDER
PINE PORTAGE
Long Lake
ATIKOKAN
KAKABEKA
NIPIGON
AGUASABON
MINNESOTA
PORT ARTHUR
FORT WILLIAM
LAKE SUPERIOR
Kapuskasing R.
ABITIBI
Lake Abitibi
MATTAGAMI
TIMMINS
ONTARIO
QUEBEC
KIRKLAND LAKE
LARDER LAKE
Lake Timiskaming
Ottawa R.
SAULT STE. MARIE
COBALT
MONTREAL R. PLANTS
MATABITCHUAN
Mississagi R.
GEO W. RAYNER
Lake Timagami
WANAPITEI R. PLANTS
SUDBURY
Lake Nipissing
CRYSTAL FALLS
NORTH BAY
OTTO HOLDEN
Gatineau R.
Lievre R.
WISCONSIN
LAKE MICHIGAN
GORE BAY
KAGAWONG
LITTLE CURRENT
SOUTH R. PLANTS
DES JOACHIMS
CHALK R.
GEORGIAN BAY
LAKE HURON
MUSKOKA
CHENAUX
CHATS FALLS
GATINEAU
MACLAREN
STEWARTVILLE
BARRETT CHUTE
MONTREAL
OTTAWA
OWEN SOUND
HANOVER
BARRIE
Lake Simcoe
SMITHS FALLS
BEAUHARNOIS
CORNWALL
PETERBOROUGH
TRENT R. PLANTS
KINGSTON
KITCHENER
TORONTO
BELLEVILLE
STRATFORD
OSHAWA
RICHARD L. HEARN
POLYMER
SARNIA
WOODSTOCK
HAMILTON
LAKE ONTARIO
Lake St. Clair
LONDON
BRANTFORD
DECEW
DETROIT
CHATHAM
ST THOMAS
SIR ADAM BECK-NIAGARA NO.2
SIR ADAM BECK-NIAGARA NO.1
J. CLARK KEITH
WINDSOR
NIAGARA FALLS
LAKE ERIE
NEW YORK
THE
HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
1952
LEGEND
MAIN SOURCES OF ELECTRIC POWER
ROUTES OF MAIN POWER FLOWS
HYDRO-ELECTRIC PLANTS UNDER CONSTRUCTION
UTILIZATION CENTRES
FUEL-ELECTRIC PLANTS
TRANSMISSION LINES (under construction and projected)

In the past ten years and particularly since 1945, growing demands for power have taxed the capacity of the Commission's resources. In December 1942 the dependable peak capacity of the Commission's resources was 1,766,500 kw. By 1945 the peak capacity was greater by 171,000 kw. than the 1942 capacity. The aggressive program of capital construction inaugurated in 1945, however, had resulted by the end of 1952 in a dependable peak capacity of 3,353,350 kw., or an increase of 1,415,850 kw. in seven years. Almost half of this increase represented the combined output of the Des Joachims, Chenaux and Otto Holden Generating Stations, all of which are located on the Ottawa River. Other notable hydro-electric developments have been Pine Portage Generating Station serving the lake-head area of the Northwestern Division, and George W. Rayner Generating Station in Ontario's northeastern mining area. The recent construction of two large fuel-electric stations at Toronto and Windsor, named the Richard L. Hearn and the J. Clark Keith Generating Stations respectively, marked a departure from the Commission's almost complete reliance on hydraulic resources. Even with the present greatly expanded power production, however, the Commission's resources are taxed to capacity to meet demands at time of annual peak load.

Major activity in the power development program at present is the construction of Sir Adam Beck-Niagara Generating Station No. 2 near Queenston, a project made possible by the Niagara Diversion Treaty of 1950. Water will be diverted from the Niagara River at a point about two miles above the Falls. It will be conveyed for about five miles by twin pressure tunnels that pass under the city of Niagara Falls and reach a maximum depth of over 300 feet below the surface of the ground. Returning to the surface at a point about 2¼ miles from the head-works, the water will flow through a canal to the forebay.

Twelve units at the station will have an installed capacity of 900,000 kw. In 1953, preliminary work necessary for the ultimate incorporation of a pumped-storage installation and associated generating capacity at this project will be under-taken. Such work, including widening of the canal, enlargement of the forebay, and the extension of certain parts of the headworks and substructure, can be carried out more economically and with less hazard before water is admitted to the new canal and forebay in 1954. The completed pumped-storage scheme will consist of a storage reservoir adjacent to the forebay, a reversible-pump plant, and four additional generating units at the main generating station. By this means, addi-tional peak capacity can be made available within the limits of the Niagara Diversion Treaty of 1950, in stages as dictated by system requirements, and at a cost less than that of new fuel-electric generation.

Even the maximum development of resources at Niagara would not reduce the urgent necessity for the power that could be provided by the development of the International Rapids Section of the St. Lawrence River. This great power project was approved by the International Joint Commission in October 1952, and Ontario Hydro is prepared to proceed with it as soon as the Federal Power Commission at Washington grants a licence to an authority to carry out the power project on the United States side of the river.

In 1949 the Commission embarked on a complex program of frequency stan-dardization in the Southern Ontario System, and this program was comprehensively treated in the 1951 Year Book, pp. 540-548. By the end of 1952, the area to be standardized had been reduced from about 12,000 to approximately 7,000 sq. miles. The magnitude and complexity of the operation have been increased, however, as the result of the growth in population and industrial production.

As a further indication of the broadened scope of the operation, it is now estimated that the domestic customers in the area referred to will have, on the average, almost twice the number of frequency-sensitive items estimated in 1947.

The basic principle governing the financial operations of the undertaking is that electrical service is provided by the Commission to the municipalities, and by the municipalities to their customers at cost. Cost includes all charges for operating and maintenance, for interest on capital investment, and reserves covering depreciation, contingencies and obsolescence, and for the stabilization of rates. It also includes a reserve for a sinking fund to retire the Commission's capital debt.

The undertaking from its inception has been self-supporting apart from the assistance given by the Provincial Government which provides 50 p.c. of the capital cost of rural distribution facilities in pursuance of its long-established policy of assisting agriculture. The Province also guarantees the payment of principal and interest of all bonds issued by the Commission and held by the public.

The undertaking as a whole involves two distinct phases of operations as follows: The *first* phase of operations is the provision of the power supply—either by generation or purchase—and its transformation, transmission and delivery in *wholesale* quantities to municipal electrical utilities, certain large industrial customers and rural operating areas. This phase of operations is performed by The Hydro-Electric Power Commission of Ontario. The *second* phase of operations is the *retail* distribution of electric energy. In most cities and towns, in many villages and in certain thickly populated areas of townships, retail distribution of electric energy is conducted by municipal commissions under the general supervision of The Hydro-Electric Power Commission of Ontario as provided for in the Power Commission Act and the Public Utilities Act. These local commissions own and operate their own distribution facilities. The Hydro-Electric Power Commission of Ontario owns the distribution facilities and conducts retail distribution in a small number of municipalities through what are called local systems. Throughout most of rural Ontario, the Commission, on behalf of the respective townships, operates the distribution facilities and attends to all physical and financial operations connected with the retail distribution of energy to the customers in the rural operating areas. Since 1944, the rate structure applying to the Commission's farm, hamlet, commercial and summer service customers has been uniform throughout the Province.

The balance sheet of the Commission shows that gross investment in fixed assets at Dec. 31, 1952, amounted to $1,176,866,092, against which there was an accumulated reserve for depreciation of $136,717,958. Included in the gross investment is an amount representing rural assets under administration totalling $145,469,077. Of this amount, $71,841,139 represents the assistance given by the Province of Ontario for rural construction. The Commission's assets, allowing for the deduction of depreciation reserve and Provincial assistance referred to above, stood at $1,193,983,213.

The 329 municipal electrical utilities, which operate under cost or fixed-rate contracts with the Commission and distribute power in 334 municipalities in the Province, had a gross investment in fixed assets amounting to $193,795,886. The provision for depreciation amounted to $50,985,329. Municipal assets, after deduction of this depreciation reserve, were $305,343,051, of which $128,655,935 represented the equity of the municipalities in the Commission's systems.

The following tables give statistics of resources generated and purchased, development program, distribution and service of the Commission.

19.—Resources Generated and Purchased (All Systems), as at December 1951 and 1952

Year and System	Commission's Generating Stations				Power Purchased	
	Hydro-electric[1]		Fuel-electric[1]			
	kw.	h.p.	kw.	h.p.	kw.	h.p.
December 1951—						
Southern Ontario System	1,484,150	1,989,477	202,000	270,778	703,100	942,493
Northern Ontario Properties—						
Northeastern Division	294,600	394,906	300	402	—	—
Northwestern Division	256,500	343,834	—	—	1,100	1,475
Totals, Resources	**2,035,250**	**2,728,217**	**202,300**	**271,180**	**704,200**	**943,968**
December 1952—						
Southern Ontario System	1,659,150	2,224,062	444,000	595,174	687,100	921,045
Northern Ontario Properties—						
Northeastern Division	301,600	404,290	300	402	—	—
Northwestern Division	259,800	348,257	—	—	1,400	1,877
Totals, Resources	**2,220,550**	**2,976,609**	**444,300**	**595,576**	**688,500**	**922,922**

[1] Dependable peak capacity—the amount of power subject to periodic change as equipment and water conditions vary, which the source is expected to be able to supply at the time of the system's peak demand. For the Commission-owned or Commission-operated generating stations, it is presumed that all units are available and that the supply of water is normal. Contractual stipulations govern the capacities of sources of purchased power.

20.—Summary of Development Program of The Hydro-Electric Power Commission of Ontario (1945 to 1955), as at Dec. 31, 1952

System and Development	In Service—	Dependable Peak Capacity
		kw.
Southern Ontario System—		
DeCew Falls (extension)—Niagara Region	September 1947	57,000
Stewartville—Madawaska River	September 1948	63,000
Additional power purchase contract—Polymer Corporation	November 1948	22,500
Emergency fuel-electric units	January 1949—April 1950	53,000
Des Joachims—Ottawa River	July 1950—February 1951	380,000
Chenaux—Ottawa River	November 1950—September 1951	120,000
Richard L. Hearn—Toronto	October 1951—December 1952 (276,000) June 1953 (100,000)	376,000[1]
J. Clark Keith—Windsor	November 1951—December 1952 (132,000) January 1952—November 1953 (132,000)	264,000[2]
Otto Holden—Ottawa River	January 1952—December 1952 (178,000) April 1953 (26,000)	204,000
Sir Adam Beck-Niagara G. S. No. 2—Niagara River	1954-1956	900,000[2]
Northern Ontario Properties—		
Northeastern Division—		
George W. Rayner—Mississagi River	July 1950	47,000
Northwestern Division—		
Ear Falls (extension)—English River	June 1948	6,000
Aguasabon—Aguasabon River	October 1948	40,000
Pine Portage—Nipigon River	July 1950 (61,400) 1954-1955 (64,600)	126,000

[1] Installed capacity of generating station when all four units are operating at 60 cycles is 400,000 kw.
[2] Installed capacity.

21.—Distribution of Power to Systems of The Hydro-Electric Power Commission of Ontario, Years Ended Oct. 31, 1947-49, and Dec. 31, 1950-52

NOTE.—Peak load generated and purchased, primary and secondary, in terms of generation.

System	1947	1948	1949	1950[1]	1951	1952
	kw.	kw.	kw.	kw.	kw.	kw.
Southern Ontario System	1,684,269	1,542,975	1,743,973	2,210,929	2,425,909	2,798,476
Northern Ontario Properties—						
Northeastern Division	191,895	194,932	213,718	255,406	273,148	283,958
Northwestern Division	126,975	149,410	192,540	248,230	246,933	247,852
Totals	**2,003,139**	**1,887,317**	**2,150,231**	**2,714,565**	**2,945,990**	**3,330,286**

[1] Owing to the change in the Commission's fiscal year to coincide with calendar year, figures shown here for 1950 cover the 14 months ended Dec. 31, 1950.

22.—Growth of The Hydro-Electric Power Commission of Ontario, Years Ended Oct. 31, 1943-49, and Dec. 31, 1950-52

Year	Municipalities Served	Ultimate Customers Served Directly or Indirectly	Total Power Distributed[1]	Assets of Commission and Municipal Utilities
	No.	No.	kw.	$
1943	903	797,258	1,738,781	464,003,836
1944	904	818,085	1,802,454	466,244,703
1945	922	869,712	1,939,505	502,816,838
1946	924	910,563	1,935,972	525,288,518
1947	944	952,853	2,003,139	582,960,362
1948	970	1,004,127	1,887,317	675,327,843
1949	1,017	1,078,221	2,150,231	854,381,154
1950[2]	1,132	1,187,117	2,714,565	1,027,251,478
1951	1,175	1,249,366	2,945,990	1,198,724,241
1952	1,244	1,317,249	3,330,286	1,370,670,328

[1] Sum of the maximum 20-minute coincident peak loads (primary plus secondary) of each of the systems operated by the Commission, given in terms of net output of the sources of supply to each system for the last month of each fiscal year. [2] Owing to the change in the Commission's fiscal year to coincide with the calendar year, figures shown here for 1950 cover the 14 months ended Dec. 31, 1950.

Manitoba.—The Manitoba Power Commission was established in 1919 for the purpose of distributing electric energy, both wholesale and retail, throughout the Province, with the exception of the Greater Winnipeg area. The utility currently operates under authority of an Act respecting the Manitoba Power Commission (R.S.M. 1940, c. 166), as amended.

The Commission's supply of electric energy for distribution is purchased from the Winnipeg Electric Company at various points, chiefly at or near the city of Winnipeg. Arrangements for the Commission's purchase of power are contained in the Seven Sisters Agreement of 1928 between the Province of Manitoba and the Winnipeg Electric Company. The Commission has gradually acquired practically all of the municipally owned and privately owned generating plants operating within its jurisdiction and has spread a network of transmission lines across the Province. All energy distributed is now generated by hydro power.

The Commission's program, started in the 1930's and designed to bring hydro-electric power at uniform service rates to all urban centres of 20,000 or over population, is now virtually complete and currently serves 419 centres. In 1942,

the Manitoba Electrification Enquiry Commission was appointed by the Provincial Government to study the feasibility of widespread farm electrification in the Province. It was concluded that, with the Manitoba Power Commission's network of transmission lines as a source of supply and with the economy in design of farm lines that had been worked out, it would be practicable to bring the benefits of hydro-electric power to over 90 p.c. of the farms in the Province, provided the farmers themselves were prepared to assist in certain organizational and operational matters. A test program undertaken in 1945 proved successful and, thereafter, the Commission conducted annual programs of farm electrification. Shortages of materials restricted the size of these programs until 1948 when the set goal was reached of 5,000 farm connections. The program has since continued on an area-coverage basis and the Commission served over 34,000 farms by the end of 1952. The 1953 program, which is planned to serve another 5,000 farms, will be the last undertaken on an area-coverage basis. The only farmers remaining will be those in isolated pockets or those who have not availed themselves of the opportunity to take service.

Saskatchewan.—The Saskatchewan Power Corporation, established Feb. 1, 1949, and operating under the provisions of the Power Corporation Act (S.S. 1950, c. 10), as amended, succeeds the Saskatchewan Power Commission which operated from Feb. 11, 1929, to Jan. 31, 1949. The main functions of the Corporation are the generation, transmission, distribution, sale and supply of electric energy and steam. It is also authorized to produce or purchase, and to transmit, distribute, sell and supply natural or manufactured gas and the Corporation entered into that field in 1952 (*see* p. 582).

In 1952, the Corporation served 579 urban communities (with six or more customers) in retail sales and three urban communities (Saskatoon, Swift Current and Battleford) in bulk sales. Its activity is extended to the entire Province with the exception of such cities as Regina and Weyburn which own and operate municipal plants and distribution systems, and Moose Jaw where the local plant and distribution system is owned and operated by National Light and Power Company Limited. A number of small communities, the largest of them being the town of Kamsack, are not served by the Saskatchewan Power Corporation at present, although some such utilities, mostly privately owned, were taken over by the Corporation in 1952.

Particulars of the operations of the Saskatchewan Power Commission from 1929 to 1948 and of the operations of the Saskatchewan Power Corporation from 1949 to 1951 are given in the 1952-53 Year Book and earlier editions. At the end of 1952, the Corporation served 107,942 customers; 21,367 were located in communities supplied with power in bulk sales and 86,575 were retail customers. The latter group comprised 74,632 customers in communities considered as urban and 11,943 in areas classified as rural, predominantly farms. All customers absorbed 332,674,176 kwh. of which 300,297,970 kwh. were generated in Corporation plants and 32,376,206 kwh. were purchased in bulk from Regina and National Light and Power utilities. Total invested capital of the Corporation at the end of 1952 amounted to $36,009,143.

During 1952, the Saskatchewan Power Corporation owned and operated four steam-generating plants (Estevan, North Battleford, Prince Albert and Saskatoon), and 12 diesel plants with capacities over 500 kw. each (Assiniboia, Humboldt, Maple Creek, Meadow Lake, Melville, Moosomin, Swift Current, Tisdale, Unity,

Watrous, Wynyard and Yorkton). The total available capacity of the Corporation in generating plants at the end of 1952 was assessed at 133,450 kw. of which 111,950 kw. was located in steam plants and 21,500 kw. in diesel plants. These figures include 36,900 kw. extensions to the steam plants in Saskatoon and Prince Albert and the gas diesel plant in Unity, which were carried out in 1952.

At the end of the year the Saskatchewan Power Corporation owned and operated 13,071 miles of transmission and rural lines, 4,314 miles of which were added during the year. Several large substations were built in 1952 with a total capacity of 46,000 kva.

23.—Growth of the Saskatchewan Power Corporation, 1945-52

Year	Communities Served in Bulk and Retail Sales	Customers in Communities Served	Power Distributed	Revenue
	No.	No.	kwh.	$
1945	150	40,968	106,539,448	2,677,289
1946	229	45,495	118,990,127	3,141,652
1947	320	63,805	160,420,859	4,442,507
1948	366	71,009	186,834,305	5,058,142
1949	420	78,389	202,135,947	5,629,372
1950	454	84,361	235,926,656	6,363,597
1951	535	93,923	278,826,919	7,159,876
1952	584	107,942	332,674,176	8,560,488

In the last two months of 1952, the Saskatchewan Power Corporation commenced the distribution and sale of natural gas. It purchased the commodity in bulk from Husky Phillips Company in the Brock area, and resold it in retail to the customers in the town of Kindersley and the village of Brock. In these communities the Corporation maintained 33 miles of transmission and distribution line valued at $353,352. There were 254 customers at the end of 1952 using natural gas with the combined two-month consumption of 74 M cu. feet. The Corporation has completed detailed surveys in connection with the proposed extension of gas service to the city of Saskatoon.

Alberta.—Public ownership of power-generating and distributing systems in Alberta is confined to certain urban municipalities. The regulatory authority over privately owned systems is the Board of Public Utility Commissioners, which has jurisdiction over the distribution and sale of electricity. The Board has power to hold investigation upon complaint made either by a municipality or by a utility company and, following such investigation, may fix just and reasonable rates.

There are three private utility services in the Province: Calgary Power Limited, Canadian Utilities Limited and Northland Utilities Limited. A synopsis of these services is given below.

Calgary Power Limited.—This Company has eight hydro-generating plants on the Bow River and its tributaries, west of Calgary. These plants are: Horseshoe Falls, Kananaskis Falls, Ghost River, Cascade, Barrier, Spray, Rundle and Three Sisters. At Dec. 31, 1951, the Company's total plant capacity was 206,550 h.p. Barrier plant, completed in 1947, was the first Company plant to be operated by remote control. Recently, Cascade, Three Sisters, Spray and Rundle plants were linked to a central control room at Kananaskis. The remaining plants will

be remote-controlled as soon as the installations can be made. The Company has reservoirs at Lake Minnewanka (180,000 acre-feet), Interlakes (Kananaskis Lakes) (90,000 acre-feet), Spray Lakes (200,000 acre-feet), and forebay storage of 74,000 acre-feet at Ghost.

Power from these plants, together with that received under interchange agreements with the cities of Lethbridge and Edmonton, is fed into a transmission network which supplies the entire electrical requirements of the cities of Calgary and Red Deer and 235 smaller urban centres in central and southern Alberta. At Dec. 31, 1952, over 1,400 oil wells were being supplied with electric pumping service as well as other requirements directly related to the oil industry, such as gathering stations, refineries, pipeline pumping, and the many large industrial plants recently located near Edmonton.

Calgary Power Limited transmission system, comprising over 4,100 miles of lines of all voltages, extends from Westlock in the north to Milk River in the south and from Macklin (Saskatchewan), Chauvin, Brooks and Taber in the east to Nordegg, Banff and Crowsnest Pass in the west. An eastern extension will soon be completed to link a new 30,000-kw. power plant at Medicine Hat with the system. The cities of Calgary and Red Deer and the towns of Ponoka, Macleod and Cardston are supplied on a wholesale basis and own their own distribution systems. All other points on the system are supplied on a retail basis. The Company has 3,529 miles of main transmission lines and 600 miles of distribution lines.

An extensive farm-electrification program is in progress in Alberta and at Mar. 31, 1953, the Company was serving approximately 15,288 farms over 10,000 miles of the farmer-owned Rural Electrification Co-operative Association rural transmission lines. The program calls for the addition of from 3,000 to 4,000 farms each year for the next several years. Calgary Power does all the engineering, construction and operation of these co-operatives through a non-profit subsidiary (Farm Electric Services Limited), energy being supplied to the farm co-operative consumers at cost. Expenditure during the next five years for additional plant capacity, transmission lines and distribution systems is estimated at $50,000,000.

Canadian Utilities Limited.—Towns and villages northeast of Drumheller are supplied from a 19,000-kw. steam plant in that city by Canadian Utilities Limited, while towns and villages north and east of Vegreville are served from a new gas-fired 8,000-kw. steam plant at Vermilion. There are tie lines with the Calgary Power Limited system at Vermilion, Vegreville and Drumheller. This utility also serves the areas around Grande Prairie from a 3,600-h.p. diesel engine plant located at that centre. The Company serves over 24,900 customers in approximately 204 towns, villages and hamlets, including 50 Rural Electrification Associations in the Province, through a network of approximately 2,000 miles of transmission lines and 2,150 miles of Rural Association lines. In 1949, the Company embarked on a program of extending its lines to farmers on a co-operative basis. The system is constructed and operated at cost for the farmer.

Northland Utilities Limited.—This Company, with headquarters at Edmonton, supplies electric energy to 5,376 consumers in 27 communities. Diesel generating plants are located at Jasper, Mayerthorpe, Athabasca, High Prairie, McLennan, Peace River, Lac La Biche, Manning, Fairview, Wildwood and Hay River, N.W.T. Low-voltage transmission lines extending from these generating stations supply

electricity to 370 farms and 17 villages. In addition, in 1948, the Company constructed a 665-kva. hydro plant on the Astoria River in Jasper National Park for the Department of Mines and Resources.

The Northland Utilities Limited also serves 1,200 consumers at Dawson Creek, B.C., with natural gas and 310 at Fairview and Bluesky.

British Columbia.—The British Columbia Power Commission was appointed Apr. 17, 1945, under the provisions of the Electric Power Act, "an Act to provide for improving the availability and supply of electric power" Operations were commenced in August 1945 with the acquisition of electrical properties in several parts of the Province. The following statement shows the growth in the number of customers to April 1953:—

Year Ended Mar. 31	*Services Acquired*	*Services Installed*	*Total Services for Period*	*Cumulative Services to End of Period*
	No.	No.	No.	No.
1946 (from August 1945)	13,270	832	14,102	14,102
1947	7,151	1,786	8,937	23,039
1948	1,000	3,431	4,431	27,470
1949	831	3,318	4,149	31,619
1950	4,686	3,321	8,007	39,626
1951	473	4,075	4,548	44,174
1952	103	2,600	2,703	45,912
Sold June 1951	−325	−640	−965	
1953	—	3,597	3,597	49,509
TOTALS	27,189	22,320	49,509	49,509

This growth has been accompanied by a corresponding increase in generating capacity from 8,285 kw. at Mar. 31, 1946, to 124,415 kw. at Mar. 31, 1953. The number of power districts rose in that period from 12 to 27 and there was also a large increase in the line mileage in operation. In 1952, there was considerable development of distribution systems to supply electrical services to rural areas, particularly in the North Okanagan district. Two new power districts, supplied from locally situated diesel generating systems, were opened in the Queen Charlotte Islands and at Fort St. James.

In 1946, the Commission established a promotional rate structure designed to "permit and encourage the maximum use of power" as required by the Act. This rate structure was extended as fast as increased plant capacity and distribution systems were installed to take care of the growth in load anticipated through its introduction. Within five years all acquired operations were enjoying this modern rate structure and, since 1951, all power districts have been charged in accordance with these promotional rates.

The Commission's main development on Vancouver Island—the John Hart plant—is being enlarged for the third time. This plant, now comprising four turbines of 28,000 h.p. each with an equivalent electrical rating of 20,000 kw., is being augmented by the addition of the final group of two units of the same size. When this additional installation is completed during the summer of 1953, the

capacity of the John Hart Generating System will be 168,000 h.p., or 120,000 kw. Preliminary work is under way to provide additional water-storage capacity at Buttle Lake.

The John Hart development now serves, through Commission transmission and distribution systems, territory on Vancouver Island between Duncan and Campbell River, including the Comox Valley, Alberni, Lake Cowichan and Nanaimo-Duncan power districts. The B.C. Electric Railway Company Limited takes delivery of power at Nanaimo and transmits a large block for distribution in Victoria and environs, so that the John Hart development serves all main portions of Vancouver Island. The facilities provided as a result of this development have led to the establishment of three major industries on Vancouver Island—one at Nanaimo, one at Port Alberni, and one at Duncan Bay.

On the mainland another major power project, the Whatshan development on the west side of Lower Arrow Lake, has been completed. It is designed for an ultimate 66,000-h.p. capacity and the first two turbines of 16,500 h.p., generating 11,250 kw. each, began operation in May 1951. Power from this plant is transmitted 75 miles at 138,000 volts to Vernon in the Okanagan Valley. Through an interconnection with Kamloops in the north and the West Kootenay Power and Light Company Limited lines to the south, a large area in the interior of the Province can be served by this project.

Other hydro-electric power projects, in various stages of development, are described below.

(a) The Clowhom Falls Generating System consists of two 1,500-kw. generating units. It began operation in May 1952, serving the Sechelt Peninsula, northwest of Vancouver.

(b) The Puntledge hydro system being acquired from the Canadian Collieries (Dunsmuir) Limited consists at present of a 9,000-h.p. hydro installation. It is being rebuilt to provide 35,000 h.p. to meet the growing needs of the Vancouver Island system.

(c) Plans are under way for a hydro development at Spillimacheen in the Columbia Valley, situated roughly half way between Golden in the north and the Windermere area in the south. Initial capacity will be approximately 5,700 h.p., and generation will feed a proposed new 33-kv. transmission line from Golden to Edgewater, a distance of approximately 70 miles. Besides supplying a large rural area, electric energy from the Spillimacheen development will replace diesel generation at both Golden and Athalmer.

(d) Preliminary investigations have been completed regarding the possible development of a 6,000-h.p. hydro generating system at Kokish River on northeast Vancouver Island.

Despite the benefits derived through industrial and other developments in the more thickly populated areas of the Province, it is in the remote and more sparsely populated portions that the benefits resulting from the activities of the Commission are more keenly felt. In less than seven years, the diesel capacity of generating stations which largely supply the requirements of the smaller power districts and rural communities has increased from 880 to 14,595 kw.

24.—Growth of the British Columbia Power Commission, Years Ended Mar. 31, 1950-53

Item		1950	1951	1952	1953
Customers	No.	39,626	44,174	45,912	49,509
Installed plant capacity	kw.	97,640	100,350	123,845	124,415
Circuit Miles of Line—					
Transmission (high voltage)	miles	458	550	570	646
Distribution primaries	"	1,958	2,393	2,541	2,704
Power Requirements—					
Generated	kwh.	157,946,073	255,556,217	375,935,761	524,502,927
Purchased	"	10,737,665	11,932,279	2,817,547	2,350,721
Totals, Power Requirements	**kwh.**	**168,683,738**	**267,488,496**	**378,753,308**	**526,853,648**
Annual revenue	$	3,267,469	4,064,641	4,895,230	5,902,344
Average revenue per kwh. (sold)	cts.	2·3	1·8	1·5	1·3
Capital Investment—					
Generation plant	$	18,081,014	18,384,774	24,748,127	..
Transmission plant	$	5,484,615	5,760,593	8,206,878	..
Distribution and general plants	$	7,843,076	9,945,223	12,359,770	..
Totals, Capital Investment	**$**	**31,408,705**	**34,090,590**	**45,314,775**	..

Sources of power for the year ended Mar. 31, 1953, were as follows:—

Source of Power	*kwh.*	*p.c.*
Hydro-electric energy	485,290,014	92·3
Diesel-electric energy	39,203,413	7·3
Steam-electric energy	9,500	0·1
Purchased power	2,350,721	0·3
TOTALS	526,853,648	100·0

The Northwest Territories and Yukon Territory.—The Northwest Territories Power Commission was created by an Act of Parliament in 1948 to bring electric power to points in the Northwest Territories where a need developed and where power could be provided on a self-sustaining basis. By legislation passed in 1949, the Act was extended to include Yukon Territory.

The Northwest Territories Power Commission has authority to construct and operate power plants as required in a territory having an area of over 1,500,000 sq. miles. The Commission is continually investigating power needs in this large area and studying reports on hydro-electric power sites.

The Commission has in operation a hydro-electric power development on the Snare River some 94 miles northwest of Yellowknife, N.W.T. Power has been supplied from this plant since the autumn of 1948 to the mines in the Yellowknife area and, in the summer of 1949, a transmission-line connection was completed to augment the supply of power to the town of Yellowknife.

A diesel generating station and distribution system was put into operation at Fort Smith, N.W.T., in October 1950. This project supplies the various government establishments at Fort Smith, e.g., the Departments of Resources and Development, Transport, National Defence (R.C.C.S.), Health and Welfare, and Public Works as well as the Royal Canadian Mounted Police and private commercial consumers and residents of the settlement.

A new hydro-electric development was completed on the Mayo River approximately six miles north of Mayo Landing, Y.T., in December 1952. This plant is delivering power to the mining developments in that area and to the settlement of Mayo Landing.

The total capital investment of the Commission as at Dec. 31, 1952, was approximately $8,500,000.

Section 3.—Total Development of Electric Power from All Available Sources

In Section 1 of this Chapter total water-power resources are given with the proportion that, so far, has been developed. Table 3 of that Section analyses the hydraulic turbine installation by the proportions in central electric stations, in pulp and paper mills, and in other industries. This is useful material, but it does not take into account electric power developed in central electric stations or in other industries from sources other than hydraulic.

Section 2 covers the central electric station industry including stations under the public ownership of provincial and municipal governments and those under private ownership. Neither of these Sections, however, gives a complete presentation of the total electric power developed in Canada. All the hydraulic energy developed is not converted to electric power: there are a number of water wheels and water turbines used for direct drive that are not geared to electric generators. On the other hand, certain central electric stations in the Atlantic Provinces, Ontario and the Prairie Provinces generate electricity from steam or internal combustion engines. It is the purpose of this Section to show the total electric power generated from all available sources. Most of the power comes, of course, from central electric stations, the figures having been given in Table 4 of Section 2, p. 563. The total kilowatt hours of electric power generated by central electric stations is divided into that generated from water power and that generated from thermal engines of all kinds.

As shown in Table 25, total electric power generated by central electric stations in 1951 was 54,851,844,000 kwh. For a complete presentation, the power generated by manufacturing industries for their own use and the power generated by the primary mining industry for use in its own operations must be added. There are a few other sources of electric energy included, such as electric railways which produced 13,016,772 kwh. in 1951. This production has been taken into the annual total shown in Table 25. There are numerous small lighting and power plants on farms, rural homes, summer resorts, stores, etc., where electricity from central electric stations is not available and for these no data are available.

25.—Total Power Generated by Central Electric Stations, Manufacturing and Mining Industries, 1942-51

NOTE.—Figures for the years 1927-41 will be found in the 1948-49 Year Book, p. 516.

Year	Central Electric Stations		Manufacturing Industries		Mining Industries		Total[1]
	'000 kwh.	p.c.	'000 kwh.	p.c.	'000 kwh.	p.c.	'000 kwh.
1942	37,355,179	91·1	3,345,444	8·2	296,734	0·7	41,007,482
1943	40,479,593	92·1	3,211,610	7·3	248,848	0·6	43,951,190
1944	40,598,779	93·2	2,752,125	6·3	210,554	0·5	43,571,276
1945	40,130,054	93·9	2,362,260	5·5	201,765	0·5	42,720,374
1946	41,736,987	93·4	2,714,261	6·1	199,950	0·4	44,662,916
1947	43,424,799	92·1	3,467,535	7·4	269,412	0·6	47,174,384
1948	42,389,681	89·7	4,590,677	9·7	270,522	0·6	47,262,060
1949	44,418,573	87·8	5,898,390	11·7	263,835	0·5	50,592,990
1950	48,493,718	88·1	6,266,051	11·4	264,232	0·5	55,036,765
1951	54,851,844	89·3	6,369,094	10·4	212,832	0·3	61,446,787

[1] Includes power generated by electric railways for their own use.

CHAPTER XIV.—THE FISHERIES

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

The immense fishery resources of Canada are derived from the prolific sea-fishing waters of the North Pacific and North Atlantic, and from numerous lakes and rivers of the inland provinces. Canada ranks high in fishery production and leads the world in monetary returns from the export of fishery products. (*See* Chapter XXI for fisheries exports.)

Fishing is Canada's oldest industry and, although its relative importance in the nation's economy has diminished through the years, the industry has shown considerable expansion and is still of paramount consequence to the coastal provinces and to the inland areas adjacent to waters where commercial fishing is pursued. Of particular importance is the fishing industry of Newfoundland where, from the standpoint of number of people directly employed in the catching and processing of fish and those indirectly affected, it ranks first among the industries. In Nova Scotia, fish-curing and packing is the leading manufacturing industry, in Prince Edward Island it ranks second and in New Brunswick and British Columbia the industry stands third in importance.

An account of the Canadian Fishing Grounds is given in the 1951 Year Book, pp. 472–475.

Section 1.—Governments and the Fisheries

Subsection 1.—The Federal Government*

The British North America Act gave the Federal Government full legislative responsibility for the regulation of the coastal and the inland fisheries of Canada. Under the Act, laws are made for the protection, conservation and development of the fisheries throughout the country. The provinces, however, have property rights in the non-tidal fisheries and have been delegated certain administrative responsibilities in varying degree. Consequently, while all the regulations governing fishing are made by the Federal Government, the work of administering the fisheries (enforcing the different laws and regulations, inspecting fish products, issuing licences, etc.) is done in some cases by federal officers and in others by provincial officers, according to arrangements made with the different provinces and without duplication of staff.

* Revised in the Department of Fisheries, Ottawa.

Specifically, all tidal or sea fisheries, except those of Quebec, are administered by the Federal Department of Fisheries while the fresh-water or non-tidal fisheries, with some exceptions, are administered by the provincial departments. The exceptions are the Yukon and Northwest Territories, Nova Scotia, New Brunswick and Prince Edward Island where the fresh-water fisheries are federally administered.

The work required in the conservation, development and general regulation of the nation's coastal and fresh-water fisheries is performed by three agencies under the Minister of Fisheries:—

(1) The Department of Fisheries proper, with headquarters at Ottawa and area offices under Chief Supervisors at Vancouver, Winnipeg, Halifax and St. John's.
(2) The Fisheries Research Board of Canada, with headquarters at Ottawa and seven stations across Canada.
(3) The Fisheries Prices Support Board, with headquarters at Ottawa.

The Department of Fisheries.—The chief responsibilities of the Department of Fisheries throughout Canada are, in brief, to conserve and develop Canada's primary fishery resources; to encourage the development of the fishing industry in the national economy; to inspect fish products, establish standards of quality and promote the optimum utilization of the resource; and to develop a proper public understanding of the resource and the industry.

The larger part of the Department's staff is stationed in the field, working in the four above-mentioned spheres, and is comprised mainly of a protection staff and an inspection staff. The protection officers, including those on the Department's 74 patrol and protection vessels, are concerned with the enforcement of the conservation regulations under the Fisheries Act and other Acts designed to ensure a continuing maximum yield of fish. The inspection officers are responsible for the inspection of fish products and processing plants under the Fish Inspection Act and relevant sections of the Meat and Canned Foods Act.

The conservation program of the Department is carried out by the Conservation and Development Service. Protection officers not only enforce regulations pertaining to restricted areas, close seasons, limitations in location and types of gear, but they inspect spawning streams and keep them clear of obstructions. Engineers of this Service construct fishways to enable fish to by-pass dams. Hatcheries are maintained to restock waters where the fisheries are under federal administration.

To ensure a high standard of quality, inspection of fish and fish products is carried out by the Inspection and Consumer Service. Fish inspection laboratories are maintained on the Atlantic and the Pacific Coasts. The Service also has a staff of home economists at Ottawa who operate a test kitchen and carry out demonstrations and lectures on methods of preparing and cooking fish and fish products.

Through the mediums of printed material, films, radio and exhibitions, the Information and Educational Service informs the public on the various aspects of the industry and the work of the fisheries service with the object of developing a better understanding of the resource and those engaged in its exploitation. The Service works closely with the Conservation and Development Service in matters concerning conservation of fisheries, and with the Inspection and Consumer Service toward encouraging increased consumption of Canadian fish products in both North American and export markets.

The Markets and Economics Service, which has a staff of economists and market analysts, is responsible for bringing together a fund of factual information, through surveys and other means, on the primary fisheries and on the processing, transportation and distribution of fishery products. Such facts and their interpretation form the basis for development and for other programs of the Department. In the marketing field continual study and interpretation is carried out on market trends in the foreign and the domestic fields. In co-operation with the Department of Trade and Commerce and its Trade Commissioner Service, work is being done on the development and extension of export markets for Canadian fish.

In addition to providing these regular services, the Department assists the commercial fishing industry in several special ways. For the purpose of promoting efficient primary fishing operations and improving the marketing of fishery products, assistance is provided for the construction of draggers and long-liners and for bait-freezing and storage facilities on the Atlantic Coast. Restrictions against trawlers have been eased to permit the licensing of new trawlers built in Canada or the United Kingdom. For each new trawler built in Canada, the owner is eligible for a licence to operate a used trawler imported from either the United Kingdom or the United States and registered in Canada after payment of duty. A bona fide applicant wanting only one trawler can import a used one from the United Kingdom without having to lay down a new keel in Canada. The policy affecting the importation of trawlers from the United Kingdom and the United States applies to ships purchased from any country entitled to most-favoured-nation treatment in accordance with Canada's obligations as a signatory of the General Agreement on Tariffs and Trade.

The Department also provides assistance in the education of fishermen by making payments to educational institutions that have agreed to carry out educational work among adult fishermen.

The Fisheries Research Board.—The functions of the Fisheries Research Board of Canada, which was established in 1937, cover a wide field in the interests of conservation, development and management of the fishery resources of the country. Parliament passed new legislation in 1953 increasing the membership of the Board from 15 to 19 to allow for wider regional representation and providing for the appointment of a permanent chairman.

The work of the Board is, generally, biological and technological in character and is carried out at seven stations: the Biological Station at St. Andrews, N.B., with its substation at Ellerslie, P.E.I.; the Pacific Biological Station, Nanaimo, B.C.; the Central Fisheries Research Station, Winnipeg, Man.; the Newfoundland Fisheries Research Station, St. John's, N'f'ld.; the Atlantic Fisheries Experimental Station, Halifax, N.S.; the Pacific Fisheries Experimental Station, Vancouver, B.C.; and the Gaspe Fisheries Experimental Station at Grande Rivière, Que.

Scientific investigations are an important part of the development of the commercial fishing industry and provide the basis for conservation measures put into effect by the Department. Almost all the principal stocks of commercial fish are under observation by the Board's biologists. Many species, such as Pacific salmon, Atlantic salmon, Atlantic groundfish, lobster, herring, albacore, whitefish, whales, oysters and clams, are being studied intensively. The studies provide knowledge of the life history, growth rate, reproduction, distribution, enemies, diseases, etc., of the fishes, shellfish and sea mammals. Special investigations are

undertaken as problems arise. The Board has completed a survey of the fisheries resources of the Northwest Territories and is exploring the fisheries resources of Canada's Eastern Arctic.

Fundamentally, the objective of the Board's technological investigations is to eliminate waste through the utilization of all fishery products that come out of the waters and the putting of those products to the best possible use in the light of current knowledge. The Board's knowledge is continually expanding through basic and applied research and this is helping to bring about a wider distribution of fishery products, a higher level of quality in the products marketed, a better understanding of the use of fish in general nutrition and of fish by-products for food, medicinal and industrial purposes.

The Fisheries Prices Support Board.—Under the Fisheries Prices Support Act, passed in 1944, this Board was set up in July 1947 to recommend to the Government price-support measures when severe price declines occur. The Board functions under the direction of the Minister of Fisheries and consists of a chairman, who is a senior officer of the Department of Fisheries, and five members chosen from private and co-operative firms in the industry, representative of the various fish-producing regions of Canada.

The Board has authority to buy quality fishery products under prescribed conditions and to dispose of them by sale or otherwise, or to pay to producers the difference between a price prescribed by the Board and the average price the product actually commands. The Board has no power to control prices nor has it any jurisdiction over operations in the fishing industry or the fish trade.

Money necessary for dealings in fishery products is available to the Board from the Consolidated Revenue Fund to a maximum aggregate amount of $25,000,000 but only on recommendation of the Federal Treasury Board and authorization of the Governor in Council. The most recent price-support action by the Board resulted from marketing problems in respect of Newfoundland salted codfish.

The Board maintains a small staff for administrative and research activities. The work is closely integrated with that of the Department's Markets and Economics Service and, where possible, services required by the Board are carried out by Department personnel. The Board has carried out field surveys on market conditions and possibilities, and on factors affecting the income of fishermen in the various producing areas. It keeps the financial position of fishermen under continuous review and makes recommendations to the Government on the basis of the facts as it finds them. Special investigations are made when serious problems arise in particular areas.

International Fisheries Conservation.—Fisheries regulation is sometimes needed on the high seas in international waters and international treaties have had to be made. Canada's obligations under such treaties with the United States and other countries are administered by the Department of Fisheries.

Canada and the United States have led the world for years in joint fisheries conservation development. Major examples of this joint effort are the International Fisheries Commission, concerned with the preservation of the halibut stocks of the North Pacific and the Bering Sea, and the International Pacific Salmon Fisheries

Commission, concerned with the conservation and development of the sockeye salmon of the Fraser River. Investigations carried out under the Commission's auspices, subsequent regulation and limitation of catches and, in the case of salmon, the construction of fishways appear to have been successful in arresting and reversing an earlier trend towards depletion of these fisheries. Another case of restoring a depleted marine resource by international agreement and action is that of the fur seals of the Pribilof Islands in the Bering Sea. Under the Provisional Fur Seal Agreement, Canada receives 20 p.c. of the fur-seal skins taken annually by the United States Government from the Pribilofs. Only surplus animals are killed.

In 1949, the Government of Canada became a signatory, along with nine other countries, to the International Northwest Atlantic Fisheries Convention which came into force in 1950. The work of the Commission, established under this Convention, concerns the scientific investigations of the fishery resources of the northwest Atlantic. The Commission has no regulatory powers but can make recommendations to the respective governments regarding measures that may be necessary for maintaining the stocks of fish that support the international fisheries in the Convention area. The third annual meeting of the Commission was held at New Haven, Conn., in May 1953, by which time all the signatory countries had ratified the treaty and appointed official representatives to the Commission. Treaty signatories are: Canada, Denmark, Iceland, the United States, the United Kingdom, France, Italy, Norway, Portugal and Spain. Headquarters of the Commission is at Halifax, N.S.

A step towards international action in regulating the high seas fisheries of the northern Pacific Ocean was achieved in December 1951, when Canada, the United States and Japan conferred at Tokyo and reached an agreement on fisheries problems. The resulting convention was ratified by the three contracting governments and instruments of ratification were deposited at Tokyo in June 1953. The treaty is known as the International Convention for the High Seas Fisheries of the North Pacific Ocean. The Convention aims at providing the maximum sustained yield of the fishery resources of the northern Pacific non-territorial waters with each of the parties assuming obligations to encourage conservation measures. It provides also for the establishment of a commission representing the three parties. The commission will study the northern Pacific fisheries, determine the application of the treaty principles and will promote and co-ordinate the scientific studies necessary for ascertaining conservation programs.

Under existing principles of international law, all nations have an equal right to exploit the fishery resources of the high seas. Problems have arisen when attempts have been made to conserve certain resources and the Convention is the first attempt to meet those problems. By joint agreement, Canada, the United States and Japan are prepared to waive some of these international rights and, under certain conditions, to abstain from fishing stocks that are under conservation by one or more of the other parties. Halibut, salmon and herring off the British Columbia coast meet the conditions of the Convention and Japan has agreed to abstain from fishing these resources.

Canada is a member of the International Whaling Commission and is obligated to collect biological data on whales caught by Canadian vessels. Whaling operations are conducted off the Newfoundland and British Columbia coasts.

Subsection 2.—The Provincial Governments*

An outline of the work undertaken by each of the provincial governments in connection with administration of commercial and game fisheries is given in the following paragraphs.

Newfoundland.—The union of Newfoundland with Canada on Mar. 31, 1949, brought about a transfer of some responsibilities in fisheries administration. The Newfoundland Fisheries Board remained the agency of government in the supervision of salt-codfish marketing, but fish and plant inspection, operation of bait depots, etc., became the concern of the Federal Department of Fisheries. The Board, formerly responsible to the Government of Newfoundland through the Commissioner for Natural Resources, became responsible to the Minister of Fisheries for Canada.

The Provincial Government is concerned mainly with improvement and development in fishing and production methods and has conducted experiments in long-lining and deep-water trawling, in the construction of multi-purpose fishing craft and in the exploration of potential fishing grounds. Steps are being taken to secure more efficient use of fisheries salt. Loans have been made available to processors for the establishment or development of fishing fleets and processing plants, and to fishermen for the construction and purchase of modern vessels capable of a greater variety of fishing operations and larger production.

In 1951, the Governments of Canada and Newfoundland established the Newfoundland Fisheries Development Committee, consisting of representatives of fishermen, processors and exporters, and of both Governments. The objective of this Committee is to establish the role of each sector of the industry and each government, jointly or severally, in the organization and development of the fisheries. Action has been taken by both Governments in certain matters considered as necessary preliminaries to an over-all program, such as an economic and sociological survey of fishing settlements and the encouragement of the use of community rather than individual stages and rooms by shore fishermen.

The inland waters of Newfoundland, which provide excellent sport fishing, are not commercially exploited to any significant degree. The lakes and ponds remain under the authority of the Natural Resources Branch of the Provincial Department of Mines and Resources, but the rivers and streams—the resort of migratory fish such as salmon and sea trout—passed under federal jurisdiction as a consequence of the union. Matters of conservation and guardianship are, therefore, mainly or wholly the concern of the Federal Department of Fisheries, although to the extent to which they affect the ponds and lakes they are subject to provincial or joint action.

Prince Edward Island.—The major responsibility for aid to the fisheries of this Province is undertaken by the Federal Government. Prince Edward Island, however, has established a Department of Industry and Natural Resources which administers the commercial and game fisheries.

Consultations were held in 1950 with marine architects and fishing ports were visited along the Atlantic seaboard with a view to obtaining the best information on boats and gear most adaptable to the Province's coastal waters. These

* Prepared by the respective provincial departments responsible for fisheries administration.

studies resulted in the adoption of the 60-ft. Island Dragger. During the search for information on boats, much was learned of the possibility of adapting the drag-net principle to smaller boats and experiments were conducted to ascertain power requirements and general feasibility. The major part of the revenue of the commercial fishermen of the Province is provided by lobster, smelt and oyster catches.

The streams of the Province are, as a whole, mostly spring-fed and fairly constant in flow, thus providing excellent spawning grounds and nurseries for game fish, of which speckled trout are by far the most important. With such favourable conditions for reproduction, the problem is to increase the production of trout of a size attractive to anglers. Comprehensive biological investigations are being carried on by the Fisheries Research Board to attain this objective by determining the most efficient procedure in stocking, managing and cropping. The Province provides the sites for these investigations and the Conservation and Development Branch of the Federal Department of Fisheries builds the necessary dams and supplies the fish required for experimental purposes.

Nova Scotia.—The basic responsibility for the administration of tidal and inland fisheries in Nova Scotia is undertaken by the Federal Government. The Province, however, supplements the activities of this authority through its Department of Trade and Industry. In practice, a system of co-operative effort has been worked out between the two authorities with each free to carry out individual responsibilities and specific programs. Provincial activities fall into three sections—development, administration and research.

Development.—Development activities include engineering services, financial assistance to the fisheries industry generally, and educational services to the fishermen.

Engineering services are related to the design, construction and equipment of boats, vessels and fish-processing plants. A marine engineer is employed for these services and for the extension of consultant services to all persons interested in the industry. Financial assistance is extended, by way of loans, for the construction and modernization of fish-processing plants and to fishermen for the acquisition of boats and engines. Where the requirements of large new plants have exceeded the capacity of local authorities, the Province has provided such utilities as water lines and rail sidings; the Province also operates a bait freezer at Cheticamp.

Educational services extended to fishermen comprise instruction in basic navigation, rules of the road, and care and maintenance of marine engines by means of short courses at selected outports and a permanent school maintained at Lunenburg. This educational program is assisted by grants under the Canadian vocational training program of the Federal Department of Labour.

Administration.—The Nova Scotia Fisheries Act serves to supplement federal jurisdiction and is administered jointly by the Department of Trade and Industry and the Federal Department of Fisheries. The Act requires fish-processing plants and fish buyers to obtain annual licences, which are issued by the Department of Trade and Industry only on the recommendation of inspectors of the Federal Department of Fisheries and the certification of the Department of National Health and Welfare as to compliance with standards of construction, operation and sanitation contained in federal regulations.

Information obtained from the licensing activities and other statistics supplied by the Federal Department of Fisheries enables the Provincial Department of Trade and Industry to handle inquiries in respect of the fisheries industry.

Research.—Provincial fisheries research activities have been confined largely to the inland trout and salmon fisheries. The Department of Trade and Industry has carried out a five-year program of water control on the LaHave River in the interests of salmon preservation and development; has undertaken experiments in fertilization of lakes and in partial poisoning of lakes to reduce the numbers of coarse fish in competition with trout for the available food supply; and has conducted some special studies of trout populations and salmon migrations. Research activities of this nature have been continued under the direction of the Nova Scotia Research Foundation.

New Brunswick.—The commercial fisheries of New Brunswick are under the jurisdiction of the Federal Department of Fisheries. Since 1945, a Fisheries Division has been in operation under the provincial Department of Industry and Development. In 1946, a Fishermen's Loan Board was established to provide financial assistance to bona fide fishermen for the purchase of new boats and engines. Since its formation the Board has lent over $1,590,000 of which more than $805,000 has been repaid. It has modernized the deep-sea fishing fleet by the introduction of a most effective small dragger, 37 units of which are operating in the area of the Gulf of St. Lawrence and three in the Bay of Fundy. Seven additional modern units are under construction. The Fisheries Division is promoting experiments on scallop and flounder dragging as well as on the seining of herring in the Gulf of St. Lawrence area.

Quebec.—The Minister of Game and Fisheries administers both the sea and the inland fisheries of Quebec. The Department is composed of two divisions—the Division of Maritime Fisheries and the Division of Fish and Game, the latter being charged with the administration of the inland fisheries.

Sea Fisheries.—Quebec is the only province administering its own sea fisheries. For the benefit of producers and fishermen, it provides a system of cold-storage plants for the freezing and preservation of fish. Since the erection of the first plant in 1932, the network has grown to 50 plants with a daily freezing capacity of 250 tons of fish and a storage capacity of 16,000,000 lb. These cold-storage plants also perform a valuable service to fishermen by providing them with frozen bait. In addition, the Department owns and maintains 115 snow houses where fish may be chilled before being sent to storage or filleting plants, 40 culling sheds, and three artificial drying plants where 6,000,000 lb. of fish may be processed annually.

The Department maintains a staff of inspectors, fish wardens, technicians and technologists for the administration of fishery legislation and the application of new techniques to the expansion of the industry. The central administration is located at Quebec city, with an office at Gaspe for the administration of cold-storage plants. Statistics are compiled by the Department of Trade and Commerce in co-operation with the inspectors of the Maritime Fisheries Division.

Fish inspection is carried out under federal and provincial legislation by provincial inspectors, who are vested with additional powers for export purposes by the Federal Government.

Educational work among the fishermen and producers is also conducted by the Department in order to teach the latest methods of fish preparation and obtain high-quality products. The new Fisheries Training School at Grande Rivière gives to fishermen of all ages the opportunity of taking free theoretical and practical courses in fishery, while the Superior School of Fisheries at Ste. Anne-de-la-Pocatière trains technologists in a four-year course. Encouragement is given to the co-operative associations of fishermen through the Social Economic Service of the latter institution. Under a maritime credit system, fishermen are able to obtain loans from credit unions for the purchase of boats and gear. The Department adheres to the federal-provincial agreement on the building of draggers and long-liners and assumes the building costs on a five-year capital refunding plan.

The fish trade is being promoted by advertising campaigns in newspapers and magazines, cooking demonstrations, educational films and free distribution of fish recipes and publicity leaflets, as well as by exhibits at fairs.

Hydrographical research in the Gulf of St. Lawrence, studies on the location of new fishing grounds as well as experiments on sea-fish biology are conducted by a Marine Biological Station at Grande Rivière and two substations of the North Shore and Magdalen Islands. This research has brought into use new types of modern fishing vessels recommended to fishermen. The Department also operates a Limnological Laboratory at Quebec city for studying the biology of the fresh-water fish of the St. Lawrence River and tributaries.

Inland Fisheries.—The Division of Fish and Game exercises jurisdiction over the inland waters. Three hundred full-time wardens are employed and licences are required for sport-fishing and hunting, the revenue from which is applied to the improvement of fishing and hunting conditions.

Five hatcheries are maintained at strategic points throughout the Province: St. Faustin, Lachine, Baldwin's Mills, Tadoussac and Gaspe. These establishments distribute speckled trout, Atlantic salmon and grey trout fry, fingerlings and older fish.

The Department administers five parks or reserves in all of which, except for Mount Orford Park, excellent fishing can be found. The Gaspe and Laurentides Parks are renowned for their trout fishing. The Chibougamau Reserve and the La Vérendrye Park, situated on the height of land, are eminently suited to canoe trips in search of pickerel, pike and grey or speckled trout. Four salmon streams, all under the jurisdiction of the Fish and Game Division, are open to anglers: the Romaine River, the St. Jean River, the Petite Cascapédia River and the Matane River.

The Department co-operates with sportsmen through a joint committee composed of departmental officials and the directors of the larger fish and game associations. The committee studies the maintenance of satisfactory fishing and hunting conditions and other problems arising out of the ever-changing conditions of modern life and their effect on the wildlife of the Province.

The Biological Bureau of the Province, located at the University of Montreal, and the big piscicultural laboratory at Quebec City, with its two stations for practical work located in the Mont Tremblant and Laurentides Parks, study problems connected with marine life.

Ontario.—The fishery resources of Ontario are administered by the Division of Fish and Wildlife, Department of Lands and Forests. The Division operates under the authority of the Fisheries Act (Canada), the Special Fishery Regulations for the Province of Ontario, the Ontario Game and Fisheries Act and the Regulations connected therewith.

Commercial Fishing.—The commercial fishing industry in Ontario provides employment to about 4,000 persons directly and to many more indirectly, and produces an annual harvest of from 30,000,000 lb. to 37,000,000 lb. of fish. For the year ended Dec. 31, 1951, the landed value revenue to licensed fishermen for the production of fish was $7,035,000.

The industry, although widely scattered throughout the Province, is centred chiefly on the Great Lakes, particularly Lake Erie which is noted for its whitefish, herring and blue pickerel. Lake Superior continues to be the leading producer of lake trout. Other principal species of fish taken commercially are: yellow pickerel, herring or ciscoes, sturgeon, pike, catfish (including bullheads), carp and suckers. Many of the smaller inland lakes are commercially fished, especially those in the northwestern portion of the Province, and careful management of these lakes is essential to ensure continued production.

The types of fishing boats in use vary from small craft to 60-ft. tugs, and types of gear also vary from the most common gill net, pound and trap nets, seines and baited hooks to small hand-operated seines and dip nets. Fishing methods and equipment have been rapidly modernized during the past few years. Diesel-driven steel-hull tugs have replaced steam-driven wooden tugs. Such aids as depth-sounding devices, radar, ship-to-shore and ship-to-ship communications have been developed and a better knowledge of the fish and their movements has been established from biological research findings. Modern icing facilities and transportation methods are in use, as well as new types of fishing gear. Nylon gill nets are replacing cotton and linen nets and a very efficient and economical trap-net is gradually replacing the pound-net in Lake Erie and other waters.

Excellent co-operation and understanding of the complex problems involved in the administration and management of Ontario's fresh-water fishing industry by the Government and the fishermen, through their local associations and the Ontario Council of Commercial Fisheries, is working to the advantage of the industry as a whole.

Angling.—In Ontario, with its estimated water area of 64,441 sq. miles, angling constitutes one of the most widely distributed recreations. There are 144 different kinds of fish in the Province, including such species as lake and speckled trout, yellow pickerel, black bass, pike and maskinonge. While it is difficult to measure the value of sport fishing to the Province, a revenue of $1,868,745 for the year ended Mar. 31, 1952, was obtained from the sale of angling licences, mainly to non-residents as residents require a licence for Provincial Parks only.

In order to maintain Ontario's reputation for excellent game-fishing, the wise management of this renewable resource is a prime factor, and a well-trained field staff of conservation officers and biologists is located in the 22 forestry districts of the Province.

Provincial Hatcheries.—Ontario operates 28 hatcheries and rearing stations. Excellent results have been produced in the culture and distribution of the various species of both commercial and game fish. The distribution for the year ended

Mar. 31, 1952, numbered 378,080,408, comprising whitefish, herring, pickerel, trout (including lake, speckled, brown and Kamloops), maskinonge, bass and ouananiche. Two of the finest trout-rearing stations on the Continent are located in Ontario at Dorion near Port Arthur, and at Hill Lake near Englehart.

Fisheries Research.—Research in Ontario is carried on in the Great Lakes, where commercial fisheries problems are being investigated, and in inland waters, where game-fish populations are being studied. At the recently completed Fisheries Research Station on South Bay, Manitoulin Island, studies relating to the removal and utilization of the less valuable species are being carried on and the effects investigated of this removal on stocks of the more valuable commercial and game species. In Algonquin Park, a careful record of angling quality is kept in a number of test lakes to allow evaluation of management techniques. Certain of the more barren lakes are being treated with inorganic fertilizer and its effect on the microscopic organisms and fish is being closely watched.

The habits of lake trout and eastern brook or speckled trout are being studied in order to provide additional information on the proper management of these species. The increase in the sea lamprey and the drastic drop in production of lake trout in recent years in Lake Huron (including Georgian Bay and North Channel) are believed by many authorities to be directly related and have led to considerable joint research by the Ontario Government and by Federal and State Governments in the United States. Co-operation is maintained in the exchange of biological findings and, where practicable and feasible, the results are applied in an attempt to control this menace.

Established fish-management principles are applied by biologists in the various forestry districts. Their program includes such projects as biological surveys and investigations, bass harvesting, coarse fish removal, sea lamprey control, creel census studies, fish tagging and other related subjects.

Manitoba.—The Department of Mines and Natural Resources administers the fisheries in Manitoba. Commercial operations are supervised during the various fishing seasons by officers using patrol boats in summer and bombardier snowmobiles in winter; eight of the former and ten of the latter are maintained by the Department. The fish cultural service operates five fish hatcheries and two egg-collecting camps. During the fiscal year ended Mar. 31, 1952, 102,300,000 pickerel fry and eyed eggs, 82,350,000 whitefish eggs and fry, 1,385,000 trout fingerlings, and 29,000 adult perch, northern pike, largemouth and smallmouth black bass were distributed in the fishing waters of the Province.

The catch of fish from commercial fishing during the year ended Mar. 31, 1952, reached an all-time high. The most important of the 14 varieties of fish included in the harvest were pickerel, whitefish and sauger; the most famous species is the Winnipeg goldeye. More than 6,500 persons find full-time or part-time employment in the fisheries and probably as many more are employed in associated industries.

Many changes have recently been made in the production and marketing of fish, the trend being toward the production of a fish fillet ready to cook and toward improvement in handling to enhance quality. The catch is immediately iced in the fishing boats, fishing stations on shore are equipped with efficient coolers and fish freighting vessels are fitted with mechanical refrigeration. In winter, fast modern mechanical transportation, including aircraft and snowmobiles, is used to rush the catch from lake to rail. In some cases the catch is brought to the processing plant

still alive and in a matter of hours the fillets have been prepared, weighed, packed and quick-frozen. Approximately 90 p.c. of the catch is exported to the United States, Winnipeg providing the principal domestic market.

Saskatchewan.—The administration of fisheries in the Province of Saskatchewan comes under the Fisheries Branch of the Provincial Department of Natural Resources with head office at Prince Albert. Most of the fisheries resources are concentrated in the northern half of the Province, where the lakes have always been a source of food to the fur traders, trappers, prospectors and the Cree and Chipewyan Indians who inhabit the area, and also provide food and supplementary income to the settlers and homesteaders on the agricultural fringe.

There are approximately 129 commercially fished lakes in the Province and the principal species of fish include lake trout, whitefish, pickerel, northern pike, sturgeon, cisco, Arctic grayling, goldeye, mullet, perch and burbot. The growth of the filleting industry has been of particular significance, 15 filleting plants having been established since 1945. That the fishery resources are important to mink ranchers in the Province is evidenced by the fact that in the year ended Mar. 31, 1952, 67 fur-farm fishing licences were issued and 28,000 mink were fed under these licences; 672 domestic licences and 1,377 free licences to Indians were also issued.

There has been marked development recently in sport fishing. For the fiscal year 1951–52 there were 38,225 resident and 6,275 non-resident angling licences sold, compared with 6,000 resident and 1,500 non-resident licences sold in 1945.

The main endeavour in the fish cultural activities in the Province during the past few years has been to extend the range of the Arctic grayling species from the Far North into the Churchill River area, and to introduce eastern brook trout and certain warm-water species into areas where preliminary study seems to indicate suitable environment. To a large extent the indiscriminate planting of fish has been discontinued. A fish hatchery is operated at Fort Qu'Appelle for the hatching of pickerel, rainbow, brown and lake trout, and two experimental ponds have been built to facilitate the study, under controlled conditions, of the introduction of warm-water species from the United States. An experimental hatchery has been established at Lac la Ronge, where Arctic grayling and lake trout eggs have been hatched. An Arctic grayling spawn camp has also been established in the Fond-du-lac River, near Black Lake and a pickerel spawn camp is located on the Montreal River, near Lac la Ronge.

The management of the provincial water areas is conducted on a scientific basis. In 1947, a large-scale biological program was undertaken and more than 100 water areas have since been studied. The main emphasis has been on the study of productivity of the various water areas as well as the inter-relationship of the species and life histories. In so far as known facts will permit, the management of the various lakes has been placed on a sustained-yield basis. Experiments are in progress on the introduction of non-native species into suitable water areas. Where sport-fishing pressure has increased, such as on Lac la Ronge, Last Mountain Lake and Amisk Lake, a creel census has been established and the annual harvest is recorded. The Fisheries Laboratory, established in 1949 at the University of Saskatchewan, has three permanent biologists on its staff; usually about 12 students of the University are employed each summer on biological surveys.

The Fisheries Branch has conducted a program of education designed to acquaint people of the Province with the importance of scientific research and the necessity of certain regulations governing the administration of fisheries. Three colour and sound films have recently been made on sport fishing.

Alberta.—Commercial and game fishing are administered by the Fisheries Branch of the Department of Lands and Forests.

Regulations under the Alberta Fishery Act, designed to improve the packing, handling, processing, storage and quality of commercial fish, have been well received and supported by the Alberta industry. In line with a policy for producing good-quality fish, lakes in which whitefish are infected with the pike tapeworm and do not meet the quality standard have been closed to commercial fishing.

Biological surveys of many lakes and streams taken over the past ten years have provided an opportunity to observe the result of former management policies. It was found that the classical tenets of trout-stream management, including close seasons, legal minimum, feeder stream closure and hatchery plants, were inadequate or incorrect. A new management plan is being conducted featuring the 'fallowing' of smaller tributary streams, abolition of the legal size minimum, except in the case of lake trout, a continuous open season on large streams and rivers and the removal of close seasons for pike, pickerel and perch. Trout-rearing stations and a provincial trout hatchery support trout-stream populations whenever required in cases of natural disaster, severe winter kill, introduction of new species or areas that have no spawning grounds.

A long-term experiment to test the effectiveness of the Canyon Creek whitefish hatchery was begun in 1941 by planting eyed eggs in certain lakes in alternate years. The evidence gathered indicated that natural reproduction was sufficient and the hatchery was closed.

British Columbia.—The Provincial Department of Fisheries was organized in 1901-02 and soon became very active in fish-cultural work, building and operating fish hatcheries and instituting scientific research into various fishery problems.

Broadly speaking, the administrative and regulative jurisdiction over the fisheries in British Columbia rests with the federal authority. When British Columbia entered Confederation in 1871, the Government of Canada undertook to protect, conserve and promote the fisheries of the Province, and one of the important functions of the Provincial Department of Fisheries is to observe these aspects and to keep the Provincial Government informed through the appropriate Minister.

The ownership of the fisheries in the non-tidal waters is vested in the Crown, in the right of the Province, as are the shell-fisheries, such as oyster-fishing and clam-fishing in the tidal waters. The authority to administer and regulate these fisheries is vested in the Province, although the regulations covering them are made under federal Order in Council on the advice and recommendation of the Province.

The provincial Fisheries Act provides for the taxation of the fisheries and, under civil and property rights, for the regulation and control of the various fish-processing plants under a system of licensing. Provision is also made for the settlement by arbitration of disputes regarding fish prices that may arise between the fishermen and operators of the various licensed plants. The administration of the Act involves the collection of revenue and the supervision of plant operations.

Net-fishing in the non-tidal waters of the Province, including commercial fishing, is regulated and administered by the Provincial Department of Fisheries, while authority for regulation of the game fisheries in the non-tidal waters is vested in the Game Commission, a branch of the Provincial Government administration. The Game Commission operates a number of trout hatcheries and egg-taking stations for re-stocking purposes.

The harvesting of marine plants of commercial importance in British Columbia, including the kelps, has recently been placed under the Provincial Department of Fisheries for regulation and control. Some research has already been done on a few of the more important species and more will be undertaken as required.

The Provincial Department of Fisheries has established a marine laboratory at Ladysmith on Vancouver Island for the purpose of conducting biological research into those species over which the Province has control, principally oysters, clams and other forms of shell-fish as well as marine plants. This research is conducted with the object of encouraging the industry to produce better products more economically and of enabling the Department to regulate the various species so that maximum exploitation may be obtained on a sustained-yield basis. The Department co-operates closely with the research work done by the Fisheries Research Board of Canada, particularly on the Pacific Coast.

Section 2.—Fishery Statistics*

Subsection 1.—Primary Production

The marketed value of all fishery products in Canada (exclusive of Newfoundland) rose to $175,718,000 in 1951, a figure higher by almost 16 p.c. than that of 1950. The record production of the West Coast fisheries accounted for most of the increase. The landings of fish, amounting to 1,448,300,000 lb., although 3 p.c. lower than the previous year were, nevertheless, maintained at a high level.

The data for Newfoundland are not included in the following tables as comparable information for that Province is not available. It is estimated, however, that in 1951 the landings of fish in Newfoundland amounted to about 612,500,000 lb., with a value to the fishermen of $13,500,000, while the marketed value of fisheries products was in the neighbourhood of $29,000,000.

* Revised in the Fisheries Section, Industry and Merchandising Division, Dominion Bureau of Statistics.

1.—Marketed Values of All Products of the Fisheries, 1870-1951

(Exclusive of Newfoundland)

Year	Value	Year	Value	Year	Value
	$'000		$'000		$'000
1870	6,577	1920	49,241	1942	75,117
1875	10,350	1925	47,942	1943	85,595
1880	14,500	1930	47,804	1944	89,440
1885	17,723	1935	34,428	1945	113,871
1890	17,715	1936	39,165	1946	121,125
1895	20,199	1937	38,976	1947	123,900
1900	21,558	1938	40,493	1948	139,749
1905	29,480	1939	40,076	1949	131,138
1910	29,965	1940	45,119	1950	151,982
1915	35,861	1941	62,259	1951	175,718

Three provinces accounted for 85 p.c. of the total marketed value of fisheries products in 1951; British Columbia's share was 50 p.c., a substantial increase over the previous year, followed by Nova Scotia with 23 p.c. and New Brunswick with 12 p.c.

2.—Marketed Value of All Products of the Fisheries, by Province, 1947-51

Province or Territory	1947		1948		1949		1950		1951	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
Newfoundland	...	...	...	...	..	..	..	..	..	..
Prince Edward Island	2,897	2	3,634	3	2,705	2	3,321	2	3,213	2
Nova Scotia	26,659	22	36,091	26	35,040	27	38,165	25	40,296	23
New Brunswick	17,132	14	20,122	14	17,428	13	18,053	12	21,155	12
Quebec	5,317	4	5,943	4	5,112	4	5,563	4	5,511	3
Ontario	5,404	4	6,394	5	6,184	5	7,034	5	7,925	4
Manitoba	5,329	4	5,415	4	4,800	4	6,600	4	7,524	4
Saskatchewan	1,171	1	1,282	1	1,026	1	1,360	1	1,749	1
Alberta	857	1	636	--	562	--	768	--	862	--
British Columbia	58,596	48	58,704	42	56,120	42	68,821	45	85,221	50
Northwest Territories	538[1]	--	1,528	1	2,161	2	2,297	2	2,262	1
Grand Totals	**123,900**	**100**	**139,749**	**100**	**131,138**	**100**	**151,982**	**100**	**175,718**	**100**
Totals, Sea Fish	110,274	89	123,991	89	115,921	88	133,445	88	154,829	88
Totals, Inland Fish	13,626	11	15,758	11	15,217	12	18,537	12	20,889	12

[1] Includes Yukon Territory; no production recorded in that Territory in later years.

3.—Quantity of Sea and Inland Fish Landed, by Province, 1947-51

NOTE.—Figures for the years 1918-45 are given in the 1947 Year Book, pp. 431-432, and for 1946 in the 1952-53 edition, p. 587.

Province or Territory	1947	1948	1949	1950	1951
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Newfoundland	...	...	..	..	..
Prince Edward Island	31,682	30,682	27,525	29,225	27,187
Nova Scotia	324,136	376,609	364,332	378,484	381,800
New Brunswick	216,740	225,317	189,235	239,671	227,003
Quebec	96,354	101,414	106,114	117,459	101,999
Ontario	24,919	29,101	34,060	32,754	30,971
Manitoba	29,939	31,529	29,503	31,468	35,458
Saskatchewan	8,020	8,076	7,473	8,731	11,513
Alberta	9,899	7,224	6,302	7,067	8,399
British Columbia	475,630	613,903	546,312	638,497	616,492
Northwest Territories	3,516[1]	7,805	9,101	7,866	7,478
Grand Totals	**1,220,835**	**1,431,660**	**1,319,957**	**1,491,222**	**1,448,300**
Totals, Sea Fish	1,141,256	1,344,132	1,229,749	1,399,262	1,349,941
Totals, Inland Fish	79,579	87,528	90,208	91,960	98,359

[1] Includes Yukon Territory; no production recorded in that Territory in later years.

In 1951, on the basis of marketed value, salmon was far ahead of all the other leading species of fish, strengthening its traditional position. Lobsters and cod were tied for second place, while herring was not far behind. Most of the main species showed increases in 1951 compared with 1950.

Table 4 shows the quantities of the main species of the commercial fisheries landed (primary products only) and values marketed (primary and secondary products). Minor items, and secondary products not specifically derived from one particular kind of fish, are grouped in the item "Other"

4.—Quantities Landed and Values of All Marketed Products of the Chief Commercial Fisheries, 1947-51

(Exclusive of Newfoundland)

NOTE.—The quantity landed excludes the weight of livers, but the value of liver products is included in the value for the species concerned.

Item	1947	1948	1949	1950	1951	Increase or Decrease 1951 compared with 1950
Salmon '000 lb.	164,868	147,678	149,744	186,944	199,396	+12,452
$'000	36,278	37,929	37,278	49,929	61,723	+11,794
Lobsters '000 lb.	31,884	35,647	38,205	44,685	45,573	+888
$'000	10,751	13,958	14,105	16,260	17,569	+1,309
Cod '000 lb.	232,711	257,793	249,291	255,729	232,439	−23,290
$'000	14,467	18,802	17,004	17,242	17,463	+221
Herring '000 lb.	398,461	552,387	470,370	561,606	510,312	−51,294
$'000	17,951	15,868	14,798	14,706	16,315	+1,609
Halibut '000 lb.	26,037	21,019	22,214	29,288	27,969	−1,319
$'000	6,532	5,397	5,690	8,442	8,131	−311
Whitefish '000 lb.	16,023	19,909	22,509	24,776	26,506	+1,730
$'000	3,562	4,989	5,690	7,057	7,640	+583
Sardines '000 lb.	101,640	92,535	62,097	68,092	64,804	−3,288
$'000	6,617	7,248	4,438	4,981	5,662	+681
Haddock '000 lb.	31,558	56,789	46,580	47,319	55,989	+8,670
$'000	2,479	4,536	3,769	4,246	5,144	+898
Pickerel (doré) '000 lb.	14,463	15,980	13,535	13,877	17,074	+3,197
$'000	3,519	3,742	2,850	3,638	4,778	+1,140
Mackerel '000 lb.	26,263	25,876	33,523	27,120	24,742	−2,378
$'000	1,719	2,252	2,518	2,192	2,112	−80
Plaice '000 lb.	1,667	4,269	3,784	9,938	25,201	+15,263
$'000	123	253	225	834	1,944	+1,110
Lake trout '000 lb.	4,858	5,492	6,149	5,657	6,490	+833
$'000	1,222	1,644	1,806	1,682	1,908	+226
Tuna '000 lb.	2,504	2,956	3,190	2,907	664	−2,243
$'000	588	1,224	879	859	1,777	+918
Smelts '000 lb.	5,545	7,988	6,876	7,154	6,523	−631
$'000	1,239	1,599	1,212	1,317	1,347	+30
Clams '000 lb.	24,163	16,554	25,826	27,964	21,318	−6,646
$'000	1,211	961	1,386	1,660	1,317	−343
Pollock '000 lb.	20,860	24,033	18,583	28,984	17,831	−11,153
$'000	835	1,648	1,284	1,363	1,250	−113
Soles '000 lb.	6,105	12,854	6,964	10,471	10,129	−342
$'000	515	1,171	580	914	1,188	+274
Hake '000 lb.	22,426	30,636	26,578	24,789	22,312	−2,477
$'000	1,268	1,644	1,522	1,260	1,181	−79
Saugers '000 lb.	4,286	4,810	7,658	5,464	4,958	−506
$'000	880	732	1,032	1,196	1,168	−28
Swordfish '000 lb.	1,792	2,363	2,237	2,156	2,544	+388
$'000	845	1,047	805	821	1,114	+293
Perch '000 lb.	3,875	3,390	3,406	3,430	4,468	+1,038
$'000	688	467	473	619	1,060	+441
Alewives '000 lb.	11,775	17,255	17,002	20,917	29,056	+8,139
$'000	457	679	693	712	998	+286

4.—Quantities Landed and Values of All Marketed Products of the Chief Commercial Fisheries, 1947-51—concluded

Item	1947	1948	1949	1950	1951	Increase or Decrease 1951 compared with 1950
Blue pickerel.....'000 lb.	1,753	5,868	9,831	8,665	4,102	−4,563
$'000	390	991	998	1,559	919	−640
Ling cod.....'000 lb.	3,875	6,586	7,263	4,638	4,746	+108
$'000	597	879	871	523	826	+303
Pike.....'000 lb.	6,008	6,780	6,673	6,122	7,239	+1,117
$'000	611	717	541	688	822	+134
Oysters..... bbl.	64,559	74,144	77,810	78,801	58,006	−20,795
$'000	715	859	876	830	804	−26
Tullibee.....'000 lb.	12,653	10,805	6,199	7,838	9,588	+1,750
$'000	785	903	346	453	666	+213
Catfish.....'000 lb.	746	1,593	2,072	1,996	5,382	+3,386
$'000	43	93	128	117	543	+426
Other..... $'000	7,013	7,594	7,341	5,882	8,349	+2,467
Total Values..... $'000	**123,900**	**139,826**	**131,138**	**151,982**	**175,718**	**+23,736**

The value of the equipment used in primary operations of the commercial fisheries in 1951 increased to $92,427,000 from $80,273,000 in 1950. Of the total investment in the agencies of primary production, 86 p.c. was employed by the sea fisheries.

5.—Capital Investment in Sea and Inland Fisheries, 1950 and 1951

(Exclusive of Newfoundland)

Kind of Equipment	1950		1951	
	No.	$'000	No.	$'000
Sea Fisheries—				
Trawlers	5	775	9	1,775
Draggers	138	3,905	169	5,402
Vessels—gasoline, diesel and sail	2,089	22,175	2,153	24,978
Boats—gasoline, diesel, sail and row	27,858	17,877	26,506	20,514
Packers, carrying boats and scows	1,183	2,234	1,798	2,632
Herring nets	44,938	1,148	43,864	1,160
Mackerel nets	29,014	794	27,432	836
Salmon nets, traps and seines	15,459	4,344	15,026	5,416
Smelt nets	16,226	605	13,642	554
Other nets, weirs and seines	6,678	2,873	7,559	3,572
Tubs of trawl, skates of gear, hand lines	87,882	1,760	83,417	1,648
Lobster traps and pounds	1,910,316	6,526	1,962,353	7,346
Other gear	...	337	...	170
Premises—piers, wharves, freezers, ice-houses, small fish- and smoke-houses	7,698	3,471	7,860	3,551
Total Values, Sea Fisheries Equipment	...	**68,824**	...	**79,554**
Inland Fisheries—				
Fish carriers and tugs	207	1,731	193	1,868
Boats (gasoline and diesel), skiffs, canoes	7,119	2,343	7,551	2,563
Gill nets	...	4,505	...	5,171
Other nets, weirs and seines	7,033	1,196	6,769	1,238
Other gear	...	315	...	586
Premises — piers, wharves, freezers, ice-houses, small fish- and smoke-houses	1,909	1,359	1,898	1,447
Total Values, Inland Fisheries Equipment	...	**11,449**	...	**12,873**
Grand Totals	...	**80,273**	...	**92,427**

6.—Persons Employed in the Primary Fishing Industry, 1949-51

(Exclusive of Newfoundland)

Persons Employed in—	Sea Fisheries			Inland Fisheries		
	1949	1950	1951	1949	1950	1951
	No.	No.	No.	No.	No.	No.
Steam trawlers and vessels	132	112	218	—	—	—
Draggers	612	722	903	—	—	—
Vessels	9,235	8,769	8,857	9,459	10,974	10,764
Boats	33,953	35,427	34,337			
Packers, carrying boats and scows	681	617	822	130	128	139
Fishing, not in boats	2,982	3,000	2,603	7,859	7,303	6,545
Totals, Employed	**47,595**	**48,647**	**47,740**	**17,448**	**18,405**	**17,448**

Subsection 2.—The Fish-Processing Industry

In 1951, a total of 639 firms were engaged in the fish-processing industry in Canada (including Newfoundland). The marketed value of their products was $163,010,000, almost 26 p.c. higher than in 1950; about one-half of the increase is accounted for by the inclusion of Newfoundland in the 1951 figures.

7.—Summary Statistics of Fish-Processing Establishments, 1947-51

Item		1947	1948	1949	1950	1951
Establishments—						
Newfoundland	No.	..		..	..	38
Prince Edward Island	"	68	65	62	57	55
Nova Scotia	"	191	203	212	208	203
New Brunswick	"	153	162	153	170	178
Quebec	"	112	107	104	94	96
British Columbia	"	70	63	68	68	69
Totals, Establishments	No.	594	600	599	597	639
Employees—						
Male	No.	10,793	10,329	10,417	10,176	12,346
Female	"	7,838	6,168	5,670	5,748	6,360
Totals, Employees	"	18,631	16,497	16,087	15,924	18,706
Salaries and wages	$'000	16,613	17,041	16,970	18,622	24,744
Fuel and electricity used	"	1,411	1,782	1,731	1,729	2,724
Materials used	"	62,780	74,588	69,090	74,446	101,621
Value of Products	"	105,206	115,821	111,919	128,968	163,010

CHAPTER XV.—FURS

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—The Fur Industry

Subsection 1.—Fur Trapping

The fur industry was at one time the most vigorous and remunerative industry in Canada and it still contributes many millions of dollars annually to the national income. Until the end of the 19th century practically all Canadian furs were wild-caught and, although fur-farming has developed rapidly during the present century, trapping continues to provide nearly 60 p.c. of the income from raw furs produced in Canada.

Wild fur-bearers are still taken in moderate numbers, even in settled areas of this country, but the populations of such animals have, in general, been so reduced by the advance of settlement that the principal trapping areas now lie in the Northwest Territories and the northern parts of the provinces. Many wild animals, including some important fur-bearers, are subject to marked fluctuations in numbers from year to year, and these fluctuations are often greatest and most nearly regular in northern regions. The number of pelts of certain wild species taken annually is notably affected by these fluctuations.

Another and perhaps more important factor governing the 'take' of wild-animal furs is the fluctuation in demand and in price consequent on changes in fashion. Thus, the vogue of recent years for short-haired furs, resulting from the desire of women to present as slender a silhouette as possible while wearing a fur coat, has caused a decrease in demand for fox and other long-haired pelts and a corresponding decrease in the number of such pelts taken by trappers. In areas, such as parts of the Northwest Territories, where these furs were formerly a staple source of income, this change in style has resulted in serious hardship. It is obvious that the problems thus created cannot be solved by wildlife-management practices.

Conservation and management of fur-bearers are, however, receiving increasing attention from federal and provincial authorities. Scientific studies of many species are being made to determine the principal factors controlling their numbers, the optimum annual harvest that should be taken, and the best methods of increasing that harvest. Among the controlling factors being studied are food, shelter, weather, diseases, parasites and predators.

In certain fur-producing districts, provincial and territorial authorities have instituted a registration system in accordance with which trap-lines or trapping areas are assigned to individuals on a constant basis. This system puts the responsibility on the registered trapper for the conservation of fur-bearers in his own area and has, in general, proved highly successful.

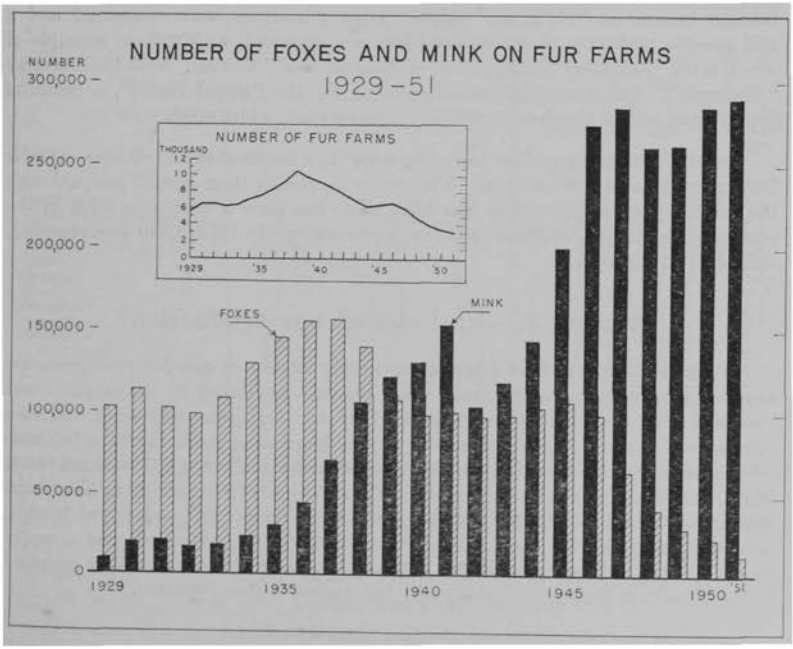
Forest fires frequently wipe out for some time wild-fur production over large areas. Provincial forest services combat this menace by well-organized fire-fighting systems, including the use of aircraft and parachute-dropped fire-fighters and

equipment, and by public education. Beaver dams also help to level off the effects of floods and drought, natural catastrophes that seriously affect fur-bearers and other wildlife. Beavers are, in fact, so useful as assistants to wildlife-management services that numbers of them are often transplanted, by air or otherwise, from areas where they are too numerous to areas where their activities will improve habitat for themselves and for other species.

The most important aspects of management of the fur-trapping industry are: constant practical scientific research, maintenance of suitable habitat and its improvement where possible, sound and balanced regulation of the harvest of fur-bearers, provision of competent and adequate field staffs, and free education of trappers with respect to the principles of wildlife management. By these means many areas depleted of fur-bearers have once again become productive. Such means will become increasingly important in maintaining Canada's position as a major producer of raw furs.

Subsection 2.—Fur Farming

Although early developments in raising fur-bearing animals on farms took place first in Prince Edward Island around 1887 and in Quebec in 1898, fur farming to-day is carried on in all the provinces of Canada. Foxes were the first fur-bearers to be raised in captivity on a commercial scale but mink, chinchilla, raccoon, marten, fisher, fitch, nutria and others are now being reared. Mink are the most numerous, followed by the various types of foxes and these two far outnumber all other kinds of fur-bearing animals.



There was a slow and steady increase in the number of fur farms until 1920 when 587 were reported, with a period of more rapid growth from 1920 to 1938 when the number reached 10,454. After the outbreak of hostilities in 1939 and the loss of the London and European markets, prices declined and many fur farms went out of production. Though prices rose considerably after the War, operating costs also increased and the number of fur farms, particularly those conducted in conjunction with other farming operations, continued to decrease. By 1951, only 3,072 reported but, despite this decrease in number, volume of production gradually increased over the period.

While the earliest and most intensive fur-farming operations were concerned with fox-raising in the Maritime Provinces and Quebec, the sharp decline in the popularity of fox furs and the steady rise in mink resulted in Ontario and Western Canada taking predominant positions in the raising of fur animals. A distribution of the 315,485 animals on fur farms at Dec. 31, 1951, showed 12 p.c. in British Columbia, 47 p.c. in the Prairie Provinces, 25 p.c. in Ontario, 10 p.c. in Quebec and 6 p.c. in the Maritime Provinces.

Furs have for centuries been used for clothing and adornment and, with the demands of fashion, the development of new colour phases in fox and mink has been an important incentive to the fur-farming industry. There have always been mink mutations in the wild state but these unusual animals stood little chance of survival and such pelts were exceedingly rare. Starting with wild-caught mink, breeders have, by cross-breeding, produced mink furs in a variety of colours. Among the earliest mutations to appear was an attractive bluish-gray mink which became known as "Platinum" mink. Then mutations were cross-bred and a still greater profusion of colour combinations appeared, an excellent example of which is the "Sapphire" mink, a cross of the steel-blue "Aleutian" with the blue-gray "Platinum". Other unusual colour patterns are the "Royal Pastel", a beautiful brown mink with a bluish cast, and an exquisite snow-white mink.

In 1937, some chinchillas were imported into Saskatchewan. These valuable little animals have a rich, soft fur. The outlay for raising them is small and, although the original cost of chinchillas was high, there has been a steady increase in the number on farms first by import and then by breeding. In 1951, 8,530 were reported, valued at $1,800,000.

Section 2.—Statistics of Fur Production*

Total Fur Production Statistics.—Early records of raw-fur production are confined to the decennial censuses, when account was taken of the numbers and values of pelts obtained by trappers. In 1920, the Dominion Bureau of Statistics commenced an annual survey of raw-fur production, basing the statistics on information supplied by the licensed fur traders. This survey was continued for some years. More recently, annual statements based on royalties, export tax, etc., have been made available by the provincial game departments (except Prince Edward Island), and these statements are now used in the preparation of the statistics issued annually by the Bureau. Figures for Prince Edward Island are based on returns supplied to the Dominion Bureau of Statistics by fur traders in that Province.

* Revised in the Agriculture Division, Dominion Bureau of Statistics.

1.—Pelts of Fur-Bearing Animals Produced, with Percentage Sold from Fur Farms, Years Ended June 30, 1933-52

Year	Pelts		Percentage of Value Sold from Fur Farms[1]	Year	Pelts		Percentage of Value Sold from Fur Farms[1]
	Number	Value			Number	Value	
		$				$	
1933	4,503,558	10,305,154	30	1943	7,418,971	28,505,033	24
1934	6,076,197	12,349,328	30	1944	6,324,240	33,147,392	28
1935	4,926,413	12,843,341	31	1945	6,994,686	31,001,456	31
1936	4,596,713	15,464,883	40	1946	7,593,416	43,870,541	30
1937	6,237,640	17,526,365	40	1947	7,486,914	26,349,997	37
1938	4,745,927	13,196,354	43	1948	7,952,146	32,232,992	37
1939	6,492,222	14,286,937	40	1949	9,902,790	22,899,882	33
1940	9,620,695	16,668,348	31	1950	7,377,491	23,184,033	34
1941	7,257,337	21,123,161	26	1951	7,479,272	31,134,400	36
1942	19,561,024	24,859,869	19	1952[2]	7,931,742	24,199,111	42

[1] Approximate. [2] Includes Newfoundland.

Ontario leads the provinces in value of fur production, accounting for 25 p.c. of the total in the 1951-52 season. The numbers of pelts taken in Alberta, Saskatchewan and Manitoba were greater than in Ontario but, in these provinces, squirrel pelts, which are lower-priced furs, made up a large part of the total. In Ontario the more valuable mink, beaver and fox pelts brought the total value to a higher level.

2.—Pelts of Fur-Bearing Animals Produced, by Province, Years Ended June 30, 1951 and 1952

Province or Territory	1951			1952		
	Pelts	Value	Percentage of Total Value	Pelts	Value	Percentage of Total Value
	No.	$		No.	$	
Newfoundland	..	..	...	53,183	151,521	0·6
Prince Edward Island	11,772	176,153	0·6	15,679	215,756	0·9
Nova Scotia	356,827	611,979	2·0	123,934	511,063	2·1
New Brunswick	27,814	170,670	0·5	79,575	210,916	0·9
Quebec	465,893	3,370,829	10·8	394,647	2,343,787	9·7
Ontario	1,042,208	8,210,658	26·4	1,111,715	6,012,145	24·9
Manitoba	1,302,010	5,370,335	17·2	1,239,173	4,461,815	18·4
Saskatchewan	875,901	2,805,972	9·0	1,164,379	2,139,569	8·8
Alberta	1,861,860	5,280,952	17·0	2,216,112	4,492,376	18·6
British Columbia	662,792	2,736,544	8·8	665,826	2,038,738	8·4
Yukon Territory	228,616	361,969	1·2	171,274	173,252	0·7
Northwest Territories	643,579	2,038,339	6·5	696,245	1,448,173	6·0
Canada	**7,479,272**	**31,134,400**	**100·0**	**7,931,742**	**24,199,111**	**100·0**

The average prices of the main kinds of pelts taken in 1951-52 were considerably lower than in 1950-51. Mutation mink pelts, however, brought slightly higher prices, rising from $21.60 to $21.99 while standard mink dropped from $20.57 to $16.87. Fox pelts of all types decreased, silver fox falling from $13.06 per pelt to $11.48. The average value of beaver pelts was $14.91 in 1951-52 as compared with $23.58 in the previous year; muskrat was $1.42 compared with $2.25 and squirrel was 43 cents compared with 66 cents.

3.—Pelts of Fur-Bearing Animals Taken, by Kind, Years Ended June 30, 1951 and 1952

Kind	1951[1]			1952		
	Pelts	Total Value	Average Value	Pelts	Total Value	Average Value
	No.	$	$	No.	$	$
Badger	702	743	1·06	508	203	0·40
Bear, white	377	9,525	25·27	420	8,470	20·17
Bear, unspecified	410	1,308	3·19	330	567	1·72
Beaver	180,817	4,262,977	23·58	222,932	3,323,274	14·91
Coyote or prairie wolf	32,721	142,584	4·36	12,983	33,154	2·55
Ermine (weasel)	377,088	805,770	2·14	353,435	542,520	1·53
Fisher	3,707	91,931	24·80	5,274	121,453	23·03
Fitch	76	86	1·13	[2]	[2]	[2]
Fox, blue	2,063	21,647	10·49	964	7,469	7·75
Fox, cross	6,514	21,041	3·23	3,423	7,498	2·19
Fox, new-type	11,749	171,684	14·61	6,281	88,655	14·11
Fox, red	36,576	64,788	1·77	28,359	34,270	1·21
Fox, silver	38,561	503,658	13·06	37,465	429,920	11·48
Fox, white	52,566	684,272	13·02	53,654	437,549	8·16
Fox, other	40	199	4·98	82	455	5·55
Lynx	9,662	108,919	11·27	7,324	38,273	5·23
Marten	21,109	539,065	25·54	16,976	276,781	16·30
Mink, standard	598,008	12,300,312	20·57	593,514	10,009,637	16·87
Mink, mutation	107,288	2,317,723	21·60	112,476	2,473,375	21·99
Muskrat	2,958,662	6,645,903	2·25	3,292,110	4,675,562	1·42
Nutria	16	18	1·13	[2]	[2]	[2]
Otter	13,567	374,007	27·57	13,467	284,096	21·10
Rabbit	48,123	22,487	0·47	42,712	8,241	0·19
Raccoon	24,384	60,697	2·49	29,029	54,875	1·89
Skunk	16,389	12,872	0·79	13,287	8,623	0·65
Squirrel	2,935,520	1,943,103	0·66	3,082,342	1,319,468	0·43
Wildcat	649	888	1·37	662	360	0·54
Wolf	1,148	7,342	6·40	1,129	4,728	4·19
Wolverine	780	18,851	24·17	568	9,238	16·26
Other	—	...	...	36	397	...
Totals	**7,479,272**	**31,134,400**	...	**7,931,742**	**24,199,111**	...

[1] Exclusive of Newfoundland. [2] Included in "Other".

Fur-Farm Statistics.—In 1951, the number of fur farms continued the decrease occurring each year since 1946, dropping from 3,492 in 1950 to 3,072 in 1951. The value of fur animals on farms at Dec. 31, 1951, was slightly lower than at the end of 1950 but the revenue from operations was higher, amounting to $12,400,000 compared with $11,800,000.

The number of farms reporting foxes in 1951 decreased since 1950 by 38 p.c. to 609, while the number of animals on these farms was lower by 40 p.c., totalling 14,336 valued at $341,839. Mink farms showed a decline from 2,557 in 1950 to 2,324 in 1951, but the number of animals on the farms reached a record total of 292,125 valued at $8,022,408 in 1951, which was 5,973 more in number than in 1950. Fox pelts produced decreased by 31 p.c. while mink pelts increased by 5 p.c.

4.—Fur Farms and Value of Fur-Bearing Animals, by Province, 1948-51

Province	Fur Farms				Values of Fur-Bearing Animals on Fur Farms			
	1948	1949	1950	1951	1948	1949	1950	1951
	No.	No.	No.	No.	$	$	$	$
Newfoundland	..	..	..	..	..	..	..	..
Prince Edward Island	246	179	127	88	172,688	158,108	146,908	101,565
Nova Scotia	219	163	130	110	175,973	154,987	184,051	195,171
New Brunswick	205	136	105	95	131,056	109,319	125,469	149,377
Quebec	1,058	718	561	389	1,345,593	1,179,718	1,306,429	1,043,629
Ontario	1,306	1,104	952	903	2,696,060	2,540,036	2,977,794	3,205,643
Manitoba	581	509	489	467	1,210,580	1,236,157	1,686,174	1,644,672
Saskatchewan	285	253	203	180	477,627	510,402	564,484	556,443
Alberta	793	657	601	519	1,600,248	1,576,938	1,978,989	1,768,280
British Columbia	347	330	324	321	1,099,710	1,277,560	1,473,988	1,530,781
Totals	**5,040**	**4,049**	**3,492**	**3,072**	**8,909,535**	**8,743,225**	**10,444,286**	**10,195,561**

5.—Fur-Bearing Animals on Fur Farms, as at Dec. 31, 1948-51

(Exclusive of Newfoundland)

Kind of Animal	1948		1949		1950		1951	
	No.	Value	No.	Value	No.	Value	No.	Value
		$		$		$		$
Chinchilla	4,339	1,088,900	5,685	1,428,708	6,053	1,350,860	8,530	1,799,963
Coyote	2	10	[1]	[1]	—	—	—	—
Fisher	83	10,250	116	10,600	99	9,860	45	4,520
Fitch	90	473	85	519	43	225	[1]	[1]
Fox, blue	985	40,103	738	28,220	557	21,359	269	341,839
Fox, cross	102	1,476	[2]	[2]	[2]	[2]	[2]	
Fox, new-type	15,442	485,170	9,734	265,694	6,857	187,574	4,260	
Fox, red	111	1,115	[2]	[2]	[2]	[2]	[2]	
Fox, silver	26,166	690,911	19,578	504,799	16,279	431,267	9,707	
Fox, other	61	1,800	150	1,839	118	1,628	100	
Lynx	4	200	[1]	[1]	—	—	—	—
Marten	427	39,690	371	30,790	327	31,020	255	21,970
Mink	262,827	6,544,333	263,673	6,469,273	286,152	8,408,379	292,125	8,022,408
Nutria	130	4,167	67	1,650	38	1,430	58	4,175
Raccoon	163	922	147	1,009	114	623	124	623
Skunk	3	15	[1]	[1]	[1]	[1]	[1]	[1]
Other	—	—	8	124	9	61	12	63
Totals	**310,935**	**8,909,535**	**300,352**	**8,743,225**	**316,646**	**10,444,286**	**315,485**	**10,195,561**

[1] Included in "Other". [2] Included in "Fox, other".

6.—Value of Fur-Bearing Animals and of Pelts Sold from Fur Farms, 1948-51

(Exclusive of Newfoundland)

Kind of Animal	1948		1949		1950		1951	
	Animals	Pelts	Animals	Pelts	Animals	Pelts	Animals	Pelts
	$	$	$	$	$	$	$	$
Chinchilla	201,557	—	404,161	150	518,750	—	416,318	[1]
Fisher	1,200	1,267	975	177	[1]	[1]	[1]	1,436
Fitch	90	1,422	75	280	[1]	[1]	[1]	[1]
Fox, blue	2,030	94,053	210	37,802	185	20,277		8,167
Fox, cross	105	2,436	[2]	[2]	[1]	[2]		[2]
Fox, new-type	9,459	1,015,612	2,642	427,964	4,287	283,573	8,248	158,368
Fox, red	[2]	[2]	[2]	[2]	[2]	[2]		[2]
Fox, silver	33,882	977,690	16,615	505,404	14,567	463,181		369,478
Fox, other	50	1,416	92	1,788	13	930		1,194
Marten	2,870	877	6,081	1,210	2,754	2,841	6,313	2,519
Mink	537,643	5,875,376	288,411	7,820,747	431,212	10,064,005	547,647	10,875,371
Nutria	534	388	80	2	[1]	[1]	[1]	[1]
Raccoon	65	15	42	26	[1]	[1]	[1]	39
Other	—	—	300	—	730	700	1,649	1,483
Totals	**789,485**	**7,970,552**	**719,684**	**8,795,550**	**972,498**	**10,835,507**	**980,175**	**11,418,055**

[1] Included in "Other". [2] Included in "Fox, other".

Section 3.—Marketing of Furs

The first Canadian fur auction sale was held in 1920 at Montreal, Que., and although that city has always been the leading Canadian fur mart, auction sales are now held at Vancouver, B.C., Edmonton, Alta., Regina, Sask., and Winnipeg, Man. The Saskatchewan Government maintains a Fur Marketing Service at Regina to assist producers in that Province.

Grading.—The grading of furs to secure uniformity was introduced in 1939 by the Federal Department of Agriculture so that furs may be purchased by grade without the necessity of buyers from other countries personally examining the

pelts. Grading offers many advantages to the producer as well as to the trade in general. It educates the rancher as to the proper value of his pelts and creates an incentive to improve the quality of the product; it furnishes guidance in the planning of future matings, aids in raising the standard of quality of the entire crop of pelts and helps in advancing the level of prices for high-quality pelts.

Exports and Imports.—Prior to World War II, Canada marketed fur pelts mainly in the United Kingdom but, since that market was practically dormant during the war years, the fur trade was carried on mainly with the United States. Though a definite revival of trade with the United Kingdom took place after the War, almost 80 p.c. of Canadian fur exports still go to the United States.

The Canadian fur trade, both export and import, is chiefly in undressed furs, the value of dressed and manufactured furs going out of or coming into Canada being a comparatively small proportion of the total. Exports consist largely, of course, of furs which Canada produces in greatest abundance, mink being the most valuable followed by beaver, muskrat and fox. On the other hand, furs such as Persian lamb, certain types of muskrat, rabbit, squirrel, sheep and lamb, which are not produced to any extent in Canada, make up the major portion of the imports.

Total exports and imports of all furs to and from the United States, the United Kingdom and all countries are given for the years 1949-52 in Part I, Section 4, of Chapter XXI, Tables **13** and **14.**

7.—Exports and Imports of Furs, by Kind, 1951 and 1952

Kind of Fur	1951			1952		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	Exports					
	$	$	$	$	$	$
Undressed—						
Beaver	1,591,155	2,661,421	4,418,160	820,565	2,408,969	3,480,460
Ermine	156,615	531,400	688,015	69,648	363,729	433,399
Fisher	95,235	74,595	173,051	95,741	31,389	151,681
Fox, all types	938,891	772,490	1,945,218	440,476	538,764	1,047,008
Lynx	37,145	27,959	66,234	81,934	3,736	86,618
Marten	107,229	437,632	545,408	50,393	228,870	281,710
Mink	1,171,240	13,641,754	14,932,206	1,034,963	14,061,757	15,161,795
Muskrat	1,618,051	1,367,417	3,034,220	542,125	844,035	1,416,453
Otter	38,721	364,396	406,463	11,393	103,968	115,451
Rabbit	675	1,200	1,875	742	31,161	31,903
Raccoon	4,357	87,459	92,516	9,466	67,987	77,453
Seal	—	70,564	70,564	36,993	—	36,993
Skunk	51,449	27,683	80,815	41,809	16,139	58,855
Squirrel	1,451,079	44,358	1,498,466	769,511	32,696	813,989
Weasel	41,090	168,387	209,477	11,264	160,265	171,529
Wolf	9,167	103,230	112,514	9,683	69,822	79,505
Other	1,556	35,841	40,765	22,144	13,189	62,306
Dressed—						
Fox	—	413	4,703	—	—	3,132
Other	10,232	808,141	913,008	204	282,364	372,016
Manufactured	1,692	608,319	630,523	3,846	483,298	521,275
Totals	**7,325,579**	**21,834,659**	**29,864,201**	**4,052,900**	**19,742,138**	**24,405,531**

7.—Exports and Imports of Furs, by Kind, 1951 and 1952—concluded

Kind of Fur	1951			1952		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	Imports					
	$	$	$	$	$	$
Undressed—						
China and Jap mink	13,525	233,944	414,466	—	122,702	122,702
Fox	3,614	151,084	168,842	21,798	30,532	56,165
Kolinsky	14,929	30,572	88,266	72,176	46,706	145,678
Marine	—	1,661	1,661	—	192	192
Mink	41,081	1,824,498	1,866,866	20,996	1,626,513	1,647,629
Muskrat	249,642	3,392,366	3,734,888	74,946	4,295,741	4,597,657
Opossum	—	22,813	23,568	—	5,180	5,180
Persian lamb	678,497	4,755,093	5,868,561	1,235,900	6,484,650	9,459,602
Rabbit	762	689,673	1,437,973	8,994	429,490	1,011,136
Raccoon	—	372,851	372,851	—	259,829	259,829
Sheep and lamb	3,248	731,795	1,079,810	—	390,001	675,667
Squirrel	140,581	364,361	574,514	38,204	193,320	282,981
Other	72,672	1,269,271	1,850,603	149,675	640,039	1,513,186
Dressed—						
Astrakhan, Russian hare	513	6,722	7,235	1,519	15,711	22,966
Rabbit	2,673	35,616	51,756	7,667	10,056	56,917
Sheep skins	3,511	327,200	334,313	469	334,201	346,662
Hatters furs	47,383	845,955	1,262,747	31,560	576,368	954,612
Other	265,158	1,040,868	1,316,812	44,174	1,099,532	1,160,089
Manufactured	376,883	697,665	1,130,637	325,398	847,945	1,194,973
Totals	**1,914,672**	**16,794,008**	**21,586,369**	**2,033,476**	**17,408,708**	**23,513,823**

Section 4.—The Fur-Processing Industry*

The rather general term "fur processing" includes the fur-dressing and -dyeing industry and the fur-goods industry. The former is concerned with the dressing or dyeing of pelts on a custom basis, while the latter is a manufacturing industry that makes up fur goods such as coats, scarves and gloves.

Fur-dressing and -dyeing industry statistics were first recorded in 1917, when 12 establishments with 512 employees reported receipts of $1,071,805. Eight establishments in 1924 reported a revenue of $1,120,895, expenditures on dyes, chemicals and other materials used of $162,013, and expenditures on salaries and wages to 539 employees of $561,233. Of the 3,473,909 skins treated in that year, muskrat pelts made up 47 p.c., rabbit 19 p.c. and squirrel 10 p.c.

The greatest number of skins treated was reported in 1941, when 14,592,079 were handled, but almost 53 p.c. of those were rabbit skins so that the revenue for that year was only $2,476,289. The record revenue reported was that for 1949, when $6,691,418 was received and rabbit skins constituted 38 p.c. of the total skins processed.

In 1951, the number of skins treated was 9,768,616, of which rabbit skins comprised 32 p.c., muskrat pelts 30 p.c., squirrel skins 14 p.c., Persian and other types of lambskins 11 p.c., and 'mouton' and other shearling wools 5 p.c.

* Prepared in the Animal Products Section, Industry and Merchandising Division, Dominion Bureau of Statistics.

8.—Principal Statistics of the Fur-Dressing Industry, 1949-51

Item		1949	1950	1951
Establishments	No.	21	22	20
Employees on Salaries—				
Male	No.	109	120	100
Female	"	42	44	37
Employees on Wages—				
Male	No.	1,224	1,187	940
Female	"	295	282	228
Salaries paid	$	628,890	653,615	600,593
Wages paid	$	2,858,743	2,766,881	2,538,783
Cost of materials used (dyes, chemicals, etc.)	$	1,215,541	1,294,259	1,076,825
Pelts treated	No.	13,933,261	13,639,110	9,768,616
Amount received for treatment of furs	$	6,691,418	6,514,772	5,302,761

Statistics for the fur-goods industry, on a comparable basis, are available from 1921, when 219 establishments reported a gross value of production of $13,639,609, with employees numbering 2,621 who received $3,013,706 in salaries and wages. Cost of materials used in the manufacturing process totalled $8,118,833. Principal statistics for the industry for the years 1949 to 1951 are given in Table 9.

9.—Principal Statistics of the Fur-Goods Industry, 1949-51

Item		1949	1950	1951
Establishments	No.	642	609	612
Employees on Salaries—				
Male	No.	1,305	1,250	1,203
Female	"	387	359	349
Employees on Wages—				
Male	No.	2,816	2,728	2,625
Female	"	2,192	1,992	1,907
Salaries paid	$	4,718,648	4,755,675	4,755,383
Wages paid	$	9,801,931	9,841,027	9,657,070
Cost of materials used	$	37,260,284	38,309,241	38,100,218
Value of products	$	60,955,010	61,930,099	61,209,546

Changes in living habits and standards that have taken place in the past quarter-century are reflected in the type of goods produced by the fur-goods industry. For example, in 1921 there were 31,604 ladies' fur coats and jackets produced whereas, in 1948, there were 225,711 ladies' fur coats made; the number dropped to 191,915 in 1950 but rose to 201,626 in 1951. The manufacture of men's fur coats, however, showed a decided reversal in the market; there were 4,655 men's fur coats and 1,037 men's fur-lined coats manufactured in 1921 but only 632 in 1951.

CHAPTER XVI.—MANUFACTURES

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

This Chapter deals with manufacturing industries in Canada in three Parts. Part I is a textual review of manufacturing in 1951 compared with the previous year. Part II gives general analyses including: the historical development of manufacturing; detailed treatment of current production under various groupings and individual industries; and principal factors in manufacturing production such as capital, employment, salaries and wages and size of establishment. Part III deals with the provincial and local distribution of manufacturing production.

PART I.—REVIEW OF CANADIAN MANUFACTURING

Canada is no longer on the fringes of industrialization but ranks among the world's most important manufacturing countries. Basic historical developments, such as the opening of the West and the magnitude of requirements of all kinds for World Wars I and II, have been followed by recent discoveries of far-reaching significance. Such events as the discovery of a major oil pool on the prairies in 1947, the discovery of large-scale deposits of iron ore and the successful search for uranium have given new dimensions to Canadian thinking and business planning. These are the factors that explain the records of capital expenditures year by year since the end of the War. Yet it is not the mere rate of expansion that is significant. There have been other periods when Canada's population has grown more rapidly and in many respects the rate of industrial expansion in the late 1920's was relatively as great as in the post-war years. The real significance of the latter period is that never before has there been an advance on such a broad industrial front.

The second point to be observed is the changing emphasis of Canadian manufacturing activity. By 1949 the period of post-war conversion was passed and Canada had entered a new phase of economic expansion which derived its dynamic from the discovery of new resources and the application of new processes. This meant that even the sharp recession in the United States in 1949 failed to have significant effects in Canada. The Korean conflict and the consequent rearmament program gave an added impetus to the expansion of Canadian industry and to the development of Canadian basic resources. Capital expenditures that contributed most to the defence of Canada were given priority. Additional capacity was created to meet the requirements of the specialized defence program—aircraft, electronic equipment, ships and guns—many items of which had never before been produced in Canada. Measures such as steel control, credit regulations and deferred depreciation had the desired effect. A shift gradually took place toward the further expansion of basic industrial capacity and away from investment in consumer goods and services.

It should be emphasized that Canada's development as an industrial country is based upon and not independent of her position as a trading nation. In 1952, Canada was sixth among the world's industrial powers and the world's third largest trader. Canada's exports earned a quarter of her income and Canada's per capita trade at $571 was higher than that of any other country. At the same time, Canada's position has become more closely linked with the North American Continent and trade with the United States has grown to the point where that country took nearly two-thirds of Canada's exports in 1952.

The stability of current levels of manufacturing is indicated by the fact that such activity is the result of business assessments of resources and market potentialities. Millions of dollars are being invested in oil because the prairies can produce oil as economically as other great fields on the North American Continent. Petrochemical plants are being erected because the raw materials are readily at hand. Kitimat is based on the coincidence of abundant and cheap hydro-power and access to ocean transportation, both of which are essential to the low-cost production of aluminum. Exploitation of the Ungava iron ore deposits rests on the belief that the steel industry of the North American Continent will need the high-grade ores involved in order to meet continuing peace-time demands. No country is in a more favourable position than Canada to supply uranium for the production of atomic energy.

The manufacturing industries of Canada in 1951 again established a new record in gross value of production with a total of $16,392,187,132. This represents an increase of 18·6 p.c. over the previous year's value. Part of the increased value was accounted for by an increase of about 6·0 p.c. in the physical volume of production and the balance by increased prices of fully and partly manufactured products. Accompanying the rise in output was an increase of 6·3 p.c. in the number of persons employed, with an increase of 18·2 p.c. in the salaries and wages paid. Salary and wage payments at $3,276,280,917 were the highest on record and exceeded the previous high, reported in 1950, by $505,013,482.

Not all segments of manufacturing production were affected to the same degree by the impact of the war in Korea. The greatest expansion was reported by the industries classified in the durable goods group which, according to preliminary estimates, achieved an increase of 10·4 p.c. in the physical volume of

production, as compared with an increase of only 2·7 p.c. for the industries producing non-durable goods. For manufacturing as a whole the increase was 6·1 p.c., the index at 242·1 being only 0·2 points below the record wartime level attained in 1944.

As was to be expected, the industries producing for national defence made the greatest gains in production during 1951. Accordingly, most of the industry groups producing durable goods reported increased activity, while only a few of the industry groups producing consumer goods reported increases in production. The transportation equipment group, with an increase of 20 p.c. in physical volume, experienced the greatest expansion in production. This was followed by products of petroleum and coal with 13 p.c., iron and steel products 11 p.c., non-ferrous metal products 10 p.c., non-metallic mineral products 9 p.c., paper products 8 p.c., electrical apparatus and supplies 7 p.c., chemicals and allied products 6 p.c., rubber products 5 p.c., foods and beverages 4 p.c., wood products 3 p.c., and miscellaneous industries 0·5 p.c. In the non-durable goods sector, the greatest decline in physical volume of production was reported by the leather products group with 8 p.c., followed by tobacco and tobacco products with 6 p.c., clothing 4 p.c., textiles 2 p.c. and printing, publishing and allied industries 0·3 p.c.

Manufacturing establishments reporting in 1951 numbered 37,021. These plants furnished employment to 1,258,375 persons who received $3,276,280,917 in salaries and wages. They also produced goods with a selling value at the factory of $16,392,187,132 and spent $9,074,526,353 for materials, while the value added by manufacture totalled $6,940,946,783. It should be remembered that the value added by manufacture does not represent the manufacturers' profits. The value added is obtained by subtracting the cost of materials, including fuel and electricity, from the value of products. The difference represents the value added to the materials by labour. It is this difference which the employer of labour uses to pay for the labour itself, overhead expenses and interest and profits. Compared with the previous year, there was an increase of $998,888,554 in the value added by manufacture.

Fifteen leading industries accounted for nearly 50 p.c. of total value of production of all industries in 1951. The largest industry—pulp and paper—which has been steadily expanding since the end of the War, is embarking on a further stage of development. From 1946 to 1951, the physical volume of production of the industry increased by one-third and new projects were under way or in an advanced state of planning. For example, in British Columbia a $40,000,000 mill was nearing completion and projects involving around $75,000,000 were under construction. Other multi-million-dollar plants were scheduled for Alberta, and significant additions to capacity were planned by a number of Ontario and Quebec companies. In 1951, a 5-p.c. increase was secured in newsprint production by speeding up machines and by more efficient plant operation. New mills contributed to a 20-p.c. increase in market pulp production and a 14-p.c. increase in the output of paperboard and papers other than newsprint. The gross value of production of this industry rose from $954,000,000 in 1950 to $1,238,000,000 in 1951. The industry ranks first in wages paid, first in new investment, first in exports as well as first in value of output. It produced one-quarter of the world's output of wood-pulp. Most of the production was processed domestically to provide 54 p.c. of the world's supply of newsprint.

Five industries in the foods and beverages group ranked among the 15 largest in Canada. Because of the basic importance of agriculture to the Canadian economy these industries are in the forefront of industrial activity. The raw products of the

farm must be further processed in meat-packing plants, in canning factories, in milk, cheese and butter establishments or in flour mills. The value of production of the slaughtering and meat-packing industry, which ranks second, rose from $757,000,000 in 1950 to $892,000,000 in 1951; butter and cheese production was valued at $331,000,000 in 1950 and $374,000,000 in 1951; flour milling reported a rise in gross value of production from $247,000,000 in 1950 to $281,000,000 in 1951; over the same period miscellaneous food preparations advanced from $180,000,000 in 1950 to $260,000,000 in 1951; the bread and other bakery products industry showed a gain from $215,000,000 in 1950 to $245,000,000 in 1951. In the post-war years, despite the virtual completion of war relief and emergency feeding programs, the food industries have continued to forge ahead. In 1951 farm income was the highest on record and agriculture's contribution to the gross national product of Canada was 30 p.c. higher than in 1950.

The third leading industry—non-ferrous smelting and refining—had a gross value of production of $670,000,000 in 1950 which rose to $861,000,000 in 1951. Canada has been the world's leading exporter of non-ferrous metals for over a decade and is also one of the world's leading producers of non-ferrous metals, standing first in the production of nickel, second in aluminum and zinc and fourth in copper and lead. The most important base-metal ore-bodies, at Sudbury, Ont., and Kimberley, B.C., were discovered before the turn of the century. They contain ores of two or more base metals intimately associated and frequently containing appreciable quantities of precious metals such as gold, silver and platinum. Present-day extraction methods are a triumph of modern techniques. Important new discoveries of non-ferrous metals include copper in the Gaspe Peninsula, copper-zinc ores at Chibougamau and zinc in Barraute Township in northwestern Quebec, titanium at Allard Lake on the Gulf of St. Lawrence and nickel-copper at Lynn Lake in northern Manitoba.

The manufacture of motor-vehicles was Canada's fourth largest industry in 1951 and the motor-vehicle parts industry ranked thirteenth. Gross value of production of motor-vehicles rose from $676,000,000 in 1950 to $743,000,000 in 1951 when the productive capacity of the industry was nearly three times the pre-war capacity. In 1951 a record number of over 415,000 vehicles of all types were produced; in the same year retail sales of passenger cars amounted to $683,000,000 and sales of commercial vehicles to $267,000,000, both record highs. The trend of passenger-car ownership reflects the rising standard of living and the growth of the motor-vehicle industry: in 1939 there were 9·5 persons for each passenger car in the country and in 1951 an estimated 6·7 persons per passenger car. The development of the motor-vehicle parts industry also moved upward, production rising from $227,000,000 in 1950 to $263,000,000 in 1951.

The fifth leading industry—petroleum products—grew from $512,000,000 in 1950 to $599,000,000 in 1951. In many respects petroleum has been Canada's most outstanding post-war development. Crude petroleum production almost quadrupled from 1947 to 1951 and refining capacity increased by 50 p.c.

For the Canadian lumber industry, 1951 was a year of near-record activity, the output of sawmills advancing from $497,000,000 in 1950 to $592,000,000. For most of the period since the end of the War, demand for sawmill products continued to exceed the available supply and, as a reflection, lumber prices more

than doubled. During these years the annual lumber output averaged 6,200,000,000 bd. ft., a 60-p.c. increase over the average rate for the four years immediately prior to World War II.

Gross value of production of the primary iron and steel industry advanced from $341,000,000 in 1950 to $465,000,000 in 1951. The industry is making tremendous progress because of the expansion of iron-ore production; between 1945 and 1951 production of the Steep Rock mines increased from 500,000 tons to more than 1,300,000 tons and an annual 3,000,000-ton output is expected by 1955. Potentially more important are the developments presently taking place in the Quebec-Labrador area. When production in this field gets under way in 1954, Canada should rank among the six largest producers of iron ore in the world.

Increased activity has been reported by the railway rolling-stock industry. This industry, which in 1950 ranked sixteenth with a gross value of production of $194,000,000, moved up into tenth position in 1951 with an output of $301,000,000.

In the textile group, only one industry ranked among the fifteen largest in 1951. Output of the cotton yarn and cloth industry advanced from $257,000,000 in 1950 to $274,000,000. Both the men's and women's factory clothing industries failed to rank among the leading fifteen industries in 1951. The textile industry was typical of other consumer goods industries which faced a market softening. Investment resources had been largely expended on the basic enlargement of industrial capacity and in the early post-war years production had been expanded to meet large backlogs of demand. The outbreak of hostilities in Korea provided another stimulus to sales but, as this precautionary buying subsided, idle capacity developed in some industries. The same condition in other industrialized countries resulted in an increase in competition in the Canadian market. The gross value of production of the textile industry rose by 85 p.c. between 1946 and 1950. New investment was high during those years and despite the considerable decline in production and sales from early 1951, planned investment in 1952 was up to the levels of the two previous years.

The gross value of production of the rubber goods industry advanced from $239,000,000 in 1950 to $312,000,000 in 1951. Canada ranks among the leading countries of the world as a manufacturer of rubber goods and the industry makes an important contribution to the country's export trade. It should be pointed out, however, that much of the increase in 1951 was accounted for by price advances. While many kinds of rubber footwear were produced at a rate exceeding that of 1950, there was a decline in the physical production of some important items such as passenger car tires. The industry is practically confined to Ontario and Quebec with Ontario accounting for almost 70 p.c. of production and employment.

PART II.—ANALYSES OF MANUFACTURING STATISTICS

Section 1.—Growth of Manufacturing

This Section gives a picture of the growth of manufacturing, in general, as shown by comparable principal statistics, i.e., establishments, employees, salaries and wages paid, cost of materials and value of products. Also, it includes information on the consumption of manufactured products as well as a treatment of value and volume data.

Subsection 1.—Historical Statistics of Manufacturing

It is impossible to give absolutely comparable statistics of manufacturing over a long period of years. From 1870 to 1915 statistics were collected only in connection with decennial or quinquennial censuses and there was inevitably some variation in the information collected. The annual Census of Manufactures was instituted in 1917 and, while numerous changes have been made since then in the information collected and the treatment of the data, an effort has been made to carry all major revisions, as far as possible, back to 1917, so that the figures for the period since then are on a reasonably comparable basis.

1.—Summary Statistics of Manufactures, 1917-51

NOTE.—Statistics of manufacturing from 1870 have been published, but between that year and 1917 figures are not on a comparable basis to the series given below. Statistics for significant years will be found in the 1943-44 Year Book, p. 363. Statistics of the non-ferrous metal-smelting industries were included in manufactures in 1925 for the first time.

Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products
	No.	No.	$	$	$	$
1917	21,845	606,523	497,801,844	1,539,678,811	1,281,131,980	2,820,810,791
1918	21,777	602,179	567,991,171	1,827,631,548	1,399,794,849	3,227,426,397
1919	22,083	594,066	601,715,668	1,779,056,765	1,442,400,638	3,221,457,403
1920	22,532	598,893	717,493,876	2,085,271,649	1,621,273,348	3,706,544,997
1921	20,848	438,555	497,399,761	1,365,292,885	1,123,694,263	2,488,987,148
1922	21,016	456,256	489,397,230	1,272,651,585	1,103,266,106	2,375,917,691
1923	21,080	506,203	549,529,631	1,456,595,367	1,206,332,107	2,662,927,474
1924	20,709	487,610	534,467,675	1,422,573,946	1,075,458,459	2,570,561,931
1925[2]	20,981	522,924	569,944,442	1,571,788,252	1,167,936,726	2,816,864,958
1926[2]	21,301	559,161	625,682,242	1,712,519,991	1,305,168,549	3,100,604,637
1927[2]	21,501	595,052	662,705,332	1,741,128,711	1,427,649,292	3,257,214,876
1928[2]	21,973	631,429	721,471,634	1,894,027,188	1,597,887,676	3,582,345,302
1929[2]	22,216	666,531	777,291,217	2,029,670,813	1,755,386,937	3,883,446,116
1930[2]	22,618	614,696	697,555,378	1,664,787,763	1,522,737,125	3,280,236,603
1931	23,083	528,640	587,566,990	1,221,911,982	1,252,017,248	2,555,126,448
1932	23,102	468,833	473,601,716	954,381,097	955,960,724	1,980,417,543
1933	23,780	468,658	436,247,824	967,788,928	919,671,181	1,954,075,785
1934	24,209	519,812	503,851,055	1,229,513,621	1,087,301,742	2,393,692,729
1935	24,034	556,664	559,467,777	1,419,146,217	1,153,485,104	2,653,911,209
1936	24,202	594,359	612,071,434	1,624,213,996	1,289,592,672	3,002,403,814
1937	24,834	660,451	721,727,037	2,006,926,787	1,508,924,867	3,625,459,509
1938	25,200	642,016	705,668,589	1,807,478,028	1,428,286,778	3,337,681,366
1939	24,805	658,114	737,811,153	1,836,159,375	1,531,051,901	3,474,783,528
1940	25,513	762,244	920,872,865	2,449,721,903	1,942,471,238	4,529,173,316
1941	26,293	961,178	1,264,862,643	3,296,547,019	2,605,119,788	6,076,308,124
1942	27,862	1,152,091	1,682,804,842	4,037,102,725	3,309,973,758	7,553,794,972
1943	27,652	1,241,068	1,987,292,384	4,690,493,083	3,816,413,541	8,732,860,999
1944	28,483	1,222,882	2,029,621,370	4,832,333,356	4,015,776,010	9,073,692,519
1945	29,050	1,119,372	1,845,773,449	4,473,668,847	3,564,315,899	8,250,368,866
1946	31,249	1,058,156	1,740,687,254	4,358,234,766	3,467,004,980	8,035,692,471
1947	32,734	1,131,750	2,085,925,966	5,534,280,019	4,292,055,802	10,081,026,580
1948	33,420	1,155,721	2,409,368,190	6,632,881,628	4,938,786,981	11,875,169,685
1949[3]	35,792	1,171,207	2,591,890,657	6,843,231,064	5,330,566,434	12,479,593,300
1950[3]	35,942	1,183,297	2,771,267,435	7,538,534,532	5,942,058,229	13,817,526,381
1951[3]	37,021	1,258,375	3,276,280,917	9,074,526,353	6,940,946,783	16,392,187,132

[1] For 1924 and subsequent years the net value of production is computed by subtracting the cost of fuel and electricity and the cost of materials from the gross value. Figures prior to 1924 are not comparable because statistics for cost of electricity are not available. [2] A change in the method of computing the number of wage-earners in the years 1925 to 1930, inclusive, increased the number somewhat over that which the method otherwise used would have given. In 1931, however, the method in force prior to 1925 was re-adopted. [3] Includes Newfoundland.

2.—Summary Statistics of Manufactures, by Province, Significant Years, 1917-51

Province and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products
	No.	No.	$	$	$	$
Newfoundland—						
1949	793	6,934	15,486,336	31,228,173	32,918,776	67,264,282
1950	850	6,682	16,246,252	31,505,623	36,712,377	71,062,850
1951	822	9,622	22,681,246	43,117,299	53,690,187	100,642,613
Prince Edward Island—						
1917	411	1,556	663,251	3,087,621	1,750,135	4,837,756
1920	370	1,287	855,210	4,164,223	2,135,857	6,300,080
1929[2]	263	2,074	727,286	2,862,725	1,466,446	4,408,608
1933	249	991	529,684	1,590,834	1,126,826	2,775,787
1939	222	1,088	617,945	2,239,117	1,243,979	3,543,681
1944	241	1,786	1,694,763	6,993,510	3,570,835	10,713,644
1946	246	1,755	1,651,469	7,582,046	3,469,435	11,200,310
1949	251	1,747	2,133,555	13,537,144	4,338,320	18,123,200
1950	244	1,786	2,342,180	15,243,042	4,284,417	19,811,023
1951	237	1,735	2,459,553	17,177,748	5,046,797	22,523,439
Nova Scotia—						
1917	1,337	25,252	18,838,051	102,415,215	57,565,703	159,980,918
1920	1,345	23,425	25,625,089	85,724,785	61,371,243	147,096,028
1929[2]	1,094	19,986	16,905,885	50,725,562	35,676,421	89,787,548
1933	1,277	12,211	9,604,680	25,354,319	19,988,257	47,912,432
1939	1,083	17,627	16,651,685	43,332,195	35,885,563	83,139,572
1944	1,281	37,812	59,940,411	103,463,123	93,376,638	204,421,664
1946	1,397	29,724	43,060,259	100,354,480	71,738,873	178,793,420
1949	1,480	29,311	54,686,577	135,841,899	102,294,298	247,592,389
1950	1,482	28,479	54,888,061	147,131,045	97,780,564	255,887,499
1951	1,474	30,512	63,975,754	172,115,336	119,486,630	303,619,234
New Brunswick—						
1917	943	19,710	12,893,014	32,380,621	27,027,725	59,408,346
1920	901	19,007	19,266,821	60,812,641	45,803,164	106,615,805
1929[2]	803	17,952	15,127,716	39,800,366	26,640,786	68,145,012
1933	747	11,336	9,308,100	20,442,421	18,166,713	41,345,622
1939	803	14,501	13,659,162	35,617,614	27,041,195	66,058,151
1944	937	23,164	32,345,080	83,993,599	62,258,478	152,106,577
1946	993	22,732	33,151,919	96,389,299	67,783,377	170,753,741
1949	1,060	23,446	44,219,819	131,804,253	91,187,375	231,506,191
1950	1,107	23,863	46,386,069	148,066,224	106,204,409	263,753,067
1951	1,084	24,505	53,546,882	176,358,864	120,594,955	307,173,504
Quebec—						
1917	7,032	188,043	141,008,616	385,212,984	380,882,409	766,095,393
1920	7,530	183,748	202,516,550	553,558,520	499,643,217	1,053,201,737
1929[2]	6,948	206,580	225,226,808	537,270,055	537,796,395	1,108,592,775
1933	7,856	157,481	134,696,386	292,560,568	288,504,782	604,496,078
1939	8,373	220,321	223,757,767	536,823,039	470,385,279	1,045,757,585
1944	9,656	424,115	668,156,053	1,494,253,053	1,350,519,134	2,929,685,183
1946	10,818	357,276	565,986,105	1,297,009,099	1,125,991,848	2,497,971,521
1949	11,579	390,275	809,579,270	2,027,793,643	1,651,629,668	3,788,497,123
1950	11,670	390,163	851,334,700	2,225,476,250	1,798,320,105	4,142,473,290
1951	11,861	417,182	1,005,601,680	2,696,638,646	2,083,933,751	4,916,157,419
Ontario—						
1917	9,061	299,389	258,393,065	794,556,502	662,174,261	1,456,730,763
1920	9,113	295,674	362,941,317	1,071,843,374	792,267,562	1,864,110,936
1929[2]	9,348	328,533	406,622,627	1,056,530,202	916,971,816	2,020,492,433
1933	9,542	224,816	220,530,088	464,544,563	465,103,842	958,776,858
1939	9,824	318,871	378,376,209	907,011,461	791,428,569	1,745,674,707
1944	10,731	564,392	975,038,060	2,310,347,858	1,930,043,913	4,339,797,784
1946	11,424	498,120	845,216,547	2,001,900,592	1,659,284,622	3,754,523,701
1949	12,951	557,190	1,305,544,434	3,256,454,918	2,708,554,013	6,103,804,834
1950	12,809	566,513	1,412,999,146	3,598,821,495	3,068,141,837	6,822,953,981
1951	13,025	599,433	1,669,386,982	4,334,394,367	3,569,400,065	8,074,731,217

[1] *See* footnote 1, Table 1. [2] *See* footnote 2, Table 1.

2. — Summary Statistics of Manufactures, by Province, Significant Years, 1917-51 —concluded

Province or Territory and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products
	No.	No.	$	$	$	$
Manitoba—						
1917	732	18,939	16,513,423	69,715,149	42,280,801	111,995,950
1920	747	23,728	32,372,081	92,729,271	62,776,912	155,506,183
1929[2]	861	24,012	31,224,596	87,832,324	63,925,015	155,266,294
1933	1,010	18,871	18,687,430	44,579,998	37,390,275	83,934,777
1939	1,087	23,910	28,444,798	82,408,293	48,810,544	134,293,595
1944	1,290	40,937	62,758,081	226,234,925	120,339,926	352,334,594
1946	1,357	38,367	61,018,345	223,096,935	122,780,805	351,887,099
1949	1,520	41,956	86,088,380	299,101,498	167,335,495	474,681,912
1950	1,507	40,985	88,701,601	300,384,707	177,051,583	485,906,206
1951	1,512	41,459	100,170,966	349,203,612	192,848,667	551,346,046
Saskatchewan—						
1917	560	6,230	5,403,332	22,040,674	13,894,179	35,934,853
1920	554	6,709	9,571,175	34,894,105	22,610,861	57,504,966
1929[2]	594	7,025	9,105,597	51,003,566	23,002,952	75,368,605
1933	673	4,782	4,848,763	19,124,030	11,478,634	31,559,387
1939	737	6,475	7,346,127	38,782,135	20,283,273	60,650,589
1944	1,054	12,361	17,703,103	131,215,017	40,833,333	175,349,234
1946	955	11,957	17,956,317	126,595,761	38,459,630	168,356,619
1949	962	10,841	22,273,942	164,349,341	47,356,949	215,742,708
1950	887	10,596	23,010,469	164,557,306	49,494,641	218,079,955
1951	973	11,023	26,290,294	185,151,455	61,088,606	250,813,026
Alberta—						
1917	636	9,461	8,662,417	42,632,212	23,883,673	66,515,885
1920	666	10,955	15,210,628	56,139,646	29,812,891	85,952,537
1929[2]	736	12,216	14,585,734	62,500,175	36,824,969	100,966,196
1933	874	9,753	9,573,468	29,425,975	18,876,929	49,395,514
1939	961	12,712	14,977,700	53,151,149	32,618,153	87,474,080
1944	1,165	22,186	33,227,729	172,082,537	77,415,753	252,949,894
1946	1,315	22,649	34,939,088	169,425,176	83,735,011	257,031,867
1949	1,685	26,425	55,115,554	251,364,059	114,681,296	371,995,120
1950	1,671	26,732	58,416,324	272,131,049	123,892,868	402,840,023
1951	2,118	29,105	69,135,587	309,430,618	141,649,574	458,281,384
British Columbia—						
1917[3]	1,133	37,943	35,426,675	87,637,833	71,673,094	159,310,927
1920[3]	1,306	34,360	49,135,005	125,405,084	104,851,641	230,256,725
1929[2,3]	1,569	48,153	57,764,968	141,145,838	113,082,137	260,418,645
1933[3]	1,552	28,417	28,469,225	70,166,220	59,034,923	133,879,330
1939	1,710	42,554	53,881,994	136,655,872	103,263,292	247,948,600
1944	2,116	96,062	178,639,118	303,560,016	337,137,197	655,844,689
1946	2,731	75,484	137,506,645	335,708,533	293,352,652	644,527,898
1949	3,493	82,934	196,403,722	531,112,329	409,665,348	959,008,088
1950	3,696	87,375	216,656,977	634,177,837	479,606,261	1,133,016,956
1951	3,897	93,647	262,626,283	789,840,417	592,448,565	1,404,880,341
Yukon and N.W.T.—						
1939	5	55	97,766	138,500	92,054	242,968
1944	12	67	118,972	189,718	280,803	489,256
1946	13	92	200,560	172,845	408,727	646,295
1949	18	148	359,068	643,807	604,896	1,377,453
1950	19	123	285,656	1,039,954	569,167	1,741,531
1951	18	152	405,690	1,097,991	758,986	2,018,909

[1] *See* footnote 1, Table 1. [2] *See* footnote 2, Table 1. [3] Includes Yukon Territory.

In order to retain some continuity with the past, Table **3** continues the historical series on the chief component material classification basis. Similar statistics under the Standard Classification groups (*see* pp. 630-631), worked back to 1945, are given in Table **10,** pp. 632-633.

3.—Summary Statistics of Manufactures, by Industrial Group, Significant Years, 1917-51

Industrial Group and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products
	No.	No.	$	$	$	$
Vegetable Products—						
1917	4,151	62,777	45,915,557	367,214,061	183,782,501	550,996,562
1920	4,549	74,241	77,750,189	536,828,044	239,328,371	776,156,415
1929[2]	5,350	91,032	95,853,121	431,595,751	341,688,938	783,706,883
1933	5,916	75,416	68,535,349	226,879,373	196,820,952	432,315,617
1939	5,872	99,447	104,248,785	356,726,153	292,129,840	659,624,014
1944	5,941	130,679	183,943,948	763,606,750	485,551,491	1,270,518,297
1946	5,916	137,170	206,893,681	871,436,061	575,963,454	1,649,914,130
1949	5,903	143,032	285,536,723	1,236,409,496	754,329,727	2,020,565,833
1950	5,801	142,895	301,287,533	1,318,098,571	834,723,002	2,185,046,049
1951	5,862	144,762	339,272,100	1,485,063,324	926,401,068	2,445,848,786
Animal Products—						
1917	5,486	46,994	35,753,133	320,302,039	124,103,990	444,406,029
1920	4,323	48,687	54,291,606	400,496,354	152,995,130	553,491,484
1929[2]	4,490	67,670	62,081,423	345,351,882	127,929,857	477,761,855
1933	4,496	53,111	46,453,188	179,429,948	87,629,444	271,068,210
1939	4,362	69,358	68,231,871	333,647,306	122,821,410	461,983,262
1944	4,388	94,195	129,215,389	835,586,247	246,064,720	1,092,015,647
1946	4,528	102,844	151,517,837	849,242,804	271,279,430	1,132,233,759
1949	4,231	102,657	197,189,519	1,158,872,220	369,545,771	1,543,930,584
1950	4,141	98,795	200,595,193	1,210,657,408	372,535,320	1,599,723,667
1951	4,030	100,487	222,271,019	1,425,565,514	402,417,994	1,846,134,158
Textile and Textile Products—						
1917	1,067	76,978	47,764,436	131,225,032	109,904,530	241,129,562
1920	1,304	87,730	84,433,609	256,233,300	173,741,035	429,974,335
1929[2]	1,534	103,881	94,969,433	217,954,088	180,469,064	403,205,809
1933	1,740	95,707	72,813,424	143,184,861	131,065,992	279,475,267
1939	1,930	121,022	107,117,035	203,618,197	181,927,898	392,657,759
1944	2,481	153,122	195,805,681	419,988,642	351,186,488	781,771,688
1946	3,082	164,737	228,018,323	459,664,221	418,263,665	888,658,943
1949	3,234	186,328	342,930,642	669,108,586	606,402,697	1,290,314,474
1950	3,266	188,614	362,381,291	750,631,525	639,958,673	1,407,032,148
1951	3,343	190,054	389,843,607	861,474,177	681,616,663	1,559,977,021
Wood and Paper Products—						
1917	7,263	152,277	113,359,997	148,277,935	245,372,487	393,650,422
1920	7,881	144,391	172,368,578	309,813,724	417,256,115	727,069,839
1929[2]	7,392	164,572	192,088,948	313,797,201	381,485,477	724,972,308
1933	7,891	105,080	102,218,652	134,663,641	184,233,540	341,336,701
1939	8,538	144,782	165,287,455	246,292,820	303,662,441	579,892,183
1944	10,452	189,674	284,436,559	497,656,158	550,826,986	1,093,725,822
1946	11,994	224,121	366,049,562	679,343,485	749,055,011	1,484,436,122
1949	15,866	262,835	579,896,808	1,061,229,176	1,184,539,519	2,325,304,849
1950	15,991	269,565	631,185,730	1,193,849,612	1,385,084,133	2,665,764,505
1951	16,817	281,204	735,283,683	1,453,475,873	1,660,280,363	3,209,391,543
Iron and Its Products—						
1917	1,495	161,745	161,875,424	378,193,116	371,792,489	749,985,605
1920	1,789	164,087	231,595,911	377,499,134	411,875,057	789,374,191
1929[2]	1,224	142,772	203,740,658	405,818,468	367,465,582	790,726,338
1933	1,334	73,348	72,296,179	98,793,191	109,198,169	216,828,992
1939	1,394	121,041	158,559,728	262,292,781	275,774,796	553,468,880
1944	2,192	411,944	818,452,454	1,104,083,922	1,390,703,087	2,540,992,974
1946	2,358	249,279	475,812,983	635,344,199	735,459,371	1,405,542,865
1949	2,658	265,474	678,924,105	1,197,956,715	1,219,303,992	2,468,376,349
1950	2,698	265,952	723,387,597	1,330,651,901	1,360,211,239	2,748,215,232
1951	2,758	303,497	910,549,175	1,724,318,073	1,641,346,745	3,432,209,864

[1] *See* footnote 1, Table 1. [2] *See* footnote 2, Table 1.

3.—Summary Statistics of Manufactures, by Industrial Group, Significant Years, 1917-51—concluded

Industrial Group and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products
	No.	No.	$	$	$	$
Non-ferrous Metal Products—						
1917	296	18,220	15,898,890	46,445,469	41,039,351	87,484,820
1920	324	23,162	27,895,343	48,434,120	52,847,178	101,281,298
1929[2]	408	39,867	54,501,806	124,900,632	150,415,215	283,545,666
1933	478	25,273	28,099,026	71,990,608	88,427,984	164,765,604
1939	526	44,563	59,684,858	242,063,177	155,808,806	416,060,459
1944	635	104,314	182,909,292	549,317,062	399,498,519	992,345,975
1946	740	84,853	150,366,178	413,022,247	278,461,262	719,191,106
1949	897	100,614	251,869,627	749,678,627	558,467,028	1,353,329,383
1950	918	104,942	274,869,661	866,997,815	626,675,566	1,541,330,200
1951	909	117,740	345,482,742	1,113,974,070	760,219,708	1,929,608,127
Non-metallic Mineral Products—						
1917	1,075	20,795	18,224,724	36,994,392	58,092,396	95,086,788
1920	846	25,500	32,351,764	69,856,558	80,205,472	150,062,030
1929[2]	843	29,257	38,958,390	112,573,103	99,065,847	229,774,300
1933	770	16,975	19,282,401	69,077,701	52,817,078	131,325,706
1939	809	23,026	30,067,934	107,979,292	85,511,631	208,166,781
1944	748	31,590	56,130,338	234,714,319	152,525,053	416,268,879
1946	910	36,493	63,848,640	240,485,869	173,638,196	446,484,682
1949	1,097	42,691	104,377,854	469,437,193	261,691,705	780,188,518
1950	1,121	44,780	116,805,778	533,587,088	312,866,411	902,667,662
1951	1,124	47,120	138,026,862	606,994,396	375,221,419	1,044,425,433
Chemicals and Allied Products—						
1917	539	56,153	51,505,484	99,068,092	131,381,995	230,450,087
1920	464	17,653	22,193,421	62,644,608	65,183,212	127,827,820
1929[2]	554	16,694	22,639,449	55,184,337	78,785,911	138,545,221
1933	696	15,397	18,738,629	34,271,854	55,394,284	92,820,761
1939	808	22,595	31,567,558	65,230,839	89,046,832	159,536,984
1944	981	81,822	137,422,977	360,412,749	355,260,598	733,569,232
1946	1,017	37,278	66,538,532	159,308,350	203,639,442	376,288,264
1949	1,022	40,499	98,568,559	238,377,149	279,038,860	536,156,674
1950	1,018	40,683	104,639,318	267,492,443	310,877,528	599,843,963
1951	1,024	44,913	128,993,172	318,228,683	373,176,901	716,287,268
Miscellaneous Industries—						
1917	473	10,584	7,504,199	11,958,675	15,662,241	27,620,916
1920	552	13,442	14,613,455	23,465,807	27,841,778	51,307,585
1929[2]	421	10,786	12,457,989	22,495,351	28,081,046	51,207,736
1933	459	8,351	7,810,976	9,497,751	14,083,738	24,138,927
1939	566	12,280	13,045,929	18,308,810	24,368,247	43,393,206
1944	665	25,542	41,304,732	66,967,507	84,159,068	152,484,005
1946	704	21,381	31,641,518	50,387,530	61,245,149	112,942,600
1949	884	27,077	52,596,820	62,161,902	97,247,135	161,426,636
1950	988	27,071	56,115,334	66,568,169	99,126,357	167,902,954
1951	1,154	28,598	66,558,557	85,432,243	120,265,922	208,304,932

[1] *See* footnote 1, Table 1. [2] *See* footnote 2, Table 1.

The figures in Table 4 show the trends of development in Canadian manufacturing industries since 1917. Interesting comparisons may be made by studying the average figures given.

4.—Significant Statistics of Manufactures for Certain Years, 1917-51

Item		1917	1920	1929[1]	1933	1939
Establishments	No.	21,845	22,532	22,216	23,780	24,805
Totals, employees	"	606,523	598,893	666,531	468,658	658,114
Averages, per establishment	"	27·8	26·6	30·0	19·7	26·5
Totals, salaries and wages	$	497,801,844	717,493,876	777,291,217	436,247,824	737,811,153
Averages, per establishment	$	22,788	31,843	34,988	18,345	29,744
Averages, per employee	$	821	1,198	1,166	931	1,121
Employees on salaries	No.	64,918	78,334	88,841	86,636	124,772
Averages, per establishment	"	3·0	3·5	4·0	3·6	5·0
Salaries	$	85,353,667	141,837,361	175,553,710	139,317,946	217,839,334
Averages, per salaried employee	$	1,315	1,811	1,976	1,608	1,746
Employees on wages	No.	541,605	520,559	577,690	382,022	533,342
Averages, per establishment	"	24·8	23·1	26·0	16·1	21·5
Wages	$	412,448,177	575,656,515	601,737,507	296,929,878	519,971,819
Averages, per wage-earner	$	762	1,106	1,042	777	975
Cost of materials	$	1,539,678,811	2,085,271,649	2,029,670,813	967,788,928	1,836,159,375
Averages, per establishment	$	70,482	92,547	91,361	40,698	74,024
Averages, per employee	$	2,539	3,482	3,045	2,065	2,790
Values added in manufacture[2]	$	1,281,131,980	1,621,273,348	1,755,386,937	919,671,181	1,531,051,901
Averages, per establishment[2]	$	58,646	71,954	79,015	38,674	61,724
Averages, per employee[2]	$	2,112	2,707	2,634	1,962	2,326
Gross value of products	$	2,820,810,791	3,706,544,997	3,883,446,116	1,954,075,785	3,474,783,528
Averages, per establishment	$	129,128	164,501	174,804	82,173	140,084
Averages, per employee	$	4,651	6,189	5,286	4,170	5,280

Item		1944	1946	1949	1950	1951
Establishments	No.	28,483	31,249	35,792	35,942	37,021
Totals, employees	"	1,222,882	1,058,156	1,171,207	1,183,297	1,258,375
Averages, per establishment	"	42·9	33·9	32·7	32·9	34·0
Totals, salaries and wages	$	2,029,621,370	1,740,687,254	2,591,890,657	2,771,267,435	3,276,280,917
Averages, per establishment	$	71,257	55,704	72,415	77,104	88,498
Averages, per employee	$	1,660	1,645	2,213	2,342	2,604
Employees on salaries	No.	192,558	181,006	221,551	231,053	247,787
Averages, per establishment	"	6·8	5·8	6·2	6·4	6·7
Salaries	$	418,065,594	410,875,776	628,427,937	692,633,349	816,714,604
Averages, per salaried employee	$	2,171	2,270	2,836	2,998	3,296
Employees on wages	No.	1,030,324	877,150	949,656	952,244	1,010,588
Averages, per establishment	"	36·2	28·1	26·5	26·5	27·3
Wages	$	1,611,555,776	1,329,811,478	1,963,462,720	2,078,634,086	2,459,566,313
Averages, per wage-earner	$	1,564	1,516	2,068	2,183	2,434
Cost of materials	$	4,832,333,356	4,358,234,766	6,843,231,064	7,538,534,532	9,074,526,353
Averages, per establishment	$	169,657	139,468	191,194	209,742	245,118
Averages, per employee	$	3,952	4,119	5,843	6,371	7,211
Values added in manufacture[2]	$	4,015,776,010	3,467,004,980	5,330,566,434	5,942,058,229	6,940,946,783
Averages, per establishment[2]	$	140,989	110,948	148,932	165,324	187,487
Averages, per employee[2]	$	3,284	3,276	4,551	5,022	5,516
Gross value of products	$	9,073,692,519	8,035,692,471	12,479,593,300	13,817,526,381	16,392,187,132
Averages, per establishment	$	318,565	257,150	348,670	384,440	442,781
Averages, per employee	$	7,420	7,594	10,655	11,677	13,026

[1] The method of computing the number of wage-earners in 1925-30, inclusive, increased the number somewhat over that which otherwise would have been given. There was, therefore, a proportionate reduction in the averages for 1925-30 per employee and wage-earner. In 1931, the method in force prior to 1925 was re-adopted. [2] Net values of products; *see* footnote 1, Table 1, p. 620.

Consumption of Manufactured Products.—The value of all manufactured products made available for consumption in 1951 was $16,677,805,705, a figure obtained by adding to the value of manufactured products the value of the imports of manufactured and partly manufactured goods and deducting the value of exports. More accurate statistics could be presented were it possible to exclude the duplications involved when the products of one manufacturing establishment become the material worked upon in another. Iron, vegetable, wood and paper, textiles and animal products were, in that order, the leading groups in the value of finished products made available for consumption in 1951. Animal, wood and paper, and non-ferrous metal products were also manufactured in greater quantities than required

for home consumption, providing export balances in these groups. Canada in the past imported large quantities of iron and steel, textiles, chemicals and non-metallic mineral products despite large home production but recent expansion of the iron and steel, chemical and non-ferrous metal industries will enable Canada to meet more requirements for home consumption and to export greater quantities in the future.

5.—Consumption of Manufactured Products, Significant Years, 1929-51, and by Industrial Group, 1950 and 1951

Year and Industrial Group	Value of Products Manufactured	Manufactured and Partly Manufactured Goods[1]		Value of Manufactured Products Available for Consumption
		Value of Net Imports	Value of Domestic Exports	
	$	$	$	$
1929	3,883,446,116	939,130,201	686,876,071	4,135,700,246
1933	1,954,075,785	298,068,344	365,232,113	1,886,912,016
1939	3,474,783,528	542,364,930	646,853,938	3,370,294,520
1944	9,073,692,519	1,302,413,996	2,668,575,781	7,707,530,734
1945	8,250,368,866	1,117,544,874	2,352,441,796	7,015,471,944
1946	8,035,692,471	1,390,123,100	1,701,677,026	7,724,138,545
1947	10,081,026,580	1,928,250,119	2,124,740,343	9,884,536,356
1948	11,876,790,012	1,869,702,089	2,259,247,456	11,487,244,645
1949	12,479,593,300	2,043,583,929	2,017,055,615	12,506,121,614
Industrial Group, 1950[2]				
Vegetable products	2,185,046,049	251,085,823	183,336,063	2,252,795,809
Animal products	1,599,723,667	45,566,726	129,658,562	1,515,631,831
Textile and textile products	1,407,032,148	233,192,983	27,445,268	1,612,779,863
Wood and paper products	2,665,764,505	95,715,725	1,066,550,770	1,694,929,460
Iron and its products	2,748,215,232	950,457,813	237,798,756	3,460,874,289
Non-ferrous metal products	1,541,330,200	185,135,390	371,364,486	1,355,101,104
Non-metallic mineral products	902,667,662	205,899,612	68,512,695	1,040,054,579
Chemicals and allied products	599,843,963	157,010,516	100,525,482	656,328,997
Miscellaneous industries	167,902,954	165,097,482	54,541,833	278,458,603
Totals, 1950	**13,817,526,380**	**2,289,162,070**	**2,239,733,915**	**13,866,954,535**
Industrial Group, 1951[2]				
Vegetable products	2,445,848,786	263,617,019	244,721,869	2,464,743,936
Animal products	1,846,134,158	70,126,024	101,562,405	1,814,697,777
Textile and textile products	1,559,977,021	303,558,270	34,935,831	1,828,599,460
Wood and paper products	3,209,391,543	128,972,748	1,316,442,025	2,021,922,266
Iron and its products	3,432,209,864	1,291,364,316	323,702,566	4,399,871,614
Non-ferrous metal products	1,929,608,127	244,526,262	457,569,880	1,716,564,509
Non-metallic mineral products	1,044,425,433	251,828,723	85,510,539	1,210,743,617
Chemicals and allied products	716,287,268	189,719,193	131,689,729	774,316,732
Miscellaneous industries	208,304,932	290,997,274	52,956,412	446,345,794
Totals, 1951	**16,392,187,132**	**3,034,709,829**	**2,749,091,256**	**16,677,805,705**

[1] Figures for the years 1929 and 1933 are for the fiscal years ended Mar. 31 of the following years; for 1939-50 they are for the calendar year. Net imports are total imports less foreign products re-exported.
[2] Consumption figures for the major standard industrial classification groups (*see* p. 630) cannot be calculated as statistics of imports and exports are still compiled on the component material classification basis.

Subsection 2.—Value and Volume of Manufacturing Production

Value of Manufacturing Production.—In the interpretation of manufacturing values over a number of years, variations in the level of prices must be borne in mind. In recent years, owing to violent changes in prices, unadjusted value series, used in isolation, have become increasingly inadequate as indicators of economic trends. Of necessity, interest has shifted to measures of volume. The index number of wholesale prices, on the 1926 base, stood at 114·3 in 1917, 155·9 in 1920, 97·3 in 1922, 95·6 in 1929, 67·1 in 1933, 84·6 in 1937, 75·4 in 1939 and

166·1 in 1950. Index numbers of the prices of fully or chiefly manufactured goods were: 113·5 in 1917, 156·5 in 1920, 100·4 in 1922, 93·0 in 1929, 70·2 in 1933, 80·5 in 1937, 75·3 in 1939 and 148·9 in 1950.

Volume of Manufacturing Production.—Since real income is ultimately measured in goods and services, the growth of the volume of manufacturing production, as distinguished from its value, becomes a matter of great significance. The important thing to know is whether consumers are getting more goods and services and not whether they are expending more dollars and cents. The field of industrial production, because of its dominating position in the national economy, has attracted increasing attention. This, in turn, has resulted in the need for more accurate measurements of physical output.

During the past few years, the Dominion Bureau of Statistics has been engaged in the reconstruction of the index of industrial production* which was first published in 1926 and later subjected to several major revisions. The latest reconstruction was made possible by the availability of a great deal of basic data. Annual statistics valuable for this project have been collected by the Bureau from the end of World War I to the present and the scope of the monthly information has been greatly expanded. Applying methods developed through the experience of the past quarter-century, it has been possible to compute an index with a fair measure of accuracy from 1935 to the present. The manufacturing component, covered specifically in the following paragraphs and tables, supersedes, from 1935 on, the index of the volume of manufacturing production published in the 1951 Year Book, p. 585, for the years 1929-46. On comparing the index for 1935 under the old series, which stood at 87·9, with the new index at 86·5, it would appear that for the back years little significant variation existed between the two series.

The manufacturing sector is divided, at the major group level, into durable manufactures and non-durable manufactures, for the reason that the movement of durable goods normally varies from that of non-durables. There tends to be greater fluctuation in durables from prosperity to depression, the demand for non-durables being more constant.

6.—Index of the Total Volume of Manufacturing Production, classified on the Basis of Durable and Non-Durable Goods, 1935-50

(1935-39=100)

Year	Non-durable Manufactures	Durable Manufactures	All Manufactures	Year	Non-durable Manufactures	Durable Manufactures	All Manufactures
1935	89·0	82·7	86·5	1943	171·5	333·0	234·5
1936	97·1	93·1	95·5	1944	179·8	340·1	242·3
1937	106·7	113·2	109·3	1945	176·3	262·1	209·8
1938	98·9	103·2	100·6	1946	180·2	205·1	189·9
1939	108·2	107·9	108·1	1947	191·2	233·5	207·7
1940	124·6	149·7	134·4	1948	197·1	244·4	215·5
1941	148·7	218·5	175·9	1949	198·2	246·3	217·0
1942	169·4	288·1	215·7	1950	208·3	259·1	228·1

The period 1935-50 was characterized by unprecedented industrial expansion. Emerging from a depression practically world-wide in scope, industrial operations in Canada entered a period of rapid growth which was maintained throughout the war and post-war years without important interruption.

* A description of the methods used in constructing the index and a description of its scope is given in DBS Reference Paper No. 34, *Revised Index of Industrial Production, 1935-1951.*

A problem confronting business economists is to determine how much of the post-war industrial 'drive' was caused by normal growth factors and how much of it was caused by the backlog of war-accumulated demand. While it is true that the greatest demand accumulation took place in housing and consumer durables, non-durables such as textiles and clothing also started the post-war period with a sizeable backlog of unfilled demand. It is now becoming apparent, after the vigorous pace of business following the outbreak of hostilities in Korea, that a considerable portion of this demand has been satisfied and some industries, notably textiles, clothing and major appliances, are experiencing difficulties. However, general prospects appear bright. The increased productive activity which will result from the present very high level of capital investment is not as yet fully reflected in current production statistics. Huge expansion and development programs are well under way in iron ore, aluminum and other metals, oil, steel, chemicals, motor-vehicles, electric power, and in a number of other industries.

The volume of output of manufactures rose steeply after the outbreak of hostilities in 1939. Productive facilities responded quickly to the urgent requirements of the Armed Forces. In the early days of the War, production assignments allotted were comparatively simple but, as pre-war weapons became obsolete and as Canada proved capable of turning out larger and more complex equipment, the assignments constantly shifted, changed and grew more difficult. The production figures merely suggest the magnitude of the achievement. They cannot describe the tremendous effort needed to convert a semi-agricultural country into a wartime arsenal nor the complications that arose because of shortages of manpower, tools and materials.

The productive peak was reached in 1944, when weapons, supplies and equipment were rolling off the assembly lines at a record-breaking pace. The end of hostilities and the subsequent reconversion to peace-time production were attended with declines in output in 1945 and 1946. The upward trend was resumed, however, in 1947. The rate of advance slackened moderately in 1948 and 1949 but regained most of its 1947 impetus in 1950 when the renewal of hostilities in Korea resulted in heavy anticipatory buying on the part of consumers and in growing expenditures for national defence. A remarkable feature is that, in 1950, the index of the volume of manufacturing production was within 10 p.c. of the record wartime level of 242·3 established in 1944.

Non-durable Manufactures.—The trend of output in the non-durable sector of manufacturing was visibly smoother than in the durable sector. Except in two years, 1938 and 1945, there was no interruption in the upward movement of production during the period under review. Despite the fact that war contracts quickened the pace of output in some of the industries, production continued to expand after the War, although at a slower rate. Unlike durable goods, non-durable commodities are mostly consumer goods and are less influenced by sudden changes in the international situation or the capital investment programs of producers and governments. By 1950, the non-durables index of output had reached 208, the highest on record.

7.—Indexes of the Volume of Manufacturing Production of the Groups Comprised within the Non-durable Manufactures Classification, 1935-50

(1935-39=100)

Year	Foods	Beverages	Tobacco and Tobacco Products	Rubber Products	Leather Products	Textile Products (except Clothing)
1935	88·8	78·6	80·7	87·9	95·9	91·1
1936	97·7	93·2	88·9	96·2	96·3	101·7
1937	101·6	109·5	101·2	112·3	105·7	110·2
1938	102·5	107·2	110·9	97·0	93·3	88·8
1939	109·4	111·5	118·2	106·6	108·7	108·2
1940	119·4	131·0	126·6	116·5	116·1	147·6
1941	139·1	151·9	140·9	154·4	141·1	167·5
1942	144·3	174·5	171·5	150·6	150·0	186·8
1943	156·0	162·0	183·8	147·0	151·1	172·1
1944	171·1	190·5	200·6	149·0	149·6	162·0
1945	170·0	205·1	230·2	180·2	155·0	160·5
1946	177·2	234·4	204·4	158·0	167·9	161·7
1947	181·5	249·4	211·9	230·7	148·7	172·9
1948	183·0	270·9	215·8	227·6	129·6	180·2
1949	180·3	285·7	224·4	208·5	133·5	186·0
1950	183·6	282·9	227·5	251·9	126·8	212·4

Year	Clothing (Textile and Fur)	Paper Products	Printing, Publishing and Allied Trades	Products of Petroleum and Coal	Chemicals and Allied Products
1935	91·8	90·0	93·9	87·6	85·7
1936	97·0	98·9	99·5	95·7	92·1
1937	104·8	114·0	105·6	104·6	107·4
1938	98·4	91·7	98·9	102·7	103·5
1939	108·0	105·4	102·2	109·4	111·3
1940	125·5	126·6	102·1	125·9	136·2
1941	141·8	143·7	113·4	141·1	210·9
1942	161·9	143·4	114·4	138·2	345·8
1943	156·7	140·0	111·7	150·0	369·3
1944	147·1	149·1	114·9	171·8	390·4
1945	146·6	161·2	125·8	167·5	292·8
1946	152·9	188·9	143·8	167·4	237·7
1947	147·7	207·4	163·3	181·2	245·5
1948	156·0	217·7	177·2	199·0	243·2
1949	159·4	213·7	183·8	218·0	239·5
1950	155·7	230·4	195·3	243·5	253·7

Durable Manufactures.—The tremendous increase in physical output during the war years was mostly concentrated in the durable goods sector. When war was declared in September 1939, there were virtually no armament works, no production of large ships and large aircraft, no guns and no tanks. Within a few years Canadian plants were turning out naval and merchant ships, war aircraft ranging up to the 15-ton Lancaster bomber, military vehicles, millions of rounds of ammunition and hundreds of other war items. The new volume index of durable manufactures reached a peak of 340 in 1944 but in the following two years it declined sharply to 205 in 1946. Since then it has regained almost half the lost ground and reached 259 in 1950.

8.—Indexes of the Volume of Manufacturing Production of the Groups Comprised within the Durable Manufactures Classification, 1935-50

(1935-39=100)

Year	Wood Products	Iron and Steel Products	Transportation Equipment	Non-ferrous Metal Products	Electrical Apparatus and Supplies	Non-metallic Mineral Products	Miscellaneous Manufactures
1935	85·3	80·5	90·0	78·5	83·8	75·7	88·1
1936	95·8	93·0	93·5	91·5	91·2	91·7	96·1
1937	108·0	118·1	114·3	106·5	118·7	117·4	104·1
1938	102·2	100·7	101·0	109·3	102·4	105·5	103·5
1939	108·8	107·7	101·3	114·3	103·8	109·8	108·2
1940	132·1	162·3	165·1	138·0	152·9	138·4	119·4
1941	150·2	238·0	291·8	193·5	225·8	184·9	170·7
1942	156·0	315·9	439·9	255·3	273·5	209·8	248·2
1943	148·4	362·4	562·8	284·9	310·5	211·6	314·6
1944	153·4	326·2	693·7	256·2	312·1	205·3	317·1
1945	155·6	265·2	453·7	193·4	258·1	195·8	275·9
1946	175·0	222·6	221·5	160·1	247·3	221·4	225·0
1947	195·6	249·9	239·5	182·8	316·8	269·8	233·4
1948	200·7	270·4	232·6	201·6	328·5	283·7	224·5
1949	202·3	264·5	243·9	200·5	333·8	284·4	261·6
1950	215·1	263·2	262·2	212·8	367·6	314·6	281·7

Section 2.—Production by Industrial Groups and Individual Industries

Two major changes were adopted in the compilation of manufacturing statistics for 1949. In addition to containing statistics for Newfoundland for the first time, the system of classification was also changed. By the Standard Classification the industries are grouped under the 17 major headings listed in Table **9** instead of the nine groups listed in Table **3** which were formerly used as the main basis of classification. Summary statistics for the main groups on the new basis are given for 1945-51 in Table **10**, while 1950 statistics for individual industries are presented in detail in Table **11**. Table **13** gives the industries on the basis of the origin of the materials used.

Subsection 1.—Manufactures Classified on the Standard Classification Basis

Table **9** shows the changes in the nature of manufacturing production since the end of World War II with regard to numbers employed, salaries and wages paid, and gross value of products. The values of both wages and products are naturally more affected by price changes than the numbers of employees. Furthermore, during periods of curtailed production there is a tendency for wage-earners to be put on part time, while the number of salaried employees responds less quickly to reduction in output. Thus, variation in number of employees would normally be less pronounced than that in money values.

Significant changes in the nature of manufacturing production have taken place since 1945. As was to be expected, industries engaged in war production have operated at a substantially lower level and industries producing consumer goods have increased their production. From the point of view of employment, the chemical and allied products group, with a reduction of 33 p.c., experienced the greatest

decline in volume of production between 1945 and 1949. Transportation equipment, which includes aircraft and shipbuilding, was second with a decline of 32 p.c., followed by tobacco and tobacco products with 12 p.c., rubber goods 12 p.c. and iron and steel products 3 p.c. The non-metallic mineral group reported the greatest gain in employment with an increase of 39 p.c., followed by printing, publishing and allied trades 31 p.c., wood products 29 p.c., electrical apparatus and supplies 27 p.c., products of petroleum and coal 26 p.c., paper products 21 p.c., textiles (except clothing) 19 p.c., clothing (textile and fur) 18 p.c., food and beverages 8 p.c., leather products 2 p.c. and non-ferrous metal products 1 p.c. For manufacturing as a whole there was an increase of 4 p.c. in the number of employees with an increase of 39 p.c. in the amount of salaries and wages paid. Although there was an increase of 50 p.c. in the gross value of production, the increase in the physical volume was not as marked. This was caused by the rise in the wholesale prices of fully and partly manufactured products.

Between 1949 and 1950, for manufacturing as a whole, there was an increase of 11 p.c. in the gross value of production, 7 p.c. in salaries and wages and 1 p.c. in employment. In terms of gross value of production of specific industries the largest gain of 34 p.c. was made by rubber products, followed by electrical apparatus and supplies with 19 p.c., and wood products with 17 p.c. Large gains were also made by transportation equipment, textile products (except clothing) and non-metallic mineral products.

9.—Percentage Variations in Employment, Salaries and Wages, and Gross Value of Products in the Main Industrial Groups, 1949 Compared with 1945, and 1950 with 1949.

Industrial Group	1949 Compared with 1945			1950 Compared with 1949		
	Employees	Salaries and Wages	Gross Value of Products	Employees	Salaries and Wages	Gross Value of Products
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Food and beverages	+8·1[1]	+48·5[1]	+49·5[1]	−1·5	+4·3	+5·1
Tobacco and tobacco products	−12·2	+39·1	+42·3	−3·4	+3·3	+9·2
Rubber products	−11·8	+23·2	−1·6	+5·2	+12·6	+34·0
Leather products	+2·3	+38·0	+25·6	−5·5	−3·2	−0·1
Textile products (except clothing)	+18·9	+78·6	+65·1	+3·3	+8·3	+16·4
Clothing (textile and fur)	+17·8	+57·1	+52·6	−1·3	+2·3	+0·9
Wood products	+28·9[1]	+86·7[1]	+83·9[1]	+3·7	+9·5	+17·3
Paper products	+20·7[1]	+80·5[1]	+95·1[1]	+1·4	+8·1	+14·5
Printing, publishing and allied trades	+31·2	+81·2	+84·1	+2·1	+9·1	+9·3
Iron and steel products	−3·4	+31·6	+49·0	+0·6	+6·1	+7·4
Transportation equipment	−32·4	−17·1	+2·8	−0·5	+7·2	+16·6
Non-ferrous metal products	+1·1	+39·9	+58·0	—	+4·3	+10·8
Electrical apparatus and supplies	+26·7	+79·5	+110·9	+7·8	+13·2	+19·4
Non-metallic mineral products	+38·8	+96·0	+88·6	+5·2	+12·1	+16·3
Products of petroleum and coal	+26·2	+73·7	+97·6	+4·3	+11·7	+15·4
Chemical products	−32·6	−6·0	+17·8	+0·4	+6·1	+10·1
Miscellaneous industries	[2]	[2]	[2]	+3·1	+10·3	+8·3
Averages, All Groups	+3·6	+39·2	+50·0	+1·0	+6·9	+10·7

[1] Exclusive of Newfoundland. [2] Owing to the change of establishments from one industry to another, figures for 1949 are not comparable with those for previous years.

10.—Summary Statistics of Manufactures, by Industrial Group, 1945, 1947 and 1949-51

NOTE.—Figures for 1946 and 1948 will be found in the 1952-53 Year Book, pp. 611-613.

Industrial Group and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	$	$	$	$
Food[1] and Beverages—						
1945	8,872	156,396	224,908,882	1,336,820,028	558,247,045	1,921,774,601
1947	8,869	167,865	276,245,015	1,656,529,086	695,092,932	2,383,975,675
1949	8,558	170,024	332,536,319	2,009,246,062	834,017,547	2,882,581,753
1950	8,401	167,664	346,714,443	2,102,437,260	885,322,008	3,029,810,604
1951	8,388	172,493	392,859,435	2,419,206,798	985,240,884	3,450,030,515
Tobacco and Tobacco Products—						
1945	86	12,164	15,738,041	79,176,519	42,985,992	122,543,932
1947	91	10,880	16,234,772	97,121,002	49,221,094	146,793,011
1949	72	10,686	21,896,378	113,357,196	58,529,226	172,420,213
1950	68	10,322	22,628,918	122,610,179	65,175,854	188,330,523
1951	62	9,826	24,438,218	119,590,053	59,033,325	179,177,093
Rubber Products—						
1945	55	23,490	39,111,477	78,500,892	98,836,225	181,413,226
1947	60	23,475	46,613,893	82,934,625	110,673,007	196,307,734
1949	62	20,729	48,172,207	73,895,718	101,705,513	178,503,559
1950	61	21,812	54,262,864	101,773,382	134,061,761	239,184,510
1951	67	23,054	64,357,696	146,951,650	161,184,980	311,678,489
Leather Products—						
1945	706	34,123	43,268,635	95,006,015	71,297,713	167,888,463
1947	792	35,724	52,628,612	123,894,474	86,646,061	212,430,165
1949	747	34,900	59,699,886	117,869,462	91,157,684	210,804,174
1950	747	32,990	57,809,677	121,217,195	87,419,427	210,563,013
1951	711	31,578	59,668,764	135,114,110	84,885,048	221,882,794
Textile Products (except Clothing)—						
1945	664	66,011	88,372,939	217,289,281	165,689,522	391,182,025
1947	747	73,979	116,228,736	289,986,732	215,170,493	514,844,838
1949	847	77,773	156,166,554	339,644,950	285,641,367	636,824,130
1950	846	80,328	169,175,142	412,682,853	315,556,761	741,262,685
1951	892	81,710	185,030,489	495,304,102	337,936,447	846,477,303
Clothing (Textile and Fur)—						
1945	2,676	99,959	131,478,496	251,899,847	222,307,384	476,754,319
1947	3,121	110,329	166,951,727	311,018,817	300,527,093	614,594,703
1949	3,058	117,752	206,512,782	371,128,833	352,741,236	727,498,836
1950	3,051	116,248	211,223,347	377,552,172	352,889,623	734,214,334
1951	3,083	115,733	222,364,947	405,347,118	370,672,177	780,012,025
Wood Products—						
1945	7,656	93,209	119,833,932	240,482,275	208,979,657	454,447,165
1947	9,744	120,434	186,467,946	398,854,196	365,050,223	771,403,332
1949	11,191	121,632	224,902,644	436,637,453	393,928,758	840,355,634
1950	11,301	126,169	246,325,125	510,565,003	463,853,510	985,859,493
1951	11,975	131,278	283,062,074	610,807,577	529,300,377	1,153,376,772
Paper Products—						
1945	475	60,819	109,627,174	255,265,326	241,121,150	536,859,861
1947	502	73,445	168,632,394	410,456,570	443,374,435	911,238,813
1949	524	76,471	208,348,621	494,300,501	532,288,636	1,093,060,326
1950	528	77,519	225,197,438	541,260,626	638,111,352	1,251,144,125
1951	547	82,889	276,521,006	683,488,653	827,924,962	1,589,842,162
Printing, Publishing and Allied Trades—						
1945	2,312	43,565	74,257,775	52,655,848	132,385,988	186,945,134
1947	2,458	52,096	101,611,652	82,585,466	178,667,051	263,632,152
1949	3,866	61,834	141,489,984	124,684,351	250,162,704	377,908,182
1950	3,869	63,125	154,369,637	135,510,227	274,098,833	413,011,915
1951	4,019	64,694	170,828,730	152,753,412	295,642,569	452,142,515

[1] Excludes fish processing in Newfoundland from 1945-50.

10.—Summary Statistics of Manufactures, by Industrial Group, 1945, 1947 and 1949-51—concluded

Industrial Group and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	$	$	$	$
Iron and Steel Products—						
1945	1,903	169,278	313,966,173	395,624,098	527,473,688	952,482,150
1947	2,200	162,399	334,044,246	451,289,335	580,342,444	1,064,654,410
1949	2,347	163,622	413,227,553	619,499,256	760,934,249	1,419,145,725
1950	2,390	164,528	438,244,749	662,332,192	817,060,278	1,524,384,478
1951	2,435	183,323	547,314,615	860,565,510	991,334,800	1,904,650,130
Transportation Equipment—						
1945	504	154,844	326,748,794	498,241,686	523,910,119	1,034,666,913
1947	562	104,348	230,898,680	426,573,091	366,151,761	803,611,372
1949	596	104,750	270,852,111	584,064,330	466,529,164	1,063,211,331
1950	601	104,176	290,436,378	674,833,465	552,171,399	1,239,579,727
1951	599	122,517	368,106,433	870,178,794	657,424,400	1,541,589,828
Non-ferrous Metal Products—						
1945	436	44,221	81,889,942	337,872,041	180,653,076	548,853,026
1947	503	43,344	91,046,568	434,517,197	201,162,856	668,074,514
1949	532	44,698	114,591,106	537,218,214	289,125,045	867,043,028
1950	536	44,680	119,535,596	606,691,788	311,539,390	960,751,814
1951	536	50,114	150,733,704	797,412,763	406,616,836	1,253,599,168
Electrical Apparatus and Supplies—						
1945	247	44,129	76,468,795	92,041,030	135,919,899	230,531,874
1947	296	52,736	103,891,016	162,131,266	200,859,040	366,506,203
1949	365	55,916	137,278,521	212,460,413	269,341,983	486,286,355
1950	382	60,262	155,334,065	260,306,027	315,136,176	580,578,386
1951	373	67,626	194,749,038	316,561,307	353,602,872	676,008,959
Non-metallic Mineral Products—						
1945	700	20,269	32,959,877	41,488,955	76,318,456	130,704,796
1947	863	26,443	50,456,143	66,266,546	115,277,990	201,786,910
1949	1,020	28,139	64,594,354	78,401,065	143,872,615	246,457,799
1950	1,045	29,603	72,380,410	91,168,605	168,377,747	286,541,363
1951	1,042	31,522	86,078,972	109,011,701	195,348,829	334,875,398
Products of Petroleum and Coal—						
1945	80	11,532	22,904,418	188,899,911	65,637,131	270,166,984
1947	80	12,769	28,689,932	257,420,851	84,073,746	361,333,008
1949	77	14,552	39,783,500	391,036,128	117,819,090	533,730,719
1950	76	15,177	44,425,368	442,418,483	144,488,664	616,126,299
1951	82	15,598	51,947,890	497,982,695	179,872,590	709,550,035
Chemicals and Allied Products—						
1945	986	61,339	107,050,824	228,855,956	252,944,165	498,630,798
1947	1,046	39,237	78,993,517	238,310,157	234,056,973	488,307,293
1949	1,037	41,328	100,690,662	280,008,945	288,171,551	587,398,215
1950	1,033	41,475	106,794,403	307,705,741	317,166,711	646,870,510
1951	1,037	45,664	131,310,151	366,957,695	384,026,141	776,489,391
Miscellaneous Industries—						
1945	692	24,024	37,187,275	83,549,139	59,608,689	144,523,599
1947	800	22,247	36,291,117	44,390,608	65,708,603	111,532,447
1949	893	26,401	51,147,475	59,778,187	94,600,066	156,363,321
1950	1,007	27,219	56,409,875	67,469,334	99,628,735	169,312,602
1951	1,173	28,756	66,908,755	87,292,415	120,899,546	210,804,555

Table 11 presents, for the year 1950, detailed statistics of the individual industries under which all industrial plants in Canada are classified. In interpreting these figures it should be remembered that they do not refer to individual products but to all the products made in an industry. For example, the value of production of the confectionery industry amounting to $104,853,748 does not imply that this was the value of confectionery produced. What it means is that the firms whose principal product is confectionery had a value of production of $104,853,748. This figure, in addition to confectionery, includes all the subsidiary products made by these firms, such as ice cream, which was valued at $2,214,689, and bread and other bakery products valued at $2,457,312. Confectionery is also produced as a subsidiary product by firms credited to other industrial classifications. The quantities and values of the principal individual commodities produced are given in Table 12. Commodities produced in small quantities are not included but the list covers approximately 75 p.c. of total production.

11.—Principal Statistics of Individual Manufacturing Industries, classified on the Standard Classification Basis, 1950

Group and Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	$	$	$	$
Food and Beverages—						
Bakery Products—						
Biscuits	47	6,315	10,891,996	30,328,324	33,801,487	64,934,603
Bread and other bakery products	2,608	31,149	60,073,998	109,213,199	98,412,581	214,586,981
Beverages—						
Aerated waters	501	7,734	15,641,029	33,028,737	51,956,684	87,138,955
Breweries	63	8,311	23,888,605	42,018,271	105,073,118	149,409,487
Distilled liquors	20	4,121	10,555,240	30,115,026	56,439,577	88,413,413
Wines	27	527	1,498,119	4,648,035	5,194,167	9,957,928
Canning and Processing—						
Fish processing[1]	591	11,842	18,722,240	79,959,218	46,691,639	128,423,853
Fruit and vegetable preparations	444	14,893	24,561,151	94,443,794	64,278,160	161,091,734
Dairy Products—						
Butter and cheese	1,806	21,022	41,951,621	250,017,648	74,353,823	330,709,143
Cheese, processed	20	808	1,791,831	15,628,483	6,759,017	22,480,266
Condensed milk	33	1,541	3,372,082	41,555,660	12,072,897	55,026,644
Dairy products, other	46	767	1,509,003	5,128,082	3,683,172	9,067,707
Grain Mill Products—						
Feeds, stock and poultry, prepared	568	5,191	10,645,384	128,513,344	25,089,531	155,324,874
Feed mills	685	1,453	1,891,370	19,329,411	3,725,929	23,576,765
Flour mills	118	4,903	11,917,625	213,755,757	31,836,800	247,107,775
Foods, breakfast	20	1,148	2,712,299	8,836,478	9,930,989	19,095,086
Meat Products—						
Animal oils and fats	14	292	731,936	1,798,600	1,071,524	3,076,049
Sausage and sausage casings	77	901	1,863,027	9,494,027	3,792,368	13,479,118
Slaughtering and meat-packing	157	20,522	54,532,037	645,353,830	107,701,364	757,043,355
Miscellaneous Food Industries—						
Confectionery	207	10,854	18,451,058	54,520,295	49,223,151	104,853,748
Sugar refining	12	3,919	9,535,834	109,713,103	31,939,788	144,872,567
Macaroni and kindred products	16	554	1,147,773	4,006,110	2,985,477	7,100,943
Malt and malt products	13	8,897	18,829,185	171,031,828	59,308,765	233,039,610
Starch and glucose	9					
Miscellaneous foods, *n.e.s.*	299					
Totals, Food[1] and Beverages	**8,401**	**167,664**	**346,714,443**	**2,102,437,260**	**885,322,008**	**3,029,810,604**

[1]Excludes fish processing in Newfoundland.

11.—Principal Statistics of Individual Manufacturing Industries, classified on the Standard Classification Basis, 1950—continued

Group and Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	$	$	$	$
Tobacco and Tobacco Products—						
Tobacco, cigars and cigarettes	53	8,503	19,511,951	62,681,958	59,383,685	122,429,151
Tobacco, processing and packing	15	1,819	3,116,967	59,928,221	5,792,169	65,901,372
Totals, Tobacco and Tobacco Products	**68**	**10,322**	**22,628,918**	**122,610,179**	**65,175,854**	**188,330,523**
Rubber Products—						
Rubber goods (including footwear)	61	21,812	54,262,864	101,773,382	134,061,761	239,184,510
Totals, Rubber Products	**61**	**21,812**	**54,262,864**	**101,773,382**	**134,061,761**	**239,184,510**
Leather Products—						
Footwear, leather	292	20,785	34,710,042	59,684,259	50,717,873	110,968,680
Gloves and mittens, leather	76	2,075	2,792,326	5,381,660	3,991,715	9,421,662
Leather tanning	70	4,399	10,345,085	40,923,465	17,079,777	59,093,493
Belting, leather	16	179	384,775	1,159,278	711,754	1,894,298
Boot and shoe findings, leather	25	408	792,938	1,782,762	1,254,936	3,082,922
Miscellaneous leather goods	268	5,144	8,784,511	12,285,771	13,663,372	26,101,958
Totals, Leather Products	**747**	**32,990**	**57,809,677**	**121,217,195**	**87,419,427**	**210,563,013**
Textile Products (except Clothing)—						
Cotton Goods—						
Cotton thread	6	831	1,634,204	5,084,454	5,387,351	10,574,641
Cotton yarn and cloth	51	26,967	55,220,043	157,835,813	95,309,562	257,383,892
Miscellaneous cotton goods	10	632	1,627,210	5,441,006	3,093,536	8,636,864
Synthetic textiles and silk	47	17,955	40,111,600	55,518,508	87,763,220	147,047,995
Woollen Goods—						
Carpets, mats and rugs	21	1,656	3,818,724	7,506,660	7,737,447	15,488,975
Woollen cloth	85	9,159	18,655,626	39,029,349	28,269,911	68,679,643
Woollen yarn	49	4,235	7,887,318	27,022,684	12,814,801	40,378,379
Miscellaneous woollen goods	46	2,307	5,680,765	20,690,734	11,732,880	32,812,348
Other Primary Textiles—						
Dyeing and finishing of textiles	46	2,459	5,481,251	2,974,977	8,468,122	12,353,630
Narrow fabrics	42	2,058	3,918,533	6,462,522	7,073,722	13,703,678
Miscellaneous Textile Products—						
Awnings, tents and sails	115	1,429	2,437,604	5,072,890	3,576,053	8,741,830
Bags, cotton and jute	32	1,267	2,335,332	28,031,738	4,943,812	33,062,539
Cordage, rope and twine	10	1,370	3,030,188	10,989,236	6,271,560	17,459,571
Oilcloth, linoleum and other coated fabrics	15	2,351	6,638,152	16,618,156	13,174,074	30,283,848
Miscellaneous Textile Goods—						
Automobile accessories, fabric	8	726	1,681,547	3,172,158	3,238,748	6,451,047
Embroideries, pleating, hemstitching, etc	128	1,639	2,914,698	2,337,271	4,932,694	7,302,217
Miscellaneous textiles, *n.e.s.*	135	3,287	6,102,347	18,894,697	11,769,268	30,901,588
Totals, Textile Products (except Clothing)	**846**	**80,328**	**169,175,142**	**412,682,853**	**315,556,761**	**741,262,685**
Clothing (Textile and Fur)—						
Knitted Goods—						
Hosiery	121	11,329	21,150,344	20,913,741	36,442,064	58,026,696
Other knitted goods	172	13,926	22,991,182	47,804,653	39,410,756	88,199,070
Men's, Women's and Children's Clothing—						
Clothing, children's factory	154	5,505	8,281,140	15,936,291	13,365,856	29,398,386
Clothing, men's factory	566	32,853	59,301,388	122,603,415	103,346,165	226,659,057
Clothing, women's factory	914	28,981	55,864,122	102,712,875	91,419,056	194,636,469
Clothing contractors, men's	131	3,254	4,906,750	672,536	5,733,237	6,478,408
Clothing contractors, women's	77	1,709	2,319,633	130,601	2,930,908	3,092,690

11.—Principal Statistics of Individual Manufacturing Industries, classified on the Standard Classification Basis, 1950—continued

Group and Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	$	$	$	$
Clothing (Textile and Fur)—concluded						
Miscellaneous Clothing—						
Corsets	37	3,219	4,741,557	7,358,186	9,533,613	16,947,544
Fur dressing and dyeing	22	1,633	3,420,496	1,294,259	5,062,481	6,514,772
Fur goods	609	6,329	14,596,702	38,309,241	23,425,230	61,930,099
Gloves and mittens, fabric	16	818	1,097,519	2,017,324	1,820,674	3,856,712
Hats and caps	157	4,825	9,260,609	11,379,834	14,471,360	26,082,396
Oiled and waterproofed clothing	14	475	919,973	2,149,227	2,047,230	4,204,902
Clothing, *n.e.s.*	61	1,392	2,371,932	4,269,989	3,880,993	8,187,133
Totals, Clothing (Textile and Fur)	**3,051**	**116,248**	**211,223,347**	**377,552,172**	**352,889,623**	**734,214,334**
Wood Products—						
Furniture	1,207	27,259	57,111,744	79,803,630	90,624,200	172,331,144
Saw and Planing Mills—						
Flooring, hardwood	28	1,676	3,397,211	7,640,268	6,553,455	14,362,553
Sash, door and planing mills	1,590	19,128	36,924,630	96,907,258	61,711,765	160,719,698
Sawmills	7,551	58,722	111,492,079	252,321,608	239,225,162	496,948,398
Veneers and plywoods	44	6,539	14,159,579	24,180,290	29,774,688	54,429,132
Miscellaneous Wood Products—						
Boxes and baskets, wood	178	3,710	6,283,873	9,661,539	9,769,640	19,742,424
Coffins and caskets	58	1,335	2,476,332	3,415,739	3,834,332	7,353,725
Other Miscellaneous Wood Industries—						
Beekeepers' and poultrymen's supplies	8	63	112,424	207,204	307,626	528,590
Cooperage	168	867	1,489,344	3,149,870	1,946,627	5,179,255
Excelsior	11	169	275,260	306,119	410,909	738,293
Lasts, trees and shoe findings	16	542	985,916	703,863	1,438,156	2,171,244
Woodenware	33	653	1,051,037	1,013,621	1,571,248	2,623,632
Wood turning	81	1,282	2,200,608	2,453,375	3,444,210	6,012,782
Miscellaneous wood products, *n.e.s.*	328	4,224	8,365,088	28,800,619	13,241,492	42,718,623
Totals, Wood Products	**11,301**	**126,169**	**246,325,125**	**510,565,003**	**463,853,510**	**985,859,493**
Paper Products—						
Boxes and bags, paper	177	13,302	28,551,880	83,841,035	55,813,164	140,656,880
Pulp and paper	123	52,343	169,246,531	373,882,762	511,142,983	954,137,651
Roofing paper	24	2,509	6,049,692	19,606,931	21,112,822	41,358,714
Miscellaneous paper goods	204	9,365	21,349,335	63,929,898	50,042,383	114,990,880
Totals, Paper Products	**528**	**77,519**	**225,197,438**	**541,260,626**	**638,111,352**	**1,251,144,125**
Printing, Publishing and Allied Industries—						
Commercial Printing—						
Printing and bookbinding	1,533	22,385	51,452,604	48,228,108	84,863,318	134,277,139
Trade composition	45	697	2,082,957	311,228	3,026,165	3,368,743
Engraving, Stereotyping and Allied Industries—						
Engraving, stereotyping and electrotyping	118	4,289	13,427,006	4,767,448	19,768,348	24,801,086
Lithography	67	4,345	11,469,554	13,747,060	20,625,082	34,578,269
Printing and Publishing—						
Printing and publishing	787	26,743	68,951,989	50,628,704	129,018,312	181,361,391
Publishing (only) of periodicals	1,319	4,666	6,985,527	17,827,679	16,797,608	34,625,287
Totals, Printing, Publishing and Allied Industries	**3,869**	**63,125**	**154,369,637**	**135,510,227**	**274,098,833**	**413,011,915**

11.—Principal Statistics of Individual Manufacturing Industries, classified on the Standard Classification Basis, 1950—continued

Group and Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	$	$	$	$
Iron and Steel Products—						
Agricultural implements	86	16,223	43,284,686	79,123,750	68,356,009	149,500,240
Boilers and plate work	56	6,223	17,904,443	20,982,184	38,316,036	60,089,965
Bridge building and structural steel	33	7,434	22,382,499	36,659,245	44,375,281	82,003,268
Castings, iron	218	17,567	47,718,307	60,200,601	78,528,361	142,361,845
Hardware, tools and cutlery	291	12,513	29,840,967	28,461,423	59,020,055	88,994,584
Heating and cooking apparatus	103	8,780	21,190,491	30,396,219	41,962,782	73,445,545
Machine shops	542	5,831	13,481,205	8,672,544	20,423,450	29,716,632
Machine tools	10	1,458	3,925,299	2,834,950	5,685,633	8,669,995
Machinery, household, office and store	62	9,066	22,760,785	40,270,243	45,288,289	86,408,148
Machinery, industrial	303	19,389	51,447,438	55,504,674	102,901,482	160,391,298
Primary iron and steel	55	29,051	85,411,927	159,282,919	154,542,373	340,540,042
Sheet metal products	283	17,049	42,630,287	92,352,260	77,559,028	171,946,702
Wire and wire goods	115	8,259	22,051,692	29,349,168	55,867,936	86,606,837
Miscellaneous iron and steel products	233	5,685	14,214,723	18,242,012	24,233,563	43,709,377
Totals, Iron and Steel Products	**2,390**	**164,528**	**438,244,749**	**662,332,192**	**817,060,278**	**1,524,384,478**
Transportation Equipment—						
Aircraft and parts	15	10,549	30,174,821	18,149,951	35,815,827	55,174,921
Bicycles and parts	9	1,090	2,748,084	3,968,822	4,175,674	8,286,198
Boat building	229	1,469	2,639,700	2,119,112	3,404,180	5,628,858
Carriages, wagons and sleighs	64	1,283	2,653,830	4,394,644	5,616,258	10,120,115
Motor-vehicles	19	29,355	94,414,819	388,496,630	284,785,098	675,867,467
Motor-vehicle parts	151	19,719	56,092,273	122,088,705	101,516,705	226,539,375
Railway rolling-stock	38	29,257	73,356,659	110,373,110	79,756,161	194,286,237
Shipbuilding	76	11,454	28,356,192	25,242,491	37,101,496	63,676,556
Totals, Transportation Equipment	**601**	**104,176**	**290,436,378**	**674,833,465**	**552,171,399**	**1,239,579,727**
Non-ferrous Metal Products—						
Aluminum products	79	5,434	13,990,132	29,005,550	25,278,370	55,372,092
Brass and copper products	155	8,932	22,893,180	82,380,983	42,010,862	126,200,549
Jewellery and silverware	218	6,299	13,784,710	30,210,609	22,779,637	53,310,540
Non-ferrous metal smelting and refining	17	19,863	58,748,362	428,697,787	202,711,781	669,882,806
White metal alloys	48	3,557	8,620,347	35,161,532	16,146,778	52,100,390
Miscellaneous non-ferrous metal products	19	595	1,498,865	1,235,327	2,611,962	3,885,437
Totals, Non-ferrous Metal Products	**536**	**44,680**	**119,535,596**	**606,691,788**	**311,539,390**	**960,751,814**
Electrical Apparatus and Supplies—						
Batteries	26	2,174	5,555,442	21,202,084	13,014,927	34,557,606
Machinery, heavy electrical	49	20,825	57,380,065	73,966,855	112,101,686	187,758,282
Radios and radio parts	67	8,499	20,047,764	31,257,857	34,881,499	66,597,406
Refrigerators, vacuum cleaners and appliances	95	9,518	22,843,556	59,570,593	60,470,530	120,929,701
Electrical apparatus and supplies, *n.e.s.*	145	19,246	49,507,238	74,308,638	94,667,534	170,735,391
Totals, Electrical Apparatus and Supplies	**382**	**60,262**	**155,334,065**	**260,306,027**	**315,136,176**	**580,578,386**

11.—Principal Statistics of Individual Manufacturing Industries, classified on the Standard Classification Basis, 1950—continued

Group and Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	$	$	$	$
Non-metallic Mineral Products—						
Abrasives, artificial	19	2,603	7,359,351	12,541,899	17,965,645	32,836,573
Asbestos products	15	1,656	3,890,249	6,904,017	6,396,016	13,818,919
Cement	8	1,793	5,296,587	6,504,314	23,091,104	38,200,513
Cement products	431	4,536	9,986,660	17,884,702	21,939,410	41,197,382
Clay products from domestic clay	134	3,793	9,037,649	676,729	17,135,634	21,790,888
Clay products from imported clay	38	2,209	5,319,493	3,670,791	10,660,273	15,095,524
Glass and glass products	106	6,444	15,632,414	19,198,095	27,255,248	49,659,133
Gypsum products	10	1,158	2,824,882	7,974,202	9,232,223	17,879,508
Lime	43	1,150	2,829,511	789,328	8,774,233	12,826,921
Salt	13	691	1,676,345	1,343,157	5,919,503	8,100,113
Sand-lime brick	5	175	434,761	336,535	1,126,303	1,553,469
Stone products	165	2,429	5,730,817	6,589,627	12,437,492	19,889,745
Miscellaneous non-metallic mineral products	58	966	2,361,691	6,755,209	6,444,663	13,692,675
Totals, Non-metallic Mineral Products	**1,045**	**29,603**	**72,380,410**	**91,168,605**	**168,377,747**	**286,541,363**
Products of Petroleum and Coal—						
Coke and gas products	30	5,121	13,867,772	58,062,102	37,117,546	104,609,907
Petroleum products	46	10,056	30,557,596	384,356,381	107,371,118	511,516,392
Totals, Products of Petroleum and Coal	**76**	**15,177**	**44,425,368**	**442,418,483**	**144,488,664**	**616,126,299**
Chemicals and Allied Products—						
Acids, alkalies and salts	28	6,020	18,039,492	30,327,614	48,527,331	87,494,365
Fertilizers	36	3,253	9,422,571	33,349,706	33,650,995	68,996,819
Medicinal and pharmaceutical preparations	210	7,524	16,637,745	24,621,090	51,098,692	76,372,691
Paints, varnishes and lacquers	109	5,929	14,569,020	49,870,382	42,446,323	92,999,193
Primary plastics	14	1,392	3,965,070	14,000,584	16,124,381	30,728,353
Soaps, washing compounds and cleaning preparations	142	3,735	10,339,733	34,749,803	30,205,104	66,048,105
Toilet preparations	98	1,862	3,423,935	7,679,500	13,181,259	20,950,830
Vegetable oils	15	792	2,155,085	40,213,298	6,289,183	47,026,547
Miscellaneous Chemical Industries—						
Adhesives	28	669	1,723,015	5,086,086	4,228,461	9,679,396
Coal tar distillation	11	457	1,274,395	6,057,087	3,342,970	10,033,238
Gases, compressed	50	1,240	3,239,598	1,873,977	10,370,288	12,737,319
Inks	30	796	2,230,151	4,570,554	5,567,213	10,217,715
Polishes and dressings	54	782	1,714,614	6,325,223	6,976,614	13,377,393
Miscellaneous chemical products, *n.e.s.*	208	7,024	18,059,979	48,980,837	45,157,897	100,208,546
Totals, Chemicals and Allied Products	**1,033**	**41,475**	**106,794,403**	**307,705,741**	**317,166,711**	**646,870,510**
Miscellaneous Industries—						
Brooms, brushes and mops	90	2,426	4,456,795	7,352,157	8,745,877	16,222,134
Fountain pens and pencils	18	1,133	2,421,360	3,435,080	5,385,851	8,872,151
Musical instruments	27	1,322	2,718,267	3,172,241	4,200,680	7,484,069
Plastic products	98	3,195	6,051,615	10,948,140	11,828,581	23,041,794
Scientific and professional equipment	97	4,810	11,842,620	13,378,949	17,980,249	31,656,295
Sporting goods	70	1,897	3,974,588	3,786,214	5,476,090	9,381,517
Toys and games	56	1,624	3,032,658	4,371,643	4,983,448	9,445,710
Typewriter supplies	7	427	911,674	2,174,991	1,998,895	4,205,208
Miscellaneous Industries—						
Artificial flowers and feathers	38	709	975,887	960,508	1,688,243	2,660,946
Buttons, buckles and fasteners	38	1,698	3,529,893	3,455,976	6,239,707	9,776,532

11.—Principal Statistics of Individual Manufacturing Industries, classified on the Standard Classification Basis, 1950—concluded

Group and Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	$	$	$	$
Miscellaneous Industries—concluded						
Candles	13	228	427,644	853,846	1,172,015	2,051,937
Hair goods	19	148	294,541	901,165	502,378	1,409,648
Ice, artificial	65	794	1,764,456	157,450	3,690,541	4,368,709
Lamps, electric, and lamp shades	49	1,159	2,131,637	3,443,998	3,551,928	7,059,218
Models and patterns	57	289	782,378	244,078	1,093,310	1,359,581
Pipes, lighters and other smokers' supplies	14	356	736,926	1,039,719	1,987,564	3,049,293
Signs, electric, neon and other	64	1,569	3,874,776	2,801,486	7,531,833	10,504,340
Stamps and stencils, rubber and metal	47	590	1,338,079	607,627	1,965,052	2,599,427
Statuary, art goods and novelties	107	932	1,551,905	1,377,353	2,415,993	3,832,543
Umbrellas	6	175	296,985	627,489	517,430	1,148,297
Miscellaneous industries, *n.e.s.*	27	1,738	3,295,191	2,379,224	6,673,070	9,183,253
Totals, Miscellaneous Industries	**1,007**	**27,219**	**56,409,875**	**67,469,334**	**99,628,735**	**169,312,602**
Grand Totals[1]	**35,942**	**1,183,297**	**2,771,267,435**	**7,538,534,532**	**5,942,058,229**	**13,817,526,381**

[1] Excludes fish processing in Newfoundland.

12.—Quantity and Value of the Principal Commodities Produced by the Manufacturing Industries, grouped by Purpose, 1950

Group and Commodity	Unit of Measure	Quantity	Value
			$
Food—			
Biscuits, all kinds	lb.	206,382,392	61,170,160
Bread, pies, cakes, etc	...	...	185,329,813
Butter, factory made	lb.	263,664,755	145,411,443
Cheese, factory made	"	146,471,572	46,780,865
Confectionery, all kinds	...	...	78,509,424
Cream, sold in dairy factories	lb. b. fat	24,825,094	26,026,026
Feed, chopped, grain	ton	477,716	30,007,328
Feeds, stock and poultry	"	1,744,639	138,285,763
Fish, canned and otherwise prepared[1]	...	...	61,703,412
Flour, wheat	bbl.	20,332,969	187,511,836
Fruits and vegetables, canned	lb.	493,753,989	57,838,390
Fruits and vegetables, frozen	"	33,296,901	5,909,425
Ice cream, factory made	gal.	22,717,126	34,611,112
Jams, jellies and marmalades	lb.	102,171,567	17,170,686
Lard	"	82,097,340	14,679,936
Meats, canned, including poultry, pastes, etc	"	65,264,673	29,011,583
Meats, cooked	"	36,019,767	20,577,006
Meats, cured	"	266,229,659	119,754,753
Meats, sold fresh	"	1,005,522,570	393,058,571
Meats, sold frozen	"	68,691,977	23,138,911
Milk, evaporated and condensed	"	288,099,630	32,273,514
Milk, sold in dairy factories	gal.	144,339,392	95,677,042
Pickles, sauces and catsup	...	...	13,614,810
Powders, edible (custard, jelly, milk, etc.)	lb.	122,006,753	26,631,827
Sausage, fresh and cured	"	75,825,160	29,878,321
Shortening	"	131,067,124	36,423,850
Sugar, granulated (cane and beet)	"	1,323,009,691	121,554,207
Tea and coffee, roasted, blended and packed	"	111,800,632	95,592,294

[1] Excludes Newfoundland.

12.—Quantity and Value of the Principal Commodities Produced by the Manufacturing Industries, grouped by Purpose, 1950—continued

Group and Commodity	Unit of Measure	Quantity	Value
			$
Drink and Tobacco—[1]			
Aerated waters	gal.	102,709,068	74,115,406
Beer, ale, stout and porter (sales)	"	171,055,633	238,703,555
Cigarettes	'000	17,311,062	266,521,398
Cigars	"	198,987	14,467,354
Spirits, potable, sold (net sales)	Pr. gal.	18,209,143	80,881,981
Tobacco, chewing, smoking and snuff	lb.	29,504,906	55,913,509
Tobacco, raw leaf, processed	"	125,368,981	65,907,261
Wine, sold	imp. gal.	4,458,837	9,870,234
Clothing—			
Coats and overcoats, men's, youths' and women's, cloth	No.	2,393,421	57,402,434
Coats, fur and fur-lined	"	205,142	48,124,664
Coats, short (including windbreakers, mackinaws, parkas, leather coats, etc.)	doz.	247,272	20,298,148
Dresses, women's and misses'	No.	16,319,973	73,661,353
Footwear, leather	...	..	103,059,694
Footwear, rubber	pr.	15,171,491	32,722,687
Gloves and mittens, all kinds	doz. pr.	1,895,468	15,628,554
Hats and caps, men's and boys'	doz.	586,250	9,770,023
Hats, women's and children's	"	460,769	12,826,972
Hosiery, all kinds	doz. pr.	9,335,010	62,489,946
Shirts, fine, work and sport	doz.	1,712,119	42,597,676
Sport suits, slacks and other sport clothing, *n.e.s.*	...	..	11,380,866
Suits, men's and youths', fine woollen	No.	1,641,619	52,814,646
Underwear	doz.	4,229,006	33,365,735
Personal Utilities—			
Bags, hand and hand luggage	...	..	13,400,862
Jewellery	...	..	16,398,767
Pianos, organs and parts	...	..	4,573,777
Plated ware, all kinds	...	..	15,454,448
Radio sets and accessories	...	..	47,349,521
Soap	...	..	39,664,238
Sporting goods	...	..	10,305,379
Toilet preparations and perfumes	...	..	20,080,509
Toys and games	...	..	14,352,935
House Furnishings—			
Blankets, all kinds	...	..	13,639,280
Brooms and household brushes	...	..	11,226,406
Carpets, mats and rugs	...	..	14,904,446
Furniture, household, including beds and couches	...	..	89,988,100
Kitchenware	...	..	12,121,733
Mattresses	...	..	16,140,184
Mops, floor and dust	doz.	245,536	1,859,358
Springs, bed and other furniture	...	..	13,767,933
Stoves, coal, wood, electric and gas	...		42,985,349
Books and Stationery—			
Advertising matter, printed	...		31,877,381
Books and catalogues, printed	...		23,038,373
Circular letters, bank notes, etc., printed	...		22,981,974
Periodicals, printed by publishers—			
Gross revenue from advertising	...		127,491,383
Subscriptions and sales	...		55,526,412
Periodicals, printed for publishers	...		20,509,030
Sheet forms, commercial, printed	...		31,969,550
Transportation Equipment—			
Aircraft, including parts and repairs	...		34,443,711
Automobile parts and accessories, including tires, etc	...	..	393,043,000
Automobiles, commercial	No.	105,258	151,285,051
Automobiles, passenger	"	284,076	447,029,182
Buses	"	764	12,852,770
Railway locomotives and parts	...		31,054,879
Ships and ship repairs	...		69,723,186
Miscellaneous, including bicycles, boats, canoes, etc	...		8,471,116

[1] Includes excise taxes on tobacco products and prime cost of spirits.

12.—Quantity and Value of the Principal Commodities Produced by the Manufacturing Industries, grouped by Purpose, 1950—concluded

Group and Commodity	Unit of Measure	Quantity	Value
			$
Miscellaneous—			
Abrasives, artificial	ton	171,684	18,513,607
Bags, cotton and jute	No.	114,502,864	29,252,868
Bags, paper	...	..	30,880,998
Bars, iron and steel, hot rolled (sold)	ton	552,006	56,694,325
Batteries, electric, and parts	...	..	31,047,494
Blooms, billets, slabs and sheet bars (sold)	net ton	362,905	25,304,261
Boilers, heating and power	...	..	14,915,498
Boxes, paper	...	..	105,964,836
Boxes, wooden	...	..	12,302,272
Calcium and sodium compounds	...	..	34,576,856
Cans, metal, for food, etc	...	..	53,784,846
Castings, iron (made for sale)	ton	271,063	44,054,509
Coke, gas-house	"	3,964,676	56,984,021
Cotton fabrics	...	..	149,819,530
Enamels, lacquers and varnishes	...	..	42,449,196
Explosives	lb.	129,985,358	16,970,844
Farm implements and parts	...	..	141,674,000
Forgings, steel and other	...	..	14,906,889
Gas, sold	M cu. ft.	25,574,110	28,044,761
Gases, compressed and liquefied	...	..	19,148,000
Gasoline	imp. gal.	1,600,095,904	269,252,387
Glass, pressed and blown	...	.	32,143,748
Hardware, builders' and other	...	..	31,069,225
Leather, shoe	lb.	89,420,972	42,923,051
Lumber, rough and planed	...		515,505,765
Machinery, industrial, household and business, and parts	...		439,146,345
Medicines and pharmaceuticals	...	..	68,254,712
Oil, fuel	imp. gal.	1,541,584,320	141,029,797
Paints, mixed, ready for use	"	10,125,933	35,573,848
Paper boards	...	..	104,231,690
Paper, newsprint, wrapping and book	...	..	561,956,976
Pipes and fittings, iron and steel	...	..	29,071,514
Plastics, primary	...	..	26,663,527
Pulp, wood, made for sale	short ton	2,251,574	243,919,947
Refrigerators, electric	...	..	75,345,814
Rolled iron and steel forms, semi-finished (sold)	ton	362,905	25,304,261
Sash, doors and other millwork	...	..	57,452,725
Scientific and professional equipment	...	..	31,656,295
Sheets, hoops, bands, strips, etc., iron and steel	...	..	86,253,049
Smelter and refinery products	...	..	669,882,806
Spun rayon fabrics and mixtures	yd.	31,443,132	26,692,725
Steel ingots and castings (sold)	net ton	313,780	38,652,613
Steel shapes erected, bridge, etc	...	..	45,612,839
Steel shapes, structural, made in primary mills	net ton	122,943	10,515,280
Synthetic yarn fabrics, continuous filament, including mixtures	yd.	87,398,775	60,354,203
Tire fabrics	lb.	28,875,041	20,992,318
Tools, hand, all kinds	...	..	25,213,634
Twine and rope	...	..	20,567,968
Wire, wire rope and cable, steel	...	..	29,296,008
Wires and cables, electrical	...	..	90,858,301
Woollen cloth, woven and other	yd.	22,735,507	57,393,332
Yarn, cotton, artificial silk, wool, etc. (made for sale)	lb.	115,298,782	125,888,264

Subsection 2.—Manufactures Classified by Origin of Materials

The distinction made between farm materials of Canadian and of foreign origin is based on whether materials are indigenous to Canada rather than on their actual source. Thus, the industries included in the foreign origin classes are those depending upon materials that cannot be grown in Canada, such as tea, coffee, spices, cane sugar, rice, rubber, cotton, etc. Industries included in the Canadian origin classes may, however, be using large quantities of imported materials.

The mineral origin group includes, in addition to non-ferrous metals so largely produced in Canada, the manufactures of iron and steel, of petroleum, and of other mineral substances, the raw materials for which are very largely imported. Products of mineral origin, with the exception of fuels, are nearly all durable goods.

A high standard of living and advanced industrial organization is usually indicated by a relatively large production and consumption of mineral products. During periods of depression when the production of capital goods is curtailed, employment in the industries of the farm group, which produce mainly consumer goods, exceeds that of the mineral group. The industries of the mineral group in 1950 employed the largest number of persons and paid out by far the highest amount in salaries and wages. The average salary and wage was $2,679 for the mineral group and $2,051 for the farm group.

13.—Principal Statistics of Manufacturing Industries, classified according to Origin of Material Used, by Main Group, 1939, 1944, 1949 and 1950

Year and Origin of Material Used	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	$	$	$	$
1939						
Farm origin	10,203	220,210	217,724,965	778,250,125	491,620,133	1,289,993,021
Mineral origin	3,474	210,752	280,054,303	669,728,573	598,024,704	1,321,444,094
Forest origin	8,430	142,091	160,798,500	244,944,997	297,563,280	572,335,960
Marine origin	523	5,369	3,638,794	18,114,698	10,311,304	28,816,536
Wildlife origin	384	4,604	5,396,623	11,592,066	8,251,880	19,961,526
Mixed origin	1,791	75,088	70,197,968	113,528,916	125,280,600	242,232,391
Grand Totals, 1939	**24,805**	**658,114**	**737,811,153**	**1,836,159,375**	**1,531,051,901**	**3,474,783,528**
Farm Origin Group—						
From field crops	6,096	124,708	126,311,033	410,994,461	335,287,457	759,964,866
From animal husbandry	4,107	95,502	91,413,932	367,255,664	156,332,676	530,028,155
Totals, Farm Origin	**10,203**	**220,210**	**217,724,965**	**778,250,125**	**491,620,133**	**1,289,993,021**
Canadian origin	9,382	171,460	168,260,771	630,779,223	366,146,937	1,011,294,132
Foreign origin	821	48,750	49,464,194	147,470,902	125,473,196	278,698,889
1944						
Farm origin	10,329	287,756	394,716,309	1,781,014,374	870,995,104	2,688,731,415
Mineral origin	4,479	634,542	1,208,779,764	2,258,796,792	2,312,260,844	4,708,104,244
Forest origin	10,347	186,680	278,171,969	495,531,476	541,521,976	1,082,160,284
Marine origin	535	9,664	10,327,695	45,906,542	22,066,801	68,882,879
Wildlife origin	535	6,190	9,430,191	28,076,572	15,728,926	43,985,177
Mixed origin	2,258	98,050	128,195,442	223,007,600	253,202,359	481,828,520
Grand Totals, 1944	**28,483**	**1,222,882**	**2,029,621,370**	**4,832,333,356**	**4,015,776,010**	**9,073,692,519**
Farm Origin Group—						
From field crops	6,307	164,514	226,751,705	888,435,918	563,349,320	1,477,008,962
From animal husbandry	4,022	123,242	167,964,604	892,578,456	307,645,784	1,211,722,453
Totals, Farm Origin	**10,329**	**287,756**	**394,716,309**	**1,781,014,374**	**870,995,104**	**2,688,731,415**
Canadian origin	9,493	225,077	303,293,749	1,507,501,822	668,958,344	2,202,655,904
Foreign origin	836	62,679	91,422,560	273,512,552	202,036,760	486,075,511
1949						
Farm origin	10,023	312,573	608,297,050	2,664,102,189	1,327,990,992	4,042,745,891
Mineral origin	5,936	453,960	1,147,317,944	2,652,631,878	2,315,722,610	5,133,084,333
Forest origin	15,467	255,671	562,316,999	1,051,100,174	1,158,202,397	2,288,386,108
Marine origin	599	11,856	16,969,825	69,090,041	41,140,022	111,961,148
Wildlife origin	663	8,370	18,008,212	38,475,825	28,844,758	67,646,428
Mixed origin	3,104	128,777	238,980,627	367,830,957	458,665,655	835,769,392
Grand Totals, 1949	**35,792**	**1,171,207**	**2,591,890,657**	**6,843,231,064**	**5,330,566,434**	**12,479,593,300**
Farm Origin Group—						
From field crops	6,165	175,715	348,944,897	1,414,938,794	863,950,508	2,313,027,879
From animal husbandry	3,858	136,858	259,352,153	1,249,163,395	464,040,484	1,729,718,012
Totals, Farm Origin	**10,023**	**312,573**	**608,297,050**	**2,664,102,189**	**1,327,990,992**	**4,042,745,891**
Canadian origin	9,204	247,762	473,274,682	2,289,435,804	1,041,245,310	3,369,356,461
Foreign origin	819	64,811	135,022,368	374,666,385	286,745,682	673,389,430

13.—Principal Statistics of Manufacturing Industries, classified according to Origin of Material Used, by Main Group, 1939, 1944, 1949 and 1950—concluded

Year and Origin of Material Used	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
1950	No.	No.	$	$	$	$
Farm origin	9,865	309,756	635,302,432	2,844,735,133	1,426,866,631	4,326,551,169
Mineral origin	6,038	460,749	1,234,389,646	2,974,681,340	2,622,196,220	5,780,180,750
Forest origin	15,580	262,524	612,465,194	1,182,568,408	1,356,295,347	2,625,214,447
Marine origin	591	11,842	18,722,240	79,959,218	46,691,639	128,423,853
Wildlife origin	631	7,962	*18,017,198*	*39,603,500*	*28,487,711*	68,444,871
Mixed origin	3,237	130,464	252,370,725	396,986,933	481,520,681	888,711,291
Grand Totals, 1950	**35,942**	**1,183,297**	**2,771,267,435**	**7,518,534,532**	**5,962,058,229**	**13,817,526,381**
Farm Origin Group—						
From field crops	6,067	177,449	371,490,647	1,537,016,230	960,378,598	2,534,609,064
From animal husbandry	3,798	132,307	263,811,785	1,307,718,903	466,488,033	1,791,942,105
Totals, Farm Origin	**9,865**	**309,756**	**635,302,432**	**2,844,735,133**	**1,426,866,631**	**4,326,551,169**
Canadian origin	9,025	241,737	485,659,591	2,381,302,252	1,083,252,802	3,505,792,122
Foreign origin	840	68,019	149,642,841	463,432,881	343,613,829	820,759,047

Subsection 3.—Manufactures Classified by Type of Ownership

Figures showing the classification of manufacturing establishments by type of ownership are available from 1946, although the figures for that year are not strictly comparable with those for succeeding years owing to the later inclusion of the fish curing and packing industry.

Of the 35,942 establishments operating in 1950, 1,319 in the periodical publishing industry were not classifiable. Thus, the percentages for 1950 presented in Tables **14** and **15** are based on a total of 34,623 establishments.

As is to be expected, the smaller establishments, regardless of type of products manufactured, are carried on under individual ownership. In that category, industries conducted on a small scale contain a large number of establishments, the percentage decreasing as the scale of operation increases, as the following figures for 1950 show:—

Group	*Average Number of Employees per Establishment*	*Percentage of Individual Ownership Establishments to the Total*
Wood products	11·2	63·9
Printing, publishing and allied trades	16·3	47·0
Food and beverages	20·0	48·6
Miscellaneous manufacturing industries	27·0	32·9
Non-metallic mineral products	28·3	34·3
Clothing (textile and fur)	38·1	27·8
Chemicals and allied products	40·1	16·8
Leather products	44·1	31·4
Iron and steel products	68·8	25·9
Non-ferrous metal products	83·4	27·0
Textiles (except clothing)	94·9	27·5
Paper products	146·8	9·5
Tobacco and tobacco products	151·8	39·7
Electrical apparatus and supplies	157·8	14·4
Transportation equipment	173·3	33·3
Products of petroleum and coal	199·7	1·3
Rubber products	357·6	8·2
ALL GROUPS	32·9	45·6

14.—Percentage Distribution of Establishments in Manufacturing Industries,[1] classified by Type of Ownership, by Province and Industrial Group, 1950, with Totals for 1946-50.

Year, Province and Group	Individual Ownership	Partnerships	Incorporated Companies	Co-operatives	Total
	p.c.	p.c.	p.c.	p.c.	p.c.
1946 (estimated)	47·3	16·0	33·4	3·3	100·0
1947	46·4	16·1	34·3	3·2	100·0
1948	46·2	16·4	34·4	3·0	100·0
1949	46·0	15·8	35·3	2·9	100·0
1950					
PROVINCE					
Newfoundland	65·3	21·6	13·0	0·1	100·0
Prince Edward Island	52·5	16·1	22·3	9·1	100·0
Nova Scotia	51·8	17·0	28·6	2·6	100·0
New Brunswick	57·3	11·6	28·0	3·1	100·0
Quebec	50·4	11·6	33·5	4·5	100·0
Ontario	40·0	16·1	41·4	2·5	100·0
Manitoba	39·8	15·7	42·4	2·1	100·0
Saskatchewan	55·8	13·3	25·0	5·9	100·0
Alberta	49·4	18·2	28·4	4·0	100·0
British Columbia	36·6	18·9	43·2	1·3	100·0
Yukon and Northwest Territories	63·2	15·8	21·0	—	100·0
Canada, 1950	**45·6**	**15·0**	**36·3**	**3·1**	**100·0**
INDUSTRIAL GROUP					
Food and beverages	48·6	11·5	27·5	12·4	100·0
Tobacco and tobacco products	39·7	4·4	51·5	4·4	100·0
Rubber products	8·2	9·8	82·0	—	100·0
Leather products	31·4	14·6	54·0	—	100·0
Textile products (except clothing)	27·5	13·9	58·3	0·3	100·0
Clothing (textile and fur)	27·8	20·0	52·2	—	100·0
Wood products	63·9	17·4	18·5	0·2	100·0
Paper products	9·5	4·2	86·3	—	100·0
Printing, publishing and allied industries	47·0	15·8	36·8	0·4	100·0
Iron and steel products	25·9	15·8	58·1	0·2	100·0
Transportation equipment	33·3	14·5	52·2	—	100·0
Non-ferrous metal products	27·0	16·8	56·2	—	100·0
Electrical apparatus and supplies	14·4	7·6	78·0	—	100·0
Non-metallic mineral products	34·3	17·3	48·3	0·1	100·0
Products of petroleum and coal	1·3	1·3	94·8	2·6	100·0
Chemicals and allied products	16·8	6·4	76·4	0·4	100·0
Miscellaneous manufacturing industries	32·9	15·2	51·9	—	100·0

[1] Four main categories of ownership only; the non-classifiable group is not included.

On the basis of employment provided, incorporated companies are by a very wide margin the most important factor in the employment field and establishments operating under individual ownership are not as important as their large numbers would seem to indicate.

15.—Percentage Distribution of Employment in the Manufacturing Industries,[1] classified by Type of Ownership, by Province and Industrial Group, 1950, with Totals for 1946-50.

Year, Province and Group	Individual Ownership	Partnerships	Incorporated Companies	Co-operatives	Total
	p.c.	p.c.	p.c.	p.c.	p.c.
1946 (estimated)	7·9	4·7	86·5	0·9	100·0
1947	7·5	4·5	87·0	1·0	100·0
1948	7·1	4·4	87·5	1·0	100·0
1949	6·8	4·2	88·0	1·0	100·0
1950					
PROVINCE					
Newfoundland	12·8	7·7	79·5	--	100·0
Prince Edward Island	22·2	10·4	61·1	6·3	100·0
Nova Scotia	11·4	5·1	82·0	1·5	100·0
New Brunswick	11·4	3·7	83·1	1·8	100·0
Quebec	8·0	3·9	87·2	0·9	100·0
Ontario	4·5	3·3	91·8	0·4	100·0
Manitoba	5·6	4·5	88·4	1·5	100·0
Saskatchewan	12·3	5·9	70·7	11·1	100·0
Alberta	11·5	8·0	77·5	3·0	100·0
British Columbia	5·7	4·9	87·1	2·3	100·0
Yukon and Northwest Territories	26·8	6·5	66·7	—	100·0
Canada, 1950	**6·3**	**3·9**	**88·8**	**1·0**	**100·0**
INDUSTRIAL GROUP					
Food and beverages	10·7	4·2	79·7	5·4	100·0
Tobacco and tobacco products	1·1	0·4	95·5	3·0	100·0
Rubber products	0·2	0·6	99·2	—	100·0
Leather products	7·5	5·5	87·0	—	100·0
Textile products (except clothing)	2·6	1·9	95·5	--	100·0
Clothing (textile and fur)	8·8	9·7	81·5	—	100·0
Wood products	20·0	9·7	69·9	0·4	100·0
Paper products	0·5	0·4	99·1	—	100·0
Printing, publishing and allied industries	9·0	4·9	84·8	1·3	100·0
Iron and steel products	2·6	2·2	94·9	0·3	100·0
Transportation equipment	0·8	0·7	98·5	—	100·0
Non-ferrous metal products	2·7	2·1	95·2	—	100·0
Electrical apparatus and supplies	0·8	0·8	98·4	—	100·0
Non-metallic mineral products	6·0	3·9	90·0	0·1	100·0
Products of petroleum and coal	--	--	99·1	0·9	100·0
Chemical products	1·4	0·6	97·6	0·4	100·0
Miscellaneous manufacturing industries	7·7	5·0	87·3	—	100·0

[1] Four main categories of ownership only; the non-classifiable group is not included.

16.—Percentage Distribution of Employment in the Forty Leading Industries, by Type of Ownership, 1950

	Industry	Individual Ownership	Partnerships	Incorporated Companies	Co-operatives	Total
		p.c.	p.c.	p.c.	p.c.	p.c.
1	Pulp and paper mills	—	0·1	99·9	—	100·0
2	Slaughtering and meat packing	1·6	1·8	93·5	3·1	100·0
3	Motor-vehicles	—	—	100·0	—	100·0
4	Non-ferrous metal smelting and refining	—	—	100·0	—	100·0
5	Petroleum products	..	..	98·6	1·4	100·0
6	Sawmills	29·1	12·2	58·4	0·3	100·0
7	Primary iron and steel	—	—	100·0	—	100·0
8	Butter and cheese	12·0	4·1	60·5	23·4	100·0
9	Cotton yarn and cloth	0·1	..	99·9	—	100·0
10	Flour mills	1·6	3·8	92·7	1·9	100·0
11	Rubber goods	0·2	0·6	99·2	—	100·0
12	Clothing, men's factory	4·9	8·4	86·7	—	100·0
13	Motor-vehicle parts	1·4	1·0	97·6	—	100·0
14	Bread and other bakery products	28·2	7·7	63·6	0·5	100·0
15	Clothing, women's factory	8·9	11·9	79·2	—	100·0
16	Railway rolling-stock	..	—	100·0	—	100·0
17	Machinery, heavy electrical	0·1	..	99·9	—	100·0
18	Printing and publishing	6·0	2·9	89·9	1·2	100·0
19	Foods, miscellaneous	5·7	3·2	91·0	0·1	100·0
20	Furniture	10·5	9·3	80·2	—	100·0
21	Sheet metal products	3·0	2·4	94·6	—	100·0
22	Miscellaneous electrical apparatus and supplies	0·6	0·9	98·5	—	100·0
23	Fruit and vegetable preparations	4·7	4·4	86·8	4·1	100·0
24	Sash, door and planing mills	19·2	8·5	72·0	0·3	100·0
25	Machinery, industrial	2·1	1·5	96·2	0·2	100·0
26	Feeds, stock and poultry, prepared	15·0	7·2	60·5	17·3	100·0
27	Agricultural implements	0·9	0·9	96·9	1·3	100·0
28	Breweries	—	—	100·0	—	100·0
29	Synthetic textiles and silk	0·3	0·1	99·6	—	100·0
30	Sugar refining	—	—	100·0	—	100·0
31	Iron castings	3·3	2·9	93·8	—	100·0
32	Boxes and bags, paper	1·3	0·9	97·5	0·3	100·0
33	Printing and bookbinding	14·7	8·0	75·4	1·9	100·0
34	Fish processing[1]	11·3	3·7	74·6	10·4	100·0
35	Brass and copper products	3·1	1·8	95·1	—	100·0
36	Tobacco, cigars and cigarettes	1·3	0·5	98·2	—	100·0
37	Refrigerators, vacuum cleaners and appliances	1·4	1·7	96·9	—	100·0
38	Footwear, leather	7·4	2·5	90·1	—	100·0
39	Miscellaneous paper goods	2·4	1·2	96·4	—	100·0
40	Confectionery	3·9	1·8	94·3	—	100·0

[1] Excludes Newfoundland.

Subsection 4.—Leading Manufacturing Industries

The rank of the ten leading industries in 1950, from the standpoint of gross value of production, is compared with their respective ranks in significant years since 1922 in the following statement:—

Industry	*Rank in—* 1922	1929	1933	1939	1944	1949	1950
Pulp and paper	2	1	1	2	5	1	1
Slaughtering and meat packing	3	2	3	3	1	2	2
Motor-vehicles	6	4	11	5	7	4	3
Non-ferrous metal smelting and refining	[1]	9	2	1	2	3	4
Petroleum products	9	10	6	6	14	5	5
Sawmills	4	5	14	8	11	6	6
Primary iron and steel	20	16	31	11	13	8	7
Butter and cheese	5	6	5	4	10	7	8
Cotton yarn and cloth	8	23	27	13	23	12	9
Flour mills	1	3	4	7	12	10	10

[1] Did not rank among the forty leading industries in 1922.

The depression of the 1930's resulted in a rearrangement in the ranking of many industries which in some cases proved to be temporary. Also, during World War II the industries engaged in producing war equipment, such as shipbuilding, aircraft, automobiles and miscellaneous chemical products, advanced to higher positions but when the War ended industries engaged in the production of consumer goods again advanced their positions. Pulp and paper, after a lapse of a number of years, resumed its premier place in 1948. With two exceptions, the industries in the lead in 1950 remained in the first ten places in 1951, although the order was changed slightly. Motor-vehicles and non-ferrous metal smelting and refining, in third and fourth places, respectively, in 1950, were reversed in 1951. Cotton yarn and cloth in ninth place and flour mills in tenth place in 1950 dropped to twelfth and eleventh places, respectively, in 1951 and were replaced by rubber goods moving up from eleventh place to ninth and railway rolling-stock from sixteenth to tenth.

17.—Principal Statistics of the Forty Leading Industries, ranked according to Gross Value of Products, 1950

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
		No.	No.	$	$	$	$
1	Pulp and paper	123	52,343	169,246,531	373,882,762	511,142,983	954,137,651
2	Slaughtering and meat packing	157	20,522	54,532,037	645,353,830	107,701,364	757,043,355
3	Motor-vehicles	19	29,355	94,414,819	388,496,630	284,785,098	675,867,467
4	Non-ferrous metal smelting and refining	17	19,863	58,748,362	428,697,787	202,711,781	669,882,806
5	Petroleum products	46	10,056	30,557,596	384,356,381	107,371,118	511,516,392
6	Sawmills	7,551	58,722	111,492,079	252,321,608	239,225,162	496,948,398
7	Primary iron and steel	55	29,051	85,411,927	159,282,919	154,542,373	340,540,042
8	Butter and cheese	1,806	21,022	41,951,621	250,017,648	74,353,823	330,709,143
9	Cotton yarn and cloth	51	26,967	55,220,043	157,835,813	95,309,562	257,383,892
10	Flour mills	118	4,903	11,917,625	213,755,757	31,836,800	247,107,775
11	Rubber goods, including footwear	61	21,812	54,262,864	101,773,382	134,061,761	239,184,510
12	Clothing, men's factory	566	32,853	59,301,388	122,603,415	103,346,165	226,659,057
13	Motor-vehicle parts	151	19,719	56,092,273	122,088,705	101,516,705	226,539,375
14	Bread and other bakery products	2,608	31,149	60,073,998	109,213,199	98,412,581	214,586,981
15	Clothing, women's factory	914	28,981	55,864,122	102,712,875	91,419,056	194,636,469
16	Railway rolling-stock	38	29,257	73,356,659	110,373,110	79,756,161	194,286,237
17	Machinery, heavy electrical	49	20,825	57,380,065	73,966,855	112,101,686	187,758,282
18	Printing and publishing	787	26,743	68,951,989	50,628,704	129,018,312	181,361,391
19	Foods, miscellaneous, *n.e.s.*	299	7,129	14,198,293	132,139,535	46,505,787	179,607,764
20	Furniture	1,207	27,259	57,111,744	79,803,630	90,624,200	172,331,144
21	Sheet metal products	283	17,049	42,630,287	92,352,260	77,559,028	171,946,702
22	Miscellaneous electrical apparatus and supplies, *n.e.s.*	145	19,246	49,507,238	74,308,638	94,667,534	170,735,391
23	Fruit and vegetable preparations	444	14,893	24,561,151	94,443,794	64,278,160	161,091,734
24	Sash, door and planing mills	1,590	19,128	36,924,630	96,907,258	61,711,765	160,719,698
25	Machinery, industrial	303	19,389	51,447,438	55,504,674	102,901,482	160,391,298
26	Feeds, stock and poultry, prepared	568	5,191	10,645,384	128,513,344	25,089,531	155,324,874
27	Agricultural implements	86	16,223	43,284,686	79,123,750	68,356,009	149,500,240
28	Breweries	63	8,311	23,888,605	42,018,271	105,073,118	149,409,487
29	Synthetic textiles and silk	47	17,955	40,111,600	55,518,508	87,763,220	147,047,995
30	Sugar refining	12	3,919	9,535,834	109,713,103	31,939,788	144,872,567
31	Castings, iron	218	17,567	47,718,307	60,200,601	78,528,361	142,361,845
32	Boxes and bags, paper	177	13,302	28,551,880	83,841,035	55,813,164	140,656,380
33	Printing and bookbinding	1,533	22,385	51,452,604	48,228,108	84,863,318	134,277,139
34	Fish processing[1]	591	11,842	18,722,240	79,959,218	46,691,639	128,423,853
35	Brass and copper products	155	8,932	22,893,180	82,380,983	42,010,862	126,200,549
36	Tobacco, cigars and cigarettes	53	8,503	19,511,951	62,681,958	59,383,685	122,429,151
37	Refrigerators, vacuum cleaners and appliances	95	9,518	22,843,556	59,570,593	60,470,530	120,929,701
38	Miscellaneous paper goods	204	9,365	21,349,335	63,929,898	50,042,383	114,990,880
39	Footwear, leather	292	20,785	34,710,042	59,684,259	50,717,873	110,968,680
40	Confectionery	207	10,854	18,451,058	54,520,295	49,223,151	104,853,748
	Totals, Leading Industries	**23,689**	**792,888**	**1,888,827,041**	**5,742,705,093**	**4,092,827,079**	**10,075,220,543**
	Totals, All Industries	**35,942**	**1,183,297**	**2,771,267,435**	**7,538,534,532**	**5,942,058,229**	**13,817,526,381**
	Percentages of leading industries to all industries	65·9	67·0	68·2	76·1	69·0	72·9

[1] Excludes Newfoundland.

18.—Principal Statistics of the Forty Leading Industries, ranked according to Gross Value of Products, 1951

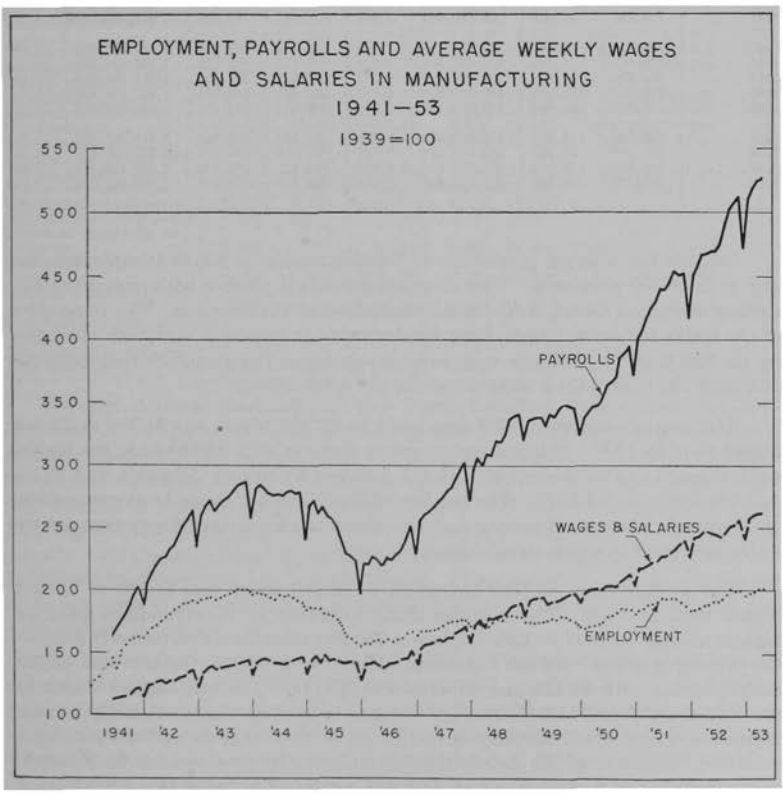
	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
		No.	No.	$	$	$	$
1	Pulp and paper	126	57,291	213,169,906	483,014,009	679,257,743	1,237,897,470
2	Slaughtering and meat packing	155	20,914	62,108,875	767,366,797	120,488,594	892,090,641
3	Non-ferrous metal smelting and refining	17	22,814	75,474,505	553,658,940	262,972,790	861,315,930
4	Motor-vehicles	19	30,479	101,342,774	469,114,484	271,113,834	742,895,888
5	Petroleum products	52	10,611	37,078,626	438,467,139	135,902,522	598,940,516
6	Sawmills	7,934	62,415	132,058,607	313,174,713	271,865,508	591,551,749
7	Primary iron and steel	57	33,393	108,561,802	223,011,814	209,472,365	464,587,486
8	Butter and cheese	1,690	20,900	46,781,550	284,602,975	82,416,262	373,745,860
9	Rubber goods, including footwear	67	23,054	64,357,696	146,951,650	161,184,980	311,678,489
10	Railway rolling-stock	37	33,410	94,028,834	175,964,789	119,895,329	300,627,241
11	Flour mills	108	4,864	13,596,597	242,132,072	37,078,324	280,866,778
12	Cotton yarn and cloth	54	27,632	58,734,833	172,443,466	97,158,451	273,651,120
13	Motor-vehicle parts	161	21,197	65,283,163	142,840,935	117,021,089	263,133,094
14	Miscellaneous food preparations, *n.e.s.*	328	9,194	20,965,126	192,185,529	65,324,778	260,430,714
15	Bread and other bakery products	2,607	32,252	67,115,919	121,376,693	116,352,428	245,288,370
16	Clothing, men's factory	577	32,732	62,316,166	131,612,306	106,308,266	238,661,331
17	Machinery, heavy electrical	50	25,296	75,598,912	96,604,451	123,141,325	221,569,105
18	Electrical apparatus and supplies, *n.e.s.*	141	21,257	60,690,091	100,024,712	119,119,884	221,081,792
19	Machinery, industrial	300	22,326	67,286,913	79,106,152	120,611,361	201,990,057
20	Fruit and vegetable preparations	459	16,401	30,107,576	116,052,675	81,999,840	200,779,150
21	Clothing, women's factory	912	28,688	56,764,282	102,135,519	95,097,888	197,750,934
22	Sheet metal products	277	17,437	49,037,352	108,335,172	86,629,030	197,114,226
23	Printing and publishing	801	27,300	76,241,565	56,975,903	137,862,920	196,717,896
24	Furniture	1,430	27,274	61,429,275	90,323,522	98,474,043	190,907,429
25	Brass and copper products	153	10,077	29,318,076	121,703,878	56,176,303	179,997,887
26	Sash, door and planing mills	1,698	19,357	40,460,680	109,505,507	66,936,399	178,765,263
27	Feeds, stock and poultry, prepared	648	5,505	12,179,857	144,617,180	27,953,403	174,509,795
28	Boxes and bags, paper	187	13,384	32,235,169	102,219,244	68,939,995	172,230,166
29	Agricultural implements	81	17,236	52,217,430	96,469,032	72,719,250	171,172,496
30	Synthetic textiles and silk	46	17,997	44,693,738	66,040,725	96,477,461	166,549,897
31	Castings, iron	205	17,462	52,128,413	75,003,538	86,683,461	165,174,661
32	Fish processing	633	14,911	24,744,189	101,621,086	58,665,035	163,010,208
33	Breweries	63	8,449	27,489,309	45,905,901	112,741,266	161,159,033
34	Printing and bookbinding	1,623	23,213	57,218,345	55,113,171	93,607,704	150,031,501
35	Sugar refining	12	3,562	10,272,939	107,540,497	28,728,247	139,109,277
36	Miscellaneous paper goods	208	9,881	24,902,102	78,430,923	58,302,757	137,835,320
37	Miscellaneous chemical products, *n.e.s.*	219	9,737	26,971,513	61,653,707	62,937,026	131,543,294
38	Footwear, leather	290	19,999	35,847,436	67,338,736	52,010,174	119,905,782
39	Acids, alkalies and salts	29	7,371	24,579,398	39,238,794	67,456,301	117,822,758
40	Aircraft and parts	23	19,198	59,558,317	36,291,613	79,403,570	117,188,078
	Totals, Leading Industries	**24,477**	**846,470**	**2,254,947,856**	**6,916,169,949**	**4,806,487,906**	**12,011,278,682**
	Totals, All Industries	**37,021**	**1,258,375**	**3,276,280,917**	**9,074,526,353**	**6,940,946,783**	**16,392,187,132**
	Percentages of leading industries to all industries	66·1	67·3	68·8	76·2	69·2	73·3

Section 3.—Principal Factors in Manufacturing Production

Subsection 1.—Salaries and Wages in Manufacturing Industries

Statistics of earnings and hours of work of wage-earners and salaried employees in manufacturing will be found in Chapter XVII on Labour.

In 1950, the 35,942 manufacturing establishments employed 231,053 salaried employees and 952,244 wage-earners, a total of 1,183,297 persons. Out of every 1,000 persons employed in these industries, 195 were classed as salary-earners and 805 as wage-earners; the former earned 25 p.c. and the latter 75 p.c. of the total amount paid out as remuneration for services. It is interesting to note the reduction in the disparity between average annual salaries and wages that has taken place in recent years. Whereas, in 1939, average annual wages were only 56 p.c. of average annual salaries, in 1943 the percentage rose to 76, declined to 69 in 1947 and increased to 73 in 1950.



19.—Total and Average Annual Salaries and Wages Paid in Manufacturing Industries, Significant Years, 1917-50

NOTE.—The averages of wage-earners and earnings for the years 1933-45 are strictly comparable with those for the years up to 1924 but not with those for the intervening years. The figures for the latest years —as for the earliest—represent the earnings for complete man-years of work, with no allowance for periods of unemployment. The difference amounts to about 3 or 4 p.c. in the total figures and affects chiefly the seasonal industries.

Year	Annual Salaries				Annual Wages			
	Salaried Employees		Total Salaries	Average Salaries	Wage-Earners		Total Wages	Average Wages
	Male	Female			Male	Female		
	No.	No.	$	$	No.	No.	$	$
1917	64,918		85,353,667	1,315	541,605		412,448,177	762
1920	78,334		141,837,361	1,811	520,559		575,656,515	1,106
1922	71,586		129,836,831	1,814	384,670		359,560,399	935
1924	54,379	15,641	130,344,822	1,862	322,719	94,871	404,122,853	968
1926	58,245	17,092	142,353,900	1,890	374,244	109,580	483,328,342	999
1929	67,731	21,110	175,553,710	1,976	454,768	122,922	601,737,507	1,042
1933	67,875	18,761	139,317,946	1,608	287,266	94,756	296,929,878	777
1939	98,165	26,607	217,839,334	1,746	415,488	117,854	519,971,819	975
1940	104,267	31,493	241,599,761	1,780	491,439	135,045	679,273,104	1,084
1941	117,251	41,693	286,336,861	1,801	626,825	175,409	978,525,782	1,220
1942	123,125	54,062	334,870,793	1,890	732,319	242,585	1,347,934,049	1,383
1943	128,679	64,516	388,857,505	2,013	762,854	285,019	1,598,434,879	1,525
1944	126,858	65,700	418,065,594	2,171	744,635	285,689	1,611,555,776	1,564
1945	128,601	62,106	417,857,619	2,191	680,620	248,045	1,427,915,830	1,538
1946	127,002	54,004	410,875,776	2,270	662,699	214,451	1,329,811,478	1,516
1947	135,248	55,852	474,693,800	2,484	721,407	219,243	1,611,232,166	1,713
1948	141,082	57,197	532,702,476	2,687	738,956	218,771	1,877,107,315	1,960
1949	157,516	64,035	628,427,937	2,836	732,457	217,199	1,963,462,720	2,067
1950	164,475	66,578	692,633,349	2,998	736,477	215,767	2,078,634,086	2,183

Ontario has a larger proportion of females among its salaried employees than any of the other provinces. This situation prevails in Quebec with regard to wage-earners owing, no doubt, to the textile industries of the Province. The importance of the textile industries in providing employment for females is strikingly illustrated by the fact that, of all female wage-earners engaged in the manufacturing industries of Canada in 1950, 44 p.c. were classed in the textile group.

The average salary in 1950 amounted to $2,998 which was $1,252 or 72 p.c. higher than in 1939. Salaried employees in Ontario with $3,150 were the highest paid, those in Quebec second with $2,981, followed by British Columbia with $2,871 and Manitoba with $2,818. The location of head offices of many large corporations at Montreal, Toronto, Winnipeg and Vancouver tends to raise the average salaries in the provinces in which these cities are located.

The average wage in 1950 amounted to $2,183 which was $1,208 or 124 p.c. higher than in 1939. The manufacturing industries of Newfoundland paid the highest average wage of $2,626, displacing British Columbia which formerly occupied the premier position. British Columbia followed with $2,393, Ontario with $2,328, Saskatchewan with $2,115 and Alberta with $2,113. The high figures shown for the Yukon and Northwest Territories in regard to average wages reflect the unusual conditions under which industry is carried on in these regions and are not representative. Statistics of the distribution of employees by province and by industrial group, together with average annual earnings, are given in Table **20**.

20.—Total and Average Annual Salaries and Wages Paid in Manufacturing Industries, by Province and Industrial Group, 1950

Province and Industrial Group	Annual Salaries				Annual Wages			
	Salaried Employees		Total Salaries	Average Salaries	Wage-Earners		Total Wages	Average Wages
	Male	Female			Male	Female		
PROVINCE	No.	No.	$	$	No.	No.	$	$
Newfoundland	1,566	252	3,549,900	1,921	4,091	743	12,696,352	2,626
Prince Edward Island	370	96	732,107	1,571	926	394	1,610,073	1,220
Nova Scotia	3,474	968	10,372,716	2,335	20,541	3,496	44,515,345	1,852
New Brunswick	2,627	877	8,424,096	2,404	16,652	3,707	37,961,973	1,865
Quebec	53,313	20,734	220,771,037	2,981	225,404	90,712	630,563,663	1,995
Ontario	78,797	35,737	360,758,375	3,150	355,536	96,443	1,052,240,771	2,328
Manitoba	5,637	2,055	21,674,518	2,818	25,619	7,674	67,027,083	2,013
Saskatchewan	2,160	825	6,914,947	2,317	6,638	973	16,095,522	2,115
Alberta	4,284	1,368	13,868,353	2,454	18,119	2,961	44,547,971	2,113
British Columbia	12,185	3,655	45,483,484	2,871	62,885	8,650	171,173,493	2,393
Yukon and Northwest Territories	32	11	83,816	1,949	66	14	201,840	2,523
Canada	**164,475**	**66,578**	**692,633,349**	**2,998**	**736,477**	**215,767**	**2,078,634,086**	**2,183**
INDUSTRIAL GROUP								
Foods and beverages	23,606	9,480	89,098,679	2,693	100,492	34,086	257,615,764	1,914
Tobacco and tobacco products	963	539	4,890,946	3,256	3,331	5,489	17,737,972	2,011
Rubber products	3,376	1,358	14,531,876	3,070	12,775	4,303	39,730,988	2,326
Leather products	2,866	1,218	12,671,007	3,103	17,000	11,906	45,138,670	1,562
Textile products (except clothing)	7,105	3,742	36,538,786	3,369	43,228	26,253	132,636,356	1,909
Clothing (textile and fur)	9,973	6,203	52,297,387	3,233	31,075	68,997	158,925,960	1,588
Wood products	19,265	2,929	46,143,831	2,079	98,757	5,218	200,181,294	1,925
Paper products	9,490	3,630	50,718,971	3,866	55,737	8,662	174,478,467	2,709
Printing, publishing and allied industries	14,765	8,876	59,108,731	2,500	30,500	8,984	95,260,906	2,413
Iron and steel products	23,133	8,280	100,982,103	3,215	126,159	6,956	337,262,646	2,534
Transportation equipment	12,881	3,888	59,040,235	3,521	84,089	3,318	231,396,143	2,647
Non-ferrous metal products	6,130	2,415	28,616,950	3,349	32,830	3,305	90,918,646	2,516
Electrical apparatus and supplies	10,204	4,544	45,471,721	3,083	33,066	12,448	109,862,344	2,414
Non-metallic mineral products	3,763	1,241	14,861,021	2,970	22,699	1,900	57,519,389	2,338
Products of petroleum and coal	3,637	1,108	15,468,919	3,260	10,347	85	28,956,449	2,776
Chemicals and allied products	9,489	5,123	44,346,028	3,035	21,730	5,133	62,448,375	2,325
Miscellaneous manufacturing industries	3,829	2,004	17,846,158	3,059	12,662	8,724	38,563,717	1,803

Average Annual Earnings in the Forty Leading Industries.—In 1950 there were 31 industries in which the average salary was $3,000 or over, compared with 20 industries in this range in 1949. The rapidly changing pattern of remuneration in manufacturing is shown by the fact that in 1945 the highest average salary paid was $2,935 reported by the brewing industry. The highest average salary in 1950 was $4,455 received by office and supervisory employees in the brewing industry. Of the other nine leading industries, five had average salaries of between $2,500 and $3,000 and four were below $2,500. The sawmill and butter and cheese industries, with $1,465 and $1,925, respectively, paid the lowest salaries among the forty leading industries.

The increase in average wages since 1945 paralleled that of salaries. There were 30 industries averaging over $2,000 in 1950 compared with only four in 1945. In 1945 the highest average annual wage was $2,365 paid by the motor-vehicle industry while in 1950 the highest was $3,051 paid by the pulp and paper industry. The highest wages are usually paid by industries in which the proportion of skilled workers is high and the proportion of female workers low. There were 13 industries in 1950 with average wages of $2,500 or over and 17 in which the average ranged between $2,000 and

$2,500. In the other 10 industries of the forty leading industry group average wages were below $2,000. This latter group includes industries made up of a large number of small establishments in which the proportion of female workers is high, such as men's factory clothing, women's factory clothing, hosiery and knitted goods, leather boots and shoes, fruit and vegetable preparations, and paper boxes and bags.

21.—Annual Salaries and Wages Paid in the Forty Leading Industries, 1950, with Comparative Figures of Annual Average Salaries and Wages Paid in 1949

NOTE.—Industries ranked according to the aggregate salaries and wages paid.

	Industry	Annual Salaries					Annual Wages				
		Salaried Employees		Total Salaries	Average Salaries		Wage-Earners		Total Wages	Average Wages	
		Male	Female		1950	1949	Male	Female		1950	1949
		No.	No.	$	$	$	No.	No.	$	$	$
1	Pulp and paper	6,552	2,026	35,729,300	4,165	3,977	43,036	729	133,517,231	3,051	2,851
2	Sawmills	10,967	671	17,047,761	1,465	1,283	46,655	429	94,444,318	2,006	1,896
3	Motor-vehicles	4,175	1,424	22,066,898	3,941	3,627	23,494	262	72,347,921	3,045	2,660
4	Primary iron and steel	2,676	845	12,868,749	3,655	3,611	25,213	317	72,543,178	2,841	2,757
5	Railway rolling-stock	2,032	246	7,873,770	3,456	3,352	26,864	115	65,482,889	2,427	2,475
6	Printing and publishing	7,783	4,196	30,260,505	2,526	2,391	12,707	2,057	38,691,484	2,621	2,440
7	Bread and other bakery products	3,608	1,131	10,870,744	2,294	2,166	20,133	6,277	49,203,254	1,863	1,747
8	Clothing, men's factory	2,740	1,663	14,580,702	3,311	2,314	8,763	19,687	44,720,686	1,572	1,513
9	Non-ferrous metal smelting and refining	2,652	482	10,940,723	3,491	3,559	16,662	67	47,807,639	2,858	2,763
10	Machinery, heavy electrical	3,172	1,313	13,655,035	3,045	2,980	12,844	3,496	43,725,030	2,676	2,554
11	Furniture	3,164	1,026	12,622,095	3,012	2,817	21,068	2,001	44,489,649	1,928	1,842
12	Motor-vehicle parts	2,086	890	10,609,312	3,565	3,295	14,365	2,378	45,482,961	2,716	2,416
13	Clothing, women's factory	2,571	1,695	14,692,523	3,444	3,394	6,199	18,516	41,171,599	1,666	1,657
14	Cotton yarn and cloth	1,424	846	7,283,076	3,208	2,940	15,771	8,926	47,936,967	1,941	1,871
15	Slaughtering and meat packing	3,476	1,128	14,814,454	3,218	3,079	13,210	2,708	39,717,583	2,495	2,377
16	Rubber goods, including footwear	3,376	1,358	14,531,876	3,070	2,974	12,775	4,303	39,730,988	2,326	2,138
17	Printing and bookbinding	3,547	1,597	14,974,732	2,911	2,690	12,046	5,195	36,477,872	2,116	1,971
18	Machinery, industrial	4,075	1,599	17,466,303	3,078	2,951	13,259	456	33,981,135	2,478	2,293
19	Electrical apparatus and supplies, *n.e.s.*	3,430	1,510	16,092,966	3,258	2,951	10,000	4,306	33,414,272	2,336	2,212
20	Castings, iron	1,543	621	7,248,866	3,350	3,104	15,075	328	40,469,441	2,627	2,440
21	Agricultural implements	2,353	709	9,413,080	3,074	3,475	13,012	149	33,871,606	2,574	2,506
22	Sheet metal products	2,515	950	10,882,344	3,141	3,088	11,800	1,784	31,747,943	2,337	2,229
23	Butter and cheese	3,759	1,678	10,467,275	1,925	1,800	14,594	991	31,484,346	2,020	1,868
24	Synthetic textiles and silk	2,233	1,100	10,623,124	3,187	3,133	10,342	4,280	29,488,476	2,017	1,962
25	Sash, door and planing mills	2,896	593	8,493,540	2,434	2,346	15,435	204	28,431,090	1,818	1,756
26	Footwear, leather	1,651	745	7,294,411	3,044	2,990	10,249	8,140	27,415,631	1,491	1,482
27	Petroleum products	2,694	774	11,768,448	3,393	3,234	6,514	74	18,789,148	2,852	2,606
28	Aircraft	2,735	845	11,447,778	3,198	2,928	6,764	205	18,727,043	2,687	2,398
29	Hardware, tools and cutlery	1,682	831	7,430,812	2,957	2,907	8,500	1,500	22,410,155	2,241	2,082
30	Boxes and bags, paper	1,341	700	7,202,979	3,529	3,287	6,323	4,938	21,348,901	1,896	1,766
31	Shipbuilding	1,234	322	5,162,610	3,318	3,255	9,793	105	23,193,582	2,343	2,347
32	Fruit and vegetable preparations	1,603	860	6,538,713	2,655	2,464	6,351	6,079	18,022,438	1,450	1,418
33	Breweries	1,230	356	7,066,492	4,455	3,737	6,595	130	16,822,113	2,501	2,471
34	Knitted goods, other	859	727	4,795,637	3,024	2,988	3,640	8,700	18,195,545	1,474	1,413
35	Brass and copper products	1,138	496	5,548,400	3,395	3,133	6,746	552	17,344,780	2,376	2,283
36	Refrigerators, vacuum cleaners and appliances	1,367	654	5,979,338	2,959	3,068	6,126	1,371	16,864,218	2,249	2,118
37	Machinery, household, office and store	1,085	541	4,946,578	3,042	2,937	6,479	961	17,814,207	2,394	2,272
38	Bridge building and structural steel	1,465	323	6,988,852	3,909	3,487	5,608	38	15,393,647	2,726	2,343
39	Wines	122	46	698,697	4,159	3,373	321	38	799,422	2,227	1,975
40	Heating and cooking apparatus	1,211	449	5,162,126	3,110	2,864	6,914	206	16,028,365	2,251	2,138
	Totals, Forty Leading Industries	**110,222**	**39,966**	**454,141,624**	**3,024**	**2,858**	**532,245**	**122,998**	**1,489,548,753**	**2,273**	**2,153**
	Grand Totals, All Industries	**164,475**	**66,578**	**692,633,349**	**2,998**	**2,836**	**736,477**	**215,767**	**2,078,634,086**	**2,183**	**2,067**

Average Earnings of Wage-Earners.—In comparing earnings by provinces or groups, consideration should be given to the type of industries in each case since the distribution of industries has a very definite regional significance. In some industries a labour force possessing deftness and speed or the ability to exercise muscular strength is necessary, in others the labour force must exercise craftsmanship or possess a high degree of technical knowledge. Workers in the latter industries naturally command relatively higher wages than those in industries where employees are routine workers.

The ranking of provinces and industries as regards annual earnings is, in many cases, different from that of weekly or hourly earnings since the factors of number of weeks worked per year and number of hours worked per week enter into the picture.

The figures for the years 1941 to 1945 given in Table 22 are based on an analysis of a pay-list covering one week in the month of highest employment. For this reason the figures do not refer to any particular month, since the month of highest employment might be May for one firm and October for another; they represent the summation of the different months of highest employment as reported by all the firms. For a particular industry, however, the month of highest employment is more significant as in such case it coincides for a great number of firms engaged in the same industry. The figures for 1946 to 1950 are based on returns received from establishments employing 15 persons or over; figures for 1946 and 1947 refer to the last week in November, whereas those for later years refer to the last week in October.

Average weekly earnings of male wage-earners for manufacturing as a whole amounted to $50.93 in 1950, an increase of $28.70 or 129 p.c. as compared with 1939. Average hourly earnings advanced from 46·2 cents in 1939 to $1.14 in 1950, an increase of 147 p.c. Annual average earnings at $2,419 were 125 p.c. higher.

Female wage-earners received an average of $29.00 per week in 1950, an increase of $16.22 or 127 p.c. over 1939. Hourly earnings at 72·5 cents were 156 p.c. higher, and annual average earnings at $1,376 were 122 p.c. higher.

22.—Average Annual, Weekly and Hourly Earnings of Male and Female Wage-Earners Employed in Manufacturing Industries, 1941-50

NOTE.—Butter and cheese factories and fish-curing and -packing plants are excluded in the years 1940 to 1945, while sawmills are also excluded in 1945. By including sawmills, weekly earnings in 1945 would have been about $34.35 for male wage-earners.

Year	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
	$	$	cents	No.
Male Wage-Earners—				
1941	1,355	27·72	53·8	51·5
1942	1,558	31·75	61·9	51·3
1943	1,726	33·80	67·1	50·4
1944	1,761	34·95	71·2	49·1
1945	1,739	35·04	73·6	47·6
1946[1]	1,702	36·23	80·7	44·9
1947[1]	1,909	41·35	92·1	44·9
1948[1]	2,175	45·73	102·3	44·7
1949[1]	2,291	47·33	106·6	44·4
1950[1]	2,419	50·93	114·2	44·6

For footnote, *see* end of table, p. 654.

22.—Average Annual, Weekly and Hourly Earnings of Male and Female Wage-Earners Employed in Manufacturing Industries, 1941-50—concluded

Year	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
	$	$	cents	No.
Female Wage-Earners—				
1941	736	15·05	31·6	47·6
1942	854	17·41	37·1	46·9
1943	987	19·33	43·1	44·8
1944	1,051	20·89	47·9	43·6
1945	984	19·84	46·5	42·7
1946[1]	943	20·08	50·2	40·0
1947[1]	1,067	23·11	58·2	39·7
1948[1]	1,233	25·91	65·1	39·8
1949[1]	1,315	27·18	68·3	39·8
1950[1]	1,376	29·00	72·5	40·0
All Wage-Earners—				
1941	1,220	24·95	49·4	50·5
1942	1,383	28·18	56·1	50·2
1943	1,525	29·87	61·2	48·8
1944	1,564	31·05	65·4	47·5
1945	1,538	30·98	66·9	46·3
1946[1]	1,516	32·38	74·1	43·7
1947[1]	1,713	37·19	85·1	43·7
1948[1]	1,960	41·25	94·6	43·6
1949[1]	2,067	42·61	98·4	43·3
1950[1]	2,183	45·94	105·6	43·5

[1] Based on weekly earnings and hours worked in the last week of November for 1946 and 1947 and of October for 1948-50 by establishments employing 15 persons or over.

23.—Average Annual, Weekly and Hourly Earnings of Wage-Earners in the Manufacturing Industries, by Province and Industrial Group, 1950

Province or Industrial Group	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
PROVINCE	$	$	cents	No.
Newfoundland	2,626	46·52	99·2	46·9
Prince Edward Island	1,220	30·36	69·0	44·0
Nova Scotia	1,852	39·74	88·7	44·8
New Brunswick	1,865	40·68	90·4	45·0
Quebec	1,995	42·21	94·0	44·9
Ontario	2,328	48·46	112·7	43·0
Manitoba	2,013	43·73	100·3	43·6
Saskatchewan	2,115	43·71	103·1	42·4
Alberta	2,113	44·86	105·3	42·6
British Columbia	2,393	50·73	126·2	40·2
Yukon and Northwest Territories	2,523	..	..	..
Canada	**2,183**	**45·94**	**105·6**	**43·5**
INDUSTRIAL GROUP				
Food and beverages	1,914	39·99	91·3	43·8
Tobacco and tobacco products	2,011	40·92	98·6	41·5
Rubber products	2,326	48·83	112·0	43·6
Leather products	1,562	32·80	81·2	40·4
Textile products (except clothing)	1,909	39·38	88·1	44·7
Clothing (textile and fur)	1,588	32·64	81·4	40·1
Wood products	1,925	43·61	98·9	44·1
Paper products	2,709	54·15	114·0	47·5
Printing, publishing and allied trades	2,413	50·30	124·5	40·4
Iron and steel products	2,534	52·23	118·7	44·0
Transportation equipment	2,647	55·06	125·7	43·8
Non-ferrous metal products	2,516	50·34	113·9	44·2
Electrical apparatus and supplies	2,414	49·90	117·7	42·4
Non-metallic mineral products	2,338	48·72	105·0	46·4
Products of petroleum and coal	2,776	56·00	135·6	41·3
Chemicals and allied products	2,325	46·52	107·2	43·4
Miscellaneous industries	1,803	38·01	88·8	42·8

24.—Average Annual, Weekly and Hourly Earnings of Male and Female Wage-Earners in the Manufacturing Industries, by Province and Industrial Group, 1950

Province or Industrial Group	Male				Female			
	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week
	$	$	cents	No.	$	$	cents	No.
PROVINCE								
Newfoundland	2,919	50·85	106·6	47·7	1,016	17·72	42·3	41·9
Prince Edward Island	1,456	35·97	78·2	46·0	667	16·46	42·0	39·2
Nova Scotia	2,002	42·98	95·5	45·0	973	20·89	47·8	43·7
New Brunswick	2,035	44·45	96·0	46·3	1,099	24·01	61·1	39·3
Quebec	2,273	48·15	103·1	46·7	1,305	27·65	68·1	40·6
Ontario	2,560	53·33	121·2	44·0	1,472	30·69	77·7	39·5
Manitoba	2,234	48·30	108·3	44·6	1,276	27·56	68·9	40·0
Saskatchewan	2,217	45·58	106·5	42·8	1,419	29·17	74·6	39·1
Alberta	2,223	47·09	109·5	43·0	1,445	30·61	77·1	39·7
British Columbia	2,522	53·34	131·7	40·5	1,458	30·84	81·6	37·8
Yukon and Northwest Territories	..	..	..	..	..	..	..	..
Canada	**2,419**	**50·93**	**114·2**	**44·6**	**1,376**	**29·00**	**72·5**	**40·0**
INDUSTRIAL GROUP								
Food and beverages	2,159	45·84	100·3	45·7	1,194	25·35	65·0	39·0
Tobacco and tobacco products	2,361	48·33	112·4	43·0	1,799	36·83	90·5	40·7
Rubber products	2,563	53·97	122·1	44·2	1,625	34·23	81·9	41·8
Leather products	1,850	38·96	93·2	41·8	1,149	24·20	62·7	38·6
Textile products (except clothing)	2,141	44·17	95·4	46·3	1,527	31·49	74·8	42·1
Clothing (textile and fur)	2,242	46·35	108·8	42·6	1,294	26·75	68·6	39·0
Wood products	1,957	44·48	100·4	44·3	1,335	30·34	74·0	41·0
Paper products	2,906	57·77	119·6	48·3	1,444	28·71	68·2	42·1
Printing, publishing and allied trades	2,747	57·64	139·9	41·2	1,277	26·80	70·7	37·9
Iron and steel products	2,581	53·18	120·6	44·1	1,665	34·28	82·8	41·4
Transportation equipment	2,680	55·67	126·8	43·9	1,825	37·91	94·3	40·2
Non-ferrous metal products	2,619	52·51	118·0	44·5	1,490	29·88	72·0	41·5
Electrical apparatus and supplies	2,649	55·03	127·1	43·3	1,788	37·14	92·4	40·2
Non-metallic mineral products	2,408	50·26	107·4	46·8	1,500	31·32	75·3	41·6
Products of petroleum and coal	2,787	56·09	135·8	41·3	1,532	..	..	..
Chemical and allied products	2,541	50·54	114·6	44·1	1,410	28·07	70·0	40·1
Miscellaneous industries	2,106	44·48	100·4	44·3	1,365	28·83	71·0	40·6

Average Earnings of Salaried Employees.—Beginning with 1946, the survey of weekly earnings and hours worked by wage-earners was expanded to include salaried employees. The survey covers establishments employing 15 persons or over and refers to the last week in November for 1946 and 1947 and to the last week in October for 1948-50. Earnings and hours worked are reported for male and female wage and salary earners in 13 groups of hours, ranging from 30 or less to 65 or more. The earnings reported for the week constitute the gross amount paid before deductions for income tax, unemployment insurance, etc. Weekly and hourly earnings as well as hours worked are thus obtained directly from the tabulated results of the reports. Annual earnings are calculated on the basis of weekly earnings correlated with the results of the annual Census of Industry.

25.—Average Annual, Weekly and Hourly Earnings of Male and Female Salary-Earners Employed in Manufacturing Industries, 1946-50

Year	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
	$	$	cents	No.
Male Salary-Earners—				
1946	..	53·21	126·7	42·0
1947	..	60·21	146·1	41·2
1948	3,147	63·47	154·4	41·1
1949	3,317	65·37	160·2	40·8
1950	3,507	69·35	172·5	40·2
Female Salary-Earners—				
1946	..	25·91	65·6	39·5
1947	..	28·68	73·7	38·9
1948	1,551	31·26	80·5	38·8
1949	1,655	32·62	84·5	38·6
1950	1,739	34·38	89·5	38·4
All Salary-Earners—				
1946	..	43·85	106·7	41·1
1947	..	49·78	123·2	40·4
1948	2,687	52·91	131·3	40·3
1949	2,836	54·85	136·8	40·1
1950	2,998	58·74	148·0	39·7

26.—Average Annual, Weekly and Hourly Earnings of Salary-Earners in the Manufacturing Industries, by Province and Industrial Group, 1950

Province or Industrial Group	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
PROVINCE	$	$	cents	No.
Newfoundland	1,921	54·95	128·9	42·6
Prince Edward Island	1,571	40·35	98·4	41·0
Nova Scotia	2,335	52·55	128·8	40·8
New Brunswick	2,404	51·60	122·9	42·0
Quebec	2,981	58·10	146·0	39·8
Ontario	3,150	59·81	152·2	39·3
Manitoba	2,818	54·21	132·5	40·9
Saskatchewan	2,317	49·76	118·2	42·1
Alberta	2,454	55·05	133·3	41·3
British Columbia	2,871	60·83	152·5	39·9
Yukon and Northwest Territories	..	..	..	..
Canada	**2,998**	**58·74**	**148·0**	**39·7**
INDUSTRIAL GROUP				
Food and beverages	2,693	55·06	134·6	40·9
Tobacco and tobacco products	3,256	57·86	150·7	38·4
Rubber products	3,070	58·09	146·7	39·6
Leather products	3,103	51·36	124·7	41·2
Textile products (except clothing)	3,369	58·61	145·8	40·2
Clothing (textile and fur)	3,233	51·12	127·8	40·0
Wood products	2,079	56·92	136·5	41·7
Paper products	3,866	68·96	176·4	39·1
Printing, publishing and allied trades	2,500	50·71	132·7	38·2
Iron and steel products	3,215	59·71	151·2	39·5
Transportation equipment	3,521	66·98	161·8	41·4
Non-ferrous metal products	3,349	63·55	159·3	39·9
Electrical apparatus and supplies	3,083	58·61	151·8	38·6
Non-metallic mineral products	2,970	58·29	146·8	39·7
Products of petroleum and coal	3,260	65·59	178·7	36·7
Chemicals and allied products	3,035	59·87	156·3	38·3
Miscellaneous industries	3,059	54·51	136·3	40·0

27.—Average Annual, Weekly and Hourly Earnings of Male and Female Salary-Earners in the Manufacturing Industries, by Province and Industrial Group, 1950

Province or Industrial Group	Male				Female			
	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week
	$	$	cents	No.	$	$	cents	No.
PROVINCE								
Newfoundland	2,087	63·33	146·7	43·5	868	26·55	66·6	39·9
Prince Edward Island	1,747	48·55	118·5	41·0	896	24·92	60·6	41·1
Nova Scotia	2,635	61·20	149·3	41·0	1,257	29·18	72·8	40·1
New Brunswick	2,774	61·40	142·8	43·0	1,298	28·71	72·5	39·6
Quebec	3,461	68·13	168·2	40·5	1,747	34·41	89·6	38·4
Ontario	3,749	71·40	179·4	39·8	1,830	34·84	91·4	38·1
Manitoba	3,239	62·42	151·1	41·3	1,662	32·01	80·4	39·8
Saskatchewan	2,640	58·13	136·8	42·5	1,468	32·34	78·3	41·3
Alberta	2,777	62·62	150·2	41·7	1,441	32·47	81·6	39·8
British Columbia	3,242	69·77	173·6	40·2	1,637	35·23	90·3	39·0
Yukon and Northwest Territories	..	..	..	..	..	..	..	..
Canada	**3,507**	**69·35**	**172·5**	**40·2**	**1,739**	**34·38**	**89·5**	**38·4**
INDUSTRIAL GROUP								
Food and beverages	3,129	64·05	154·3	41·5	1,608	32·92	83·8	39·3
Tobacco and tobacco products	3,821	67·18	174·0	38·6	2,247	39·48	104·2	37·9
Rubber products	3,597	67·97	169·5	40·1	1,759	33·26	86·4	38·5
Leather products	3,640	61·26	145·2	42·2	1,838	30·92	78·9	39·2
Textile products (except clothing)	4,134	71·48	174·8	40·9	1,914	33·08	85·5	38·7
Clothing (textile and fur)	3,964	64·27	157·1	40·9	2,057	33·33	86·1	38·7
Wood products	2,227	65·90	154·7	42·6	1,109	32·85	83·8	39·2
Paper products	4,576	81·14	204·9	39·6	2,009	35·64	94·3	37·8
Printing, publishing and allied trades	3,040	61·75	161·2	38·3	1,602	32·56	85·7	38·0
Iron and steel products	3,715	69·29	173·7	39·9	1,817	33·91	88·5	38·3
Transportation equipment	3,980	76·07	182·0	41·8	1,998	38·21	96·0	39·8
Non-ferrous metal products	3,938	74·95	184·6	40·6	1,855	35·27	92·1	38·3
Electrical apparatus and supplies	3,608	68·11	175·5	38·8	1,905	35·99	94·7	38·0
Non-metallic mineral products	3,388	67·41	167·3	40·3	1,701	33·85	89·1	38·0
Products of petroleum and coal	3,662	72·64	194·2	37·4	1,941	38·52	113·0	34·1
Chemicals and allied products	3,671	71·22	183·6	38·8	1,858	36·05	96·1	37·5
Miscellaneous industries	3,685	66·78	173·9	41·0	1,865	33·78	88·0	38·4

Real Earnings of Employees.—When the index number representing the average yearly earnings is divided by the index number of the cost of living, on the same base, a measure of 'real' wages is obtained. Index numbers for 1941-50 are given in Table 28.

28.—Average Yearly Earnings, and Index Numbers of Earnings, Cost of Living and Real Wages of Wage-Earners in Manufacturing Industries, 1941-50

NOTE.—Figures for 1931-40 are given in the 1947 Year Book, p. 560.

Year	Wages Paid	Average Wage-Earners	Average Yearly Earnings	Index Numbers (1935-39=100)		
				Average Yearly Earnings	Cost of Living	Real Value of Average Yearly Earnings
	$	No.	$			
1941	978,525,782	802,234	1,220	130·9	111·7	117·2
1942	1,347,934,049	974,904	1,383	148·4	117·0	126·8
1943	1,598,434,879	1,047,873	1,525	163·6	118·4	138·2
1944	1,611,555,776	1,030,324	1,564	167·8	118·9	141·1
1945	1,427,915,830	928,665	1,538	165·0	119·5	138·1
1946	1,329,811,478	877,150	1,516	162·7	123·6	131·6
1947	1,611,232,166	940,650	1,713	183·8	135·5	135·6
1948	1,876,773,231	957,491	1,960	210·3	155·0	135·7
1949	1,963,462,720	949,656	2,067	221·9	160·8	138·0
1950	2,078,634,086	952,244	2,183	234·2	166·5	140·7

Percentages of Salaries and Wages to Net Value of Products.—Table 29 shows the relation between salaries and wages paid by manufacturers and the total net value of production. Figures of gross production are often used in such calculations, but the values out of which the wages of employees must come in the long run are the values added to the raw materials while they are in the factory. Such added values constitute the real production of the manufacturing plant and are alone available for payment of salaries and wages, interest, rent, taxes, repairs and all other overhead charges that ordinarily must be met. The percentage of salaries declined steadily with the increasing manufacturing production from 1924 to 1929, while from 1931 to 1935 and again in 1938 and 1939, the percentage of salaries to value added was above normal owing to decreased industrial activity. It should be borne in mind, however, that salaried employees increased 230 p.c. during the period 1924-50 while wage-earners increased 128 p.c. The percentage of wages has fluctuated much less than that of salaries. The number of wage-earning employees may be adjusted more rapidly to the activity of the industry and wage levels likewise may be adjusted more readily to the price levels of the products. Of the increase in the net value of production since 1939, 46 p.c. was passed along in increased salaries and wages.

29.—Percentage of Salaries and Wages Paid to the Total Net Value of Manufacturing Production, 1941-50

Year	Value Added by Processes of Manufacture[1]	Salaries Paid	Wages Paid	Percentages— of Salaries to Value Added	Percentages— of Wages to Value Added	Percentages— of Total Salaries and Wages to Value Added
	$	$	$	p.c.	p.c.	p.c.
1941	2,605,119,788	286,336,861	978,525,782	11·0	37·6	48·6
1942	3,309,973,758	334,870,793	1,347,934,049	10·1	40·7	50·8
1943	3,816,413,541	388,857,505	1,598,434,879	10·2	42·0	52·2
1944	4,015,776,010	418,065,594	1,611,555,776	10·4	40·2	50·6
1945	3,564,315,899	417,857,619	1,427,915,830	11·7	40·1	51·8
1946	3,467,004,980	410,875,776	1,329,811,478	11·8	38·4	50·2
1947	4,292,055,802	474,693,800	1,611,232,166	11·0	37·6	48·6
1948	4,938,786,981	532,594,959	1,876,773,231	10·8	38·0	48·8
1949	5,330,566,434	628,427,937	1,963,462,720	11·8	36·8	48·6
1950	5,942,058,229	692,633,349	2,078,634,086	11·6	35·0	46·6

[1] Equivalent to "net value of products"; *see* footnote 1, Table 1, p. 620.

Subsection 2.—Capital, Repair and Maintenance Expenditures

Prior to 1944 the following information on capital investment was collected: (1) fixed capital—land, buildings, fixtures, machinery, tools and other equipment; and (2) working capital—inventory value of raw materials, stocks in process, fuel and miscellaneous supplies on hand; inventory value of finished products; cash, bills and accounts receivable, prepaid expenses, etc. This information was replaced in 1944 by the collection of expenditure statistics on fixed capital, repairs and maintenance. Although it is now impossible to calculate the total investment in the fixed and current assets in manufacturing, it is still possible to calculate the investment in fixed assets. Total investment in fixed assets can be obtained with an approximate degree of accuracy by starting with the total investment in 1943, which amounted

to $6,317,000,000, and adding the expenditures to date and then deducting on a straight-line basis the normal rates of depreciation allowed by the Income Tax Department. Comparative figures of the investment in fixed assets since 1939 are as follows:—

Year	Amount	Average per Employee
	$	$
1939	2,168,900,000	3,296
1943	3,002,900,000	2,420
1948	4,055,500,000r	3,509r
1949	4,262,800,000r	3,640r
1950	4,394,700,000	3,714

Between 1939 and 1943 there was a decrease of $876 in the value of fixed assets per employee, owing to a decline in the replacement of and additions to buildings and equipment during the war years and also to an increase in the number of shifts worked and a resulting increase in number of employees. After the War, investment in fixed assets increased rapidly. Old plants were modernized and new plants were built to take care of expanded home markets resulting from higher purchasing power and increased population. The net result in this development was an increase of $418 in the value of buildings and equipment per employee between 1939 and 1950.

Of the total capital expenditure by manufacturers in 1950 amounting to $502,500,000, 15·6 p.c. was reported by the paper-products group of industries, 15·0 p.c. by the food group, 8·8 p.c. by iron and steel, 6·5 p.c. by petroleum and coal, 5·9 p.c. by wood products, 5·5 p.c. by the textile industries (except clothing), 5·4 p.c. by transportation equipment, 5·2 p.c. by chemical products, etc.

30.—Capital, Repair and Maintenance Expenditure by the Manufacturing Industries, by Province and Industrial Group, 1950, with Totals for 1944-50

Year and Province	Capital Expenditure			Repair and Maintenance Expenditure		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
1944	61·3	150·1[1]	211·4	60·7	173·5	234·2
1945	75·9	204·2[1]	280·1	63·1	170·6	233·7
1946	132·2	205·0	337·2	56·8	164·3	221·1
1947	184·7	343·2	527·9	62·4	210·7	273·1
1948	184·8	394·2	579·0	78·9	253·9	332·8
1949	156·6	379·2	535·8	66·7	267·2	333·9
1950						
PROVINCE						
Newfoundland	2·0	5·5	7·5	1·0	3·0	4·0
Prince Edward Island	0·4	0·5	0·9	0·1	0·2	0·3
Nova Scotia	1·7	5·9	7·6	4·0	5·1	9·1
New Brunswick	1·2	6·3	7·5	1·1	6·4	7·5
Quebec	44·0	108·5	152·5	19·2	81·7	100·9
Ontario	56·1	161·8	217·9	30·2	140·9	171·1
Manitoba	5·7	10·9	16·6	2·1	6·6	8·7
Saskatchewan	2·3	6·2	8·5	0·5	2·6	3·1
Alberta	3·2	13·4	16·6	1·7	6·1	7·8
British Columbia	18·8	48·1	66·9	7·7	26·4	34·1
Totals, 1950	**135·4**	**367·1**	**502·5**	**67·6**	**279·0**	**346·6**

[1] Includes allowance for capital items charged to operating expense of $18,000,000 in 1944 and $23,900,000 in 1945.

30.—Capital, Repair and Maintenance Expenditure by the Manufacturing Industries, by Province and Industrial Group, 1950, with Totals for 1944-50— concluded

Industrial Group	Capital Expenditure			Repair and Maintenance Expenditure		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
INDUSTRIAL GROUP						
Food and beverages	26·0	49·2	75·2	10·0	31·6	41·6
Tobacco and tobacco products	1·0	1·6	2·6	0·4	1·3	1·7
Rubber products	0·6	4·1	4·7	0·7	4·6	5·3
Leather products	0·7	1·8	2·5	0·6	2·1	2·7
Textile products (except clothing)	6·6	20·8	27·4	3·5	15·9	19·4
Clothing (textile and fur)	2·5	9·4	11·9	1·4	4·6	6·0
Wood products	8·1	21·3	29·4	5·4	19·4	24·8
Paper products	21·1	57·4	78·5	8·0	51·7	59·7
Printing, publishing and allied trades	5·0	14·4	19·4	1·7	4·1	5·8
Iron and steel products	13·5	30·7	44·2	12·7	41·7	54·4
Transportation equipment	9·9	17·4	27·3	5·7	20·0	25·7
Non-ferrous metal products	8·9	13·5	22·4	4·0	24·6	28·6
Electrical apparatus and supplies	3·1	10·6	13·7	2·0	10·5	12·5
Non-metallic mineral products	4·4	12·0	16·4	1·6	15·7	17·3
Products of petroleum and coal	14·3	18·5	32·8	4·8	9·7	14·5
Chemicals and allied products	7·3	19·0	26·3	4·3	19·1	23·4
Miscellaneous	2·4	3·6	6·0	0·8	2·4	3·2

Subsection 3.—Size of Manufacturing Establishments

The size of a manufacturing establishment is generally measured either by the value of product or by the number of employees but each of these methods has its limitations. The former measure has to be adjusted for changes in the price level and, as between industries, it makes those in which the cost of raw materials is relatively high appear to operate on a larger scale. The latter takes no account of the differences in capital equipment at different times or in various industries and, obviously, the increased use of machinery may lead to an increase in production concurrently with a decrease in number of employees.

Size as Measured by Gross Value of Products.—In 1929, the 719 establishments producing over $1,000,000 each had an aggregate value of products of $2,516,064,954, or 62 p.c. of the total for all manufacturing establishments. In 1931 the number of plants in that category was 482, their output being valued at $1,451,658,954, or 53 p.c. of the total. However, by 1944, war demands resulted in manufacturing establishments with a production of $1,000,000 increasing in number to 1,376 with an output of about 75 p.c. of the total value of manufactures. In 1946, with the decline in production of the large war plants, the manufactures of establishments with an output of $1,000,000 or over declined to 67 p.c. of the total manufactures although the number of plants increased to 1,442. In 1947, the number of plants increased to 1,716 and production to the total was 72 p.c. As a result of increased prices and expansion in the physical volume of production in the years 1947-50, establishments with a production of $1,000,000 or over increased to 2,047 in 1950 and their contribution to the total output rose to 76 p.c.

31.—Manufacturing Establishments and Total and Average Production, classified by Value of Product Group, 1929, 1939, 1944 and 1950

Gross Value Group	Establishments	Total Production	Average per Establishment	Establishments	Total Production	Average per Establishment
	1929[1]			1939[2]		
	No.	$	$	No.	$	$
Under $25,000	14,024	106,735,470	7,611	15,623	120,903,054	7,739
$ 25,000 but under $ 50,000	2,802	99,529,725	35,521	2,803	99,558,383	35,519
50,000 " 100,000	2,209	156,308,744	70,760	2,215	156,410,769	70,614
100,000 " 200,000	1,688	237,532,492	140,718	1,584	225,582,130	142,413
200,000 " 500,000	1,519	504,218,217	331,941	1,285	390,626,844	303,990
500,000 " 1,000,000	636	443,597,677	697,481	689	466,441,130	676,983
1,000,000 " 5,000,000	601	1,217,866,089	2,026,400	520	1,091,293,939	2,098,642
5,000,000 or over	118	1,298,198,865	11,001,685	81	923,724,311	11,404,004
Totals and Averages	**23,597**	**4,063,987,279**	**172,225**	**24,800**	**3,474,540,560**	**140,102**
	1944			1950		
	No.	$	$	No.	$	$
Under $25,000	13,942	128,782,147	9,237	16,100	145,592,152	9,043
$ 25,000 but under $ 50,000	4,011	143,023,914	35,658	4,820	172,772,167	35,845
50,000 " 100,000	3,442	245,273,500	71,259	4,529	324,361,092	71,619
100,000 " 200,000	2,513	355,235,489	141,359	3,586	510,250,226	142,289
200,000 " 500,000	2,256	714,546,348	316,731	3,278	1,029,829,371	314,164
500,000 " 1,000,000	943	661,670,696	701,666	1,582	1,112,819,210	703,425
1,000,000 " 5,000,000	1,089	2,294,546,053	2,107,021	1,577	3,374,117,833	2,139,580
5,000,000 or over	287	4,530,614,372	15,786,113	470	7,147,784,330	15,208,051
Totals and Averages	**28,483**	**9,073,692,519**	**318,565**	**35,942**	**13,817,526,381**	**384,439**

[1] Includes central electric stations and dyeing, cleaning and laundry establishments. [2] Excludes the Yukon and Northwest Territories.

Size as Measured by Number of Employees.—In 1929, establishments employing 501 or more persons accounted for 27 p.c. of the total number of employees engaged in manufacturing. The tendency then in evidence of increasing concentration of production into larger units was checked by the depression, the proportion decreasing in 1933 to 21 p.c. (central electric stations included) but rising again to 26 p.c. in 1939. The same also held true for establishments employing 101 or more persons. In 1929 they employed 62 p.c. of the total, in 1933, 56 p.c., and in 1939, 62 p.c.

The effect of World War II on the concentration of industries into large units is illustrated by the increase in the number of establishments employing 500 or more hands. In 1939 such establishments numbered 172 and employed 26 p.c. of the employees engaged in manufacturing; by 1944 the number had increased to 383 and the percentage of total employees to 47. In a further subdivision of this group in 1944 it was found that 226 establishments employed between 500 and 999 persons, 56 between 1,000 and 1,499, and 101 employed over 1,500. There were 12 plants employing over 7,000 persons, the largest having an employment of slightly over 13,000.

As a result of the resumption of peace-time production, the larger establishments declined in size so that, by 1950, only 56 establishments employed over 1,500 persons. The largest plant employed over 13,000 persons, one other employed over 8,000 and four employed between 6,000 and 8,000 persons.

32.—Manufacturing Establishments, classified by Number of Employees and by Province, 1950

Province or Territory	Employees— Up to 499	500 to 799	800 to 999	1,000 to 1,499	1,500 or Over	Total
	No.	No.	No.	No.	No.	No.
Newfoundland	848	—	—	1	1	850
Prince Edward Island	244	—	—	—	—	244
Nova Scotia	1,476	1	2	3	—	1,482
New Brunswick	1,099	5	1	1	1	1,107
Quebec	11,550	57	21	23	19	11,670
Ontario	12,634	84	25	36	30	12,809
Manitoba	1,501	2	—	2	2	1,507
Saskatchewan	887	—	—	—	—	887
Alberta	1,668	2	—	1	—	1,671
British Columbia	3,675	12	5	1	3	3,696
Yukon and Northwest Territories	19	—	—	—	—	19
Canada	**35,601**	**163**	**54**	**68**	**56**	**35,942**

33.—Establishments and Employees in Manufactures, classified by Number of Employees per Establishment, 1929, 1939, 1944 and 1950

Employee Group	Establishments	Employees	Average per Establishment	Establishments	Employees	Average per Establishment
	1929[1]			1939[2]		
	No.	No.	No.	No.	No.	No.
Under 5 employees	12,273	30,446	2·5	13,002	28,020	2·2
5 to 20 "	6,160	62,310	10·1	6,985	68,151	9·8
21 " 50 "	2,531	81,846	32·3	2,330	75,324	32·3
51 " 100 "	1,262	90,238	71·5	1,158	81,646	70·5
101 " 200 "	745	103,944	139·5	695	97,063	139·7
201 " 500 "	444	136,397	307·2	458	139,687	305·0
501 or over	182	189,253	1,040·0	172	168,168	977·7
Totals and Averages	**23,597**	**694,434**	**29·4**	**24,800**	**658,059**	**26·5**
	1944			1950		
	No.	No.	No.	No.	No.	No.
Under 5 employees	13,208	29,958	2·3	16,726	34,719	2·1
5 to 14 "	7,111	58,404	8·2	9,103	75,149	8·3
15 " 49 "	4,615	124,408	27·0	6,022	160,397	26·6
50 " 99 "	1,622	113,869	70·2	1,920	133,374	69·5
100 " 199 "	900	126,192	140·2	1,121	156,489	139·6
200 " 499 "	644	196,707	305·4	709	216,593	305·5
500 or over	383	573,344	1,497·0	341	395,304	1,159·2
Head offices[3]	—	—	—	—	11,272	—
Totals and Averages	**28,483**	**1,222,882**	**42·9**	**35,942**	**1,183,297**	**32·9**

[1] Includes central electric stations and dyeing, cleaning and laundry establishments. [2] Excludes the Yukon and Northwest Territories. [3] Includes only those head offices that are not located at a plant.

Size of Establishment in Leading Industries.—Table 34 summarizes the degree of concentration in some of the leading industries of Canada. Concentration is extremely marked in the case of non-ferrous metal smelting and refining, motor-vehicles, railway rolling-stock, cotton yarn and cloth, rubber goods, pulp and paper, primary iron and steel and heavy electrical machinery. On the other hand, the

degree of concentration is low in such industries as fruit and vegetable preparations, bread and other bakery products, sawmills, furniture, butter and cheese, women's factory clothing and miscellaneous foods.

34.—Percentage Importance of Establishments, each Employing 200 or more Persons, in the Leading Industries, 1950

	Industry	Number of Establishments Employing 200 or More Persons	Percentage of Total Establishments in the Industry	Percentage of Total Production in the Industry
1	Pulp and paper	66	53·7	91·8
2	Slaughtering and meat packing	27	17·2	70·4
3	Motor-vehicles	9	47·4	98·1
4	Non-ferrous metal smelting and refining	14	82·4	98·9
5	Petroleum products	13	28·3	83·9
6	Sawmills	27	0·4	28·4
7	Primary iron and steel	26	47·3	91·6
8	Butter and cheese	17	0·9	18·5
9	Cotton yarn and cloth	30	58·8	94·6
10	Flour mills	8	6·8	48·4
11	Rubber goods	21	34·4	94·2
12	Clothing, men's factory	31	5·5	36·2
13	Motor-vehicle parts	22	14·6	81·0
14	Bread and other bakery products	23	0·9	28·7
15	Clothing, women's factory	6	0·7	5·6
16	Railway rolling-stock	23	60·5	95·4
17	Machinery, heavy electrical	14	28·6	89·7
18	Printing and publishing	29	3·7	65·8
19	Miscellaneous foods	1	0·3	[1]
20	Furniture	17	1·4	18·9
21	Sheet metal products	25	8·8	66·2
22	Miscellaneous electrical apparatus and supplies	14	9·7	75·4
23	Fruit and vegetable preparations	8	1·8	32·0
24	Sash, door and planing mills	2	0·1	[1]
25	Machinery, industrial	19	6·3	46·8

[1] Information cannot be published since there are fewer than three establishments.

PART III.—PROVINCIAL AND LOCAL DISTRIBUTION OF MANUFACTURING PRODUCTION

Section 1.—Provincial Distribution of Manufacturing Production

Ontario and Quebec are by far the most important manufacturing provinces of Canada. Their combined production in 1950 amounted to $10,965,427,271 or 79 p.c. of the total gross value of manufactured products.

Table 1 shows the outstanding predominance of these two Provinces in each industrial group. In 1950, Quebec led in the manufacture of tobacco and tobacco products, textiles (except clothing), clothing (textile and fur), paper products and products of petroleum and coal. In the production of wood products, British Columbia with 39 p.c. held the dominant position, outranking both Ontario and Quebec which accounted for 26 and 21 p.c., respectively, of total production. In each of the other industrial groups, Ontario led by a wide margin.

1.—Summary Statistics of Manufactures of Each Province, classified by Industrial Group, 1950

Province and Industrial Group	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	$	$	$	$
Newfoundland						
Food and beverages[1]	38	975	1,773,110	5,407,171	4,519,557	10,177,353
Textile products (except clothing)	5	99	161,863	489,640	314,730	822,950
Clothing (textile and fur)	6	315	371,941	637,737	412,671	1,060,079
Wood products	732	1,472	1,270,414	2,665,208	2,276,124	5,049,034
Paper products	3	2,763	10,627,615	20,124,871	25,613,377	48,056,345
Printing, publishing and allied industries	29	382	850,870	342,373	1,281,218	1,658,832
Iron and steel products	7	214	445,206	325,998	639,263	996,871
Transportation equipment	6	69	101,756	66,139	177,818	248,679
Non-metallic mineral products	12	108	164,287	165,642	335,732	532,381
Chemicals and allied products	6	75	151,304	558,319	416,180	988,094
Miscellaneous manufacturing industries	3	57	76,539	45,749	23,402	71,247
Miscellaneous[2]	3	153	251,347	676,776	702,305	1,400,985
Totals, Newfoundland	**850**	**6,682**	**16,246,252**	**31,505,623**	**36,712,377**	**71,062,850**
Prince Edward Island						
Food and beverages	124	1,092	1,395,978	11,725,236	2,640,374	14,583,372
Wood products	91	263	247,952	621,894	511,604	1,153,112
Printing, publishing and allied industries	10	159	278,570	125,893	406,866	543,906
Iron and steel products	5	120	166,981	211,599	233,650	462,014
Transportation equipment	4	6	4,351	4,090	5,732	10,480
Miscellaneous[3]	10	146	248,348	2,554,330	486,191	3,058,139
Totals, Prince Edward Island	**244**	**1,786**	**2,342,180**	**15,243,042**	**4,284,417**	**19,811,023**
Nova Scotia						
Food and beverages	404	7,812	11,745,253	46,332,198	24,760,617	72,411,976
Leather products	5	96	136,995	223,358	235,364	461,090
Textile products (except clothing)	11	625	1,262,949	3,481,826	2,699,363	6,330,791
Clothing (textile and fur)	15	1,327	1,833,209	3,966,761	3,006,006	7,082,100
Wood products	737	4,775	6,206,431	14,751,332	11,052,112	26,211,572
Paper products	7	1,237	3,330,983	5,666,704	9,332,218	16,400,221
Printing, publishing and allied industries	120	1,251	2,477,018	1,915,191	4,727,038	6,729,288
Iron and steel products	49	6,331	16,372,581	27,675,599	22,557,086	54,607,438
Transportation equipment	77	2,973	6,553,536	7,956,663	7,054,680	15,469,967
Non-metallic mineral products	28	635	1,166,806	903,035	2,231,049	3,644,017
Products of petroleum and coal	3	989	2,868,990	31,194,107	7,949,873	41,146,494
Chemicals and allied products	15	301	693,092	2,951,451	1,867,206	4,956,036
Miscellaneous[4]	11	127	240,218	112,820	307,952	436,509
Totals, Nova Scotia	**1,482**	**28,479**	**54,888,061**	**147,131,045**	**97,780,564**	**255,887,499**
New Brunswick						
Food and beverages	339	6,830	10,106,726	72,928,391	25,870,558	100,545,788
Leather products	11	326	490,992	1,083,269	968,211	2,068,703
Textile products (except clothing)	15	1,933	3,726,982	7,022,355	6,773,402	14,045,309
Clothing (textile and fur)	5	250	333,538	493,152	423,552	937,915
Wood products	572	4,973	7,346,459	18,462,935	13,707,241	32,567,487
Paper products	13	3,784	11,728,577	31,290,584	36,935,052	74,121,704
Printing, publishing and allied industries	64	828	1,584,448	1,010,737	2,872,845	3,949,213
Iron and steel products	29	1,260	2,682,353	4,212,403	5,805,215	10,207,322
Transportation equipment	12	2,238	5,399,465	5,444,983	5,900,242	11,657,556
Non-metallic mineral products	26	388	732,446	1,180,269	2,375,292	3,941,975
Chemicals and allied products	7	136	346,113	3,237,908	997,689	4,292,968
Miscellaneous[5]	14	917	1,907,970	1,699,238	3,575,110	5,417,127
Totals, New Brunswick	**1,107**	**23,863**	**46,386,069**	**148,066,224**	**106,204,409**	**263,753,067**

For footnotes, *see* end of table, p. 666.

1.—Summary Statistics of Manufactures of Each Province, classified by Industrial Group, 1950—continued

Province and Industrial Group	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	$	$	$	$
Quebec						
Food and beverages	2,696	41,405	82,056,501	530,447,267	226,814,557	767,879,619
Tobacco and tobacco products	42	8,383	18,827,150	61,254,073	55,651,347	117,262,440
Rubber products	23	6,686	14,958,889	18,400,998	22,408,932	41,545,119
Leather products	394	17,404	27,522,886	49,261,557	39,772,270	89,622,366
Textile products (except clothing)	382	46,002	96,193,845	223,204,872	178,051,240	408,773,561
Clothing (textile and fur)	1,726	65,795	115,871,769	216,999,240	199,061,671	417,865,202
Wood products	3,357	32,443	54,515,819	113,139,835	95,733,606	211,460,889
Paper products	178	31,144	89,158,704	217,957,215	260,803,937	514,069,763
Printing, publishing and allied industries	1,025	16,748	40,610,493	36,314,207	73,940,722	111,045,559
Iron and steel products	544	35,572	89,506,531	114,627,312	163,884,333	284,918,357
Transportation equipment	103	23,677	61,514,672	81,996,991	72,376,251	157,531,149
Non-ferrous metal products	161	14,089	36,748,633	222,777,032	111,839,649	356,563,186
Electrical apparatus and supplies	81	16,430	42,276,707	61,580,301	79,521,806	142,371,353
Non-metallic mineral products	293	8,487	19,791,187	26,765,968	45,796,326	81,570,589
Products of petroleum and coal	12	3,168	9,376,201	145,260,550	50,298,509	206,297,281
Chemicals and allied products	336	15,159	38,229,360	86,463,568	95,553,454	187,265,942
Miscellaneous	317	7,571	14,175,353	19,025,264	26,811,495	46,430,915
Totals, Quebec	**11,670**	**390,163**	**851,334,700**	**2,225,476,250**	**1,798,320,105**	**4,142,473,290**
Ontario						
Food and beverages	3,148	68,496	147,568,172	820,053,953	377,700,150	1,215,694,455
Tobacco and tobacco products	22	1,797	3,571,736	60,699,293	8,827,577	69,703,729
Rubber products	32	15,084	39,215,136	83,347,431	111,523,075	197,476,263
Leather products	265	13,892	27,530,376	65,631,438	43,108,524	109,996,917
Textile products (except clothing)	358	29,919	64,486,404	162,712,086	121,576,737	289,150,649
Clothing (textile and fur)	1,014	39,627	77,421,583	124,539,425	121,284,499	247,425,826
Wood products	2,569	35,712	70,826,772	127,866,580	120,353,730	251,226,518
Paper products	262	30,867	87,959,140	212,242,594	228,464,138	462,606,653
Printing, publishing and allied industries	1,570	31,829	81,030,097	75,076,406	143,505,131	220,355,017
Iron and steel products	1,221	106,259	291,565,663	461,986,077	552,537,226	1,046,324,751
Transportation equipment	247	63,071	187,534,526	549,845,151	432,157,829	989,443,986
Non-ferrous metal products	307	24,844	66,645,065	249,272,872	184,875,702	451,117,491
Electrical apparatus and supplies	250	42,628	110,542,316	194,002,398	230,578,986	428,337,963
Non-metallic mineral products	481	15,426	39,925,566	48,873,703	92,954,493	154,621,200
Products of petroleum and coal	29	7,901	23,141,501	137,160,468	55,749,080	204,540,649
Chemicals and allied products	515	21,755	56,721,101	180,932,103	179,782,157	375,896,422
Miscellaneous	519	17,406	37,313,990	44,579,517	63,162,803	109,035,492
Totals, Ontario	**12,809**	**566,513**	**1,412,999,146**	**3,598,821,495**	**3,068,141,837**	**6,822,953,981**
Manitoba						
Food and beverages	368	9,804	22,494,668	166,369,904	52,094,453	220,969,535
Leather products	33	682	1,122,270	3,223,712	1,661,337	4,919,186
Textile products (except clothing)	25	756	1,415,293	6,707,779	2,349,422	9,165,098
Clothing (textile and fur)	166	6,250	10,931,147	22,265,653	19,924,860	42,340,779
Wood products	314	3,149	6,071,378	11,844,580	10,338,386	22,465,681
Paper products	20	1,415	3,400,799	9,462,233	12,963,278	23,389,225
Printing, publishing and allied industries	265	3,814	8,271,616	7,476,331	14,968,668	22,654,957
Iron and steel products	119	4,796	11,438,870	15,140,332	24,276,075	40,238,711
Transportation equipment	23	6,582	15,497,577	17,486,444	17,073,617	35,195,790
Non-ferrous metal products	19	498	1,299,978	18,291,247	1,646,758	20,437,053
Electrical apparatus and supplies	17	632	1,190,121	2,887,825	2,910,012	5,864,224
Non-metallic mineral products	44	962	2,091,613	3,105,304	6,491,928	11,123,245
Products of petroleum and coal	4	417	970,782	8,462,206	3,477,121	12,402,413
Chemicals and allied products	44	761	1,567,404	6,872,458	5,064,941	12,070,271
Miscellaneous[a]	46	467	938,085	788,699	1,810,727	2,670,038
Totals, Manitoba	**1,507**	**40,985**	**88,701,601**	**309,384,707**	**177,051,583**	**485,906,206**
Saskatchewan						
Food and beverages	233	5,037	11,154,249	89,621,459	28,365,139	119,532,117
Textile products (except clothing)	5	117	225,162	1,259,881	339,635	1,612,687
Clothing (textile and fur)	14	202	348,444	722,891	525,405	1,255,059
Wood products	333	1,413	2,179,992	4,391,028	4,291,714	8,824,276
Paper products	3	16	36,570	39,260	60,713	100,973
Printing, publishing and allied industries	183	1,424	3,056,922	1,920,907	4,832,820	6,857,112

For footnote, *see* end of table, p. 666.

1.—Summary Statistics of Manufactures of Each Province, classified by Industrial Group, 1950—concluded

Province or Territory and Industrial Group	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
Saskatchewan—concluded	No.	No.	$	$	$	$
Iron and steel products	49	726	1,455,058	2,520,091	2,581,183	5,195,553
Transportation equipment	6	24	58,863	82,406	119,134	206,924
Non-metallic mineral products	28	323	762,925	850,145	1,860,783	2,865,114
Products of petroleum and coal	8	693	2,010,113	39,867,481	3,671,714	44,854,805
Chemicals and allied products	11	233	579,154	1,299,810	648,260	1,983,612
Miscellaneous[7]	14	388	1,143,017	21,981,947	2,198,141	24,791,723
Totals, Saskatchewan	**887**	**10,596**	**23,010,469**	**164,557,306**	**49,494,641**	**218,079,955**
Alberta						
Food and beverages	414	9,610	21,258,948	166,004,309	51,699,921	219,668,936
Leather products	12	57	77,822	88,169	99,308	189,264
Textile products (except clothing)	12	162	271,271	1,821,019	531,610	2,365,364
Clothing (textile and fur)	32	928	1,498,236	3,307,832	3,930,392	7,258,127
Wood products	715	5,365	9,425,534	23,999,375	18,042,642	42,743,016
Paper products	5	138	309,067	1,419,576	881,235	2,312,106
Printing, publishing and allied industries	232	1,940	4,362,982	3,106,065	8,274,561	11,473,838
Iron and steel products	107	2,472	5,908,605	7,167,799	9,415,797	16,826,264
Transportation equipment	19	2,295	5,541,094	6,169,301	5,810,729	12,189,301
Non-ferrous metal products	5	63	154,874	715,600	361,811	1,085,871
Electrical apparatus and supplies	4	17	26,040	24,597	37,754	64,713
Non-metallic mineral products	59	1,965	4,548,971	5,529,299	10,108,068	16,875,498
Products of petroleum and coal	8	920	2,845,676	50,067,654	8,421,998	59,928,306
Chemicals and allied products	21	575	1,613,451	2,322,082	5,168,453	8,330,625
Miscellaneous[8]	26	225	573,753	388,372	1,108,589	1,528,794
Totals, Alberta	**1,671**	**26,732**	**58,416,324**	**272,131,049**	**123,892,868**	**402,840,023**
British Columbia						
Food and beverages	632	16,586	37,133,115	193,488,744	90,796,202	288,220,391
Rubber products	4	34	74,315	19,676	111,136	138,687
Leather products	23	526	917,216	1,686,834	1,560,287	3,270,953
Textile products (except clothing)	31	654	1,344,036	4,747,339	2,746,434	7,580,366
Clothing (textile and fur)	72	1,542	2,597,380	4,610,681	4,305,501	8,965,381
Wood products	1,873	36,569	88,172,687	192,724,150	187,392,993	383,899,507
Paper products	37	6,155	18,645,983	43,057,589	63,057,404	110,087,135
Printing, publishing and allied industries	369	4,741	11,828,321	8,218,557	19,266,126	27,715,305
Iron and steel products	260	6,778	18,702,901	28,464,982	35,130,450	64,607,197
Transportation equipment	104	3,241	8,230,538	5,781,297	11,495,367	17,625,895
Non-ferrous metal products	39	4,379	12,627,247	93,083,550	8,915,614	104,417,162
Electrical apparatus and supplies	29	478	1,143,030	1,745,869	1,934,544	3,718,672
Non-metallic mineral products	72	1,296	3,171,790	3,775,478	6,168,223	11,288,768
Products of petroleum and coal	9	1,000	2,982,619	29,470,227	14,535,298	45,507,047
Chemicals and allied products	76	2,437	6,801,719	21,801,629	27,462,183	49,606,638
Miscellaneous	66	959	2,284,080	1,501,235	4,728,499	6,367,852
Totals, British Columbia	**3,696**	**87,375**	**216,656,977**	**634,177,837**	**479,606,261**	**1,133,016,956**
Yukon and N.W.T.						
Food and beverages	5	17	27,723	58,628	60,480	127,062
Wood products	8	35	61,687	98,086	153,358	258,401
All other groups[8]	6	71	196,246	883,240	355,329	1,356,068
Totals, Yukon and N.W.T.	**19**	**123**	**285,656**	**1,039,954**	**569,167**	**1,741,531**

[1] Excludes fish processing. [2] Includes tobacco and tobacco products, leather products and products of petroleum and coal, figures for which are confidential and cannot be published separately. [3] Includes tobacco products, leather products, textile products, clothing (textile and fur), non-metallic mineral products and chemicals and allied products, figures for which are confidential and cannot be published separately. [4] Includes electrical apparatus and supplies, figures for which are confidential and cannot be published separately. [5] Includes non-ferrous metal products and products of petroleum and coal, figures for which are confidential and cannot be published separately. [6] Includes rubber products, figures for which are confidential and cannot be published separately. [7] Includes leather products and non-ferrous metal products, figures for which are confidential and cannot be published separately. [8] Includes printing, publishing and allied trades, non-ferrous metal products, products of petroleum and coal, and miscellaneous industries, figures for which are confidential and cannot be published separately.

The degree of concentration of manufacturing production in large units is illustrated in Table 2. In 1950, 39·2 p.c. of all persons engaged in manufacturing in Newfoundland were working in establishments having 500 or more employees, as compared with 33·4 p.c. for Canada as a whole. Before the entry of Newfoundland into Confederation, Ontario had the greatest concentration in the largest units; in 1950 that Province ranked second with 37·4 p.c. of its employees in establishments employing 500 or more persons. Quebec ranked third with 34·9 p.c. followed by New Brunswick with 28·5 p.c., Nova Scotia 24·7 p.c., British Columbia 23·3 p.c., Manitoba 19·4 p.c. and Alberta 9·0 p.c. There were no plants in either Prince Edward Island or Saskatchewan in that category.

2.—Concentration of Manufacturing Production in each Province, 1950

Province or Territory	Number of Establishments Employing 500 or More Persons	Percentage of Total Number of Establishments in Province	Provincial Percentage of Number of Employees Accounted for by these Establishments
Newfoundland	2	0·2	39·2
Prince Edward Island	—	—	—
Nova Scotia	6	0·4	24·7
New Brunswick	8	0·7	28·5
Quebec	120	1·0	34·9
Ontario	175	1·3	37·4
Manitoba	6	0·4	19·4
Saskatchewan	—	—	—
Alberta	3	0·2	9·0
British Columbia	21	0·5	23·3
Yukon and Northwest Territories	—	—	—
Canada	**341**	**0·9**	**33·4**

Subsection 1.—The Manufactures of the Atlantic Provinces

Manufacturing production in Newfoundland is dominated by the forest and fisheries resources. Pulp and paper is the leading industry followed by sawmilling, these two industries together accounting for 71 p.c. of the total production of the Province in 1950. No information is available regarding the processing of fish products and the position of that industry in 1950 in the economy of the Province cannot be evaluated.

In Prince Edward Island the predominant agricultural and fishery resources make butter and cheese, fish curing and packing, and prepared stock and poultry feeds the leading manufactures of the Province. Nova Scotia is renowned for its coal mines and its fisheries as well as extensive forests and agricultural lands and is favoured with easy access by sea to the high-grade iron-ore supply of Newfoundland. On these resources are based the leading manufactures of fish curing and packing, primary iron and steel, railway rolling-stock, sawmills, pulp and paper, shipbuilding and repairs, and butter and cheese. In addition, important petroleum refineries and coke and gas plants add to the diversification of manufacturing in the Province. The forests of New Brunswick give a leading place to its pulp and paper and sawmilling industries, while fish and agricultural products add to the varied output.

3.—Statistics of the Leading Industries of the Atlantic Provinces, 1950

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
		NEWFOUNDLAND					
		No.	No.	$	$	$	$
1	Pulp and paper	3	2,763	10,627,615	20,124,871	25,613,377	48,056,345
2	Sawmills	596	947	569,731	1,150,570	1,220,544	2,430,089
3	Planing mills, sash, doors, etc.	26	272	475,855	1,278,098	771,793	2,083,208
4	Bread and other bakery products	11	189	326,956	1,188,082	584,240	1,823,437
5	Breweries	3	113	272,822	397,680	1,206,874	1,678,200
6	Aerated waters	11	133	217,506	478,536	703,722	1,213,839
7	Printing and publishing	7	206	557,185	182,647	905,175	1,112,208
8	All other leading industries[1]	7	540	921,173	3,287,687	2,175,655	5,531,747
	Totals, Leading Industries[2]	**664**	**5,163**	**13,968,843**	**28,088,171**	**33,181,380**	**63,929,073**
	Totals, All Industries[2]	**850**	**6,682**	**16,246,252**	**31,505,623**	**36,712,377**	**71,062,850**
		PRINCE EDWARD ISLAND					
		No.	No.	$	$	$	$
1	Butter and cheese	23	154	257,364	2,796,517	519,185	3,368,058
2	Fish processing	57	467	390,159	2,393,569	776,144	3,220,589
3	Feeds, stock and poultry, prepared	10	54	85,322	1,068,806	154,710	1,238,344
4	Sawmills	83	154	110,280	311,120	308,514	632,758
5	Printing and publishing	4	141	267,596	117,413	393,709	521,123
6	Fruit and vegetable preparations	7	117	115,799	289,068	135,802	435,507
7	Sash, door and planing mills	3	64	85,482	251,423	136,715	392,436
8	Bread and other bakery products	9	70	93,750	198,122	129,210	342,379
9	Aerated waters	6	36	58,896	135,088	173,766	323,229
10	All other leading industries[3]	4	239	495,418	7,101,372	964,713	8,124,240
	Totals, Leading Industries	**206**	**1,496**	**1,960,066**	**14,662,498**	**3,692,468**	**18,598,663**
	Totals, All Industries	**244**	**1,786**	**2,342,180**	**15,243,042**	**4,284,417**	**19,811,023**
		NOVA SCOTIA					
		No.	No.	$	$	$	$
1	Fish processing	207	3,805	5,397,334	24,715,307	11,177,190	36,357,774
2	Primary iron and steel	5	4,535	12,254,491	19,869,223	12,534,011	36,326,915
3	Sawmills	600	3,111	3,597,102	8,707,102	6,847,085	15,772,588
4	Pulp and paper	4	1,051	3,065,466	4,780,592	8,784,061	14,949,842
5	Butter and cheese	24	593	1,011,894	5,874,980	2,032,646	8,091,468
6	Shipbuilding	21	1,836	4,254,081	2,878,656	4,552,169	7,665,247
7	Sash, door and planing mills	69	1,023	1,719,028	3,878,038	2,748,406	6,740,281
8	Railway rolling-stock	3	576	1,303,672	4,725,305	1,312,496	6,226,590
9	Bread and other bakery products	75	770	1,276,041	3,289,466	2,560,980	6,047,821
10	Confectionery	8	1,012	1,393,541	2,795,496	2,739,487	5,602,559
11	Miscellaneous iron and steel products	3	488	1,257,292	2,785,597	2,251,139	5,248,692
12	Printing and publishing	30	723	1,598,893	1,048,413	3,281,002	4,391,199
13	Knitted goods other than hosiery	3	613	981,009	2,288,331	1,745,884	4,086,716
14	Aerated waters	31	323	550,536	1,237,142	2,076,900	3,406,558
15	Fruit and vegetable preparations	23	607	730,424	1,993,440	1,274,140	3,385,375
16	Miscellaneous foods	10	184	300,975	2,322,339	411,087	2,760,681
17	All other leading industries[4]	8	2,001	5,309,965	37,844,792	16,423,370	56,493,801
	Totals, Leading Industries	**1,124**	**23,251**	**46,006,744**	**131,034,131**	**82,752,053**	**223,554,107**
	Totals, All Industries	**1,482**	**28,479**	**54,888,061**	**147,131,045**	**97,780,564**	**255,887,499**

For footnotes, *see* end of table.

3.—Statistics of the Leading Industries of the Atlantic Provinces, 1950—concluded

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
		NEW BRUNSWICK					
		No.	No.	$	$	$	$
1	Pulp and paper	7	3,564	11,347,564	29,798,346	36,148,281	71,798,801
2	Sawmills	454	3,216	4,380,994	10,511,572	9,069,233	19,774,001
3	Fish processing	165	2,700	2,656,533	10,464,321	5,679,906	16,530,680
4	Slaughtering and meat packing	3	368	888,835	9,271,013	1,784,177	11,128,437
5	Miscellaneous foods	8	246	353,817	6,710,029	1,852,322	8,579,412
6	Sash, door and planing mills	66	1,173	2,069,732	5,196,778	3,128,099	8,428,921
7	Butter and cheese	33	434	704,377	6,103,744	1,368,350	7,628,608
8	Heating and cooking apparatus	3	725	1,591,562	1,781,815	3,619,321	5,505,120
9	Bread and other bakery products	66	747	1,250,572	2,978,562	2,263,173	5,447,570
10	Feeds, stock and poultry, prepared	10	151	284,406	4,383,345	594,281	5,017,166
11	Biscuits	3	528	781,199	1,939,784	2,214,129	4,212,318
12	Fertilizers	3	115	302,552	3,190,450	821,350	4,055,644
13	Printing and publishing	19	592	1,200,752	595,628	2,229,460	2,872,842
14	Confectionery	5	389	593,595	1,208,280	1,148,558	2,398,054
15	Miscellaneous wood products, n.e.s.	7	197	313,568	1,714,306	553,326	2,326,988
16	All other leading industries[5]	12	5,683	12,612,096	42,514,270	24,196,195	68,087,667
	Totals, Leading Industries	**864**	**20,628**	**41,332,154**	**138,362,243**	**96,670,161**	**243,792,229**
	Totals, All Industries	**1,107**	**23,863**	**46,386,069**	**148,066,224**	**106,204,409**	**263,753,067**

[1] Includes: biscuits; miscellaneous foods, *n.e.s.*; and tobacco, cigars and cigarettes. [2] Excludes fish processing. [3] Includes: bags, cotton and jute; fertilizers; slaughtering and meat packing. [4] Includes: cotton yarn and cloth; wire and wire goods; coke and gas; petroleum products; and breweries. [5] Includes: breweries; sugar refineries; cotton yarn and cloth; synthetic textiles and silk; railway rolling-stock; shipbuilding and repairs; brooms, brushes and mops; brass and copper products; and gypsum products.

Subsection 2.—The Manufactures of Quebec

Quebec contributes about 30 p.c. of the total value of manufactured products of Canada. Quebec's forests, water powers, minerals and agricultural lands, its extensive highway system and also its geographic position astride the St. Lawrence estuary permitting sea-going vessels to reach its main centres of population up to 800 miles inland, are among the assets that have tended to develop manufacturing industries and have enabled over 4,000 new industrial plants to be opened in the past five years. In addition, Quebec has a stable and industrious population, an important factor in industries such as textiles, clothing, leather boots and shoes, etc., in which large labour forces are required. The production of pulp and paper occupies the premier position, accounting for about 10 p.c. of the gross value of Quebec manufactures and for over 44 p.c. of the Canadian total for this industry. Other large industries in which Quebec predominates are: tobacco, cigars and cigarettes; cotton yarn and cloth; leather boots and shoes; men's factory clothing; women's factory clothing; railway rolling-stock; silk and artificial silk; medicinal and pharmaceutical preparations; fur goods; and corsets.

Quebec produces 65 p.c. of all cotton goods made in Canada, 60 p.c. of all rayon fabrics and 40 p.c. of the woollen and knitted goods. Two of the most important industrial developments in the Province are the Ungava iron projects and the new titanium industry.

4.—Statistics of the Leading Industries of the Province of Quebec, 1950

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
		No.	No.	$	$	$	$
1	Pulp and paper	54	22,900	72,550,996	165,934,196	221,295,842	421,720,396
2	Non-ferrous metal smelting and refining	7	7,139	20,474,071	163,426,318	79,281,367	263,596,900
3	Petroleum products	6	2,290	6,872,475	136,482,045	44,851,630	188,665,936
4	Slaughtering and meat packing	40	3,836	9,736,877	149,637,925	24,124,541	174,658,538
5	Cotton yarn and cloth	18	17,847	36,493,952	108,744,660	59,499,529	171,168,377
6	Clothing, women's factory	550	18,533	34,330,460	69,312,719	59,704,676	129,308,699
7	Clothing, men's factory	341	17,627	31,868,075	70,741,186	56,050,278	127,160,743
8	Tobacco, cigars and cigarettes	37	7,782	18,024,301	58,624,102	54,625,082	113,573,776
9	Synthetic textiles and silk	34	13,027	28,431,782	37,275,202	59,112,770	98,603,297
10	Railway rolling-stock	10	13,496	34,236,778	54,253,974	36,613,137	93,001,658
11	Butter and cheese	782	5,519	9,821,178	74,022,791	17,016,083	92,706,797
12	Electrical apparatus and supplies, *n.e.s.*	32	10,525	27,815,361	31,466,131	51,299,427	83,574,246
13	Sawmills	1,965	10,357	14,181,814	43,983,758	28,854,004	73,571,302
14	Boots and shoes, leather	184	12,917	20,472,697	35,292,064	28,969,892	64,588,029
15	Miscellaneous foods	72	2,012	4,196,513	45,377,019	18,535,757	64,263,121
16	Bread and other bakery products	976	8,976	16,102,126	31,029,224	25,983,546	59,026,761
17	Furniture	377	8,844	17,416,374	24,613,201	28,631,842	53,858,475
18	Machinery, industrial	59	6,136	15,798,105	17,534,731	29,251,189	47,497,168
19	Feeds, stock and poultry, prepared	163	1,290	2,405,560	40,312,080	6,388,732	47,063,887
20	Brass and copper products	38	2,782	6,527,846	31,157,644	13,091,047	44,929,715
21	Printing and publishing	81	6,379	16,554,538	12,125,733	31,742,170	44,199,363
22	Breweries	8	2,628	7,225,189	14,079,680	28,303,288	43,108,905
23	Sheet metal products	67	4,620	11,415,731	22,143,759	20,373,892	43,005,671
24	Rubber goods, including rubber footwear	23	6,686	14,958,889	18,400,998	22,408,932	41,545,119
25	Sash, door and planing mills	728	5,918	9,831,755	23,409,505	16,021,663	40,056,106
26	Boxes and bags, paper	50	4,157	7,922,118	23,718,303	15,943,243	39,905,918
27	Acids, alkalies and salts	9	2,651	8,138,143	12,836,364	20,756,912	36,696,684
28	Printing and bookbinding	500	6,420	14,781,969	11,705,708	23,068,829	35,131,395
29	Medicinal and pharmaceutical preparations	92	3,411	8,164,370	10,903,392	22,129,212	33,416,104
30	Confectionery	52	2,835	4,640,616	15,702,309	16,585,278	32,590,498
31	Knitted goods, other than hosiery	66	4,885	7,559,040	17,718,506	14,436,305	32,482,594
32	Primary iron and steel	12	3,482	9,543,763	11,222,417	18,732,959	32,208,247
33	Distilled liquors	8	1,765	4,597,292	10,598,371	20,603,269	31,989,698
34	Aerated waters	173	2,708	5,485,179	11,259,834	20,037,187	31,938,417
35	Refrigerators, vacuum cleaners and appliances	22	2,467	5,429,745	17,177,708	14,281,076	31,690,483
36	Fur goods	281	3,197	6,959,674	19,783,537	11,584,951	31,464,405
37	Woollen cloth	33	3,070	6,387,261	18,207,036	11,317,514	30,028,840
38	Castings, iron	59	3,762	9,739,299	14,617,180	14,479,951	29,807,947
39	Miscellaneous paper goods	65	2,466	4,844,984	17,409,851	12,146,372	29,778,953
40	Paints, varnishes and lacquers	32	2,613	6,070,908	15,883,188	12,859,001	28,976,558
	Totals, Leading Industries[1]	**8,106**	**269,955**	**598,007,804**	**1,708,124,349**	**1,310,992,375**	**3,112,559,726**
	Totals, All Industries	**11,670**	**390,163**	**851,334,700**	**2,225,476,250**	**1,798,320,105**	**4,142,473,290**
	Percentages of leading industries to all industries	69·5	69·2	70·2	76·8	72·9	75·1

[1] Sugar refining is also a leading industry, but statistics cannot be published because there are fewer than three establishments.

Subsection 3.—The Manufactures of Ontario

Despite the great industrial progress made by other provinces, Ontario in 1950 produced over 49 p.c. of the nation's manufactured goods. Many more industrial areas are being created as new industries and self-contained factory expansions of existing industries are going to the smaller towns. A vast increase in steel-ingot capacity is being made possible by developments at Steep Rock Iron Mines and Ontario will play a role commensurate with its position on the Great Lakes waterway which links the wide range of natural resources of forests, minerals and water power with one of the most densely populated regions on the Continent. At Sarnia, huge investments are going into plant for a whole group of new products based on the oil flowing through the Edmonton-Superior pipeline and being shipped across the Great Lakes. Other significant developments are taking place in synthetic rubber and industrial and consumer chemicals. Recent expansions in the electrical industries are not only keyed to defence needs but to the needs of the population which is expanding in Ontario at the rate of 10,000 a month. In addition to the large automotive plants in Ontario, three United States automobile producers opened new plants in the Province in 1950. Expansion has also taken place in many other lines including wood, metal and paper products, textiles, tools, farm implements, building products, food products, leather goods, glass and plastics.

Ontario also has the greatest diversification of manufacturing production of any province. Certain industries, such as the manufacture of motor-vehicles, motor-vehicle parts, agricultural implements, heavy electrical machinery, starch and glucose, machine tools, bicycles and parts, miscellaneous non-ferrous metal products, and carpets, mats and rugs are carried on almost exclusively in Ontario. Of the 40 leading industries in Canada in 1950, a substantial number were dominated by Ontario's share of the total production. These industries, with the percentage that the Ontario production of each bears to the 1950 total for Canada, are: motor-vehicles 98; motor-vehicle parts 98; heavy electrical machinery 96; agricultural implements 94; rubber goods 83; primary iron and steel 76; iron castings 70; miscellaneous paper products 60; sheet metal products 59; brass and copper products 59; printing and bookbinding 58; industrial machinery 57; confectionery 57; paper boxes and bags 56; furniture 52; and flour mills 48.

In the case of the smaller industries, too, Ontario dominates the field. In 1950, Ontario contributed more than 75 p.c. of the Canadian total for the following industries: machine tools 100; bicycles and parts 99; carpets, mats and rugs 96; tobacco processing and packing 94; typewriter supplies 92; miscellaneous non-ferrous metal products 91; soaps, washing compounds and cleaning preparations 90; wine 89; breakfast foods 89; inks 88; artificial abrasives 87; leather tanning 86; batteries 85; scientific and professional equipment 84; boilers and plate work 81; automobile accessories, fabric, 81; cordage, rope and twine 80; woollen yarn 79; jewellery and silverware 76; sporting goods 75; toys and games 75; refrigerators, vacuum cleaners and appliances 73; feed mills 71; household, office and store machinery 69; and animal oils and fats 63.

5.—Statistics of the Leading Industries of the Province of Ontario, 1950

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
		No.	No.	$	$	$	$
1	Motor-vehicles	12	28,233	91,763,734	381,400,669	280,861,485	664,718,707
2	Pulp and paper	44	16,977	55,131,461	121,452,150	157,596,001	299,446,083
3	Slaughtering and meat packing	62	7,878	21,018,841	248,282,574	42,915,921	292,708,651
4	Non-ferrous metal smelting and refining	8	8,282	25,088,654	136,504,183	113,611,275	264,301,440
5	Primary iron and steel	23	19,618	59,963,169	123,458,423	116,327,277	259,659,679
6	Motor-vehicle parts	96	18,999	54,502,049	120,299,599	98,961,818	222,115,982
7	Rubber goods, including footwear	32	15,084	39,215,136	83,347,431	111,523,075	197,476,263
8	Machinery, heavy electrical	33	19,662	54,714,677	70,988,049	107,674,292	180,297,433
9	Agricultural implements	37	14,961	40,630,384	75,322,342	63,081,871	140,280,750
10	Petroleum products	14	4,819	14,818,486	98,918,549	33,143,018	139,299,910
11	Flour mills	66	2,352	5,706,961	101,685,047	16,755,924	119,134,355
12	Butter and cheese	660	7,900	16,814,277	87,538,823	29,007,832	119,107,284
13	Fruit and vegetable preparations	200	8,808	15,527,205	57,855,846	43,449,689	102,805,785
14	Sheet metal products	146	10,048	25,628,802	54,461,794	46,017,696	101,795,682
15	Castings, iron	102	11,679	33,130,554	41,349,109	55,427,814	99,400,473
16	Bread and other bakery products	901	14,007	28,022,222	45,761,260	44,190,654	93,129,212
17	Machinery, industrial	169	10,227	27,550,292	31,076,629	59,724,475	91,775,578
18	Furniture	472	14,072	30,797,688	40,542,063	48,166,431	89,697,495
19	Refrigerators, vacuum cleaners and appliances	65	6,927	17,228,427	42,108,016	45,820,532	88,580,865
20	Printing and publishing	295	12,126	32,688,459	26,235,546	61,246,659	88,322,825
21	Electrical apparatus and supplies, *n.e.s.*	96	8,442	21,138,745	41,649,344	41,993,522	84,564,206
22	Boxes and bags, paper	98	7,371	16,940,763	46,498,307	31,699,560	78,801,884
23	Printing and bookbinding	657	11,763	27,703,206	29,474,968	47,976,283	78,052,194
24	Cotton yarn and cloth	29	7,944	16,313,794	43,692,657	30,116,095	74,905,044
25	Brass and copper products	87	5,224	14,248,627	48,074,551	25,257,828	74,302,967
26	Clothing, men's factory	148	10,737	20,928,837	36,000,319	32,774,683	69,004,151
27	Miscellaneous paper goods	111	5,412	13,143,619	36,978,760	30,960,459	68,551,088
28	Feeds, stock and poultry, prepared	246	2,366	5,029,007	55,845,424	11,839,583	68,523,604
29	Sawmills	1,385	9,040	15,163,263	35,709,238	32,043,511	68,488,612
30	Coke and gas products	15	3,082	8,323,015	38,241,919	22,606,062	65,240,739
31	Hardware, tools and cutlery	203	9,258	22,669,983	20,984,007	43,064,278	65,184,116
32	Miscellaneous chemical products, *n.e.s.*	108	3,834	10,322,929	31,311,326	28,112,655	64,920,344
33	Tobacco processing and packing	10	1,218	2,314,118	57,298,250	4,765,904	62,212,708
34	Miscellaneous foods	122	3,246	6,723,457	42,678,718	17,885,260	60,944,522
35	Breweries	21	2,915	9,377,659	16,342,243	42,901,688	60,043,576
36	Machinery, store, office and household	37	5,090	13,472,917	27,464,765	31,561,653	59,414,983
37	Soaps, washing compounds and cleaning preparations	62	3,095	8,943,156	31,889,362	26,343,866	59,221,384
38	Confectionery	82	5,839	10,539,993	32,247,519	26,325,641	59,196,697
39	Wire and wire goods	67	5,367	14,956,294	20,113,787	34,136,615	55,125,866
40	Paints, varnishes and lacquers	54	2,548	6,753,833	26,993,970	24,283,157	51,637,085
	Totals, Leading Industries	**7,075**	**366,450**	**954,948,693**	**2,708,077,536**	**2,162,152,042**	**4,982,390,222**
	Totals, All Industries	**12,809**	**566,513**	**1,412,999,146**	**3,598,821,495**	**3,068,141,837**	**6,822,953,981**
	Percentages of leading industries to all industries	55·2	64·7	67·6	75·2	70·5	73·0

Subsection 4.—The Manufactures of the Prairie Provinces

The leading industries of the Prairie Provinces are those based on agricultural resources—grain-growing, cattle-raising and dairying areas. Next in importance, generally, are industries providing for the more necessary needs of the resident population, such as the baking of bread, printing and publishing, etc. The extensive railway services require large shops for the maintenance of rolling-stock, especially in the Winnipeg area. The greatly increased production of crude petroleum in Alberta as well as the widespread use of motor-vehicles and power machinery on farms in the three provinces has given rise to the establishment and rapid development of petroleum refining. Manitoba, as the early commercial centre of the prairies, has had a greater industrial development than either of the other Provinces.

Its natural resources of accessible water power, forests and, more recently, minerals, have created considerable diversification of industrial production. While agriculture continues to play the main economic role in Saskatchewan, both oil and metal wealth are being developed.

Considering the Prairie Provinces as an economic unit, slaughtering and meat packing had the largest gross value of production in 1950, amounting to $221,776,029, followed by petroleum products with $115,140,064, flour mills $97,789,996, butter and cheese $78,799,591 and railway rolling-stock $40,208,465. These five industries accounted for about 50 p.c. of the total production of the Prairie Provinces. Other leading industries, in order of gross value of production, were: bread and other bakery products, breweries, men's factory clothing, printing and publishing, sawmills, planing mills, prepared stock and poultry feeds, furniture, aerated waters, women's factory clothing, printing and bookbinding, pulp and paper, miscellaneous foods, sheet metal products, etc.

6.—Statistics of the Leading Industries of the Prairie Provinces, 1950

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
		MANITOBA					
		No.	No.	$	$	$	$
1	Slaughtering and meat packing	14	2,848	8,028,473	87,437,320	15,439,202	103,356,037
2	Railway rolling-stock	4	5,727	13,712,128	15,160,908	14,250,986	29,908,993
3	Butter and cheese	80	1,592	3,232,950	17,336,528	6,376,135	24,122,613
4	Flour mills	10	467	924,194	19,297,072	1,800,792	21,226,924
5	Clothing, men's factory	36	2,563	3,799,455	9,606,690	8,663,377	18,326,417
6	Clothing, women's factory	34	1,803	3,625,229	6,454,950	5,904,024	12,396,374
7	Bread and other bakery products	122	1,511	3,053,697	5,424,869	5,619,754	11,409,524
8	Pulp and paper[1]	2	515	1,400,194	2,946,054	7,470,438	11,279,314
9	Petroleum products	3	227	554,557	7,565,743	2,732,030	10,572,274
10	Printing and publishing	77	1,678	3,735,426	2,963,050	7,457,713	10,537,570
11	Furniture	82	1,365	2,860,054	5,415,912	4,532,688	10,044,494
12	Miscellaneous foods, *n.e.s.*	22	391	707,401	7,771,639	1,479,253	9,279,747
13	Printing and bookbinding	76	1,476	3,089,164	3,067,969	5,288,965	8,428,432
14	Breweries	6	591	1,619,323	1,889,373	6,316,635	8,359,776
15	Feeds, stock and poultry, prepared	34	232	466,905	6,242,856	1,039,876	7,369,429
16	Primary iron and steel	4	898	2,206,328	2,192,089	4,455,431	7,070,803
17	Boxes and bags, paper	8	563	1,292,495	4,242,933	2,682,560	6,971,361
18	Sheet metal products	18	801	1,898,177	3,744,071	2,907,128	6,737,810
19	Fur goods	61	776	1,710,014	3,841,750	2,660,440	6,523,025
20	Bags, cotton and jute	4	190	424,758	5,585,566	826,864	6,431,502
21	Aerated waters	21	436	905,165	2,198,039	3,415,872	5,755,099
22	Castings, iron	8	725	1,800,270	1,529,620	3,975,099	5,547,692
23	All other leading industries[2]	8	1,166	3,188,051	27,458,987	10,446,398	38,750,667
	Totals, Leading Industries	**734**	**28,541**	**64,234,408**	**249,373,988**	**125,741,660**	**380,405,877**
	Totals, All Industries	**1,507**	**40,985**	**88,701,601**	**300,384,707**	**177,051,583**	**485,906,206**
		SASKATCHEWAN					
1	Petroleum products	8	693	2,010,113	39,867,481	3,671,714	44,854,805
2	Flour mills	17	674	1,725,682	34,674,096	6,602,173	41,634,048
3	Slaughtering and meat packing	10	1,198	3,131,356	26,509,478	4,989,867	31,765,889
4	Butter and cheese	66	1,358	2,660,871	18,768,568	5,646,772	24,794,552
5	Breweries	5	374	974,090	1,870,685	5,819,656	7,816,884
6	Bread and other bakery products	83	923	1,700,588	3,850,421	3,092,597	7,142,673
7	Printing and publishing	107	1,114	2,452,153	1,366,309	3,933,794	5,387,207
8	Sawmills	274	733	864,884	1,395,405	2,179,226	3,641,075
9	Aerated waters	22	279	527,947	1,226,971	1,465,514	2,842,159
10	Sash, door and planing mills	25	399	798,767	1,425,854	1,287,003	2,754,716
11	Feeds, stock and poultry, prepared	12	101	213,849	1,884,339	270,737	2,182,492
	Totals, Leading Industries[3]	**629**	**7,846**	**17,060,300**	**132,839,607**	**38,959,053**	**174,816,500**
	Totals, All Industries	**887**	**10,596**	**23,010,469**	**164,557,306**	**49,494,641**	**218,079,955**

For footnotes, *see* end of table, p. 674.

6.—Statistics of the Leading Industries of the Prairie Provinces, 1950—concluded

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
		ALBERTA					
		No.	No.	$	$	$	$
1	Slaughtering and meat packing	12	2,838	7,494,242	73,724,171	12,516,869	86,654,103
2	Petroleum products	7	905	2,794,239	49,904,232	8,373,468	59,712,985
3	Flour mills	18	772	1,759,940	31,060,527	3,670,499	34,929,024
4	Butter and cheese	105	1,672	3,348,862	23,494,950	6,016,236	29,882,426
5	Sash, door and planing mills	81	1,493	3,135,834	10,136,722	6,335,794	16,638,388
6	Sawmills	567	2,851	4,101,494	7,378,338	8,195,195	16,005,403
7	Breweries	5	589	1,579,382	3,172,938	8,275,881	11,562,484
8	Bread and other bakery products	119	1,409	2,809,793	6,007,564	5,273,792	11,451,417
9	Railway rolling-stock	3	1,958	4,747,982	5,367,255	4,747,982	10,299,472
10	Feeds, stock and poultry, prepared	48	280	572,659	6,186,562	1,291,639	7,563,354
11	Printing and publishing	83	1,067	2,493,488	1,640,654	5,367,361	7,067,991
12	Clothing, men's factory	9	694	1,131,080	2,785,260	3,305,354	6,102,344
13	Miscellaneous wood products, *n.e.s.*	9	268	603,806	3,766,347	1,075,866	4,892,243
14	Aerated waters	20	313	629,182	1,591,075	2,168,044	3,864,207
15	Furniture	45	510	1,072,609	1,938,807	1,734,246	3,705,398
16	Printing and bookbinding	65	673	1,583,016	1,005,073	2,430,892	3,465,622
17	Fruit and vegetable preparations	8	297	461,648	1,541,771	1,624,507	3,221,195
18	Cement products	23	288	804,336	1,662,576	1,451,480	3,168,223
19	Machine shops	43	519	1,293,111	1,076,915	1,982,173	3,123,899
20	Bridge building and structural steel	3	414	1,008,107	1,321,477	1,667,410	3,017,140
21	Machinery, industrial	9	519	1,275,491	1,167,005	1,630,204	2,848,717
22	Sheet metal products	9	262	541,571	1,481,983	1,259,966	2,753,501
23	Biscuits	3	189	344,686	1,068,825	1,134,982	2,213,426
24	Clay products from domestic clay	11	451	986,056	22,471	1,863,091	1,950,309
25	Bags, cotton and jute	3	57	91,223	1,581,847	294,152	1,880,527
26	Agricultural implements	14	294	698,310	777,430	1,061,652	1,874,093
27	Miscellaneous foods	15	167	281,456	1,118,505	554,247	1,704,272
28	Boxes and baskets, wood	8	226	484,200	706,897	666,782	1,393,781
29	Miscellaneous iron and steel products	8	102	244,567	807,529	480,027	1,295,152
30	Gases, compressed	5	122	320,900	165,162	1,007,030	1,206,968
31	Signs, electric, neon and other	9	126	382,292	295,979	832,695	1,152,348
32	Brass and copper products	3	49	123,874	703,400	309,809	1,021,409
33	All other leading industries[4]	15	1,979	4,585,824	20,274,345	17,110,057	39,484,452
	Totals, Leading Industries	**1,385**	**24,353**	**53,785,260**	**264,934,592**	**115,709,382**	**387,106,273**
	Totals, All Industries	**1,671**	**26,732**	**58,416,324**	**272,131,049**	**123,892,868**	**402,840,023**

[1] Publication of these figures authorized by the two firms concerned. [2] Includes bridge-building and structural steel, non-ferrous metal smelting and refining, malt and malt products, and biscuits. [3] Although non-ferrous metal smelting and refining is also a leading industry, figures cannot be given because there are fewer than three establishments. [4] Includes paper boxes and bags, cement, condensed milk, fertilizers, gypsum products glass and glass products, malt and malt products, and sugar refineries.

Subsection 5.—The Manufactures of British Columbia

Forest resources have made British Columbia the third most important manufacturing province of Canada. British Columbia is currently succeeding in providing a solid foundation for its industrial development by pushing factories and plants into more remote sections and drawing greater value in employment and dollars from its natural resources without increasing the strain on those resources at too fast a rate. One of the most impressive fields of expansion is to be found in the pulp and paper industry. British Columbia accounts for approximately one-half of the total fisheries production of Canada and plays a large part in making Canada the largest fish-exporting nation in the world. This Province has been significantly influenced also by recent developments in the petroleum products and meat-packing industries.

Emphasizing the importance of the forests in the industrial life of the Province, the sawmilling industry ranked first with a gross value of production of $293,022,294, and the pulp and paper industry second with $86,886,870. Third in importance was fish curing and packing, based principally on the estuarial salmon fisheries. Other important industries are: slaughtering and meat packing, petroleum products, fertilizers, planing mills, veneers and plywoods, miscellaneous food products, fruit and vegetable preparations, butter and cheese, etc. The varied resources of the Pacific Coast have resulted in a wide diversification of its manufactures.

7.—Statistics of the Leading Industries of the Province of British Columbia, 1950

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials Used	Net Value of Products	Gross Value of Products
		No.	No.	$	$	$	$
1	Sawmills	1,462	27,704	67,667,895	141,848,964	148,286,160	293,022,294
2	Pulp and paper	9	4,573	15,123,235	28,846,553	54,234,983	86,886,870
3	Fish processing	68	3,869	9,444,511	39,296,797	27,627,557	67,728,992
4	Slaughtering and meat packing	11	1,385	3,850,602	45,367,014	5,217,270	50,883,632
5	Petroleum products	5	565	1,809,293	26,640,725	11,122,709	38,675,270
6	Sash, door and planing mills	146	2,632	6,196,818	22,229,437	11,485,054	34,070,701
7	Veneers and plywoods	11	2,990	7,347,416	13,729,327	16,094,945	30,047,542
8	Miscellaneous food industries	40	702	1,235,115	23,876,445	4,708,696	28,668,471
9	Fertilizers	7	1,309	4,007,401	9,327,707	18,285,489	27,745,806
10	Fruit and vegetable preparations	75	2,313	3,804,835	15,847,422	8,182,799	24,307,003
11	Butter and cheese	33	1,800	4,099,848	14,080,747	6,370,584	21,007,337
12	Bread and other bakery products	243	2,537	5,420,420	9,454,000	8,686,619	18,700,824
13	Printing and publishing	82	2,708	7,385,199	4,349,751	12,438,431	16,920,175
14	Feeds, stock and poultry, prepared	38	650	1,481,360	10,983,041	3,184,036	14,421,867
15	Machinery, industrial	40	1,796	5,200,753	4,237,221	9,568,240	13,973,429
16	Sheet metal products	29	996	2,528,392	8,163,566	5,523,616	13,798,872
17	Furniture	178	2,099	4,408,644	6,670,545	6,695,137	13,502,308
18	Shipbuilding	26	2,444	6,380,490	3,776,765	8,769,392	12,798,980
19	Breweries	11	718	1,955,202	2,829,373	9,199,371	12,227,463
20	Boxes and bags, paper	11	780	1,633,826	6,429,011	3,765,897	10,263,180
	Totals, Leading Industries[1]	**2,525**	**64,570**	**160,981,255**	**437,984,411**	**379,446,985**	**829,652,016**
	Totals, All Industries	**3,696**	**87,375**	**216,656,977**	**634,177,837**	**479,606,261**	**1,133,016,956**

[1] Other leading industries for which statistics cannot be given because there are fewer than three establishments in each industry are: non-ferrous metal smelting and refining, sugar refining, and bridge building and structural steel.

Section 2.—Manufacturing Industries in Urban Centres

The prosperity of most of the cities and towns of Canada, especially in the east, is intimately connected with their manufacturing industries, which provide employment for a large proportion of the labour forces. In the west the cities are more largely distributing centres, though manufactures are increasing rapidly there also.

Table 8 indicates the extent to which the manufacturing industries of Canada are concentrated in urban centres and shows, by provinces, the proportion of the gross manufacturing production contributed by cities and towns having a gross production of over $1,000,000 each. In the more highly industrialized Provinces of Ontario and Quebec such cities and towns in 1950 accounted for 94 p.c. of the total manufactures for those Provinces, while in the Atlantic Provinces and British Columbia, where sawmilling, fish packing, and dairying are leading industries, the proportions were 67 p.c. and 60 p.c., respectively. In the Prairie Provinces manufacturing is confined largely to a few urban centres.

8.—Urban Centres, each with a Gross Manufacturing Production of over $1,000,000, Number of Establishments and Production in these Centres as a Percentage of the Provincial Total, by Province, 1950.

NOTE.—Statistics published in this table are in some cases higher than the figures published in Table 11, pp. 677-682, since the table below includes statistics of towns with fewer than three establishments and production of over $1,000,000 each. It is not possible to publish this information in Table 11 without disclosing the operations of individual establishments.

Province or Territory	Urban Centres with a Gross Production of over $1,000,000 each	Establishments Reporting in Urban Centres Producing over $1,000,000 each	Total Production in Urban Centres Producing over $1,000,000 each	Total Production in each Province	Production in Urban Centres as a Percentage of Total Production in each Province
	No.	No.	$	$	p.c.
Newfoundland	2	116	47,459,730	71,062,850	66·8
Prince Edward Island	2	53	12,095,702	19,811,023	61·1
Nova Scotia	23	484	170,656,474	255,887,499	66·7
New Brunswick	15	312	190,276,993	263,753,067	72·1
Quebec	135	7,207	3,886,133,152	4,142,473,290	93·8
Ontario	170	9,411	6,414,786,179	6,822,953,981	94·0
Manitoba	13	1,135	443,786,457	485,906,206	91·3
Saskatchewan	9	380	177,121,553	218,079,955	81·2
Alberta	14	776	306,474,760	402,840,023	76·1
British Columbia	29	2,279	678,461,417	1,133,016,956	59·9
Yukon and Northwest Territories	—	—	—	1,741,531	—
Canada	**412**	**22,153**	**12,327,252,417**	**13,817,526,381**	**89·2**

9.—Principal Statistics of the Manufacturing Industries of the Six Leading Manufacturing Cities, 1939, 1944, 1946 and 1948-50

City and Year	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products[1]
	No.	No.	$	$	$	$
Montreal, Que.....1939	2,501	105,315	114,602,118	7,667,848	254,188,246	483,246,583
1944	3,109	185,708	308,396,358	15,855,932	650,618,563	1,215,988,014
1946	3,785	173,507	291,381,617	14,740,538	602,667,823	1,147,945,303
1948	3,887	180,098	368,191,470	20,269,002	841,048,938	1,550,246,090
1949	4,136	184,779	399,943,526	16,487,474	847,444,669	1,596,713,694
1950	4,127	184,982	419,217,987	17,034,094	914,907,200	1,696,677,033
Toronto, Ont.....1939	2,885	98,702	122,553,435	7,306,351	240,532,281	482,532,331
1944	3,344	154,538	260,776,613	11,743,947	513,429,109	1,020,345,353
1946	3,632	145,556	247,298,288	12,238,707	549,256,912	1,036,939,790
1948	3,683	154,197	335,142,822	16,500,672	804,970,396	1,475,761,819
1949	4,005	158,562	368,510,524	17,003,151	837,148,440	1,579,186,450
1950	4,011	160,063	392,754,292	18,176,609	918,699,592	1,686,922,991
Hamilton, Ont.....1939	461	31,512	39,563,423	5,267,577	70,829,034	152,746,340
1944	480	53,500	94,982,915	12,095,294	171,117,467	363,033,672
1946	501	45,951	80,959,432	10,434,888	150,977,835	308,033,098
1948	526	53,370	124,016,143	19,583,629	259,800,537	519,132,345
1949	546	54,665	137,641,333	17,728,214	285,180,403	563,982,920
1950	549	54,823	145,093,180	18,862,120	310,380,224	625,480,893
Windsor, Ont.....1939	222	17,729	25,938,890	1,673,417	63,907,106	122,474,320
1944	231	35,912	80,667,573	4,890,272	232,102,240	387,603,874
1946	256	30,889	60,315,436	3,748,979	138,788,813	244,925,148
1948	271	32,729	85,354,165	5,100,497	231,706,777	413,749,890
1949	283	34,591	94,304,627	5,373,123	271,392,923	494,162,203
1950	280	34,901	105,778,494	4,967,956	311,563,422	564,870,512

For footnote *see* end of table.

9.—Principal Statistics of the Manufacturing Industries of the Six Leading Manufacturing Cities, 1939, 1944, 1946 and 1948-50—concluded

City and Year	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products[1]
	No.	No.	$	$	$	$
Vancouver, B.C.....1939	829	17,957	22,382,192	1,397,159	56,565,511	101,267,243
1944	933	43,473	79,141,407	3,568,106	142,416,371	289,390,718
1946	1,071	31,408	55,960,984	3,075,458	138,045,068	270,165,166
1948	1,136	33,815	75,300,519	4,299,879	211,726,521	360,749,092
1949	1,225	33,536	78,793,345	4,392,716	204,642,985	358,620,526
1950	1,219	34,411	85,542,771	4,894,707	234,053,078	409,347,342
Winnipeg, Man.....1939	648	17,571	20,717,273	1,491,823	44,873,043	81,024,272
1944	686	25,870	38,824,299	2,445,806	119,917,745	198,169,626
1946	756	26,730	42,354,650	2,625,075	121,531,306	206,381,007
1948	765	27,906	54,379,965	3,133,001	157,379,778	264,022,796
1949	860	28,687	58,604,162	3,166,077	143,827,270	255,006,806
1950	855	27,804	58,991,267	3,086,710	142,486,939	261,781,262

[1] Net value is derived from gross value by deducting cost of materials, fuel and electricity.

10.—Principal Statistics of the Manufacturing Industries in the Six Leading Metropolitan Areas, 1950

Metropolitan Area	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products
	No.	No.	$	$	$	$
Greater Montreal[1]	4,546	217,522	501,555,570	36,979,130	1,224,869,852	2,233,108,037
Greater Toronto	4,348	187,223	465,058,869	22,561,243	1,086,745,813	2,024,851,723
Greater Hamilton	638	57,554	150,856,448	19,366,709	322,011,070	648,295,615
Greater Vancouver	1,548	50,014	124,576,929	8,031,396	358,242,771	634,949,837
Greater Windsor	297	35,364	106,677,079	5,017,309	314,197,024	569,209,197
Greater Winnipeg	990	36,146	79,055,002	5,954,206	254,246,235	413,286,638

[1] Exclusive of the non-ferrous smelting and refining industry.

11.—Statistics of Manufactures of Urban Centres, each with a Gross Production of $1,000,000 or over and with Three or More Establishments, 1950

NOTE.—Statistics for urban centres with three or more establishments cannot be published when one establishment has 75 p.c. or two establishments 90 p.c. of the total production.

Province and Municipality	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products
	No.	No.	$	$	$	$
Newfoundland—						
Corner Brook (East and West)	7	1,625	6,376,732	1,350,485	12,802,310	29,683,194
St. John's	109	2,356	4,232,360	375,311	8,877,400	17,776,536
Prince Edward Island—						
Charlottetown	36	607	1,106,411	120,508	6,627,639	8,651,772
Summerside	17	306	403,130	40,566	2,777,466	3,443,930
Nova Scotia—						
Amherst	22	995	1,844,096	253,051	5,468,210	9,317,206
Berwick	10	213	281,929	60,804	1,244,690	1,823,559
Bridgetown	9	170	258,445	23,873	665,109	1,284,535
Bridgewater	20	222	380,282	34,146	714,980	1,501,323
Dartmouth	18	266	497,096	75,746	965,482	2,053,049
Digby	11	260	457,135	19,103	1,112,750	1,860,124
Glace Bay	16	205	285,796	28,688	608,434	1,271,234
Halifax	142	5,600	11,193,377	743,812	22,652,705	42,492,674
Hantsport	5	291	526,250	62,977	981,171	2,351,032
Lockeport	4	260	369,921	30,182	1,323,281	2,054,862

11.—Statistics of Manufactures of Urban Centres, each with a Gross Production of $1,000,000 or over and with Three or More Establishments, 1950—continued

Province and Municipality	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products
	No.	No.	$	$	$	$
Nova Scotia—concluded						
Lunenburg	16	630	1,109,516	71,640	2,836,693	4,672,421
Middleton	10	179	232,467	23,917	839,708	1,378,175
New Glasgow	27	964	1,961,838	299,588	2,428,313	5,963,767
North Sydney	13	327	533,217	47,928	1,169,061	2,198,353
Pictou	9	315	513,939	36,624	1,071,157	1,886,783
Shelburne	17	214	341,587	22,985	845,761	1,588,575
Stellarton	8	130	213,496	20,810	699,066	1,115,443
Sydney	38	5,745	15,380,430	4,882,733	29,554,904	57,615,234
Truro	37	1,153	1,806,048	185,005	4,424,355	7,782,519
Windsor	14	307	445,294	44,758	1,709,200	2,399,062
Yarmouth	26	849	1,465,314	155,422	4,551,631	7,750,098
New Brunswick—						
Campbellton	16	309	482,413	51,244	977,451	1,897,761
Fredericton	43	821	1,383,694	128,270	3,529,153	6,135,187
Moncton	48	3,676	7,703,356	529,652	20,261,043	32,261,331
Newcastle	11	504	1,118,515	289,431	3,620,343	6,659,324
Saint John	107	3,314	6,628,977	1,052,138	44,813,523	62,271,015
St. Stephen	14	592	958,479	68,623	1,928,185	3,775,715
Sussex	11	225	369,198	48,024	1,514,344	2,581,682
Woodstock	16	148	224,571	30,910	833,251	1,227,421
Quebec—						
Acton Vale	13	893	1,422,536	65,561	2,694,808	4,752,928
Asbestos	16	528	1,167,796	207,323	3,553,813	5,453,838
Beauharnois	14	1,574	4,217,805	1,410,567	7,470,435	17,601,315
Beauport	13	162	271,420	17,504	808,650	1,310,601
Bedford	12	889	1,563,204	42,544	766,804	4,293,165
Beebe Plain	11	293	478,730	18,667	1,101,952	1,864,334
Berthierville	15	679	1,077,830	140,515	2,288,716	4,801,040
Cabano	11	218	382,852	5,500	651,435	1,525,646
Cap de la Madeleine	31	2,319	4,554,576	957,705	15,403,601	29,292,414
Chambly Canton	9	426	906,987	69,174	1,547,850	2,942,631
Chicoutimi	33	453	793,205	60,306	1,722,178	3,069,370
Coaticook	21	1,048	1,786,481	114,421	4,254,572	7,537,226
Contrecœur	10	288	373,685	10,533	727,078	1,335,224
Danville	12	161	283,285	73,602	617,074	1,100,828
Drummondville	46	8,499	18,140,436	1,714,207	24,144,054	67,308,971
Farnham	21	1,014	2,049,124	161,152	4,606,060	9,034,827
Granby	67	5,002	9,970,514	558,608	24,459,486	46,990,122
Grand'Mère	26	2,332	4,871,906	1,320,846	11,369,277	23,637,808
Grenville	4	108	199,218	25,775	831,246	1,175,347
Hull	66	3,722	8,569,996	1,865,451	26,547,148	44,222,810
Huntingdon	15	675	1,616,621	134,569	6,718,016	10,415,677
Iberville	20	392	689,628	35,297	1,409,284	2,890,703
Joliette	59	2,215	3,878,905	502,529	7,549,049	15,612,342
Jonquière	16	485	1,228,839	275,760	3,256,212	5,558,745
Lachine	54	6,886	19,262,874	1,019,780	24,425,402	61,864,819
Lachute	11	273	580,451	137,855	1,506,426	2,414,429
La Pérade	13	262	413,492	94,750	1,554,096	2,219,323
Laprairie	18	350	716,580	209,160	706,955	2,286,361
Lasalle	36	3,567	8,684,090	4,347,689	38,165,746	75,932,699
La Sarre	13	172	301,839	19,765	627,797	1,131,255
Lennoxville	13	412	900,059	155,445	2,031,336	3,816,635
L'Epiphanie	14	255	446,465	27,258	707,840	1,534,534
Lévis	37	590	921,241	66,733	2,465,368	4,062,411
Longueuil	36	2,219	4,702,040	300,248	10,176,781	20,766,670
Loretteville	28	602	639,133	21,394	1,431,886	2,418,091
Marieville	20	502	716,501	48,405	2,377,106	3,942,435
Matane	22	330	609,667	23,449	1,125,728	2,289,545
Mégantic	18	497	812,201	69,934	1,244,600	2,586,628
Mont Laurier	19	283	397,165	32,526	1,099,574	2,256,232
Montmagny	47	1,569	2,521,048	143,035	4,860,068	10,526,984
Montreal	4,127	184,982	419,217,987	17,034,094	914,907,200	1,696,677,033
Montreal East	25	4,952	13,575,287	11,463,148	239,798,091	318,203,760
Nicolet	18	451	717,817	53,929	1,692,175	2,957,824
Outremont	25	1,325	3,238,479	117,903	14,218,724	23,940,387
Plessisville	20	850	1,656,651	78,427	2,791,673	5,185,045
Point-aux-Trembles	11	464	913,944	60,061	1,023,549	2,593,858
Portneuf Station	12	408	808,788	299,325	3,543,940	5,954,276
Princeville	12	389	647,792	69,966	4,662,362	6,232,161
Quebec	434	14,810	27,328,810	3,564,502	72,614,883	134,262,488
Richmond	13	435	898,298	26,709	1,095,123	2,651,780

11.—Statistics of Manufactures of Urban Centres, each with a Gross Production of $1,000,000 or over, and with Three or More Establishments, 1950—continued

Province and Municipality	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products
	No.	No.	$	$	$	$
Quebec—concluded						
Rimouski	32	448	912,712	32,787	1,282,625	2,745,039
Rivière-du-Loup	22	462	861,916	91,007	1,170,502	2,304,159
Rock Island	18	608	1,245,917	56,699	1,103,897	4,157,389
St. Casimir	14	112	137,292	14,498	803,201	1,091,619
St. Césaire	27	355	482,478	34,034	1,175,851	1,951,417
Ste. Croix	9	182	292,673	18,384	576,204	1,021,017
St. Félicien	16	262	388,308	31,291	2,402,571	3,626,229
St. Félix-de-Valois	16	72	84,585	9,088	818,292	1,073,066
St. Gabriel-de-Brandon	21	271	347,444	13,199	524,462	1,154,606
St. Georges (Beauce Co.)	13	416	709,647	57,613	784,676	2,090,900
St. Georges West	8	266	345,958	34,049	817,215	1,689,418
St. Hyacinthe	86	4,990	8,840,806	547,419	24,317,801	41,492,089
St. Jacques	9	195	191,082	10,632	1,010,481	1,276,300
St. Jean	66	5,072	11,421,507	864,715	18,192,013	39,070,142
St. Jérôme (Terrebonne Co.)	54	3,821	6,650,126	506,524	11,033,921	23,416,474
St. Lambert	16	795	1,552,824	113,100	2,930,517	5,910,924
St. Laurent	29	2,957	7,904,447	635,066	14,858,148	29,643,020
Ste. Marie	20	630	1,076,809	93,763	2,427,664	4,105,147
St. Michel de Laval	27	249	434,540	29,741	808,472	1,489,463
St. Pie	14	205	301,365	33,903	1,296,188	1,874,199
St. Rémi	11	326	478,798	51,055	2,685,962	4,228,389
Ste. Thérèse de Blainville	32	920	1,618,670	84,176	2,312,803	5,576,897
St. Tite	24	345	439,308	18,609	1,002,170	1,752,410
Shawinigan Falls	45	4,863	13,279,301	7,216,012	34,200,928	84,011,064
Shawville	10	96	138,674	19,895	861,402	1,138,499
Sherbrooke	100	8,107	16,178,199	1,158,394	34,977,844	70,058,897
Sorel	34	1,661	3,344,319	257,805	1,302,460	5,048,708
Sutton	11	174	237,673	19,897	598,132	1,022,405
Terrebonne	17	583	1,144,179	51,674	1,892,218	4,077,668
Thetford Mines	28	391	663,381	84,888	833,551	2,120,210
Three Rivers	80	6,979	17,121,773	6,204,590	38,886,570	92,901,507
Thurso	10	412	949,303	15,434	1,935,400	3,159,111
Trois Pistoles	17	254	439,204	16,740	2,422,958	3,389,018
Val D'Or	19	200	373,925	32,744	489,322	1,123,488
Valleyfield	42	4,072	8,797,933	684,397	15,871,501	34,481,838
Verchères	15	113	187,296	42,775	1,101,746	1,570,562
Verdun	58	1,260	2,335,995	78,174	5,017,086	9,743,811
Victoriaville	56	2,580	4,525,356	174,809	8,387,775	15,802,243
Warwick	17	407	690,776	71,733	2,122,834	3,721,485
Waterloo	20	890	1,647,969	74,893	2,347,918	5,350,063
Westmount	14	1,940	4,703,100	297,003	5,825,451	14,233,247
Ontario—						
Acton	20	1,019	2,199,956	250,278	7,005,001	11,252,351
Almonte	11	335	676,139	114,214	2,395,878	3,478,975
Amherstburg	11	918	2,489,981	1,641,865	3,846,365	13,201,192
Arnprior	19	607	1,290,123	103,458	2,418,503	5,014,998
Aurora	49	647	1,381,636	80,067	5,189,083	7,826,329
Barrie	25	1,000	1,985,448	157,574	7,587,608	14,630,841
Beamsville	13	150	245,300	13,455	573,551	1,000,383
Belleville	58	2,846	6,750,345	1,509,829	9,198,337	25,090,245
Bloomfield	10	155	206,862	27,377	924,434	1,371,962
Blyth	5	33	60,181	15,582	1,091,090	1,216,755
Brampton	30	1,080	2,349,664	131,644	4,384,296	8,975,399
Brantford	150	13,544	33,291,327	1,792,272	61,750,955	125,828,360
Brockville	42	1,775	3,983,228	332,418	23,539,619	28,153,167
Burlington	16	652	1,527,113	101,336	4,958,654	7,963,627
Caledonia	11	292	668,494	240,531	2,473,243	4,601,378
Campbellford	19	360	685,684	56,713	2,159,367	3,608,578
Carleton Place	10	821	1,632,738	114,847	2,052,600	4,735,248
Chatham	72	3,879	9,722,612	1,131,756	47,782,245	67,981,128
Chesley	13	387	661,604	27,331	1,158,875	2,114,353
Clinton	11	173	299,805	25,886	642,866	1,851,428
Cobourg	30	1,046	2,107,204	195,732	4,199,075	8,826,384
Collingwood	19	1,094	2,348,243	120,023	3,532,441	6,548,571
Cornwall	52	6,811	16,276,165	3,351,038	25,463,530	63,604,729
Deseronto	5	225	334,224	17,876	763,868	1,319,277
Dresden	12	160	256,796	52,062	877,881	1,746,364
Dundas	30	1,307	2,934,056	217,057	2,944,572	8,279,500
Dunnville	20	1,036	1,952,990	104,199	4,990,566	7,809,933
Durham	13	246	482,278	44,469	766,562	1,439,628
Eastview	76	308	721,196	69,188	3,453,687	4,965,586

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11.—Statistics of Manufactures of Urban Centres, each with a Gross Production of $1,000,000 or over and with Three or More Establishments, 1950—continued

Province and Municipality	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products
	No.	No.	$	$	$	$
Ontario—continued						
Elmira	21	773	1,698,492	168,960	4,079,430	8,158,562
Elora	7	357	694,115	35,602	695,316	1,870,253
Essex	14	270	510,586	71,540	1,185,927	2,301,891
Exeter	7	119	191,717	27,020	641,494	1,052,207
Forest	12	217	316,423	37,771	885,326	1,557,311
Fort Erie	18	657	1,963,266	56,205	4,456,951	11,895,926
Fort William	50	3,046	8,349,667	2,345,238	21,158,440	45,208,699
Galt	91	6,069	13,481,983	739,072	21,582,811	45,248,268
Gananoque	18	770	1,729,573	156,149	3,004,703	6,058,043
Georgetown	18	1,053	2,610,673	180,930	5,374,042	10,220,103
Goderich	17	537	1,020,767	261,658	6,512,100	8,956,917
Gravenhurst	8	321	629,953	25,483	946,212	2,211,821
Grimsby	17	532	922,263	61,952	1,779,870	3,931,429
Guelph	106	6,081	13,725,354	990,011	26,405,766	51,890,283
Hamilton	549	54,823	145,093,180	18,862,120	310,380,224	625,480,893
Hanover	22	1,061	2,029,284	93,961	2,969,806	5,993,979
Harriston	13	213	320,534	47,732	1,054,423	1,648,086
Harrow	11	99	183,132	29,422	923,053	1,392,746
Hearst	8	244	531,411	22,169	1,397,203	2,498,475
Hespeler	20	2,038	4,328,423	457,880	6,140,347	12,717,334
Huntsville	16	460	906,267	66,759	3,818,634	5,694,786
Ingersoll	27	1,310	3,082,051	231,603	8,653,757	14,807,860
Kincardine	13	470	787,017	49,022	1,329,382	2,819,850
Kingston	70	5,168	12,175,346	1,219,496	24,626,062	53,571,292
Kitchener	195	14,934	34,411,968	1,779,518	86,462,387	159,409,436
Leamington	17	1,158	2,434,600	288,489	17,800,328	27,787,572
Leaside	50	8,918	23,483,393	1,070,518	51,267,977	101,285,161
Lindsay	35	952	1,778,582	162,741	3,489,663	7,324,315
Listowel	14	483	922,692	79,678	2,088,031	3,771,229
London	275	15,781	37,263,956	2,045,147	77,886,843	158,623,745
Long Branch	34	1,241	3,220,686	138,309	6,537,297	14,491,214
Meaford	18	418	726,039	44,397	1,210,326	2,520,963
Merritton	16	1,903	5,504,561	900,635	11,693,194	23,179,749
Midland	21	810	1,559,819	87,377	5,229,407	8,087,625
Milton	13	638	1,412,189	324,334	2,399,840	6,521,523
Milverton	10	269	510,836	26,686	889,037	1,709,463
Mimico	31	618	1,478,241	146,479	2,006,959	4,955,039
Morrisburg	8	192	260,591	8,516	468,552	1,032,600
Mount Forest	15	245	366,820	31,574	891,482	1,526,312
Napanee	17	406	804,952	109,016	2,135,101	3,744,109
Newcastle	3	222	413,175	10,791	481,210	1,008,945
New Hamburg	12	344	611,496	36,634	1,094,399	2,242,782
New Liskeard	14	605	1,101,808	44,059	2,032,680	3,857,318
Newmarket	19	1,028	2,332,557	122,870	4,958,653	9,775,939
New Toronto	37	6,589	19,091,187	1,689,155	67,335,666	124,431,476
Niagara Falls	81	6,106	16,427,750	4,940,914	31,992,398	77,563,043
North Bay	31	567	1,382,641	113,137	2,164,015	4,711,695
Norwich	8	102	154,091	28,512	760,299	1,176,982
Oakville	43	1,449	3,353,136	242,568	5,898,011	13,754,273
Orangeville	14	201	326,712	31,598	912,934	1,409,921
Orillia	47	1,920	4,006,951	304,901	5,723,429	12,885,586
Ottawa	268	9,800	22,539,621	1,760,733	37,037,004	80,885,740
Owen Sound	52	2,484	5,144,040	277,899	6,076,629	15,283,611
Palmerston	8	67	105,784	15,493	984,482	1,152,146
Paris	24	1,498	3,260,067	137,569	5,347,911	11,647,894
Pembroke	32	1,004	1,934,564	93,620	3,453,338	7,119,224
Penetanguishene	13	419	738,364	39,438	1,072,582	2,370,375
Perth	25	943	1,651,377	102,183	3,394,384	6,974,134
Peterborough	98	9,724	24,536,725	1,201,826	63,570,163	111,445,960
Petrolia	13	464	969,183	481,562	7,105,925	8,414,535
Picton	18	161	259,245	24,611	711,690	1,154,225
Port Arthur	54	2,447	6,691,968	1,664,157	14,405,150	32,691,155
Port Dalhousie	5	254	476,029	19,391	580,565	1,630,558
Port Dover	9	113	176,571	13,739	631,013	1,080,408
Port Elgin	9	211	349,537	16,988	573,952	1,052,422
Port Hope	24	1,119	2,988,503	329,928	4,003,963	10,604,036
Prescott	17	638	955,679	34,762	1,666,147	3,435,580
Preston	39	2,934	6,322,790	248,497	9,394,527	20,419,487
Renfrew	28	939	1,818,542	162,717	3,480,042	6,271,251
Ridgetown	12	284	590,192	27,680	718,208	2,062,191
St. Catharines	111	10,415	29,678,884	1,521,944	48,063,051	105,506,667
St. Mary's	13	658	1,412,869	920,264	5,301,342	10,036,059

11.—Statistics of Manufactures of Urban Centres, each with a Gross Production of $1,000,000 or over and with Three or More Establishments, 1950—continued

Province and Municipality	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products
	No.	No.	$	$	$	$
Ontario—concluded						
St. Thomas	44	2,343	5,107,355	295,949	9,453,429	17,886,335
Sarnia	49	7,512	21,243,294	11,096,453	99,740,557	169,803,424
Sault Ste. Marie	54	7,343	20,958,735	9,127,896	58,222,466	109,521,309
Seaforth	13	285	493,256	30,932	1,530,562	2,376,018
Simcoe	30	1,344	2,820,001	200,715	13,148,121	20,809,311
Sioux Lookout	7	101	196,159	19,485	962,838	1,273,662
Southampton	8	324	704,349	18,420	1,059,734	2,025,462
Stratford	67	3,657	8,123,585	398,058	14,414,822	27,423,128
Strathroy	19	491	848,525	44,686	1,926,800	3,255,574
Streetsville	13	313	682,518	134,642	3,178,372	5,048,035
Sudbury	43	907	1,942,765	170,998	4,821,860	8,670,485
Swansea	9	718	1,818,379	233,638	3,449,911	7,787,923
Tavistock	9	170	266,457	23,735	1,525,167	1,962,294
Tecumseh	5	268	407,919	31,733	864,382	1,830,273
Thorold	26	2,167	7,335,385	3,016,567	16,706,643	36,034,685
Tillsonburg	26	794	1,526,823	184,373	8,841,333	11,520,338
Timmins	26	631	1,222,046	69,610	2,050,382	4,537,285
Toronto	4,011	160,063	392,754,262	18,176,609	918,699,592	1,686,922,991
Trenton	25	1,338	2,755,197	409,380	6,830,831	13,103,667
Tweed	10	153	262,788	20,624	804,891	1,506,588
Walkerton	17	476	892,276	41,823	1,175,730	2,465,735
Wallaceburg	25	2,927	6,915,844	1,242,257	14,588,893	27,627,679
Waterford	7	146	212,508	13,974	909,766	1,152,040
Waterloo	55	2,572	6,049,438	384,084	11,564,359	30,987,250
Watford	8	129	238,338	21,635	509,639	1,050,980
Welland	58	8,016	23,657,248	4,233,203	45,414,292	97,308,179
Wellington	8	133	216,608	47,649	1,067,148	1,658,831
West Lorne	7	215	374,626	20,812	904,560	1,591,440
Weston	46	2,716	6,761,800	426,849	13,341,357	27,654,437
Whitby	13	396	629,127	42,449	1,099,922	2,266,772
Winchester	8	67	112,753	34,658	1,035,351	1,452,731
Windsor	280	34,901	105,778,494	4,967,956	311,563,422	564,870,512
Wingham	16	400	740,778	50,969	1,607,595	2,806,573
Woodstock	65	3,797	8,364,742	407,726	21,437,483	39,404,569
Manitoba—						
Brandon	41	754	1,584,729	190,148	9,347,825	13,192,304
Dauphin	13	105	175,983	21,180	670,465	1,139,251
Marden	8	87	192,549	53,008	432,753	1,044,666
Neepawa	8	102	212,162	68,574	599,178	1,080,390
Portage la Prairie	20	250	382,327	33,070	1,014,200	1,769,648
St. Boniface	85	4,097	10,423,514	927,000	92,795,176	114,751,219
Selkirk	60	899	2,081,041	425,897	2,600,074	7,305,924
Steinbach	14	197	379,766	39,487	1,119,051	1,835,229
The Pas	10	145	354,538	9,681	360,589	1,490,461
Transcona	5	2,493	6,033,700	398,520	12,259,489	20,108,553
Winnipeg	855	27,804	58,991,267	3,086,710	142,486,939	261,781,262
Saskatchewan—						
Kamsack	9	53	77,013	7,757	786,143	1,157,177
Melville	8	58	94,371	19,733	984,723	1,214,523
Moose Jaw	46	1,308	3,218,924	629,608	33,460,038	41,058,063
North Battleford	12	155	261,710	36,369	820,521	1,401,070
Prince Albert	32	923	2,026,822	182,232	10,805,666	15,728,534
Regina	132	2,977	7,086,129	1,293,238	40,169,207	54,806,567
Saskatoon	113	2,715	6,045,521	738,815	42,269,071	57,158,053
Swift Current	11	194	422,708	80,747	1,537,151	2,363,082
Yorkton	17	162	314,178	71,006	1,459,262	2,234,484
Alberta—						
Athabasca	21	138	215,610	23,871	1,027,030	1,475,876
Barrhead	11	90	162,206	14,521	1,062,174	1,360,201
Calgary	284	7,910	18,509,347	1,677,951	89,077,718	122,767,543
Edmonton	292	8,638	20,300,073	938,774	82,052,889	119,447,681
Grande Prairie	20	266	481,258	61,232	1,668,451	3,091,019
Lethbridge	43	974	2,112,306	146,604	6,378,250	12,171,678
Medicine Hat	34	1,056	2,151,707	134,946	16,511,391	20,935,831
Red Deer	17	144	296,625	38,743	1,742,604	2,803,288
Rocky Mountain House	26	150	229,743	22,877	1,189,586	1,729,440
Wetaskiwin	8	53	115,658	12,804	1,010,181	1,210,256

11.—Statistics of Manufactures of Urban Centres, each with a Gross Production of $1,000,000 or over and with Three or More Establishments, 1950—concluded

Province and Municipality	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products
	No.	No.	$	$	$	$
British Columbia—						
Armstrong	12	136	288,990	30,632	663,342	1,402,354
Burns Lake	15	144	304,157	24,384	1,775,956	2,441,137
Chilliwack	28	243	499,323	60,437	1,409,966	2,329,587
Cranbrook	22	404	938,280	83,842	1,964,079	3,904,861
Creston	13	126	222,732	16,945	661,735	1,113,335
Dawson Creek	20	271	483,327	73,336	1,487,124	2,314,899
Duncan	29	197	435,391	31,370	847,126	1,613,447
Fernie	8	91	211,489	24,230	387,736	1,314,136
Kamloops	31	427	915,416	80,887	1,406,047	3,243,501
Kelowna	35	697	1,535,471	97,806	3,152,879	6,054,184
Lake Cowichan	4	450	1,349,343	78,586	1,996,723	4,947,016
Merritt	8	152	369,822	23,752	590,896	1,337,910
Mission City	25	513	993,611	72,794	2,863,993	5,035,855
Nanaimo	27	519	1,287,498	88,823	2,884,379	5,054,645
Nelson	37	571	1,261,087	102,486	2,721,450	6,008,570
New Westminster	114	6,313	16,161,699	925,872	50,491,993	92,790,444
North Vancouver	56	1,901	4,671,945	253,542	7,837,576	16,735,857
Oliver	8	121	269,022	16,681	510,179	1,007,146
Penticton	25	288	546,944	33,578	1,031,263	2,272,718
Port Alberni	23	2,010	5,586,580	223,493	12,017,592	27,139,017
Port Moody	6	636	1,819,736	11,629	3,534,205	8,388,265
Prince George	148	1,262	2,657,520	225,389	8,814,192	14,140,665
Prince Rupert	25	562	1,351,094	59,787	3,852,108	6,939,732
Quesnel	73	387	679,506	75,690	1,889,734	3,261,512
Revelstoke	15	131	248,404	31,538	526,759	1,108,804
Vancouver	1,219	34,411	85,542,771	4,894,707	234,053,078	409,347,342
Vernon	43	434	780,699	68,497	1,663,413	3,136,521
Victoria	201	4,223	10,373,639	798,177	21,209,973	42,931,688
Williams Lake	9	109	190,641	20,372	581,094	1,146,269

CHAPTER XVII.—LABOUR*

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—The Government in Relation to Labour

Subsection 1.—Federal Labour Legislation

The Federal Department of Labour was established in 1900 under the Conciliation Act which provided machinery to aid in preventing and settling labour disputes and required the Department to collect, compile and publish statistical and other relevant information. The Department assumed, too, the administration of the Fair Wages Policy adopted in the same year for the protection of workmen employed in the execution of Federal Government contracts and on works aided by grants from public funds.

At present, in addition to the statutory duty of disseminating information concerning labour and industrial matters, the Minister of Labour is responsible for the administration of certain statutes: Conciliation and Labour Act, 1906; Government Annuities Act, 1908; Fair Wages and Hours of Labour Act, 1935; Unemployment Insurance Act, 1940; Vocational Training Co-ordination Act, 1942; Reinstatement in Civil Employment Act, 1946; Merchant Seamen Compensation Act, 1946; Government Employees Compensation Act, 1947; and Industrial Relations and Disputes Investigation Act, 1948. (*See* also pp. 87-88.)

Fair Wages Policy.—Wages and hours of work on contracts for construction and for the manufacture of equipment and supplies for the Federal Government were governed for some years by a Resolution of the House of Commons (1900) which was later incorporated in an Order in Council and amended from time to time. Contracts for construction are now regulated under the Fair Wages and Hours of Labour Act, 1935, and by an Order in Council of June 7, 1922, as amended Apr. 9, 1924, and May 2, 1949, and consolidated in November 1949. Hours on such work are limited to eight per day and 44 per week except in an emergency or in special

* Except as otherwise noted, this Chapter has been revised under the direction of A. H. Brown, Deputy Minister, Department of Labour, Ottawa.

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cases where exemption is granted by Order in Council; wages to be paid are those current for the type of work in the district concerned or, if there are no current rates, fair and reasonable ones determined by the Minister of Labour.

Wages and hours for work on contracts for equipment and supplies are regulated by the Order in Council of 1922 as amended on Dec. 31, 1934, and May 2, 1949. The hours on such work must be those fixed by the custom of the trade in the district where the work is performed, or fair and reasonable hours. The wages must be current or fair and reasonable, but in no event shall they be less than those established by statute or regulation of the province in which the work is being performed.

On Sept. 24, 1952, the Order in Council above referred to was amended to provide that all types of contracts to which the Order is applicable, entered into on and after Jan. 1, 1953, shall contain a clause prohibiting discrimination against any employee because of race, national origin, colour or religion, or because the employee has made a complaint or given information with respect to such discrimination.

The Industrial Relations and Disputes Investigation Act.—This legislation came into effect by proclamation on Sept. 1, 1948, revoking the Wartime Labour Relations Regulations, P.C. 1003, in effect since March 1944, and repealing the Industrial Disputes Investigation Act which had been in force from 1907 until suspended by the Wartime Regulations in 1944. The Act protects proceedings commenced and decisions, orders and certifications made under the wartime legislation in so far as these involve services authorized by the Act.

The Act applies only to industries within federal jurisdiction, viz., navigation, shipping, interprovincial railways, canals, telegraphs, steamship lines and ferries both international and interprovincial, aerodromes and air transportation, radio broadcasting stations, and works declared by Parliament to be for the general advantage of Canada or of two or more provinces. However, the Act provides that provincial authorities, if they so desire, may enact similar legislation for application to employees within provincial jurisdiction and make mutually satisfactory arrangements with the Federal Government for the administration of such legislation by the federal authorities.

In general, the Act in its important features provides that employees and employers shall have the right to organize and bargain collectively, that trade unions may be certified as bargaining agents for groups of employees, and that trade unions and employers are required upon notice to bargain collectively in good faith. The Act provides for invoking collective bargaining negotiations and for the mediation of conciliation officers and conciliation boards in reaching collective agreements. Employees may change bargaining agents at times under conditions specified in the Act which also prescribes conditions affecting the duration and renewal of collective agreements. Collective agreements are required to contain provision for the arbitration of disputes concerning the meaning or violation of such agreements and where such provision is lacking application may be made for its establishment. The Act prohibits unfair labour practices, i.e., the interference with or domination of trade unions by employers or interference, discrimination and coercion in trade-union activity. The conditions precedent to strike and lockout action are provided in the Act. Industrial inquiry commissions may be appointed to investigate industrial matters or disputes.

The Minister of Labour is charged with the administration of the Act and is directly responsible for the provisions affecting the appointment of conciliation officers, conciliation boards and industrial inquiry commissions, consent to prosecute, and complaints that the Act has been violated or that a party has failed to bargain in good faith.

The Canada Labour Relations Board administers provisions concerning the certification of bargaining agents, the writing of a procedure into a collective agreement for the final settlement of disputes concerning the meaning or violation of such agreement, and the investigation of complaints made to the Minister that a party has failed to bargain collectively.

Detailed statistics concerning activities under the Act may be found in the Annual Report of the Department of Labour. In brief, the Canada Labour Relations Board has received 408 applications for certification since Sept. 1, 1948, 242 being granted, 94 rejected, 61 withdrawn and 11 pending at Mar. 31, 1953.

Of the 191 industrial disputes dealt with under the conciliation provisions of the Act, 143 were settled by conciliation officers and conciliation boards, 20 were not settled, 8 lapsed and 20 were pending at Mar. 31, 1953.

Subsection 2.—Provincial Labour Legislation

Labour legislation in Canada is, for the most part, a matter for the provincial legislatures since it usually governs, in some respects, the contract of service between employer and employee or the contract between members of a trade union which forms the basis of the union, or it regulates conditions in local work-places. The right to contract is a civil right and the British North America Act, which distributes legislative powers between the Parliament of Canada and the provincial legislatures, grants to the provinces power to enact laws in relation to "civil rights" and, with certain exceptions, "local works and undertakings".

In each province, except Prince Edward Island, a Department of Labour (in Alberta, the Department of Industries and Labour) is charged with the administration of labour laws. Legislation for the protection of miners is administered by departments dealing with mines.

Factory legislation in eight provinces and shops legislation in several provinces prohibit child labour, regulate the hours of women and young persons, and provide for safety and health. Other labour statutes in most provinces include minimum-wage legislation and maximum-hours laws, legislation to ensure freedom of association, to promote collective bargaining and to provide for the settlement of industrial disputes, and laws to provide for apprenticeship and the licensing of certain classes of workmen. The Industrial Standards Acts in Nova Scotia, New Brunswick, Ontario and Saskatchewan, the Alberta Labour Act and the Fair Wage Act in Manitoba enable the wages and hours of work agreed upon at a conference of representatives of employers and employees in designated trades to be made legal throughout the trade concerned. The Quebec Collective Agreement Act permits collective agreements between employers and trade unions to be made binding on all in the industry. Workmen's compensation laws in all provinces are administered by independent boards.

Provincial labour legislation enacted in 1952 is outlined in the following paragraphs.

Newfoundland.—Amendments made in 1952 to the *Workmen's Compensation Act, 1950*, raise the amount payable for the funeral expenses of a deceased workman from $125 to $200 and increase the monthly allowance for each dependent child under 16 years of age from $10 to $12. The waiting period is shortened from six to four days, that is, no compensation other than medical aid is now payable for a disability that lasts fewer than four days. A further amendment fixes a higher minimum for temporary total disability; a workman must now receive $15 a week or the full amount of his average weekly earnings if less than $15, the former minimum being $12.50 or earnings, if less. Other amendments authorize the Workmen's Compensation Board to grant a daily subsistence allowance to a workman undergoing treatment away from home, and to assess and collect a surcharge from employers in any class to establish a second injury fund.

Prince Edward Island.—The *Workmen's Compensation Act, 1949*, was amended to increase the rate of compensation for disability from 66⅔ to 75 p.c. A totally disabled workman may now receive a weekly payment equal to 75 p.c. of his average weekly earnings before the accident, and a partially disabled workman an amount equal to 75 p.c. of the difference in his average weekly earnings before and after the accident. A monthly allowance of $25, instead of $20, is provided for an orphan child of a deceased workman, subject to a maximum of $100 a month for a family of orphans.

Nova Scotia.—The *Apprenticeship Act, 1952*, which replaced a 1937 Act, is designed to give further encouragement to apprentice training in that it may be applied to a trade in a specific plant or a certain area even if the trade is not designated for the whole Province. Previously, designated trades were given province-wide application.

The Act provides for a system of apprenticeship under which a person may enter into an apprenticeship agreement with an employer in a designated trade for a period of at least two years of reasonably continuous employment and related class instruction. In the designated trades, which now include the trade of machinist as well as seven building trades and the motor-vehicle repair trade, no person under 21 years of age may be employed for more than three months unless he is an apprentice or holds a certificate of qualification under the Act, except in special circumstances with the consent of the Minister of Labour.

The powers and duties of the Director of Apprenticeship and of the advisory committees are more clearly defined.

Amendments to the *Workmen's Compensation Act*, effective from Apr. 1, 1952, increase the maximum annual earnings on which compensation is computed from $2,500 to $3,000, the minimum amount payable to a workman permanently and totally disabled from $75 to $85 a month, and the sum payable for burial expenses from $150 to $200. A new provision permits the Workmen's Compensation Board to require a workman to be examined by a medical referee selected by the Minister of Labour.

The *Coal Mines Regulation Act, 1951*, was amended to direct that greater precautions be taken in mines against the hazards of fire and explosion.

The application of the *Steam Boiler and Pressure Vessel Inspection Act* is extended to refrigeration plants.

New Brunswick.—Several of the benefits under the *Workmen's Compensation Act* are increased: the monthly allowance for a widow or invalid widower from $40 to $50, for each child under 18 years of age from $10 to $12, and for each orphan child from $20 to $25. The minimum payment of $12.50 a week for a workman who suffers temporary total disability is raised to $15. As before, a workman whose average weekly earnings are less than the minimum must receive the full amount of his earnings.

The *Labour Relations Act, 1949*, was amended to provide that, without the consent of the Labour Relations Board, the membership records of a union produced for the Board's use may not be disclosed and no one may be compelled to state whether any person is or is not a member of a union. Other amendments enable the Board to obtain the necessary evidence for determining whether a union applying for certification has the support of a majority of the employees in a proposed bargaining unit and to make regulations determining when a person is a member in good standing of a union.

An amendment to the *Mining Act*, proclaimed in force Aug. 1, 1952, provides for a voluntary revocable check-off of union dues in the coal-mining industry.

Quebec.—Two major changes were made in the *Workmen's Compensation Act*. The maximum amount of annual earnings on which compensation may be computed is raised from $2,500 to $3,000 and the rate of compensation for disability was increased from 66⅔ to 70 p.c. The increase in the compensation rate applies only to accidents occurring after Feb. 1, 1952.

Ontario.—Amendments to the *Workmen's Compensation Act* extend its coverage to learners, members of municipal volunteer fire brigades, and persons who are required to assist the police in making an arrest or in preserving the peace.

A minor amendment to the *Factory, Shop and Office Building Act* provides that, in buildings erected after July 1, 1952, outside fire-escapes may not extend above the third floor.

Manitoba.—An amendment to the *Apprenticeship Act*, designed to stimulate apprenticeship training throughout the Province, enables the Lieutenant-Governor in Council to establish selected areas as apprenticeship zones. By a further amendment, provision is made for a special course of combined education and apprenticeship training for an apprentice who does not have the necessary educational qualifications.

The *Workmen's Compensation Act* was amended to extend its coverage to several new industries.

The *Gas and Oil Burner Act, 1952*, to come into force on proclamation, prohibits the sale, installation or use of gas and oil-burning equipment unless it has been approved by the Department of Labour and a permit has been issued for its installation. The new Act also provides that only a licensed person may install such equipment.

Saskatchewan.—The *Equal Pay Act, 1952*, proclaimed in effect from Jan. 1, 1953, requires employers to pay women at the same rate as men when they are employed to do work of comparable character in the same establishment. Charges

of discrimination will be dealt with first by conciliation procedure and then, if necessary, by prosecution. Offenders against the Act are liable to fines of up to $100. Saskatchewan is the second province to pass an equal-pay law. Ontario passed a similar Act in 1951.

The *Workmen's Compensation (Accident Fund) Act* was amended to raise the ceiling on earnings from $3,000 to $4,000 a year, to increase the monthly allowances from $20 to $25 for each dependent child under 16 years of age and from $25 to $30 for each orphan child, and to raise the minimum monthly payment to the dependants of a deceased workman from $80 to $85 where the dependants are a widow or invalid widower and one child, and from $90 to $100 where they are a widow or invalid widower and two or more children. These increases apply to all payments made after June 1, 1952, regardless of when the accident occurred.

The *Workmen's Compensation Act, 1911*, which applies to certain classes of railway workers, was amended to raise the maximum amount of compensation payable by the employer. An injured workman may now recover the equivalent of the estimated earnings of a workman in similar employment during the preceding three years or the sum of $3,500 (previously $2,500), whichever is greater, but not more than $4,000 (previously $3,000). Another amendment enables a Saskatchewan railway worker who works both in the Province and in an adjoining American State to receive compensation if he is injured while working in the adjoining State.

The *Annual Holidays Act* was amended to permit the Lieutenant-Governor in Council to exempt specific classes or groups of employees from the Act.

Alberta.—In accordance with the recommendations of a Special Committee of the Legislature appointed in 1951, the *Workmen's Compensation Act* was amended to raise the maximum amount of annual earnings on which compensation is based from $2,500 to $3,000 and to increase the rate of compensation for disability from 66⅔ to 75 p.c. The waiting period is reduced to one day and compensation is now payable from the day after the accident. The minimum weekly payment for total disability is increased from $15 to $25, or the full amount of earnings if less than $25 a week.

Other amendments increase the allowance for funeral expenses from $175 to $200 and permit the Board to grant a further allowance of $100 for the cost of transporting the workman's body from the place of death to his place of residence. The monthly allowance for a dependent child in the care of a remaining parent is raised from $15 to $25 but a change from 18 to 16 years is made in the age to which compensation is paid.

An important feature of the revision is that the monthly payments to all widows are brought up to the same level. It is provided that, from Apr. 1, 1952, the allowance of $50 a month which has been payable since 1948 to widows of deceased workmen will be payable to others widowed before that date. The increased assistance is to be continued until a widow becomes eligible for old age assistance or other pension.

Learners and workers in several new industries are brought under the Act, and the Board is authorized to bring under the Act volunteer employments undertaken in the public interest, e.g., volunteer firemen.

British Columbia.—The *Workmen's Compensation Act* was amended to implement some of the recommendations of Chief Justice Sloan who, in 1949, was appointed Royal Commissioner to inquire into the operation of the Act. The amendments provide that compensation for disability is to be computed on the basis of 70 p.c. of average earnings instead of 66⅔ p.c., and that the limit placed on the amount of annual earnings taken into account be raised from $2,500 to $3,600. The minimum weekly payment for total disability is increased from $12.50 to $15 or the full amount of average weekly earnings if less than $15.

Higher benefits to dependants in death cases were made effective from Apr. 1, 1952, regardless of when the accident or disablement occurred. The amendments increase the burial allowance from $150 to $250, the monthly allowance for a widow or invalid widower from $50 to $75, the payment for a dependent child from $12.50 to $20, the benefit for an orphan child from $20 to $30, and the maximum amount payable to all dependants, where there is no widow or children, from $55 to $75. The hospital insurance premium for widows, invalid widowers and their dependants and for orphan children who are receiving compensation under the Act is now to be paid by the Workmen's Compensation Board.

Regulation of Wages and Hours of Labour.—The regulation of wages and hours of labour of persons in private employment is within provincial jurisdiction and all the provinces, except Prince Edward Island, have legislation on the subject.

In Nova Scotia, the minimum wage law applies only to women; in Ontario, though the Act applies to both sexes, Orders in Council apply only to women. In New Brunswick, Manitoba, Alberta and British Columbia, there are separate Orders for men and women but in British Columbia many Orders cover both sexes. In Quebec and Saskatchewan all Orders apply to both sexes. Under the Newfoundland Minimum Wage Act, 1950, a general Order for male workers is in effect.

In Quebec, under the Collective Agreement Act, hours and wages and also apprenticeship, vacations with pay and family allowances provisions established by a collective agreement voluntarily entered into by employers and unions or groups of employees may be made legally binding by Order in Council on all employers and employees in the industry in the district covered by the agreement, if the parties are sufficiently representative of the industry. At Mar. 31, 1952, 100 agreements had been generalized to apply either throughout the Province or to a certain district. These agreements covered 215,926 workers and 21,409 employers. The agreements in force throughout the Province apply to the following industries: building materials, the manufacture of women's cloaks and suits, dresses, millinery, men's and boys' clothing, men's and boys' hats and caps, men's and boys' shirts, ladies' handbags, fine gloves and work gloves, shoes, furniture, paints, corrugated and uncorrugated paper boxes, tanning and elevator construction. Other agreements concern industries in particular cities or parts of the Province including all building trades and printing trades in the large urban centres and many rural districts. During 1952, an agreement for the structural iron erection industry was extended for the first time and one affecting hospital employees in a certain area was repealed. (For statistics, *see* pp. 744-745.)

The industrial standards Acts of Nova Scotia, New Brunswick, Ontario and Saskatchewan and the Alberta Labour Act provide that wages and hours agreed upon at a conference of representatives of employers and employees called by the

Minister of Labour or his representative may be made legally binding by Order in Council on the industry in the area concerned. The Nova Scotia Act applies only to construction work at Halifax, Dartmouth and Sydney.

In Nova Scotia, 11 schedules for individual building trades were in force during 1952, including 10 renewals of previous schedules and one new schedule governing plasterers at Sydney made binding for the first time. In New Brunswick, six schedules for individual building trades were in force during 1952. One new schedule governing painters at Saint John replaced the previous schedule which had expired in 1941.

In Ontario, there were 137 schedules in force at Mar. 31, 1951. Throughout the Province schedules were in effect for brewery workers, cloakmakers, the men's and boys' clothing industry, men's and boys' hats and caps and the hard furniture industry. In the construction industry, one schedule covered several building trades in one city, and 57 schedules, each for a single trade in a single locality, covered one or more trades in 28 localities. In other industries also, schedules were in effect for certain zones only: for bakers in one zone, for soft furniture manufacturing in one, for coal hoisting in one, for the coal industry in one, for taxi-drivers in one, for the retail gasoline service in four and for barbers in 65 zones. From Mar. 31, 1951, to the end of 1952, 28 new schedules were made binding, seven of which were made for the first time, including one covering millinery manufacturing throughout the Province.

In Saskatchewan, 16 schedules were in effect at Dec. 31, 1951. One for barbers covered the whole Province; others were in effect for bakers and bakery salesmen, carpenters, electrical workers, painters, shoe repairers and beauty-culture operators in one or more areas. During 1952, a new schedule for carpenters at Swift Current replaced the one rescinded in 1947.

In Alberta, 22 schedules were in effect during 1952. These included, in one or more areas, bakers and bakery salesmen, certain individual building trades, dairy employees, garage and service-station employees, radio-service employees, laundry and dry-cleaning employees and barbers. One new schedule was made binding during the year.

Part II of the Manitoba Fair Wage Act provides similar machinery for fixing wages and hours in any business, trade or undertaking, except agriculture. Orders in Council, under this legislation, have been passed fixing wages and hours in the barbering and hairdressing trades.

Five provinces, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia, have statutes that either place absolute limits on working hours or require time and one-half the regular rate to be paid if work is continued after specified limits. There is, in addition, an Act of limited application in Quebec. In the provinces that have no special hours-of-work legislation, the only statutory regulation of hours, apart from that described above under industrial standards Acts and the Quebec Collective Agreement Act, is that imposed by factories Acts, mines Acts and, in Newfoundland, an Act governing shops. In New Brunswick and Quebec, the limits imposed by the factories Acts apply only to women and boys under 18 years. Several minimum wage Acts give authority for the regulation of hours as well as wages.

Minimum Wage Regulations.—Table 1 shows the minimum rates in effect in May 1953 for several classes of establishments in the principal cities. In Newfoundland, New Brunswick, British Columbia and, with respect to men in Manitoba, the rates set are for the entire province. Elsewhere rates vary according to zone. The rates given apply to the hours specified or to the normal work-week of the establishment, if less, except at Montreal and Winnipeg. No work-week is specified in the Newfoundland Order.

1.—Minimum Weekly Wage Rates for Experienced Workers in Certain Cities, May, 1953

Item and Type of Establishment	St. John's[1]	Halifax[2]	Saint John[2]	Montreal	Toronto[2]	Winnipeg[4]	Regina	Edmonton[5]	Vancouver
Hours per week...		48	48	48-60[6]	48	44	44	44	44
	cts. per hour	$	cts. per hour	cts. per hour	$	cts. per hour	$	$	$
Factories.....	50	16·80	40	51	16·80	55	24	24	0·40[7]
Laundries, etc....	50	16·80	40	51	16·80	55	24	24	0·40[7]
Shops.....	50	16·80	40	51	16·80	55	24	24	18
Hotels, restaurants, etc.....	50	16·80	38	44[8]	16·80	55	24	24	22
Beauty parlours...	50	16·80	40	51	16·80	55	24	24	25
Theatres and amusement places	50	16·80	40	51	16·80	55	24	24	18
Offices.....	50	16·80	40	51	16·80	55	24	24	18[2]

[1] Males over 18 only. [2] Females only. [3] Females; 55 cents for men in canning or processing of fish, vegetables or fruit. [4] Females; 60 cents for men applying to a 48-hour week. [5] Females; $26 for men over 21 years. [6] Rates apply to 48 or 54 hours in factories; 48 hours in offices; 54 hours in laundries, shops, beauty parlours and theatres; 60 hours in hotels. [7] Hourly rates. [8] Cooks, 58 cents; kitchen help, 51 cents; bell boys, 30 cents.

Regulation of Hours and Annual Holidays.—In Ontario, there is a maximum eight-hour day and 48-hour week for the workers to whom the statute applies. In Alberta, the maximum daily and weekly hours in the cities of Calgary, Edmonton, Lethbridge and Medicine Hat are eight and 44; in the remainder of the Province they are eight and 48. In British Columbia, hours are limited to eight in a day and 44 in a week. In these three Provinces, the Acts apply to most workers, except farm labourers and domestic servants. In Saskatchewan, an Act of 1947 requires time and one-half to be paid for work after eight hours daily and 44 hours weekly. The Act applies to workers in all industries except agriculture and domestic service. A Manitoba Act of 1949 requires time and one-half to be paid for work done after eight hours in a day and after 48 hours in a week for men workers and 44 for women. The Act covers most industrial workers in the Province. In all provinces that have Acts regulating hours, longer hours may be worked in an emergency or by permission of the administrative authority.

Six provinces have legislation providing for annual holidays with pay for workers in most industries. In five of these provinces—Quebec, Ontario, Manitoba, Alberta and British Columbia—workers are entitled to a week's holiday with pay after a year of employment. Two weeks' holiday is given in Saskatchewan after a year of employment, in Alberta after two years of employment, and in Manitoba after three years of employment. A worker employed for less than a year is entitled, in Quebec, to a half-day for each month of employment and, in Saskatchewan, to one day for each month. Coal miners in Alberta are entitled to one day's holiday with pay for every 20 days worked in a month but not more than two weeks' holiday in a year.

Farm workers are excluded from the holiday provisions in all provinces and domestic servants in all but Manitoba and Saskatchewan. The Manitoba Act also excludes independent contractors as well as railway and express companies under federal jurisdiction. In addition, Quebec exempts forest operation workers, public corporation employees, salesmen, janitors and watchmen, and certain part-time workers; Ontario, professional workers, salesmen, and funeral directors and embalmers; Manitoba and Saskatchewan, ranch and market-garden employees; and British Columbia, professional workers and horticultural workers.

Section 2.—The Labour Force

Subsection 1.—Labour Force Statistics of the Census of 1951*

The labour force, as defined in the 1951 Census, includes all persons 14 years of age or over who, during the week ended June 2, 1951: (1) worked for pay or profit or did unpaid work that contributed to the running of a farm or business operated by a member of the household; (2) had jobs but did not work because of illness, bad weather, vacation, industrial dispute, or temporary lay-off with definite instructions to return to work within 30 days of the time of being laid off; (3) were without jobs and were seeking work during the week. The latter category includes those who would have looked for work except that they were temporarily ill, were on indefinite or prolonged lay-off, or believed that no work was available.

The labour force does not include persons going to school, keeping house, permanently unable to work, retired or voluntarily idle, and those not otherwise classifiable. Persons working or with a job but not at work were asked to state the name and kind of business or industry in which they worked, as well as the occupation at which they worked. Those not working were asked to report the information for the firm or business where they last worked.

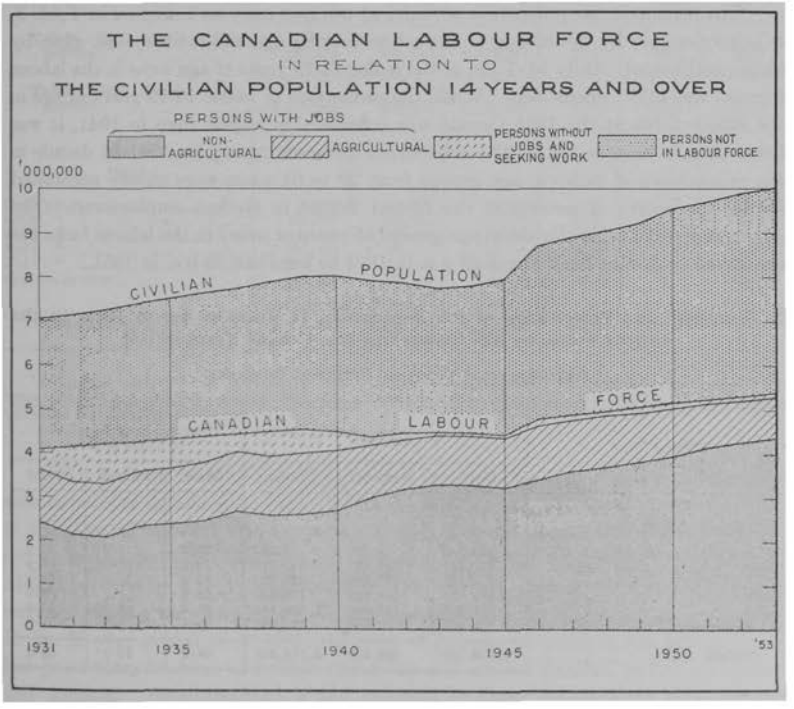
It should be pointed out that, although new workers (persons seeking their first job at the time of the Census) were, by definition, part of the labour force, they were regarded as having no industrial attachment and were not included in the figures. This group, numbering only 8,970 males and 4,502 females at the time of the 1951 Census, would vary in size from census to census depending upon economic conditions. Furthermore, while persons with jobs, with previous work experience and seeking work, etc., were classified at the 1951 Census according to the labour force concept, they were classified at the 1921, 1931 and 1941 Censuses according to the gainfully occupied concept. The differences arising from the inclusion or exclusion of certain segments of the population, depending upon the concept used to measure the working force, are not sufficiently significant to affect the comparability of data shown and, for the sake of convenience, the working population is referred to in subsequent paragraphs as the "labour force" irrespective of concept used at the time of the Census.

Final figures for Canada, excluding the Yukon and Northwest Territories, show that 4,130,802 males and 1,168,823 females, 14 years of age or over, or a total of 5,299,625 persons, were in the labour force during the week ended June 2, 1951. Of this number, 4,121,832 males and 1,164,321 females had jobs or had previous work experience and were seeking work during the week of June 2, 1951.

* Prepared in the Census Division, Dominion Bureau of Statistics.

Males represented 78 p.c. and females 22 p.c. of the total labour force. The population of the ten provinces consisted of 7,074,363 males and 6,909,966 females, or a total of 13,984,329 persons. The total labour force, therefore, accounted for 37·8 p.c. of the total population, males in the labour force representing 58·4 p.c. of the total male population and females 16·9 p.c. of the total female population. About 82 p.c. of the males and almost 24 p.c. of the females 14 years of age or over were in the labour force during the week ended June 2, 1951.

Relative Growth of Numbers of Males and Females in the Labour Force, 1921-51.—Table 2 shows that the percentage of the male population (including the Armed Forces in 1941) at working ages (14 years or over) in the labour force has been declining since 1921 while for females the percentage has increased steadily since that date. If males on Active Service at the 1941 Census date are excluded from the male labour force, the trend changes substantially. While a sharp drop in the percentage of the male population in the labour force then appears between 1931 and 1941, an almost corresponding increase occurs between 1941 and 1951. Males on Active Service on June 2, 1941, accounted for over 8 p.c. of the total male labour force at that time.



2.—Number and Percentage of the Population in the Labour Force, by Sex, Census Years 1921-51

(Exclusive of the Yukon and Northwest Territories)

Census Year	Labour Force Population[1]			Percentage of Total Population			Percentage of Population 14 Years or Over		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
	No.	No.	No.						
1921	2,675,290	489,058	3,164,348	59·2	11·5	36·1	86·7	17·2	53·4
1931	3,256,531	665,302	3,921,833	60·7	13·3	37·8	85·3	19·1	53·7
1941 (incl. Active Service)	3,676,563	833,972	4,510,535	62·4	14·9	39·3	83·6	20·2	52·9
1941 (excl. Active Service)	3,363,111	832,840	4,195,951	57·1	14·9	36·5	76·7	20·2	49·3
1951 (incl. N'f'ld.)[2]	4,121,832	1,164,321	5,286,153	58·3	16·9	37·8	82·2	23·6	53·1
1951 (excl. N'f'ld.)[2]	4,032,372	1,147,241	5,179,613	58·5	17·0	38·0	82·3	23·8	53·3

[1] The "gainfully occupied" rather than the "labour force" concept was used prior to 1951 (*see* text on p. 693). [2] Excludes a few persons seeking work who have never been employed.

The decline in the proportion of males at working ages, as indicated in Table 3, is largely caused by the raising of the school-leaving age and, at the older ages, by earlier retirement. Only 14·1 p.c. of the males 14-15 years of age were in the labour force at the 1951 Census date. While the proportion of males 16-19 years of age in the labour force at the 1951 Census was considerably higher than in 1941, it was lower than in 1921 or 1931. The substantial increases during the 1941-51 decade in the proportions of males in age groups from 20 to 64 years were chiefly accounted for by the return of persons in the Armed Forces to civilian employment. The percentage of males in the oldest age group (65 years or over) in the labour force has continued to decline from about 58 p.c. in 1921 to less than 39 p.c. in 1951.

3.—Numbers and Percentages of the Population, 14 Years of Age or Over, in the Labour Force, by Age Group and Sex, Census Years 1921-51

(Exclusive of the Yukon and Northwest Territories)

Census Year and Age Group	Number			Percentage of Population 14 Years or Over		
	Male	Female	Total	Male	Female	Total
1921						
14-15 years	50,345	14,042	64,387	29·3	8·4	19·0
16-19 "	244,821	101,795	346,616	76·3	32·2	54·4
20-24 "	324,102	126,226	450,328	92·4	35·1	63·4
25-34 "	663,919	111,628	775,547	96·2	17·2	58·0
35-64 "	1,266,936	122,629	1,389,565	94·4	10·7	55·8
65 years or over	125,167	12,738	137,905	58·4	6·2	32·9
Totals, 1921[1]	**2,675,290**	**489,058**	**3,164,348**	**86·6**	**17·2**	**53·3**

For footnote, *see* end of table.

3.—Numbers and Percentages of the Population, 14 Years of Age or Over, in the Labour Force, by Age Group and Sex, Census Years 1921-51—concluded

Census Year and Age Group	Number			Percentage of Population 14 Years or Over		
	Male	Female	Total	Male	Female	Total
1931						
14-15 years	39,155	8,078	47,233	18·8	4·0	11·5
16-19 "	284,274	124,986	409,260	67·5	30·3	49·1
20-24 "	429,018	189,336	618,354	92·6	42·4	67·9
25-34 "	759,361	155,601	914,962	97·7	21·7	61·3
35-64 "	1,580,936	169,942	1,750,878	95·9	12·0	57·1
65 years or over	163,787	17,359	181,146	55·7	6·2	31·5
Totals, 1931[1]	**3,256,531**	**665,302**	**3,921,833**	**85·3**	**19·1**	**53·7**
1941						
14-15 years	37,082	7,656	44,738	16·9	3·6	10·3
16-19 "	260,649	136,904	397,553	57·2	30·6	44·1
20-24 "	356,064	214,958	571,022	68·9	41·8	55·4
25-34 "	796,667	220,770	1,017,437	86·8	24·8	56·3
35-64 "	1,728,306	231,807	1,960,113	91·7	13·7	54·9
65 years or over	184,343	20,745	205,088	47·2	5·5	26·7
Totals, 1941 (excl. Active Service)	**3,363,111**	**832,840**	**4,195,951**	**76·7**	**20·2**	**49·3**
Totals, 1941 (incl. Active Service)	**3,676,563**	**833,972**	**4,510,535**	**83·6**	**20·2**	**52·9**
1951[1]						
14-15 years	29,988	10,609	40,597	14·1	5·2	9·7
16-19 "	280,976	186,555	467,531	66·2	44·3	55·3
20-24 "	494,339	257,606	751,945	92·2	46·8	69·2
25-34 "	1,024,535	268,171	1,292,706	96·4	24·2	59·6
35-64 "	2,079,598	414,194	2,493,792	93·2	19·6	57·4
65 years or over	212,396	27,186	239,582	38·6	5·1	22·1
Totals, 1951[2]	**4,121,832**	**1,164,321**	**5,286,153**	**82·2**	**23·6**	**53·1**

[1] Includes a few persons of "Not stated" age. In 1921 such persons were included in the age group 35-64 years. In 1941 and 1951 there was no "Not stated" age group since all ages were assigned to specific groups.
[2] Includes Newfoundland.

Table 4 shows that the ratio of females to males in the labour force has increased each successive decade since 1921. Even the addition of persons on Active Service at the time of the 1941 Census to the civilian labour force at that date does not, except in the case of Nova Scotia, alter the continuous increase in these ratios. Although the ratio is highest in industrial Ontario and Quebec, the most significant increases during the decade 1941-51 have occurred in the four western provinces. In the 30-year period since 1921, the ratio of females to males in the labour force has more than doubled in British Columbia and almost doubled in Saskatchewan and Alberta. Newfoundland is not included in these comparisons since census figures for 1921, 1931 and 1941 are not available for that Province.

4.—Number of Females to Every 1,000 Males in the Labour Force, by Province, Census Years 1921-51

(Exclusive of the Yukon and Northwest Territories)

Census Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1921	..	149	183	176	216	211	171	103	108	131	183
1931	..	156	182	187	246	228	199	124	132	167	204
1941 (incl. Active Service)	..	169	209	202	266	251	208	144	149	192	227
1941 (excl. Active Service)	..	196	241	230	280	276	231	156	163	213	248
1951	191	212	240	253	302	309	285	203	215	283	282

Occupational Trends, 1901-51.—The main obstacle in the way of a comparison of occupations by census years is the absence of a uniform scheme of classification at each census. Even if the classification had been the same, the revolutionary changes that have taken place in the nature of work performed in many occupations with the introduction of machine processes in production would make comparisons difficult. Thus, comparison can be made only for the broad occupational groups shown in Table **5**. In this table, occupations for 1901, 1911, 1921, 1941 and 1951 have been rearranged to place them on a comparable basis with the 1931 classification, the 1911 figures, perhaps, being less comparable than those for other years. The main change in the 1931 grouping was the transfer of the "accountants" class from the professional service group to the clerical group.

The outstanding feature of Table **5**, so far as the males are concerned, is the decline shown in the relative importance of agricultural occupations since 1901. In that year, just over 45 p.c. of all males in the labour force were engaged in agricultural occupations, as compared with 19·7 p.c. in 1951. The proportionate importance of fishing, hunting and trapping occupations as a group has fluctuated somewhat from decade to decade, manufacturing and mechanical occupations have continued to increase in relative importance, and the relative position of mining and quarrying occupations has remained almost constant since 1921. There has been a steady growth in the proportion of males in construction, transportation, trade and finance, service and clerical occupations. Labourers (other than those engaged in the primary industries) have alternately increased and decreased in relative importance during the decades from 1901 to 1951. This may be caused by differences in the quality of enumeration of occupations and by the tendency for recent immigrants at each census to be more commonly employed as labourers than the labour force population generally.

Table **5** shows that over 42 p.c. of all occupied females were in personal service occupations in 1901 as compared with only about 22 p.c. in 1951. Females occupied in clerical occupations increased from approximately 5 p.c. to over 27 p.c. in the same comparison. The proportion of females in most trade and finance occupations increased from census to census while the proportion in manufacturing and mechanical occupations showed an almost continuous decline since 1901. Although a change in the 1951 Census definition of the occupation "lodging housekeeper" tended to reduce the number of females so classified, the decline in proportion of females in personal service occupations since the 1941 Census was due chiefly to a substantial decrease in the number of household workers during the ten-year period.

5.—Percentage of the Labour Force, 14[1] Years of Age or Over, by Occupation Group and Sex, Census Years 1901-51

(Exclusive of the Yukon and Northwest Territories)

NOTE.—Occupations for 1901, 1911, 1921, 1941 and 1951 were rearranged on the basis of the 1931 classification, although some adjustment of the 1931 grouping was necessary. The principal changes made in the 1931 classification were the transfer of accountants from the "Professional" to the "Clerical" group, and of female labourers and packers and wrappers in manufacturing and trade from the groups "Labourers" and "Transportation", respectively, to "Manufacturing" and "Trade". Absolute figures from which these percentages were derived are given in the Statistical Summary of the Progress of Canada at the end of this volume (*see* Index).

Occupation Group	1901	1911	1921	1931	1941[2]	1951
	MALES					
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Agricultural	45·8	38·9	38·0	33·9	31·7	19·7[3,4]
Fishing, trapping and logging	2·8[5]	3·3[6]	2·5[7]	2·8	3·9	3·2
Mining and quarrying	1·8	2·6[8]	1·8	1·8	2·1	1·6
Manufacturing and mechanical	14·8	11·7	11·8	12·1	16·7	19·2
Construction	5·8	6·4	6·1	6·2	6·3	7·9
Transportation and communication	5·3	6·5	6·9	8·3	8·8	11·2
Trade and finance	5·9	8·2	9·2	9·1	8·8	9·8
Service	6·5	5·9	7·3	8·3	9·2	12·5
Professional	*2·6*	*2·3*	*2·9*	*3·2*	*3·6*	*4·5*
Personal	*3·1*	*2·9*	*2·7*	*3·9*	*4·3*	*4·7*
Clerical	3·0	3·1	4·8[9]	4·3	4·8	5·6
Labourers[10]	8·2	13·4	11·4	13·1	7·5	8·0
Totals, All Occupations[11]	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**
	FEMALES					
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Agricultural	3·8	4·4	3·7	3·6	2·3	2·8[4]
Fishing, trapping and logging	[12]	0·1[6]	[7,12]	0·1	[12]	[12]
Mining and quarrying	[12]	[12]	[12]	[12]	[12]	[12]
Manufacturing and mechanical	29·6	26·5	18·3	15·2	17·8	17·6
Construction	[12]	[12]	[12]	[12]	0·1	0·1
Transportation and communication	0·6	1·5	3·0	2·7	2·0	3·4
Trade and finance	3·3	7·9	9·7	8·5	8·9	11·1
Service	57·0	50·4	46·2	52·1	50·1	36·3
Professional	*14·6*	*12·4*	*19·0*	*17·6*	*15·3*	*14·3*
Personal	*42·2*	*37·6*	*27·1*	*34·3*	*34·7*	*21·7*
Clerical	5·3	9·3	18·5[9]	17·7	18·5	27·4
Labourers[10]	0·5	0·1	0·1	0·1	0·1	0·2
Totals, All Occupations[11]	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**

[1] Ten years of age or over in 1901 and 1911. [2] Exclusive of persons on Active Service on June 2, 1941. [3] Exclusive of a few persons seeking work who had never been employed. [4] Exclusive of Newfoundland. [5] Excludes all Indians. [6] Includes pulp mill employees. [7] Excludes Indians living on reserves. [8] Includes almost all mine and smelter employees except clerical workers. [9] Includes proof-readers, shippers, weighmen and postmen, classified elsewhere in other years. The addition of these persons to the 1931 figures would have added 18·0 p.c. to the number of males in this occupation group. [10] Excluding agricultural, fishing, logging and mining labourers. [11] Includes "Not stated" group. [12] Less than 0·05 p.c.

Occupations by Province, 1951.—From Tables 6 and 7 it will be seen that, for males, agricultural occupations were relatively most important in Canada as a whole and in each of the Maritime and Prairie Provinces, while in Newfoundland almost one-third of the males in the labour force were engaged in fishing, trapping and logging occupations. In Quebec, Ontario and British Columbia manufacturing and mechanical occupations gave employment to a larger proportion of males than any other occupation group.

Clerical and service occupations provided employment to approximately one-half of the female labour force in Canada at the time of the 1951 Census, ranging from 42·7 p.c. in the case of Quebec to 54·9 p.c. in Alberta. While in Newfoundland 33·0 and 17·4 p.c. of the female labour force was occupied in service and clerical occupations, respectively, corresponding figures for Ontario were in almost reverse order, that is 17·5 and 32·6 p.c., for these two occupation groups. The professional group, including teachers and nurses, and the commercial group, including sales clerks, also provided employment to an appreciable number of females in each province.

6.—Number on Labour Force,[1] 14 Years of Age or Over, Classified by Occupation Group and Sex, by Province, 1951

(Exclusive of the Yukon and Northwest Territories)

Occupation Group	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
	MALES										
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Proprietary and managerial	5,711	1,745	13,584	10,141	97,883	142,453	20,103	18,711	24,356	35,247	369,934
Professional	2,812	755	6,362	4,597	60,251	84,650	9,938	8,768	13,233	19,369	210,735
Clerical	3,702	717	7,902	6,227	71,936	101,679	14,221	7,435	11,745	18,336	243,900
Agricultural	3,567	12,693	22,977	26,211	187,846	193,795	70,430	141,736	111,745	26,874	797,874
Fishing, hunting, trapping and logging	27,512	2,190	15,003	19,059	39,508	18,233	2,817	1,936	2,296	23,145	151,699
Mining and quarrying	2,256	12	11,957	930	11,883	20,496	2,154	849	7,475	7,261	65,273
Manufacturing and mechanical[2]	9,250	1,803	22,699	15,920	219,846	331,003	29,334	14,276	25,797	60,645	730,573
Construction	7,103	1,656	14,011	8,779	91,025	105,999	14,999	8,123	18,760	28,258	298,713
Transportation and communication	10,644	2,093	19,504	15,570	101,655	125,076	21,963	18,973	24,672	39,467	379,617
Commercial and financial	2,671	998	7,087	5,535	61,540	82,380	12,252	11,442	15,049	21,577	220,531
Service	4,832	1,774	17,574	6,898	65,391	102,263	15,546	8,831	18,270	30,364	271,743
Personal	*2,868*	*539*	*4,622*	*3,340*	*33,433*	*61,436*	*7,825*	*5,687*	*8,059*	*16,309*	*139,018*
Protective	*1,847*	*1,191*	*12,680*	*3,393*	*25,238*	*47,769*	*7,198*	*2,843*	*9,630*	*13,144*	*124,928*
Other	*117*	*44*	*272*	*165*	*1,720*	*3,058*	*528*	*401*	*581*	*911*	*7,797*
Labourers[3]	8,427	1,486	16,756	12,967	100,242	117,697	16,771	8,787	16,318	30,816	330,267
Totals, Males in All Occupation Groups[4]	**89,460**	**28,156**	**178,087**	**134,953**	**1,130,194**	**1,439,966**	**232,296**	**251,077**	**291,269**	**346,374**	**4,121,832**
	FEMALES										
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Proprietary and managerial	1,118	209	1,897	1,423	9,848	13,408	1,658	1,425	1,992	4,279	37,257
Professional	2,656	1,201	7,818	6,206	52,073	53,346	8,548	10,017	10,152	13,928	165,945
Clerical	2,976	1,008	9,473	7,400	76,617	144,902	20,044	11,270	17,554	30,565	321,809
Agricultural	115	250	502	405	7,564	9,573	3,397	5,844	3,351	1,566	32,567
Fishing, hunting, trapping and logging	24	4	19	15	15	35	12	18	5	70	217
Mining and quarrying	—	—	—	—	10	—	—	—	—	8	18
Manufacturing and mechanical[2]	939	503	2,865	3,277	77,610	70,113	6,933	1,180	2,586	6,407	172,413
Construction	2	3	1	11	147	535	75	12	54	58	898
Transportation and communication	373	155	1,177	866	8,670	13,707	1,597	1,462	1,579	4,104	33,690
Commercial and financial	3,004	683	5,381	4,049	27,608	47,072	7,783	5,004	7,540	12,223	120,347
Service	5,638	1,813	12,717	9,338	69,359	77,858	14,876	14,217	16,856	22,367	245,039
Personal	*5,612*	*1,809*	*12,584*	*9,256*	*68,844*	*77,015*	*14,701*	*14,123*	*16,674*	*22,015*	*242,663*
Protective	*6*	*3*	*52*	*16*	*261*	*465*	*56*	*23*	*70*	*122*	*1,074*
Other	*20*	*1*	*81*	*36*	*254*	*378*	*119*	*71*	*112*	*230*	*1,302*
Labourers[3]	122	73	302	519	7,548	9,725	738	214	465	1,233	20,939
Totals, Females in All Occupation Groups[4]	**17,080**	**5,969**	**42,719**	**34,085**	**341,646**	**444,975**	**66,205**	**51,035**	**62,629**	**97,978**	**1,164,321**

[1] Excludes a few persons seeking work who had never been employed. [2] Includes "Electric light and power production and stationary enginemen". [3] Excludes agricultural, fishing, logging or mining labourers. [4] Includes "Not stated" group.

7.—Percentage Distribution of the Labour Force,[1] 14 Years of Age or Over, Classified by Occupation Group and Sex, by Province, 1951

(Exclusive of the Yukon and Northwest Territories)

Occupation Group	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
	MALES										
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Proprietary and managerial	6·4	6·2	7·6	7·5	8·7	9·9	8·7	7·5	8·4	10·2	9·0
Professional	3·1	2·7	3·6	3·4	5·3	5·9	4·3	3·5	4·5	5·6	5·1
Clerical	4·1	2·5	4·4	4·6	6·4	7·1	6·1	3·0	4·0	5·3	5·9
Agricultural	4·0	45·1	12·9	19·4	16·6	13·5	30·3	56·5	38·4	7·8	19·4
Fishing, hunting, trapping and logging	30·8	7·8	8·4	14·1	3·5	1·3	1·2	0·8	0·8	6·7	3·7
Mining and quarrying	2·5	[2]	6·7	0·7	1·1	1·4	0·9	0·3	2·6	2·1	1·6
Manufacturing and mechanical[3]	10·3	6·4	12·7	11·8	19·5	23·0	12·6	5·7	8·9	17·5	17·7
Construction	7·9	5·9	7·9	6·5	8·1	7·4	6·5	3·2	6·4	8·2	7·2
Transportation and communication	11·9	7·4	11·0	11·5	9·0	8·7	9·5	7·6	8·5	11·4	9·2
Commercial and financial	3·0	3·5	4·0	4·1	5·4	5·7	5·3	4·6	5·2	6·2	5·4
Service	5·4	6·3	9·9	5·1	5·8	7·1	6·7	3·5	6·3	8·8	6·6
Personal	*3·2*	*1·9*	*2·6*	*2·5*	*3·4*	*3·6*	*3·4*	*2·2*	*2·8*	*4·7*	*3·4*
Protective	*2·1*	*4·2*	*7·1*	*2·5*	*2·2*	*3·3*	*3·1*	*1·1*	*3·3*	*3·3*	*3·0*
Other	*0·1*	*0·2*	*0·2*	*0·1*	*0·2*	*0·2*	*0·2*	*0·2*	*0·2*	*0·3*	*0·2*
Labourers[4]	9·4	5·3	9·4	9·6	8·9	8·2	7·2	3·5	5·6	8·9	8·0
Totals, Males in All Occupation Groups[5]	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**
	FEMALES										
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Proprietary and managerial	6·5	3·5	4·4	4·2	2·9	3·0	2·5	2·8	3·2	4·4	3·2
Professional	15·6	20·1	18·3	18·2	15·2	12·0	12·9	19·6	16·2	14·2	14·3
Clerical	17·4	16·9	22·2	21·7	22·4	32·6	30·3	22·1	28·0	31·2	27·6
Agricultural	0·7	4·2	1·2	1·2	2·2	2·2	5·1	11·5	5·4	1·6	2·8
Fishing, hunting, trapping and logging	0·1	0·1	[2]	[2]	[2]	[2]	[2]	[2]	[2]	0·1	[2]
Mining and quarrying	—	—	—	—	[2]	—	—	—	—	[2]	[2]
Manufacturing and mechanical[3]	5·5	8·4	6·7	9·6	22·7	15·8	10·5	2·3	4·1	6·5	14·8
Construction	[2]	0·1	[2]	[2]	[2]	0·1	0·1	[2]	0·1	0·1	0·1
Transportation and communication	2·2	2·6	2·8	2·5	2·5	3·1	2·4	2·9	2·5	4·2	2·9
Commercial and financial	17·6	11·4	12·6	11·9	8·1	10·6	11·8	9·8	12·0	12·5	10·3
Service	33·0	30·4	29·8	27·4	20·3	17·5	22·5	27·9	26·9	22·8	21·0
Personal	*32·9*	*30·3*	*29·5*	*27·2*	*20·2*	*17·3*	*22·2*	*27·7*	*26·6*	*22·5*	*20·8*
Protective	[2]	*0·1*	*0·1*	[2]	*0·1*	*0·1*	*0·1*	[2]	*0·1*	*0·1*	*0·1*
Other	*0·1*	[2]	*0·2*	*0·1*	*0·1*	*0·1*	*0·2*	*0·1*	*0·2*	*0·2*	*0·1*
Labourers[4]	0·7	1·2	0·7	1·5	2·2	2·2	1·1	0·4	0·7	1·3	1·8
Totals, Females in All Occupation Groups[5]	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**

[1] Excludes a few persons seeking work who had never been employed. [2] Less than 0·05 p.c. [3] Includes "Electric light and power production and stationary enginemen". [4] Excludes agricultural, fishing, logging or mining labourers. [5] Includes "Not stated" group.

Selected Occupations, by Sex, 1951.—The principal occupations reported by males and females at the 1951 Census are shown in Table 8 which lists, in order of numerical importance, all occupations having 20,000 or more males and all occupations with 10,000 or more females. These occupations accounted for 69·5 p.c. of all males and 80·2 p.c. of all females in the labour force at that time. Changes in the order of the principal occupations since 1941 were more pronounced for female than for male workers. Stenographers and typists, office clerks and sales clerks increased substantially to become, in that order, the numerically most important occupation classes for females. As for males, the ten numerically most important occupations in 1941 were, except for slight changes in rank, also the ten principal occupations in 1951. Despite the similarity in the order of these occupations for males, however, substantial increases in the number of office clerks, truck drivers and carpenters and sharp decreases in the number of farmers and farm labourers were reported over the decade.

8.—Occupations with 20,000 or More Males and Occupations with 10,000 or More Females, 1951

(Exclusive of the Yukon and Northwest Territories)

Occupation	Number	Occupation	Number
Males		**Males**—concluded	
Farmers and stockraisers	536,929	Chauffeurs and taxi drivers	21,079
Labourers[1]	330,267	Waiters	20,341
Farm labourers	238,598	**Totals, Males in Selected Occupations**	**2,866,390**
Office clerks	158,229	Percentage of All Occupations	69·5
Truck drivers	152,728		
Carpenters	129,045	**Females**	
Owners, managers, officials, retail trade	127,034		
Lumbermen	92,575		
Sales clerks	77,754	Stenographers and typists	133,485
Mechanics, motor-vehicle	64,199	Office clerks	118,025
Owners, managers, officials, manufacturing	63,634	Sales clerks	95,443
Armed Forces, other than commissioned officers	60,570	Hotel, cafe and private household workers, *n.e.s.*	88,775
Commercial travellers	52,737	Teachers, school	74,319
Mechanics, *n.e.s.*	52,677	Bookkeepers and cashiers	54,713
Foremen, manufacturing	46,342	Sewers and sewing machine operators, *n.e.s.*	46,011
Painters, decorators and glaziers	46,273	Waitresses	40,735
Fishermen	46,184	Nurses, graduate	34,270
Shipping and receiving clerks	45,710	Telephone operators	29,587
Owners, managers, officials, wholesale trade	39,308	Housekeepers and matrons	26,397
Electricians and wiremen	34,992	Farm labourers	23,844
Bookkeepers and cashiers	33,686	Labourers[1]	20,939
Accountants and auditors	32,549	Nurses, practical	18,451
Owners, managers, officials, personal service, *n.e.s.*	31,853	Owners, managers, officials, retail trade	17,863
Machinists, metal	31,277	Laundresses, cleaners, dyers	16,985
Machine operators, *n.e.s.*	31,121	Packers and wrappers, *n.e.s.*	16,283
Janitors and sextons	31,120	Cooks	15,663
Sectionmen and trackmen	30,353	Nurses-in-training	15,581
Miners	29,817	Dressmakers and seamstresses (not factory)	14,237
Plumbers and pipe fitters	29,531	Barbers, hairdressers, manicurists	10,854
Teachers, school	28,259	Charworkers and cleaners	10,766
Stationary engineers	25,586	Nuns, *n.e.s.*	10,559
Guards, watchmen, *n.e.s.*	25,298		
Welders and flame cutters	23,162	**Totals, Females in Selected Occupations**	**933,785**
Officials, government service	23,158		
Owners, managers, officials, construction	22,415	Percentage of All Occupations	80·2

[1] Excludes agricultural, fishing, logging or mining labourers.

9.—Number and Percentage Distribution of the Labour Force,[1] 14 Years of Age or Over, by Occupation Group, Age Group and Sex, 1951

(Exclusive of the Yukon and Northwest Territories)

Occupation Group	14-19 Years		20-24 Years		25-44 Years		45-64 Years		65 Years or Over		All Ages	
	MALES											
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Proprietary and managerial	466	0·1	10,918	3·0	186,332	50·4	148,750	40·2	23,468	6·3	369,934	100·0
Professional	3,308	1·6	21,143	10·0	122,127	58·0	54,770	26·0	9,387	4·5	210,735	100·0
Clerical	24,289	10·0	45,573	18·7	113,149	46·4	52,706	21·6	8,183	3·4	243,900	100·0
Agricultural	88,214	11·1	81,903	10·3	312,629	39·2	248,288	31·1	66,840	8·4	797,874	100·0
Fishing, hunting, trapping and logging	18,112	11·9	24,134	15·9	67,696	44·6	36,016	23·7	5,741	3·8	151,699	100·0
Mining and quarrying	3,077	4·7	9,063	13·9	35,183	53·9	16,568	25·4	1,382	2·1	65,273	100·0
Manufacturing and mechanical[2]	42,825	5·9	89,289	12·2	377,107	51·6	195,442	26·8	25,910	3·5	730,573	100·0
Construction	12,310	4·1	31,413	10·5	145,996	48·9	92,637	31·0	16,357	5·5	298,713	100·0
Transportation and communication	26,373	6·9	54,887	14·5	201,346	53·0	91,325	24·1	5,686	1·5	379,617	100·0
Commercial and financial	18,280	8·3	27,981	12·7	112,663	51·1	51,529	23·4	10,078	4·6	220,531	100·0
Service	19,739	7·3	37,723	13·9	112,396	41·4	80,309	29·6	21,576	7·9	271,743	100·0
Personal	*7,759*	*5·6*	*10,857*	*7·8*	*50,093*	*36·0*	*55,611*	*40·0*	*14,698*	*10·6*	*139,018*	*100·0*
Protective	*10,833*	*8·7*	*25,977*	*20·8*	*59,503*	*47·6*	*22,287*	*17·8*	*6,328*	*5·1*	*124,928*	*100·0*
Other	*1,147*	*14·7*	*889*	*11·4*	*2,800*	*35·9*	*2,411*	*30·9*	*550*	*7·1*	*7,797*	*100·0*
Labourers[3]	46,320	14·0	52,118	15·8	133,873	40·5	82,837	25·1	15,119	4·6	330,267	100·0
Totals, Males in All Occupations[4]	**310,964**	**7·5**	**494,339**	**12·0**	**1,940,399**	**47·1**	**1,163,734**	**28·2**	**212,396**	**5·2**	**4,121,832**	**100·0**
	FEMALES											
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Proprietary and managerial	145	0·4	1,584	4·3	17,773	47·7	15,400	41·3	2,355	6·3	37,257	100·0
Professional	12,946	7·8	41,580	25·1	71,737	43·2	35,374	21·3	4,308	2·6	165,945	100·0
Clerical	58,392	18·1	93,958	29·2	131,729	40·9	35,999	11·2	1,731	0·5	321,809	100·0
Agricultural	5,246	16·1	3,616	11·1	12,022	36·9	9,724	29·9	1,959	6·0	32,567	100·0
Fishing, hunting, trapping and logging	40	18·4	33	15·2	83	38·2	55	25·3	6	2·8	217	100·0
Mining and quarrying	1	5·6	5	27·8	8	44·4	4	22·2	—	—	18	100·0
Manufacturing and mechanical[2]	32,747	19·0	36,326	21·1	71,325	41·4	28,868	16·7	3,147	1·8	172,413	100·0
Construction	174	19·4	201	22·4	388	43·2	120	13·4	15	1·7	898	100·0
Transportation and communication	8,783	26·1	9,395	27·9	11,137	33·1	4,197	12·5	178	0·5	33,690	100·0
Commercial and financial	25,298	21·0	23,845	19·8	51,351	42·7	18,482	15·4	1,371	1·1	120,347	100·0
Service	43,929	17·9	39,577	16·2	88,965	36·3	60,925	24·9	11,643	4·8	245,039	100·0
Personal	*43,291*	*17·8*	*39,244*	*16·2*	*88,069*	*36·3*	*60,478*	*24·9*	*11,581*	*4·8*	*242,663*	*100·0*
Protective	*44*	*4·1*	*88*	*8·2*	*598*	*55·2*	*306*	*28·5*	*48*	*4·0*	*1,074*	*100·0*
Other	*594*	*45·6*	*245*	*18·8*	*303*	*23·3*	*141*	*10·8*	*19*	*1·6*	*1,302*	*100·0*
Labourers[3]	5,869	28·0	4,362	20·8	7,384	35·3	3,100	14·8	224	1·1	20,939	100·0
Totals, Females in All Occupations[4]	**197,164**	**16·9**	**257,606**	**22·1**	**468,363**	**40·2**	**214,002**	**18·4**	**27,186**	**2·3**	**1,164,321**	**100·0**

[1] Excludes a few persons seeking work who had never been employed. [2] Includes "Electric light and power production and stationary enginemen". [3] Excludes agricultural, fishing, logging or mining labourers. [4] Includes "Not stated" group.

Occupations by Age, 1951.—Table 9 shows that higher proportions of males under 25 years were employed in fishing, trapping and logging occupations, in clerical occupations, in protective and other service occupations, and in the labourers group than in other occupation groups. It is worth noting, on the other hand, that 46·5 p.c. of the males in proprietory and managerial occupations were 45 years of age or over, while about 50 p.c. of those in personal service occupations were over that age. The table also indicates that in each occupation group the average age for females was considerably lower than for males.

Occupations of Females, by Marital Status, 1941 and 1951.—The female labour force included 348,961 married women in 1951. The somewhat better than three-fold rise in the number of working wives was the most outstanding change in the labour force composition during the 1941-51 decade, the 229 p.c. jump dwarfing increases of 33·5 p.c. in the total number of married women and 40·0 p.c. in the total number of working women. Of the 1941 total of 2,336,485 married women, one out of every 21 was working; of the 1951 total of 3,119,824 married women, one in every 9 was gainfully employed.

Married women accounted for 243,019 or over 73 p.c. of the total increase in the female labour force in the decade. In 1941, about 13 p.c. of the working women were married as compared with 30·0 p.c. in 1951; the number of single women in the labour force, on the other hand, rose 9 p.c. in the ten-year interval and represented only 62·0 p.c. of all working women in 1951 as against 80·0 p.c. in 1941. The number of working widows increased 38·0 p.c. and divorced women, while accounting for a very small portion of the total female labour force, increased more than 200 p.c.

Owing to changes in definitions and the inclusion of Newfoundland in the 1951 Census, occupation group figures for 1951 and 1941 are not strictly comparable. However, for most groups, comparisons between the two census years reflect the approximate change. Increase in the number of working wives during the decade varied by occupation group from two to seven times the number employed in 1941.

In the ten-year period, the number of married women in proprietory and managerial occupations increased about four times, while the number in the professions increased over four times. The number in clerical occupations was over seven times the corresponding 1941 figure, in commercial occupations six times, in manufacturing occupations almost three times and in service occupations more than one and one-half times.

10.—Number and Percentage of the Labour Force Females, 14 Years of Age or Over, by Occupation Group and Marital Status, 1941 and 1951

(Exclusive of the Yukon and Northwest Territories)

Occupation Group	Single		Married[1]		Widowed		Divorced		Total[2]	
1941	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Proprietary and managerial	6,442	39·3	5,555	33·9	4,227	25·8	180	1·1	16,404	100·0
Professional	119,856	92·1	6,903	5·3	3,015	2·3	298	0·2	130,076	100·0
Clerical	138,213	89·7	11,992	7·8	3,273	2·1	685	0·4	154,169	100·0
Agricultural	6,028	31·8	2,582	13·6	10,280	54·2	79	0·4	18,969	100·0
Fishing, hunting and trapping	165	50·9	23	7·1	136	42·0	—	—	324	100·0
Logging	—	—	—	—	—	—	—	—	—	—

For footnotes, *see* end of table.

10.—Number and Percentage of the Labour Force Females, 14 Years of Age or Over, by Occupation Group and Marital Status, 1941 and 1951—concluded

Occupation Group	Single		Married[1]		Widowed		Divorced		Total[2]	
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
1941—concluded										
Mining and quarrying	15	93·8	—	—	1	6·2	—	—	16	100·0
Manufacturing and mechanical[3]	101,591	79·2	20,679	16·1	5,394	4·2	558	0·4	128,224	100·0
Construction	254	81·4	43	13·8	13	4·2	2	0·6	312	100·0
Transportation and communication	11,841	84·2	1,536	10·9	586	4·2	101	0·7	14,065	100·0
Commercial and financial	61,713	84·9	7,977	11·0	2,491	3·4	519	0·7	72,702	100·0
Service	208,155	73·2	47,045	16·6	27,169	9·6	1,823	0·6	284,206	100·0
Personal	*207,608*	*73·3*	*46,852*	*16·6*	*27,056*	*9·5*	*1,814*	*0·6*	*283,339*	*100·0*
Protective	*51*	*33·3*	*44*	*28·8*	*55*	*35·9*	*3*	*2·0*	*153*	*100·0*
Other	*501*	*70·2*	*149*	*20·9*	*58*	*8·1*	*6*	*0·8*	*714*	*100·0*
Labourers[4]	9,931	85·2	1,398	12·0	307	2·6	19	0·2	11,655	100·0
Totals, All Occupations[5]	**665,623**	**80·0**	**105,942**	**12·7**	**56,964**	**6·8**	**4,273**	**0·5**	**832,840**	**100·0**
1951[6,7]										
Proprietary and managerial	10,684	28·7	19,392	52·0	6,537	17·5	644	1·7	37,257	100·0
Professional	127,959	77·1	31,471	19·0	5,565	3·4	950	0·6	165,945	100·0
Clerical	226,867	70·5	80,922	25·1	10,419	3·2	3,601	1·1	321,809	100·0
Agricultural	10,511	32·3	16,354	50·2	5,597	17·2	105	0·3	32,567	100·0
Fishing, hunting and trapping	79	39·9	83	41·9	35	17·7	1	0·5	198	100·0
Logging	9	47·4	6	31·6	3	15·8	1	5·3	19	100·0
Mining and quarrying	10	55·6	5	27·8	3	16·7	—	—	18	100·0
Manufacturing and mechanical[3]	100,950	58·6	59,261	34·4	10,357	6·0	1,845	1·1	172,413	100·0
Construction	470	52·3	365	40·6	47	5·2	16	1·8	898	100·0
Transportation and communication	23,136	68·7	8,885	26·4	1,275	3·8	394	1·2	33,690	100·0
Commercial and financial	66,394	55·2	45,428	37·7	6,793	5·6	1,732	1·4	120,347	100·0
Service	134,589	54·9	76,825	31·4	29,984	12·2	3,641	1·5	245,039	100·0
Personal	*133,067*	*54·8*	*76,205*	*31·4*	*29,779*	*12·3*	*3,612*	*1·5*	*242,663*	*100·0*
Protective	*610*	*56·8*	*304*	*28·3*	*144*	*13·4*	*16*	*1·5*	*1,074*	*100·0*
Other	*912*	*70·0*	*316*	*24·3*	*61*	*4·7*	*13*	*1·0*	*1,302*	*100·0*
Labourers[4]	12,415	59·3	7,073	33·8	1,246	5·9	205	1·0	20,939	100·0
Totals, All Occupations[5,7]	**723,433**	**62·1**	**348,961**	**30·0**	**78,672**	**6·8**	**13,255**	**1·1**	**1,164,321**	**100·0**

[1] Includes "Permanently separated". [2] Totals for 1941 include a few persons with marital status "Not stated". [3] Includes "Electric light and power production and stationary enginemen". [4] Excludes agricultural, fishing, logging or mining labourers. [5] Includes "Not stated" group. [6] Excludes a few persons seeking work who had never been employed. [7] Includes Newfoundland.

Occupations by Class of Worker, 1951.—Of the 4,121,832 males in the labour force on June 2, 1951, 974,287 or 23·6 p.c. were reported as employers or "own accounts", 3,011,322 or just over 73 p.c. as wage or salary earners and 136,223 or 3·3 p.c. as unpaid family workers. Female wage and salary earners, numbering 1,073,829, accounted for more than 92 p.c. of the 1,164,321 females in the labour force. Employers and "own accounts" totalled 56,722 or 4·9 p.c. and unpaid family workers 33,770 or approximately 3 p.c. of the total female labour force.

11.—Number and Percentage of the Labour Force,[1] 14 Years of Age or Over, by Occupation Group, Class of Worker and Sex, 1951

(Exclusive of the Yukon and Northwest Territories)

Occupation Group	Employers and Own Account		Wage-Earners		No Pay (Unpaid Family Workers)		Total	
	MALES							
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Proprietary and managerial	207,886	56·2	161,929	43·8	119	[2]	369,934	100·0
Professional	32,136	15·2	178,467	84·7	132	[2]	210,735	100·0
Clerical	143	[2]	243,560	99·9	197	[2]	243,900	100·0
Agricultural	539,872	67·7	131,701	16·5	126,301	15·8	797,874	100·0
Fishing, hunting and trapping	40,110	79·1	9,367	18·5	1,202	2·4	50,679	100·0
Logging	11,997	11·9	87,847	87·0	1,176	1·2	101,020	100·0
Mining and quarrying	1,365	2·1	63,892	97·9	16	[2]	65,273	100·0
Manufacturing and mechanical[3]	35,716	4·9	693,613	94·9	1,244	0·2	730,573	100·0
Construction	47,028	15·7	251,101	84·1	584	0·2	298,713	100·0
Transportation and communication	28,649	7·5	349,884	92·2	1,084	0·3	379,617	100·0
Commercial and financial	12,091	5·5	206,662	93·7	1,778	0·8	220,531	100·0
Service	15,652	5·8	255,476	94·0	615	0·2	271,743	100·0
Personal	*15,144*	*10·9*	*123,288*	*88·7*	*586*	*0·4*	*139,018*	*100·0*
Protective	*79*	[2]	*124,837*	*99·9*	*12*	[2]	*124,928*	*100·0*
Other	*429*	*5·5*	*7,351*	*94·3*	*17*	*0·2*	*7,797*	*100·0*
Labourers[4]	—	—	328,635	99·5	1,632	0·5	330,267	100·0
Totals, Males in All Occupations[5]	**974,287**	**23·6**	**3,011,322**	**73·1**	**136,223**	**3·3**	**4,121,832**	**100·0**
	FEMALES							
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Proprietary and managerial	23,807	63·9	12,897	34·6	553	1·5	37,257	100·0
Professional	4,412	2·7	161,281	97·2	252	0·1	165,945	100·0
Clerical	194	[2]	319,852	99·4	1,763	0·5	321,809	100·0
Agricultural	8,186	25·1	6,215	19·1	18,166	55·8	32,567	100·0
Fishing, hunting and trapping	95	48·0	93	47·0	10	5·0	198	100·0
Logging	2	10·5	17	89·5	—	—	19	100·0
Mining and quarrying	4	22·2	14	77·8	—	—	18	100·0
Manufacturing and mechanical[3]	5,668	3·3	166,410	96·5	335	0·2	172,413	100·0
Construction	51	5·7	841	93·7	6	0·6	898	100·0
Transportation and communication	104	0·3	33,494	99·4	92	0·3	33,690	100·0
Commercial and financial	624	0·5	111,661	92·8	8,062	6·7	120,347	100·0
Service	13,425	5·5	227,298	92·8	4,316	1·7	245,039	100·0
Personal	*13,358*	*5·5*	*225,004*	*92·7*	*4,306*	*1·8*	*242,663*	*100·0*
Protective	*1*	[2]	*1,073*	*99·9*	—	—	*1,074*	*100·0*
Other	*71*	*5·5*	*1,221*	*93·8*	*10*	*0·7*	*1,302*	*100·0*
Labourers[4]	—	—	20,775	99·2	164	0·8	20,939	100·0
Totals, Females in All Occupations[5]	**56,722**	**4·9**	**1,073,829**	**92·2**	**33,770**	**2·9**	**1,164,321**	**100·0**

[1] Excludes a few persons seeking work who had never been employed.
[2] Less than 0·05 p.c.
[3] Includes "Electric light and power production and stationary enginemen", fishing, logging or mining labourers.
[4] Excludes agricultural,
[5] Includes "Not stated" group.

Subsection 2.—Current Labour Force Statistics*

During World War II it became increasingly apparent that up-to-date information on the size and characteristics of the labour supply was a necessity. Also, the possibility of disturbed economic conditions in the post-war period emphasized the need for a current and periodic analysis of the state of employment in Canada. To meet this need, a labour force survey on a sample basis was conducted in the autumn of 1945. Quarterly surveys were carried out from then until November 1952, when the survey was placed on a monthly basis. A multi-stage area sample

* Revised in the Special Surveys Division, Dominion Bureau of Statistics.

was used involving the selection of progressively smaller sample areas and ultimately of households. Random methods of choice were used at every stage of selection so that all members of the population had an equal chance of inclusion. The present sample includes about 30,000 households in over 100 different areas in Canada. These areas include the 28 cities having a population of 30,000 or over in 1941, in addition to some of the smaller urban places and various rural areas.

The estimates of the labour force are restricted to the civilian labour force, since net strength of the Armed Forces is obtainable directly from official sources. Inmates of institutions and Indians living on reserves are also excluded because they are not in the competitive labour market. Because of inaccessibility and high cost of enumeration, certain remote areas of the country have been excluded from the sample.

The labour force surveys provide a classification of persons 14 years of age or over on the basis of their activity during a specified week, which is, in each case, the week that precedes the beginning of the survey. Information on the part of the population not in the labour force is also collected. These non-workers are classified as keeping house, going to school, retired or voluntarily idle, too old or permanently unable to work.

The information gathered on the labour force is divided into two groups: (1) persons with jobs and (2) persons without jobs and seeking work. The estimates of persons with jobs are classified by region, sex, age, hours worked, occupation, industry and occupational status. Special estimates are given for women employed in domestic service and employed women by marital status. Included in the estimate of persons with jobs are those who worked during the survey week, as well as those temporarily absent from their jobs because of illness, vacation, bad weather, labour disputes or temporary layoffs. The estimates of persons without jobs and seeking work are classified by region, sex, age and number of months looking for work.

The estimates obtained from the labour force surveys are all subject to sampling error; the relative error tends to increase as the size of the estimate decreases. Accordingly, the reliability of the smaller estimates is less than that of the larger estimates. Estimates of less than 10,000 persons should not be used without careful reservation.

Data in Table 12 for June 1, 1946 to 1953, are compiled from the results of labour force surveys conducted in late May or early June of those years. The information for years prior to 1946 is taken from estimates based upon 1931 and 1941 Census data rearranged according to the definitional system used in the labour force surveys, the revised census benchmarks being linked with the June 1946 survey on the basis of monthly and annual employment and unemployment data.

The labour force sample survey for June 1951 used the same reference week as the 1951 Census of population. The same general labour force definitions were used in each and comparisons can be made in the data obtained. In general, the results obtained from the sample survey compared favourably with those obtained from the Census having due regard to the sampling variability mentioned above.

Differences did show up, however, owing largely to two factors. (1) There is a difference in coverage. Excluded from the sampling scheme but included in the Census are 117,000 inmates in institutions, 62,000 Indians on reserves, 71,000 persons in the Armed Forces, and 110,000 persons living in relatively inaccessible areas. This difference affects in some measure each labour force category. (2) Enumeration of the whole population presents problems not encountered in continuing sample surveys. The latter employs relatively few enumerators with the opportunity of reinstruction for successive surveys. Consequently, the current survey can probe more deeply to bring out the marginal elements of the labour force. In particular, the survey reported more family members as having done unpaid family work on a farm or in a business than were reported by the Census.

12.—Estimates of the Civilian Labour Force and its Main Components, June 1, 1931-53[1]

Year	Civilian Population (14 years of age or over)	Civilian Labour Force (14 years of age or over)							Persons not in the Labour Force (14 years of age or over)
		Persons With Jobs					Persons Without Jobs and Seeking Work	Total Labour Force	
		Non-Agriculture			Agriculture	Total (with jobs)			
		Paid Workers	Other[2]	Total (non-agriculture)					
	'000	'000	'000	'000	'000	'000	'000	'000	'000
1931....	7,039	2,006	421	2,427	1,203	3,630	475	4,105	2,934
1932...	7,163	1,828	381	2,209	1,223	3,432	733	4,165	2,998
1933....	7,287	1,698	470	2,168	1,243	3,411	817	4,228	3,059
1934....	7,411	1,910	493	2,403	1,263	3,666	624	4,290	3,121
1935....	7,539	1,920	532	2,452	1,284	3,736	618	4,354	3,185
1936....	7,665	1,972	576	2,548	1,304	3,852	565	4,417	3,248
1937....	7,785	2,085	661	2,746	1,324	4,070	406	4,476	3,309
1938....	7,912	2,053	625	2,678	1,344	4,022	516	4,538	3,374
1939....	8,035	2,056	655	2,711	1,364	4,075	523	4,598	3,437
1940....	8,053	2,173	636	2,809	1,329	4,138	418	4,556	3,497
1941....	7,969	2,538	476	3,014	1,210	4,224	193	4,417	3,552
1942....	7,900	2,770	488	3,258	1,127	4,385	134	4,519	3,381
1943....	7,797	2,906	434	3,340	1,107	4,447	75	4,522	3,275
1944....	7,856	2,950	369	3,319	1,126	4,445	62	4,507	3,349
1945....	7,992	2,914	363	3,277	1,134	4,411	72	4,483	3,509
1946....	8,715	2,957	481	3,438	1,261	4,699	125	4,824	3,891
1947....	8,933	3,112	548	3,660	1,163	4,823	91	4,914	4,019
1948....	9,053	3,201	537	3,738	1,177	4,915	81	4,996	4,057
1949....	9,211	3,312	548	3,860	1,110	4,970	101	5,071	4,140
1950[3]...	9,574	3,415	560	3,975	1,062	5,037	144	5,181	4,393
1951[3]...	9,714	3,640	535	4,175	997	5,172	83	5,255	4,459
1952[3]...	9,910	3,782	516	4,298	924	5,222	107	5,329	4,581
1953[3]...	10,020	3,854	543	4,397	900	5,297	90	5,387	4,633

[1] Exclusive of persons in institutions, remote areas and Indian reserves. [2] Employers, 'own-account' and unpaid family workers. [3] Includes Newfoundland.

Main Characteristics of the Canadian Labour Force, 1931-53.*—The civilian population 14 years of age or over (exclusive of persons in institutions) increased in the period June 1931 to June 1953 by about 2,742,000 persons or at the rate of about 125,000 persons a year. The strength of the Armed Forces rose very considerably from 5,000 in 1931 and 9,000 in mid-1939 to 779,000 at June 1944 but declined to 105,000 by June 1953. Consequently, the civilian non-institutional

* Newfoundland data have been subtracted from 1953 totals: thus all statements made in this analysis are on the basis of the nine other provinces.

population, which increased very little from June 1939 to June 1940, actually declined in size until, in mid-1943, it contained almost 238,000 fewer persons than in 1939. During 1944, there was a small increase in the civilian population (59,000) as the rate of increase of the Armed Forces levelled off. In 1945, 1946 and 1947 the civilian population increased markedly as a consequence of the rapid demobilization of the Forces.

In contrast, the civilian labour force maintained its strength notwithstanding large withdrawals to the Forces during the war years (June 1942 labour force being 102,000 greater than at June 1941 and that of June 1945 being 66,000 greater) mainly by recruiting replacements from among those who would normally be outside the labour force. The group classed as "not in the labour force" usually represents a fairly constant percentage of the population but during the war years this category reached a low point in 1943 (162,000 persons fewer than in 1939), increased by 74,000 between mid-1943 and mid-1944 and then moved sharply upward with the decline in wartime employment (the increase was: June 1944 to June 1945, 160,000; and June 1945 to June 1946, 382,000).

The number of civilian jobs increased considerably during the War as compared with pre-war experience (despite a decline in agricultural employment) reaching a wartime peak of 4,447,000 in June 1943 (372,000 greater than June 1939). After registering a decline to 4,411,000 during the readjustment period represented by June 1945, the number of jobs continued to increase in post-war years to the all-time high, for that month, of 5,186,000 in June 1953.

Section 3.—Employment, Payrolls and Hours*

For many years the Dominion Bureau of Statistics has made monthly surveys of employment in the major non-agricultural industries, exclusive of education, health, domestic and personal service, government administration, etc. The broad industrial divisions covered by the surveys are forestry (chiefly logging), mining, manufacturing, construction, transportation, storage and communications, public utilities, trade, finance, insurance and real estate, and certain services (chiefly hotels, restaurants, laundries and dry-cleaning plants). Early in 1941, the monthly inquiries were extended to cover the current earnings of those in recorded employment. Subsequently, a record of weekly payrolls and average wages and salaries was built up for 1939, 1940 and 1941. Since late in 1944, monthly data have also been collected on man-hours and hourly earnings. Inquiries into the sex distribution of the persons on the payrolls of reporting establishments were undertaken on a monthly basis commencing Feb. 1, 1946, replacing the annual and semi-annual surveys of immediately preceding years. Following the entry of Newfoundland into Confederation, the collection of employment and payrolls data was undertaken in that Province.

For practical reasons associated with costs of collection in time and money, the current inquiries† are limited to firms and branches ordinarily employing 15 or more persons. The restriction results in the inclusion of industrial samples of varying size in the monthly survey, the variation depending upon the organization of the industry in large or in small units; from the equally important geographical

* Prepared in the Employment Section, Labour and Prices Division, Dominion Bureau of Statistics.

† The methods used in preparing the current statistics of employment and payrolls and man-hours and hourly earnings are explained in the DBS monthly bulletins on these subjects.

aspect, however, much greater uniformity exists in the provincial coverage of total employees and, in all cases, the coverage is large. It is estimated that the almost 24,000 firms co-operating in 1952 employed approximately 83 p.c. of the total wage-earners and salaried employees in the industries surveyed.

From 1951, the monthly records of employment, payrolls and man-hours have been grouped according to the Canadian Standard Industrial Classification. More recently the employment and payrolls indexes were recalculated on 1949 averages as 100 p.c. The tables in this Section incorporate classification changes, and all indexes refer to 1949 = 100.

The employment and payrolls indexes published monthly reflect general economic conditions in the country as a whole and also in specific areas, since workers are taken on staff or released by firms in response to demand for their products. As in each successive year since 1947, industrial employment in Canada reached a new all-time high level during 1952. Sustained consumer demand for goods and services, augmented by heavy defence expenditures occasioned by the continuation of hostilities in Korea and by Canada's commitments under NATO, were reflected in the high volume of employment during 1952. Commencement of a number of long-term industrial developments, such as the aluminum undertaking in British Columbia and the Quebec-Labrador iron-ore project, also contributed to the increase in employment during the year. The working time lost in labour disputes in 1952 was considerably higher than in the previous year although the total number of these disputes declined slightly. Work stoppages in the British Columbia logging and lumbering industry as well as in textiles and clothing and in construction contributed to the increase of over 300 p.c. in the number of man-working days lost.

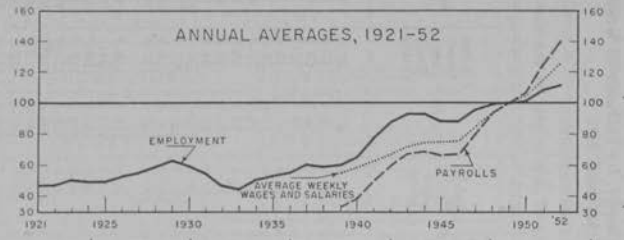
Employment.—There was a moderate increase in employment during 1952, with the average index for the composite of nine non-agricultural industries (1949 = 100) climbing to a new peak of 111·6. The figure for Oct. 1, at 116·4, was the highest ever reached. The rate of increase over 1951, 2·6 p.c., was considerably lower than the rate of upward movement between 1950 and 1951, reflecting the stabilization of employment at a higher level following the accelerating effect of the Korean hostilities on defence expenditures. Month-to-month movements of the employment index during 1952 followed the seasonal pattern with slightly decreased employment between Jan. 1 and May 1, rising steadily thereafter, except for fractional declines in November and December.

Gain in semployment were recorded in all major industrial groups with the exception of forestry (chiefly logging) where there was a decrease of 10·6 p.c. from the 1951 level. In manufacturing as a whole, employment rose by 1·3 p.c. over the preceding year, the average increase in durable goods, at 3·9 p.c., outweighing a decline of 1·3 p.c. in the staffs of factories turning out non-durable commodities. Advances in employment over the previous year within the durable goods group were particularly notable in the aircraft and parts industry, where there was an increase ot nearly 68 p.c., in shipbuilding and repairing which gained 33 p.c., and in transportation equipment manufacturing which rose by 18 p.c. Recessions in employment were, however, recorded in a number of durable goods industries including heating and cooking appliances, glass and glass products, wood products, saw and planing mills, and furniture. In the non-durable goods division declines in employment were largely concentrated in the textiles group (excluding clothing) and in rubber products.

EMPLOYMENT, PAYROLLS AND AVERAGE WEEKLY WAGES AND SALARIES, 1941–53

(COMPOSITES OF NINE NON-AGRICULTURAL INDUSTRIES)

1949 = 100



EMPLOYMENT

AVERAGE WEEKLY WAGES AND SALARIES

PAYROLLS

160 140 120 100 80 60 40

1941 J 1942 J 1943 J 1944 J 1945 J 1946 J 1947 J 1948 J 1949 J 1950 J 1951 J 1952 J 1953 J

Industrially, employment in construction in 1952 showed the most marked gain of all groups for which data are available, with an increase of 8·5 p.c. over 1951. Excluding forestry, new all-time high records of employment were established in the major non-manufacturing industries, although the advances over 1951 in all groups with the exception of public utilities operation and services were less than the rate of increase revealed by a similar comparison between 1950 and 1951.

Employment gains for 1952 were indicated in each of the provinces and, although these advances were generally moderate, they resulted in record high levels being reached in most instances. Heightened post-war employment was particularly marked in Alberta where the increase over 1946 was 46·2 p.c.; in Ontario it was 29·0 p.c., in British Columbia 27·6 p.c., and in Quebec 25·4 p.c.

Employment indexes for the major industries are given in Table **13** and for the provinces in Table **14** by months for 1951 and 1952, with annual averages from 1939. Table **15** gives index numbers of employment in eight cities of Canada. Changes from the previous year were slight in each case, the most notable variation being an increase of 4 p.c. in the index for Montreal. Quebec, Toronto, Winnipeg and Ottawa-Hull also showed small increases over 1951, while the Vancouver index declined by 1·3 p.c. and those for Windsor and Hamilton receded fractionally from their 1951 peaks.

The percentages of women employed in the main industrial groups has remained fairly constant over the past few years. In 1952, women made up 21·8 p.c. of the industrial composite compared with 21·7 p.c. in 1951.

13.—Annual Average Index Numbers of Employment, by Industrial Group, 1939-52, and Monthly Indexes, 1951 and 1952

(Exclusive of Newfoundland and the Territories)

NOTE.—These indexes are calculated as at the first day of each month, on the base 1949=100.

Year and Month	Forestry (chiefly Logging)	Mining	Manufacturing	Construction	Transportation, Storage and Communication	Public Utility Operation	Trade	Finance, Insurance, Real Estate	Services[1]	Industrial Composite
Averages—										
1939	59·3	93·7	56·3	62·0	59·8	54·9	61·5	67·8	56·8	60·1
1940	82·2	95·8	65·1	47·1	62·2	56·0	63·7	67·3	57·9	64·7
1941	91·0	99·0	82·6	68·6	70·1	59·2	68·2	69·5	66·1	77·4
1942	95·1	95·9	101·6	70·2	74·6	58·0	68·0	72·9	70·5	87·9
1943	87·3	88·7	111·5	69·4	79·5	56·8	67·6	73·4	74·8	93·0
1944	104·4	86·5	110·6	51·9	82·6	57·0	71·6	75·0	79·6	92·5
1945	119·7	82·3	100·0	53·8	86·0	61·1	76·2	77·4	81·1	88·2
1946	129·9	86·9	91·0	69·5	89·3	71·1	83·4	85·3	88·3	88·2
1947	149·6	88·6	97·2	85·6	95·4	76·7	90·2	91·5	94·6	95·7
1948	138·4	97·2	100·1	95·4	99·0	89·0	96·3	96·0	99·1	99·7
1949	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1950	100·8	105·5	100·9	102·4	99·9	101·3	103·2	105·4	101·0	101·5
1951	138·6	110·6	108·0	110·2	106·1	103·4	107·4	115·2	103·1	108·8
1952	123·9	116·8	109·4	119·6	110·9	107·6	109·9	121·9	106·6	111·6
1951—										
Jan. 1	161·1	108·2	103·7	98·1	100·5	99·2	113·8	108·4	98·3	105·9
Feb. 1	156·3	108·0	104·9	90·0	98·6	99·3	104·6	109·1	98·5	104·1
Mar. 1	153·6	107·8	105·9	86·7	99·0	98·3	103·8	109·7	98·1	104·1
Apr. 1	130·9	107·8	107·3	88·0	99·6	99·0	105·5	113·6	98·3	104·7
May 1	105·7	108·1	108·0	101·4	102·5	101·0	105·6	115·9	100·0	106·1
June 1	118·7	109·4	109·2	113·3	105·5	105·3	106·7	116·0	102·8	108·9
July 1	124·4	111·8	110·2	118·1	109·5	106·9	107·0	116·7	107·3	110·9
Aug. 1	113·6	112·8	110·3	123·8	111·4	108·0	105·4	117·1	109·9	111·4
Sept. 1	114·4	112·3	110·3	128·2	113·0	107·7	105·6	117·4	110·1	112·0
Oct. 1	135·1	112·9	110·4	127·9	111·6	105·8	108·3	117·6	106·8	112·7
Nov. 1	165·1	114·1	108·5	126·0	111·4	105·2	109·1	119·7	104·2	112·6
Dec. 1	184·6	114·3	107·5	120·5	110·8	105·1	113·3	121·0	102·7	112·7

For footnote, *see* end of table.

13.—Annual Average Index Numbers of Employment, by Industrial Group, 1939-52, and Monthly Indexes, 1951 and 1952—*concluded*

Year and Month	Forestry (chiefly Logging)	Mining	Manufacturing	Construction	Transportation, Storage and Communication	Public Utility Operation	Trade	Finance, Insurance, Real Estate	Services[1]	Industrial Composite
1952—										
Jan. 1	181·5	113·0	104·4	103·6	108·4	103·3	114·3	121·2	101·3	109·4
Feb. 1	173·6	114·3	105·3	97·5	106·3	102·3	105·2	121·0	100·8	107·4
Mar. 1	167·8	115·5	106·5	95·0	106·0	102·5	104·5	120·9	101·4	107·6
Apr. 1	126·1	114·9	107·0	99·0	108·4	103·1	105·7	120·9	102·9	107·5
May 1	77·5	115·0	107·3	108·1	108·2	103·9	106·9	121·0	104·4	107·2
June 1	98·6	117·1	108·5	119·3	111·7	107·4	107·5	121·4	107·2	110·3
July 1	93·9	118·2	108·8	129·9	113·9	111·3	109·5	122·1	111·6	112·1
Aug. 1	77·0	119·6	110·3	146·8	114·9	113·1	109·1	122·6	113·2	114·1
Sept. 1	95·1	119·5	112·8	139·4	115·1	112·9	109·6	122·5	112·5	115·2
Oct. 1	116·4	118·8	114·2	138·6	114·0	111·0	112·2	123·0	109·9	116·4
Nov. 1	136·2	118·3	113·6	132·4	112·5	110·0	114·6	123·2	107·6	116·2
Dec. 1	142·6	117·1	113·5	125·6	111·5	109·8	119·3	123·3	106·4	116·1
Percentage distribution[2]	3·6	3·9	45·7	9·8	13·4	1·7	14·3	4·3	3·3	100·0

[1] Consists mainly of hotels, restaurants, laundries and dry-cleaning establishments. [2] The proportion of employees reported in the industries to the total reported by all employers making returns in Canada at Dec. 1, 1952.

14.—Annual Average Index Numbers of Employment, by Province, 1939-52, and Monthly Indexes, 1951 and 1952

NOTE.—These indexes are calculated as at the first day of the month, on the base 1949=100.

Year and Month	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada[1]
Averages—										
1939	64·1	66·8	59·6	64·6	57·3	59·7	71·4	55·1	55·8	60·1
1940	67·2	71·4	67·4	67·4	64·2	63·4	70·1	57·4	58·0	64·7
1941	75·7	90·0	82·1	80·3	77·9	74·1	76·1	65·5	67·9	77·4
1942	70·8	103·3	89·8	94·1	87·0	80·0	78·1	70·9	82·2	87·9
1943	74·7	106·8	95·0	100·9	90·0	83·1	81·5	74·3	94·5	93·0
1944	85·9	105·0	98·4	99·1	89·5	85·8	85·5	77·6	92·5	92·5
1945	81·9	101·5	98·6	92·8	86·7	85·3	86·4	76·3	87·5	88·2
1946	87·2	95·4	98·1	90·4	86·8	89·6	92·2	82·6	83·6	88·2
1947	93·3	92·1	104·3	97·8	94·7	93·6	97·2	88·1	97·1	95·7
1948	102·6	99·6	105·2	101·2	98·9	97·2	99·5	93·7	101·3	99·7
1949	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1950	110·2	95·6	102·6	100·5	102·7	100·8	100·8	104·5	100·8	101·5
1951	112·6	100·3	109·0	109·2	110·4	103·9	106·0	112·4	106·1	108·8
1952	123·2	104·0	109·5	113·4	112·0	106·0	111·4	120·8	106·7	111·6
1951—										
Jan. 1	117·3	100·1	113·2	105·2	108·0	102·7	103·4	107·4	100·6	105·9
Feb. 1	105·3	95·4	108·3	103·6	107·2	99·3	96·6	103·4	98·7	104·1
Mar. 1	102·0	91·1	108·1	104·3	107·3	98·6	95·4	103·5	98·7	104·1
Apr. 1	96·8	94·2	106·9	103·9	108·2	99·1	96·9	103·7	100·9	104·7
May 1	103·1	94·2	103·7	105·8	108·9	100·5	98·7	107·0	104·4	106·1
June 1	113·4	100·3	103·6	108·8	110·9	103·5	107·2	112·3	107·3	108·9
July 1	119·0	100·4	105·6	110·8	112·5	106·5	110·7	115·9	110·1	110·9
Aug. 1	120·2	104·2	108·6	111·2	111·8	107·8	112·7	120·9	110·5	111·4
Sept. 1	122·5	105·9	110·1	112·2	112·1	108·2	113·0	121·5	110·9	112·0
Oct. 1	120·1	106·4	110·9	113·6	112·9	107·1	112·3	118·7	112·1	112·7
Nov. 1	116·3	106·3	112·4	115·4	112·0	107·1	112·9	117·2	110·4	112·6
Dec. 1	115·3	104·8	116·1	115·7	112·5	106·5	112·0	117·0	108·8	112·7
1952—										
Jan 1	111·6	100·1	115·2	111·3	109·9	103·8	108·9	114·3	104·0	109·4
Feb. 1	116·8	101·3	112·5	109·5	105·4	101·4	101·9	111·9	100·3	107·4
Mar. 1	102·3	98·5	111·9	109·9	108·3	100·7	101·4	110·9	102·6	107·6
Apr. 1	135·9	99·9	116·2	107·8	108·4	101·3	101·6	111·8	105·2	107·5

[1] Exclusive of Newfoundland and the Territories.

14.—Annual Average Index Numbers of Employment, by Province, 1939-52, and Monthly Indexes, 1951 and 1952—concluded

Year and Month	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada[1]
1952—concluded										
May 1	111·8	98·1	101·1	106·4	108·8	102·5	105·4	114·8	107·5	107·2
June 1	122·1	101·7	105·4	110·8	110·7	105·9	113·5	118·7	108·8	110·3
July 1	127·0	107·8	107·9	114·9	113·5	107·5	116·2	123·3	95·5	112·1
Aug. 1	132·4	107·7	104·0	118·9	113·2	109·6	118·9	128·4	102·6	114·1
Sept. 1	133·2	109·9	110·8	116·2	114·6	109·6	117·5	130·5	112·6	115·2
Oct. 1	130·8	109·8	112·3	118·0	115·9	109·8	116·2	128·0	115·1	116·4
Nov. 1	127·3	107·5	106·9	118·5	115·8	109·5	117·5	128·3	114·4	116·2
Dec. 1	126·8	106·0	109·2	118·7	115·9	110·3	117·9	128·5	112·0	116·1
Percentage distribution[2]	0·2	3·6	2·5	29·6	42·5	5·2	2·4	4·9	9·1	100·0

[1] Exclusive of Newfoundland and the Territories. [2] The proportion of employees reported in the industries to the total reported by all employers making returns in Canada at Dec. 1, 1952.

15.—Annual Average Index Numbers of Employment, by Metropolitan Area, 1939-52, and Monthly Indexes, 1951 and 1952

NOTE.—These indexes are calculated as at the first day of the month, on the base 1949=100.

Year	Montreal	Quebec	Toronto	Ottawa-Hull	Hamilton	Windsor	Winnipeg	Vancouver
Averages—								
1939	60·9	67·5	56·3	57·0	53·1	47·1	59·2	49·7
1940	64·2	69·5	61·9	63·5	63·0	56·3	62·8	53·5
1941	76·5	87·3	74·4	77·5	79·3	79·0	74·4	64·2
1942	87·6	111·9	87·0	82·7	92·5	97·8	79·7	88·7
1943	97·6	135·7	93·6	85·3	92·5	105·7	83·6	105·9
1944	97·7	134·1	89·2	84·8	89·7	100·8	87·2	104·6
1945	90·4	109·3	86·7	82·8	87·6	84·1	85·9	96·1
1946	88·6	85·4	86·7	88·1	82·2	82·9	90·3	85·9
1947	94·2	93·2	93·1	91·4	91·6	92·2	93·9	96·9
1948	97·1	100·5	97·3	96·5	96·9	94·4	97·1	102·1
1949	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1950	101·3	98·7	104·1	103·1	100·8	102·2	100·1	99·1
1951	106·6	101·6	110·7	108·4	109·5	107·7	102·7	101·4
1952	110·9	105·2	113·3	108·9	109·2	107·0	104·3	100·1
1951—								
Jan. 1	103·4	97·8	110·0	108·0	106·1	108·9	103·3	99·5
Feb. 1	102·6	95·4	108·3	105·1	105·4	110·5	100·2	97·7
Mar. 1	103·1	95·5	108·3	104·0	105·7	112·0	99·4	98·4
Apr. 1	104·7	96·7	110·0	105·0	107·2	113·1	100·1	100·2
May 1	106·4	99·1	110·8	106·8	110·6	111·0	100·5	101·6
June 1	107·0	101·7	111·2	109·0	112·1	111·7	102·8	102·1
July 1	108·0	103·9	112·2	110·4	113·8	111·0	104·5	103·9
Aug. 1	107·1	106·4	110·2	110·2	113·1	109·2	104·0	103·4
Sept. 1	107·7	106·6	110·8	110·0	111·1	105·3	104·4	103·6
Oct. 1	109·1	106·1	111·8	110·1	111·2	99·7	103·6	103·4
Nov. 1	109·4	105·8	111·9	111·4	108·3	99·5	104·2	101·7
Dec. 1	110·2	104·3	112·8	110·5	109·0	100·0	104·8	101·3
1952—								
Jan. 1	107·2	99·7	111·3	110·0	107·2	98·5	102·2	98·6
Feb. 1	106·1	97·1	109·1	106·6	105·9	98·1	100·8	96·5
Mar. 1	106·7	98·5	109·6	106·1	106·8	103·2	99·8	97·6
Apr. 1	107·8	100·2	110·3	106·1	108·1	107·8	100·6	99·8
May 1	108·9	102·9	111·1	107·1	108·8	110·2	102·1	100·9
June 1	110·5	104·7	112·1	108·1	109·7	102·7	103·6	101·5
July 1	112·3	107·4	114·4	109·3	109·5	115·2	104·8	94·7
Aug. 1	112·0	109·1	113·5	110·0	109·2	111·3	106·3	97·2
Sept. 1	112·7	105·4	114·5	110·3	109·1	109·6	106·1	102·6
Oct. 1	114·5	112·6	116·1	109·9	111·3	109·3	106·9	103·1
Nov. 1	115·1	112·3	118·0	111·1	112·4	107·5	108·5	103·6
Dec. 1	116·4	112·6	119·7	111·6	112·8	111·1	110·2	105·5
Percentage distribution[1]	15·0	1·6	14·6	1·7	3·2	1·9	3·4	3·9

[1] Proportion of employees reported in metropolitan areas to the total reported by all employers making returns in Canada at Dec. 1, 1952.

Earnings.—Disbursements in wages and salaries rose significantly in 1952 as a result both of increased employment and of widespread and substantial upward adjustments in rates of pay. Gains were general in all industries and areas covered and, at 140·3, the average payrolls index (1949=100) exceeded the previous year's record level by 11·7 p.c. The 1952 estimate of total Canadian labour income also showed an increase of 11 p.c. over 1951.*

Provincially, the largest percentage gains in the year were those of approximately 17 p.c. in Alberta and Prince Edward Island, more than 14 p.c. in Saskatchewan, and 13 p.c. in Quebec and British Columbia. Industrially, construction, which led the other major groups in employment gains over the preceding year, also showed the most notable advance in payroll disbursements, with an increase of 23·3 p.c. over 1951. Public utility operation showed a gain of 15·4 p.c. and an increase of 15·1 p.c. was recorded in mining. The smallest percentage gain over 1951 in payroll disbursements, amounting to 2·6 p.c., was in forestry (chiefly logging) where the average index of employment declined by 10·6 p.c. owing, in part, to the industrial dispute of woods workers in British Columbia during the summer of 1952. In manufacturing as a whole, the index of payrolls rose by 10·8 p.c. in 1952; the durable goods industries showed a gain of 14·3 p.c. and in the non-durable goods division, where employment declined slightly during the year, the amounts disbursed in payrolls increased by 7·3 p.c.

* Monthly estimates of total wages, salaries and supplementary labour income are given in DBS Bulletins, *Estimates of Labour Income*.

16.—Annual Index Numbers of Employment, Payrolls and Average Earnings in Industrial Establishments, with Average Weekly Wages and Salaries, 1951 and 1952.

Industry	Index Numbers (1949=100)						Average Weekly Wages and Salaries Reported	
	Employment		Aggregate Weekly Payrolls		Average Weekly Earnings			
	1951	1952	1951	1952	1951	1952	1951	1952
Industry							$	$
Forestry (chiefly logging)	138·6	123·9	167·4	171·7	119·2	137·2	48·40	55·72
Mining	110·6	116·8	128·5	147·9	116·2	127·3	59·82	65·56
Manufacturing	108·0	109·4	126·1	139·7	116·6	127·6	51·25	56·11
Durable goods[1]	112·8	117·2	131·4	150·2	116·4	128·1	54·89	60·39
Non-durable goods[1]	103·8	102·5	120·4	129·2	115·9	125·8	47·74	51·82
Construction	110·2	119·6	130·1	160·4	117·2	133·7	48·36	55·21
Transportation, storage and communications	106·1	110·9	118·3	130·2	111·1	116·9	53·76	56·59
Public utility operation	103·4	107·6	120·1	138·6	116·2	128·7	55·93	61·95
Trade	107·4	109·9	123·6	136·6	115·5	124·7	42·71	46·10
Finance, insurance and real estate	115·2	121·9	126·1	141·7	109·6	116·5	46·26	49·17
Service[2]	103·1	106·6	113·1	123·8	112·7	121·5	31·61	34·07

For footnotes, *see* end of table, p. 714.

16.—Annual Index Numbers of Employment, Payrolls and Average Earnings in Industrial Establishments, with Average Weekly Wages and Salaries, 1951 and 1952—concluded.

Province and City	Index Numbers (1949=100)						Average Weekly Wages and Salaries Reported	
	Employment		Aggregate Weekly Payrolls		Average Weekly Earnings			
	1951	1952	1951	1952	1951	1952	1951	1952
							$	$
Province								
Prince Edward Island	112·6	123·2	124·3	145·2	119·2	137·2	37·52	40·08
Nova Scotia	100·3	104·0	113·3	126·9	116·2	127·3	42·51	45·88
New Brunswick	109·0	109·5	122·9	131·6	116·6	127·6	43·02	46·04
Quebec	109·2	113·4	125·4	141·8	117·2	133·7	47·37	51·66
Ontario	110·4	112·0	128·3	141·8	111·1	116·9	51·69	56·36
Manitoba	103·9	106·0	117·7	128·4	116·2	128·6	48·37	51·73
Saskatchewan	106·0	111·5	119·1	136·4	115·6	124·7	46·68	50·90
Alberta	112·4	120·8	127·4	149·3	109·6	116·5	50·37	54·90
British Columbia	106·1	106·7	123·1	139·0	112·7	121·5	52·93	59·46
Canada[3]	**108·8**	**111·6**	**125·6**	**140·3**	**115·5**	**126·0**	**49·61**	**54·13**
City								
Halifax	109·5	116·6	122·2	144·8	111·8	124·4	39·61	44·10
Saint John	102·3	107·7	114·8	129·4	112·4	120·5	40·29	43·16
Quebec	101·6	105·2	115·2	129·3	113·5	123·2	40·58	43·95
Sherbrooke	107·8	106·2	125·1	133·6	115·8	125·6	41·58	45·10
Three Rivers	108·9	105·1	127·6	129·5	115·9	121·6	48·35	50·69
Montreal	106·6	110·9	121·2	138·0	114·0	124·9	47·69	52·24
Ottawa-Hull	108·4	108·9	124·5	135·3	114·7	124·3	45·01	48·75
Toronto	110·7	113·3	129·4	144·2	117·3	128·6	51·68	56·65
Hamilton	109·5	109·2	126·9	138·0	116·0	126·3	54·11	58·94
St. Catharines	121·1	119·5	147·3	152·7	121·6	130·3	60·07	64·38
Brantford	99·9	99·9	116·3	129·2	116·8	129·5	51·01	56·58
Kitchener	106·2	102·0	123·2	130·2	116·1	127·6	47·20	51·87
London	108·8	108·8	129·6	139·2	118·8	127·6	48·42	52·01
Windsor	107·7	107·0	123·4	133·0	114·7	124·2	58·22	63·03
Fort William-Port Arthur	106·3	118·3	124·9	150·1	116·4	126·3	52·86	57·37
Winnipeg	102·7	104·3	117·9	129·7	115·2	124·8	45·27	49·06
Regina	102·9	106·9	117·0	133·7	114·0	125·7	43·62	48·08
Saskatoon	107·8	113·0	121·9	141·4	113·1	125·2	42·35	46·88
Edmonton	120·1	129·9	138·9	166·4	115·9	128·2	47·03	52·05
Calgary	113·4	121·7	130·0	153·6	114·3	125·9	47·99	52·82
Vancouver	101·4	100·1	116·0	127·4	114·5	127·4	50·12	55·77
Victoria	106·6	106·6	124·1	136·1	117·3	128·6	49·03	53·77

[1] The durable goods group includes wood products, iron and steel products, transportation equipment, non-ferrous metal products, electrical apparatus and supplies, and non-metallic mineral products; the non-durable goods group includes the remaining manufacturing industries. [2] Mainly hotels, restaurants, laundries and dry-cleaning establishments. [3] Exclusive of Newfoundland and the Territories.

Table 17 shows the month-to-month movement of average weekly wages and salaries in 1951 and 1952, with annual averages from 1939. In each group for which data are available, new all-time high levels of per capita earnings were reached, with the composite of nine leading non-agricultural industries showing average weekly wages and salaries to be $54.13 in 1952 as compared with $49.61 in the preceding year. Widespread upward adjustments of wage rates were largely responsible for the higher per capita earnings, with industrial and occupational changes in the distribution of employees contributing to a lesser extent.

17.—Average Weekly Wages and Salaries, by Industrial Group, 1939-52, and Monthly Averages, 1951 and 1952

Year and Month	Forestry (chiefly Logging)	Mining	Manufacturing	Construction	Transportation, Storage and Communication	Public Utility Operation	Trade	Finance, Insurance, Real Estate	Service[1]	Industrial Composite
	$	$	$	$	$	$	$	$	$	$
Averages—										
1939	17·37	28·69	22·79	18·83	28·68	29·53	21·83	29·59	16·33	23·44
1940	17·30	30·24	24·48	22·71	29·72	30·20	22·53	29·70	16·74	24·94
1941	19·18	32·64	26·73	23·78	30·34	31·88	22·81	30·00	17·43	26·65
1942	20·70	34·81	28·99	27·29	31·70	34·16	24·07	31·46	18·21	28·62
1943	24·78	36·09	31·39	30·83	33·15	35·70	25·24	32·48	19·42	30·79
1944	26·54	38·05	32·49	30·63	34·62	37·01	26·21	33·61	20·25	31·85
1945	26·90	38·61	32·46	30·66	36·05	36·91	26·85	34·77	20·71	32·04
1946	29·03	39·21	32·27	31·62	37·53	38·17	28·45	36·11	21·90	32·48
1947	35·42	43·03	36·34	34·85	41·23	41·05	31·29	38·34	23·48	36·19
1948	39·11	48·77	40·67	37·99	45·51	45·16	34·38	40·08	25·87	40·06
1949	40·62	51·49	43·97	41·28	48·39	48·14	36·97	42·22	28·05	42·96
1950	42·01	53·95	46·21	43·27	49·15	51·14	38·61	43·90	29·50	44·84
1951	48·40	59·82	51·25	48·36	53·76	55·93	42·71	46·26	31·61	49·61
1952	55·72	65·56	56·11	55·21	56·59	61·95	46·10	49·17	34·07	54·13
1951—										
Jan. 1	42·58	54·08	46·60	40·82	51·07	52·76	39·55	44·78	30·23	45·27
Feb. 1	42·45	58·22	49·64	46·56	52·55	53·48	40·91	45·35	30·97	47·87
Mar. 1	44·94	58·85	49·56	47·56	52·53	54·85	41·58	45·28	31·45	48·19
Apr. 1	45·76	57·56	50·03	46·59	53·05	54·57	41·60	45·91	31·50	48·43
May 1	48·74	59·20	50·84	46·99	53·03	55·36	42·51	46·16	31·79	49·17
June 1	49·54	58·74	50·90	47·15	53·72	55·57	42·77	46·23	31·77	49·34
July 1	51·66	60·32	51·70	48·81	54·12	56·22	43·53	46·23	31·60	50·17
Aug. 1	47·49	60·77	51·68	49·48	54·20	56·32	43·85	46·27	31·21	50·16
Sept. 1	48·15	60·77	52·37	50·44	54·74	56·03	43·74	46·40	31·28	50·66
Oct. 1	50·83	63·01	53·31	51·95	55·06	57·79	44·17	47·11	32·07	51·59
Nov. 1	54·14	62·74	53·89	51·60	55·35	58·47	44·34	47·72	32·59	52·05
Dec. 1	54·47	63·60	54·44	52·34	55·71	59·73	43·91	47·65	32·84	52·41
1952—										
Jan. 1	51·60	60·42	51·82	46·14	55·73	59·65	44·25	47·50	32·69	50·42
Feb. 1	52·87	63·55	55·36	54·37	85·45	61·05	45·61	47·75	33·41	53·19
Mar. 1	57·04	64·20	55·73	55·81	56·43	61·56	45·93	48·42	33·97	53·95
Apr. 1	59·96	65·88	56·55	56·06	55·04	62·02	45·82	49·40	33·81	54·32
May 1	56·38	65·09	56·55	55·35	56·70	61·82	45·91	49·65	34·22	54·34
June 1	53·24	65·40	56·10	54·96	56·43	61·92	46·43	49·62	34·06	54·08
July 1	53·47	65·76	55·95	54·56	56·49	61·04	46·57	49·57	33·74	53·96
Aug. 1	54·21	65·24	55·71	53·91	57·06	61·49	46·69	49·50	33·64	53·89
Sept. 1	56·31	66·22	56·36	56·05	57·15	61·80	46·61	49·51	33·92	54·55
Oct. 1	56·61	67·41	57·09	57·45	57·23	62·18	46·53	49·54	34·69	55·12
Nov. 1	56·88	68·14	57·66	58·66	57·70	63·93	46·58	49·85	35·23	55·65
Dec. 1	60·01	69·40	58·46	59·15	57·69	64·89	46·26	49·77	35·47	56·12

[1] Consists mainly of hotels, restaurants, laundries and dry-cleaning establishments.

Since 1944, a monthly series of statistics on man-hours, hourly earnings and weekly wages in industries where employers keep count of hours actually worked has been prepared by the Dominion Bureau of Statistics. In manufacturing, the proportion of total workers included in the monthly surveys on these subjects is high, amounting to approximately 80 p.c. of all wage-earners in Canada. Table 18 summarizes the recent data. In general, the trend towards a shorter working week continued during 1952, with many of the listed industries showing fractional reductions in average weekly hours worked. Construction was again an exception, with an increase in the average work week from 40·3 hours to 41·7 hours between 1951 and 1952. In all industries and areas for which statistics are available there have been successive increases in recent years in the averages of hourly earnings and weekly wages.

18.—Average Hours and Earnings in Specified Industries and Areas, 1950-52

Industry, Province and City	Average Hours Worked			Average Hourly Earnings			Average Weekly Wages		
	1950	1951	1952	1950	1951	1952	1950	1951	1952
Industry	No.	No.	No.	cts.	cts.	cts.	$	$	$
Mining	43·0	43·1	42·7	121·4	133·4	147·1	52·20	57·50	62·81
Metal mining	45·1	44·1	44·4	121·1	134·8	148·2	54·62	59·45	65·80
Coal mining	38·1	39·5	38·2	130·1	136·7	148·6	49·57	54·00	56·77
Manufacturing	42·3	41·8	41·5	103·6	116·8	129·2	43·82	48·82	53·62
Durable goods[1]	42·5	42·0	41·6	112·0	125·8	139·8	47·60	52·84	58·16
Non-durable goods[1]	42·2	41·7	41·3	95·2	107·2	117·4	40·17	44·70	48·49
Construction	39·9	40·3	41·7	105·6	117·6	130·8	42·13	47·39	54·54
Buildings and structures	39·6	39·5	40·9	113·3	127·1	142·8	44·87	50·20	58·41
Highways, bridges and streets	40·8	41·9	42·6	88·1	95·1	103·3	35·94	39·85	44·01
Service	42·5	42·5	42·6	65·8	69·3	73·6	27·97	29·45	31·25
Hotels and restaurants	43·5	43·5	43·7	64·5	68·8	72·8	28·06	29·93	31·81
Laundries and dry-cleaning plants	40·9	40·9	40·9	65·1	67·3	71·7	26·63	27·53	29·33
Province									
Newfoundland	44·4	44·0	43·2	101·1	112·8	124·7	44·89	49·63	53·87
Nova Scotia	43·1	42·2	41·5	91·9	100·9	114·5	39·61	42·58	47·52
New Brunswick	44·5	43·8	43·0	91·2	103·8	112·7	40·58	45·46	48·46
Quebec	44·0	43·5	43·0	92·9	104·5	115·5	40·88	45·46	49·67
Ontario	41·9	41·3	40·9	109·4	123·7	137·0	45·84	51·09	56·03
Manitoba	41·8	41·4	40·8	99·4	112·5	122·9	41·55	46·58	50·14
Saskatchewan	41·4	41·0	41·2	105·1	117·4	129·6	43·51	48·13	53·40
Alberta	41·7	41·0	40·5	103·9	116·6	130·0	43·33	47·81	52·65
British Columbia	37·8	37·8	38·0	124·4	140·7	157·7	47·02	53·18	59·93
City									
Montreal	42·3	42·0	41·9	97·9	109·2	120·9	41·41	45·86	50·66
Toronto	40·9	40·6	40·5	107·8	122·3	135·7	44·09	49·65	54·96
Hamilton	40·7	40·2	39·7	121·1	136·2	150·0	49·29	54·75	59·55
Windsor	41·2	39·7	39·3	132·0	143·7	159·1	54·38	57·05	62·21
Winnipeg	41·5	41·0	40·5	98·7	111·4	121·3	40·96	45·67	49·13
Vancouver	37·2	37·3	37·5	122·3	138·4	154·8	45·50	51·62	58·05

[1] The durable goods group includes wood products, iron and steel products, transportation equipment, non-ferrous metal products, electrical apparatus and supplies, and non-metallic mineral products; the non-durable goods group includes the remaining manufacturing industries.

Section 4.—Earnings, Hours of Work and Wage Rates

Subsection 1.—Earnings and Hours of Work of Male and Female Employees in Manufacturing Establishments*

Information on earnings and hours of male and female wage-earners and salaried employees in manufacturing has been collected by the Dominion Bureau of Statistics for one week in the autumn of each year since 1946. The surveys cover manufacturing establishments usually employing 15 or more persons and include more than 85 p.c. of all employees in the industry. In addition to the general figures of employees, earnings and hours, distributions of wage-earners by hours worked in the survey week were obtained from 1946 to 1949 and, in 1950, a distribution of wage-earners and salaried employees by range of earnings.† In 1951, data for general office and clerical workers were segregated from those for managerial, professional and other salaried employees.

* Prepared in the Employment Section, Labour and Prices Division, Dominion Bureau of Statistics. More complete information is published in the DBS annual bulletins, *Earnings and Hours in Manufacturing*.

† *See* the 1952-53 Year Book, p. 701.

The surveys cover all full-time, part-time and casual employees on the paylists in the week, except homeworkers and employees absent without pay throughout the week. No data are included for proprietors or firm members, pensioners, or for employees in separately organized sales offices. The earnings comprise the gross remuneration for the week, including regularly paid bonuses and vacation pay, before deduction for taxes, insurance, pension plans, etc. Part-time, full-time and overtime hours worked and hours of paid absence are included.

The period since 1946, when the first survey was made, has been characterized by steadily rising earnings, reflecting upward pay adjustments and increasing cost-of-living bonuses. A more rapid expansion in employment activity in the higher-paid durable goods industries than in the non-durables has also contributed more recently to the upward movement of the general averages. The amounts and proportions of the increases reported for male and female wage-earners and salaried employees are given in Table **19**. Reductions in working time, particularly between 1950 and 1951, resulted in generally smaller percentage increases in the weekly wages than in the hourly earnings of the wage-earners.

Tables **20** and **21** show geographical and industrial averages of hours and earnings for wage-earners and salaried employees in the week ended Oct. 31 in 1950 and 1951. Table **21** also gives statistics for office workers in October 1951 which show that 56·8 p.c. of the men and 96·6 p.c. of the women are classified as salaried personnel. Their hours differed insignificantly from those of managerial and professional staffs.

Variations in hours worked, as shown in these tables, are related to the length of the normal work week, which is regulated largely by local custom, union agreements and provincial legislation, and to the levels of industrial activity prevailing in the periods surveyed. The group averages are also influenced by the industrial and occupational distributions of the reported employees, the numbers of men and women, of casual and part-time workers, the duration of their employment in the week and the amounts of overtime worked and of time lost through absenteeism, labour turnover, etc. Women usually average fewer hours than men because their work-week tends to be shorter, part-time work and absenteeism are more prevalent, and above-average proportions are employed in industries where a short work-week is customary.

Disparities in levels of earnings are associated with pay differentials on an industrial and geographical basis, the type and size of the manufacturing operation, occupational differences, fluctuations in activity resulting from seasonal, market and other conditions, variations in the proportions of short-time, casual and part-time workers and in the amount of overtime work, and differences in the proportions of women employed. Area variations are closely related to the industrial distributions of the workers. Salary levels are further affected by the prevalence of head offices, the type and size of establishments, and varying requirements for highly paid professional and executive personnel.

The proportions of women included in the 1950 and 1951 surveys and the relationship of their wages and salaries to men's earnings are given in Table **22**. Their earnings are generally lower than those of men, not only because of pay differentials and occupational differences, but also because their hours of work are frequently shorter, part-time work and absenteeism is more common than among men and they tend, on the average, to be younger and less experienced workers.

19.—Average Earnings, with Increases over the Preceding Year, Weeks Ended Nov. 30, 1946 and 1947 and Oct. 31, 1948-51

(As reported by manufacturers usually employing 15 or more persons)

Year	Men			Women			Both Sexes		
	Average Earnings	Increase over Preceding Year		Average Earnings	Increase over Preceding Year		Average Earnings	Increase over Preceding Year	
	Average Hourly Earnings of Wage-Earners								
	$	$	p.c.	$	$	p.c.	$	$	p.c.
1946	0·807	..	..	0·502	..	..	0·741	..	..
1947	0·921	0·114	14·1	0·582	0·080	15·9	0·851	0·110	14·8
1948	1·023	0·102	11·1	0·651	0·069	11·9	0·946	0·095	11·2
1949	1·066	0·043	4·2	0·683	0·032	4·9	0·984	0·038	4·0
1950	1·142	0·076	7·1	0·725	0·042	6·1	1·056	0·072	7·3
1951	1·313	0·171	15·0	0·825	0·100	13·8	1·222	0·166	15·7
	Average Weekly Wages								
	$	$	p.c.	$	$	p.c.	$	$	p.c.
1946	36·23	..	..	20·08	..	..	32·38	..	..
1947	41·35	5·12	14·1	23·11	3·03	15·1	37·19	4·81	14·9
1948	45·73	4·38	10·6	25·91	2·80	12·1	41·25	4·06	10·9
1949	47·33	1·60	3·5	27·18	1·27	4·9	42·61	1·36	3·3
1950	50·93	3·60	7·6	29·00	1·82	6·7	45·94	3·33	7·8
1951	56·46	5·53	10·9	31·27	2·27	7·8	51·32	5·38	11·7
	Average Weekly Salaries								
	$	$	p.c.	$	$	p.c.	$	$	p.c.
1946	53·21	..	..	25·91	..	..	43·85	..	..
1947	60·21	7·00	13·2	28·68	2·77	10·7	49·78	5·93	13·5
1948	63·47	3·26	5·4	31·26	2·58	9·0	52·91	3·13	6·3
1949	65·37	1·90	3·0	32·62	1·36	4·4	54·85	1·94	3·7
1950	69·35	3·98	6·1	34·38	1·76	5·4	58·74	3·89	7·1
1951	77·55	8·20	11·8	38·42	4·04	11·8	65·98	7·24	12·3

20.—Average Hours and Earnings of Male and Female Wage-Earners for the Last Week of October, 1950 and 1951

(As reported by manufacturers usually employing 15 or more persons)

Province	Average Hours Worked			Average Hourly Earnings			Average Weekly Earnings		
	Men	Women	Both Sexes	Men	Women	Both Sexes	Men	Women	Both Sexes
Province	No.	No.	No.	cts.	cts.	cts.	$	$	$
Newfoundland 1950	..	..	..	..	..	..	..	..	..
1951	46·1	40·5	45·5	123·2	45·7	115·1	56·80	18·51	52·37
Nova Scotia 1950	45·0	43·7	44·8	95·5	47·8	88·7	42·98	20·89	39·74
1951	43·4	42·9	43·3	111·3	51·6	103·4	48·30	22·14	44·77
New Brunswick 1950	46·3	39·3	45·0	96·0	61·1	90·4	44·45	24·01	40·68
1951	45·5	39·1	44·3	113·0	68·7	105·8	51·42	26·86	46·87
Quebec 1950	46·7	40·6	44·9	103·1	68·1	94·0	48·15	27·65	42·21
1951	44·8	37·8	43·0	119·6	77·7	109·9	53·58	29·37	47·26
Ontario 1950	44·0	39·5	43·0	121·2	77·7	112·7	53·33	30·69	48·46
1951	42·4	37·9	41·6	138·2	88·8	129·5	58·60	33·66	53·87
Manitoba 1950	44·6	40·0	43·6	108·3	68·9	100·3	48·30	27·56	43·73
1951	42·4	38·4	41·6	125·5	75·7	116·5	53·21	29·07	48·46
Saskatchewan 1950	42·8	39·1	42·4	106·5	74·6	103·1	45·58	29·17	43·71
1951	41·8	38·6	41·4	123·4	84·7	118·8	51·58	32·69	49·18
Alberta 1950	43·0	39·7	42·6	109·5	77·1	105·3	47·09	30·61	44·86
1951	41·6	38·6	41·3	127·0	85·6	122·0	52·83	33·04	50·39
British Columbia 1950	40·5	37·8	40·2	131·7	81·6	126·2	53·34	30·84	50·73
1951	39·5	35·9	39·1	156·2	95·7	150·0	61·70	34·36	58·65
Canada[1] **1950**	**44·6**	**40·0**	**43·5**	**114·2**	**72·5**	**105·6**	**50·93**	**29·00**	**45·94**
1951	**43·0**	**37·9**	**42·0**	**131·3**	**82·5**	**122·2**	**56·46**	**31·27**	**51·32**

[1] Exclusive of Newfoundland, Prince Edward Island and the Territories in 1950 and of Prince Edward Island and the Territories in 1951.

20.—Average Hours and Earnings of Male and Female Wage-Earners for the Last Week of October, 1950 and 1951—continued

City and Industry		Average Hours Worked			Average Hourly Earnings			Average Weekly Earnings		
		Men	Women	Both Sexes	Men	Women	Both Sexes	Men	Women	Both Sexes
		No.	No.	No.	cts.	cts.	cts.	$	$	$
City										
Montreal	1950	45·2	39·2	43·3	109·3	72·8	98·7	49·40	28·54	42·74
	1951	43·6	37·3	41·8	125·1	82·5	114·0	54·54	30·77	47·65
Toronto	1950	43·0	38·5	41·8	122·9	78·4	111·2	52·85	30·18	46·48
	1951	41·8	37·8	40·8	140·7	89·3	128·4	58·81	33·76	52·39
Hamilton	1950	42·7	39·0	42·0	133·2	86·4	124·1	56·88	33·70	52·12
	1951	41·2	35·9	40·2	152·4	98·9	143·3	62·79	35·51	57·61
Windsor	1950	43·6	40·2	43·3	145·5	97·8	141·8	63·44	39·32	61·40
	1951	39·5	39·3	39·5	148·4	109·1	145·1	58·62	42·88	57·31
Winnipeg	1950	44·3	39·9	43·2	108·2	69·5	99·9	47·93	27·73	43·16
	1951	41·8	38·2	41·1	124·8	76·4	115·5	52·17	29·18	47·47
Vancouver	1950	39·8	38·0	39·5	132·7	81·5	124·6	52·81	30·97	49·22
	1951	38·9	37·1	38·6	156·8	94·7	148·3	61·00	35·13	57·24
Industry										
Food and beverages	1950	45·7	39·0	43·8	100·3	65·0	91·3	45·84	25·35	39·99
	1951	45·0	39·0	43·4	112·6	75·1	103·2	50·67	29·29	44·79
Meat products	1950	42·9	38·9	42·2	121·6	91·1	116·5	52·17	35·44	49·16
	1951	42·5	38·8	41·8	139·5	106·8	133·9	59·29	41·44	55·97
Canned and preserved fruits and vegetables.	1950	46·4	37·7	41·6	84·0	62·5	73·3	38·98	23·56	30·49
	1951	44·7	36·0	40·4	93·6	68·6	82·7	41·84	24·70	33·41
Bread and other bakery products.	1950	47·0	40·6	45·9	96·0	58·2	90·3	45·12	23·63	41·45
	1951	46·8	41·6	45·9	107·5	64·9	100·7	50·31	27·00	46·22
Tobacco and tobacco products	1950	43·0	40·7	41·5	112·4	90·5	98·6	48·33	36·83	40·92
	1951	43·8	40·0	41·5	138·1	115·6	124·7	60·49	46·24	51·75
Rubber products	1950	44·2	41·8	43·6	122·1	81·9	112·0	53·97	34·23	48·83
	1951	42·0	39·5	41·4	142·3	97·7	132·1	59·77	38·59	54·69
Leather products	1950	41·8	38·6	40·4	93·2	62·7	81·2	38·96	24·20	32·80
	1951	38·7	36·0	37·6	102·6	69·3	89·4	39·71	24·95	33·61
Textile products (except clothing).	1950	46·3	42·1	44·7	95·4	74·8	88·1	44·17	31·49	39·38
	1951	42·0	37·7	40·4	106·7	84·4	99·0	44·81	31·82	40·00
Cotton yarn and broad woven goods.	1950	44·4	41·6	43·4	95·1	80·4	89·7	42·22	33·45	38·93
	1951	38·2	34·5	36·8	104·0	90·7	99·4	39·73	31·29	36·58
Clothing (textile and fur)	1950	42·6	39·0	40·1	108·8	68·6	81·4	46·35	26·75	32·64
	1951	38·8	35·8	36·7	121·5	76·2	90·5	47·14	27·28	33·21
Men's clothing	1950	41·7	39·3	40·0	109·1	67·9	80·7	45·49	26·68	32·28
	1951	36·1	34·4	34·9	118·6	75·0	88·6	42·81	25·80	30·92
Women's clothing	1950	38·0	36·5	36·8	128·3	72·6	84·5	48·75	26·50	31·10
	1951	36·8	34·6	35·1	141·0	80·7	94·3	51·89	27·92	33·10
Knit goods	1950	45·9	41·7	43·1	98·9	66·2	78·0	45·40	27·61	33·62
	1951	42·9	39·0	40·4	115·4	74·4	89·5	49·51	29·02	36·16
Wood products	1950	44·3	41·0	44·1	100·4	74·0	98·9	44·48	30·34	43·61
	1951	43·0	40·6	42·9	113·9	84·9	112·3	48·98	34·47	48·18
Saw and planing mills	1950	43·9	40·6	43·8	104·9	88·4	104·5	46·05	35·89	45·77
	1951	42·5	40·0	42·4	121·0	103·5	120·5	51·43	41·40	51·09
Furniture	1950	45·1	41·3	44·7	94·6	72·7	92·7	42·66	30·03	41·44
	1951	44·1	39·6	43·7	102·9	81·1	101·3	45·38	32·12	44·27
Paper products	1950	48·3	42·1	47·5	119·6	68·2	114·0	57·77	28·71	54·15
	1951	47·2	40·9	46·5	143·8	80·8	137·6	67·87	33·05	63·98
Pulp and paper mills	1950	48·9	42·6	48·8	122·5	75·5	121·7	59·90	32·16	59·39
	1951	47·8	42·2	47·7	148·5	88·8	147·5	70·98	37·47	70·36
Other paper products	1950	45·7	42·0	44·3	106·8	67·2	92·3	48·81	28·22	40·89
	1951	44·1	40·7	42·8	121·1	79·7	106·3	53·41	32·44	45·50
Printing, publishing and allied industries	1950	41·2	37·9	40·4	139·9	70·7	124·5	57·64	26·80	50·30
	1951	40·6	38·0	40·0	152·4	76·6	135·6	61·87	29·11	54·24
Iron and steel products	1950	44·1	41·4	44·0	120·6	82·8	118·7	53·18	34·28	52·23
	1951	42·7	39·8	42·5	140·4	98·4	138·5	59·95	39·16	58·86
Iron castings	1950	46·0	44·8	46·0	121·6	87·3	121·0	55·94	39·11	55·66
	1951	43·2	40·5	43·2	135·9	101·3	135·2	58·71	41·03	58·41
Machinery manufacturing	1950	45·1	41·0	44·9	114·4	87·0	112·9	51·59	35·67	50·69
	1951	44·6	40·2	44·3	132·8	99·0	131·0	59·23	39·80	58·03
Primary iron and steel	1950	42·6	39·6	42·6	129·1	98·7	128·8	55·00	39·09	54·87
	1951	41·4	38·3	41·4	153·0	115·5	152·7	63·34	44·24	63·22
Transportation equipment	1950	43·9	40·2	43·8	126·8	94·3	125·7	55·67	37·91	55·06
	1951	42·2	38·7	42·1	139·0	109·7	138·2	58·66	42·45	58·18
Aircraft and parts	1950	46·6	40·2	46·4	117·9	74·1	116·9	54·94	29·79	54·24
	1951	45·5	42·0	45·4	134·5	97·0	133·8	61·20	40·74	60·75
Motor-vehicles	1950	43·8	43·8	43·8	146·0	107·3	145·5	63·95	46·78	63·73
	1951	40·4	36·3	40·4	149·7	117·7	149·3	60·48	42·73	60·32

20.—Average Hours and Earnings of Male and Female Wage-Earners for the Last Week of October, 1950 and 1951—concluded

Industry		Average Hours Worked			Average Hourly Earnings			Average Weekly Earnings		
		Men	Women	Both Sexes	Men	Women	Both Sexes	Men	Women	Both Sexes
Industry—concluded		No.	No.	No.	cts.	cts.	cts.	$	$	$
Transportation equipment—concl.										
Motor-vehicle parts and accessories.	1950	44·4	40·0	43·8	128·6	97·2	124·5	57·10	38·88	54·53
	1951	45·4	38·5	44·6	137·9	115·4	135·4	62·61	44·43	60·39
Railroad and rolling-stock equipment.	1950	43·0	—	43·0	117·1	—	116·5	50·35	—	50·10
	1951	39·2	—	39·2	139·2	—	139·1	54·57	—	54·53
Shipbuilding and repairing	1950	43·8	—	43·8	112·4	—	112·0	49·23	—	49·06
	1951	44·4	38·1	44·3	133·9	79·7	133·4	59·45	30·37	59·10
Non-ferrous metal products	1950	44·5	41·5	44·2	118·0	72·0	113·9	52·51	29·88	50·34
	1951	42·0	40·0	41·8	142·1	81·0	137·7	59·68	32·40	57·56
Smelting and refining	1950	44·5	—	44·5	122·5	—	122·4	54·51	—	54·47
	1951	40·9	—	40·9	153·4	—	153·2	62·74	—	62·66
Electrical apparatus and supplies.	1950	43·3	40·2	42·4	127·1	92·4	117·7	55·03	37·14	49·90
	1951	42·5	38·7	41·5	144·1	107·0	135·0	61·24	41·41	56·03
Non-metallic mineral products	1950	46·8	41·6	46·4	107·4	75·3	105·0	50·26	31·32	48·72
	1951	45·3	40·2	45·0	124·3	85·4	121·7	56·31	34·33	54·77
Products of petroleum and coal	1950	41·3	—	41·3	135·8	—	135·6	56·09	—	56·00
	1951	41·4	—	41·4	162·6	—	162·2	67·32	—	67·15
Chemical products	1950	44·1	40·1	43·4	114·6	70·0	107·2	50·54	28·07	46·52
	1951	43·3	39·6	42·7	131·7	79·9	123·6	57·03	31·64	52·78
Miscellaneous manufacturing industries.	1950	44·3	40·6	42·8	100·4	71·0	88·8	44·48	28·83	38·01
	1951	43·3	39·5	41·8	113·0	78·5	99·6	48·93	31·01	41·63
Averages, Durable Goods	**1950**	**44·2**	**40·8**	**43·9**	**117·7**	**84·8**	**115·2**	**52·02**	**34·60**	**50·57**
	1951	**42·7**	**39·4**	**42·5**	**135·0**	**98·5**	**132·6**	**57·65**	**38·81**	**56·36**
Averages, Non-durable Goods.	**1950**	**45·1**	**39·8**	**43·2**	**109·9**	**69·9**	**96·8**	**49·56**	**27·82**	**41·82**
	1951	**43·5**	**37·6**	**41·5**	**126·3**	**79·2**	**111·8**	**54·94**	**29·78**	**46·40**
Averages, Manufacturing Industries.	**1950**	**44·6**	**40·0**	**43·5**	**114·2**	**72·5**	**105·6**	**50·93**	**29·00**	**45·94**
	1951	**43·0**	**37·9**	**42·0**	**131·3**	**82·5**	**122·2**	**56·46**	**31·27**	**51·32**

21.—Average Hours and Earnings of Salaried Employees for the Last Week of October 1950 and 1951, and Earnings of Office Workers, 1951

(As reported by manufacturers usually employing 15 or more persons)

Province		Salaried Employees						Office Workers		
		Average Hours Worked			Average Weekly Earnings			Average Weekly Earnings		
		Men	Women	Both Sexes	Men	Women	Both Sexes	Men	Women	Both Sexes
Province		No.	No.	No.	$	$	$	$	$	$
Newfoundland	1950	...	...	...	...	...	...	...	...	...
	1951	43·3	42·0	43·0	70·71	30·80	62·04	52·93	30·19	47·02
Nova Scotia	1950	41·0	40·1	40·8	61·20	29·18	52·55	...	...	...
	1951	42·3	40·2	41·7	67·83	31·95	58·43	57·87	31·66	49·00
New Brunswick	1950	43·0	39·6	42·0	61·40	28·71	51·60	...	...	...
	1951	42·6	40·1	41·8	68·64	31·72	57·65	53·97	31·51	44·96
Quebec	1950	40·5	38·4	39·8	68·13	34·41	58·10	...	...	...
	1951	40·3	38·1	39·7	75·77	37·32	64·67	58·82	36·54	50·04
Ontario	1950	39·8	38·1	39·3	71·40	34·84	59·81	...	...	...
	1951	39·5	37·9	39·0	79·67	39·49	67·29	62·44	38·86	52·02
Manitoba	1950	41·3	39·8	40·9	62·42	32·01	54·21	...	...	...
	1951	40·5	39·6	40·3	70·20	35·06	60·57	55·69	34·53	47·28
Saskatchewan	1950	42·5	41·3	42·1	58·13	32·34	49·76	...	...	...
	1951	41·6	40·9	41·3	64·97	37·25	56·35	51·31	36·97	44·73
Alberta	1950	41·7	39·8	41·3	62·62	32·47	55·05	...	...	...
	1951	41·6	40·3	41·3	71·12	36·86	62·06	57·25	36·48	49·32
British Columbia	1950	40·2	39·0	39·9	69·77	35·23	60·83	...	...	...
	1951	40·2	39·1	40·0	81·66	40·03	71·10	65·46	39·52	55·75
Canada[1]	**1950**	**40·2**	**38·4**	**39·7**	**69·35**	**34·38**	**58·74**	...	...	...
	1951	**40·0**	**38·2**	**39·5**	**77·55**	**38·42**	**65·98**	**60·68**	**37·77**	**51·14**

[1] Exclusive of Newfoundland, Prince Edward Island and the Territories in 1950 and Prince Edward Island and the Territories in 1951.

21.—Average Hours and Earnings of Salaried Employees for the Last Week of October, 1950 and 1951, and Earnings of Office Workers, 1951—continued

City and Industry		Salaried Employees						Office Workers		
		Average Hours Worked			Average Weekly Earnings			Average Weekly Earnings		
		Men	Women	Both Sexes	Men	Women	Both Sexes	Men	Women	Both Sexes
		No.	No.	No.	$	$	$	$	$	$
City										
Montreal	1950	39·7	37·8	39·1	69·32	36·07	59·03			
	1951	39·7	37·7	39·1	77·22	38·65	65·50	59·75	37·75	50·81
Toronto	1950	38·9	37·6	38·5	69·98	35·69	58·37			
	1951	38·8	37·4	38·3	78·37	40·68	66·11	61·78	39·91	52·00
Hamilton	1950	39·1	37·8	38·7	72·57	34·79	60·58			
	1951	39·3	37·6	38·7	82·20	39·44	68·81	62·01	38·97	51·66
Windsor	1950	41·0	39·9	40·7	87·40	41·90	74·59			
	1951	40·7	39·6	40·4	90·10	44·38	77·46	71·32	43·94	60·12
Winnipeg	1950	41·4	39·9	40·9	62·46	32·06	54·04			
	1951	40·4	39·5	40·2	70·20	35·31	60·56	55·82	34·84	47·46
Vancouver	1950	39·8	38·8	39·5	69·25	35·05	58·73			
	1951	39·8	38·9	39·5	79·84	39·47	67·68	62·84	38·75	52·62
Industry										
Food and beverages	1950	41·5	39·3	40·9	64·05	32·92	55·06			
	1951	41·1	39·1	40·5	71·15	37·29	61·78	56·49	36·72	48·31
Meat products	1950	41·7	40·0	41·4	65·22	36·97	59·19			
	1951	41·5	40·2	41·3	73·42	42·50	67·41	61·69	41·80	55·89
Canned and preserved fruits and vegetables	1950	41·8	39·8	41·1	62·72	29·53	50·62			
	1951	40·7	39·2	40·2	68·28	35·24	57·23	54·21	34·81	43·80
Bread and other bakery products	1950	44·3	40·1	42·6	54·50	29·53	44·22			
	1951	44·3	38·6	42·3	59·52	34·14	50·58	49·46	33·95	41·86
Tobacco and tobacco products	1950	38·6	37·9	38·4	67·18	39·48	57·86			
	1951	37·5	36·8	37·3	78·21	42·41	66·73	70·18	41·53	56·47
Rubber products	1950	40·1	38·5	39·6	67·97	33·26	58·09			
	1951	38·4	38·0	38·3	74·59	37·40	63·90	56·32	37·09	48·40
Leather products	1950	42·2	39·2	41·2	61·26	30·92	51·36			
	1951	41·2	38·1	40·2	66·47	34·33	56·30	53·97	33·56	45·78
Textile products (except clothing)	1950	40·9	38·7	40·2	71·48	33·08	58·61			
	1951	40·5	38·4	39·8	79·67	36·78	65·41	58·75	36·08	48·21
Cotton yarn and broad woven goods	1950	40·4	38·7	39·8	74·04	31·60	59·37			
	1951	40·4	38·5	39·7	80·21	35·38	65·64	58·22	35·03	47·21
Clothing (textile and fur)	1950	40·9	38·7	40·0	64·27	33·33	51·12			
	1951	40·4	38·3	39·5	72·45	36·85	57·54	55·32	35·55	44·92
Men's clothing	1950	39·9	38·6	39·5	59·83	31·17	49·46			
	1951	40·0	38·1	39·3	68·83	34·50	55·89	50·98	33·60	42·79
Women's clothing	1950	41·2	38·4	39·9	64·86	37·88	52·39			
	1951	40·6	38·4	39·6	70·75	40·40	57·35	55·39	38·76	46·65
Knit goods	1950	41·4	39·2	40·4	69·69	31·22	52·33			
	1951	40·8	38·1	39·6	77·69	36·27	59·53	59·00	35·09	44·77
Wood products	1950	42·6	39·2	41·7	65·90	32·85	56·92			
	1951	42·5	38·7	41·5	74·34	37·16	64·48	61·33	36·69	52·56
Saw and planing mills	1950	43·3	40·0	42·5	66·25	34·07	58·91			
	1951	42·9	39·6	42·2	76·04	39·03	67·67	63·50	38·74	56·16
Furniture	1950	41·2	38·3	40·2	66·12	31·78	54·33			
	1951	41·3	37·5	40·0	72·40	35·33	60·25	58·22	34·62	47·72
Paper products	1950	39·6	37·8	39·1	81·14	35·64	68·96			
	1951	39·3	38·0	38·9	93·92	40·60	79·57	67·67	40·06	56·87
Pulp and paper mills	1950	39·9	38·1	39·5	85·11	36·73	74·15			
	1951	39·8	38·5	39·5	99·72	42·45	86·47	72·39	41·94	62·12
Other paper products	1950	38·9	37·3	38·4	72·47	34·30	59·36			
	1951	38·2	37·3	37·9	81·43	38·25	66·78	56·48	37·70	47·29
Printing, publishing and allied industries	1950	38·3	38·0	38·2	61·75	32·56	50·71			
	1951	38·5	37·8	38·2	69·61	36·83	57·20	53·89	35·65	45·02
Iron and steel products	1950	39·9	38·3	39·5	69·29	33·91	59·71			
	1951	39·6	37·9	39·1	78·15	38·30	67·65	63·14	37·94	53·99
Iron castings	1950	40·8	37·6	39·9	67·32	33·77	58·27			
	1951	41·0	38·3	40·2	75·61	36·64	64·69	60·46	36·28	51·21
Machinery manufacturing	1950	40·3	39·0	39·9	67·00	33·42	57·19			
	1951	39·9	38·2	39·4	75·89	37·41	64·77	60·59	37·18	51·50
Primary iron and steel	1950	39·0	37·6	38·7	74·58	34·73	65·22			
	1951	39·5	38·0	39·1	87·37	40·75	76·52	72·09	40·40	61·18

21.—Average Hours and Earnings of Salaried Employees for the Last Week of October, 1950 and 1951, and Earnings of Office Workers, 1951—concluded

Industry		Salaried Employees						Office Workers		
		Average Hours Worked			Average Weekly Earnings			Average Weekly Earnings		
		Men	Women	Both Sexes	Men	Women	Both Sexes	Men	Women	Both Sexes
Industry—concluded		No.	No.	No.	$	$	$	$	$	$
Transportation equipment	1950	41·8	39·8	41·4	76·07	38·21	66·98	...	...	...
	1951	41·3	39·9	41·0	80·85	41·51	71·39	66·15	41·32	57·79
Aircraft and parts	1950	40·5	39·5	40·2	67·94	34·90	59·99	...	...	...
	1951	41·2	39·8	40·8	76·69	40·03	67·27	66·78	39·79	58·49
Motor-vehicles	1950	42·2	41·1	41·9	88·23	43·16	76·19	...	...	...
	1951	41·6	40·9	41·4	89·21	46·02	78·35	70·27	45·91	60·71
Motor-vehicle parts and accessories.	1950	41·0	39·5	40·6	75·09	35·71	63·59	...	...	...
	1951	40·2	39·3	40·0	83·07	40·93	70·67	64·99	40·70	54·55
Railroad and rolling-stock equipment.	1950	44·3	39·6	43·9	68·77	38·42	65·86	...	...	...
	1951	41·2	38·6	40·9	78·64	39·07	74·19	62·45	38·95	54·99
Shipbuilding and repairing	1950	41·8	36·4	40·8	66·12	31·64	59·38	...	...	...
	1951	42·2	39·3	41·6	73·77	36·29	66·20	62·86	36·05	55·77
Non-ferrous metal products	1950	40·6	38·3	39·9	74·95	35·27	63·55	...	...	...
	1951	40·2	38·1	39·6	85·63	40·21	73·63	63·70	39·67	52·87
Smelting and refining	1950	42·2	40·4	41·9	76·23	37·47	70·30	...	...	...
	1951	41·5	41·3	41·5	90·60	46·26	84·76	69·81	46·16	61·97
Electrical apparatus and supplies.	1950	38·8	38·0	38·6	68·11	35·99	58·61	...	...	...
	1951	39·3	37·6	38·8	75·51	38·37	64·82	62·06	37·83	52·67
Non-metallic mineral products	1950	40·3	38·0	39·7	67·41	33·85	58·29	...	...	...
	1951	39·9	37·6	39·3	76·94	38·61	66·34	59·17	38·24	50·64
Products of petroleum and coal.	1950	37·4	34·1	36·7	72·64	38·52	65·59	...	...	...
	1951	38·7	37·1	38·4	81·92	42·72	74·52	63·15	40·72	56·48
Chemical products	1950	38·8	37·5	38·3	71·72	36·05	59·87	...	...	...
	1951	38·9	38·0	38·6	78·79	40·31	66·37	56·55	39·41	47·81
Miscellaneous manufacturing industries.	1950	41·0	38·4	40·0	66·78	33·78	54·51	...	...	...
	1951	40·1	37·0	38·9	75·50	36·73	60·89	56·66	36·20	45·96
Averages, Durable Goods	**1950**	**40·4**	**38·6**	**39·9**	**70·48**	**35·10**	**60·87**	...	...	...
	1951	**40·3**	**38·3**	**39·8**	**78·63**	**39·04**	**68·17**	**63·31**	**38·65**	**54·16**
Averages, Non-durable Goods.	**1950**	**40·0**	**38·3**	**39·5**	**68·29**	**33·90**	**56·97**	...	...	...
	1951	**39·8**	**38·2**	**39·3**	**76·54**	**37·98**	**64·08**	**57·94**	**37·13**	**48·41**
Averages, Manufacturing Industries.	**1950**	**40·2**	**38·4**	**39·7**	**69·35**	**34·38**	**58·74**	...	...	...
	1951	**40·0**	**38·2**	**39·5**	**77·55**	**38·42**	**65·98**	**60·68**	**37·77**	**51·14**

22.—Proportions of Women Employees and Proportions of their Average Earnings to Men's Earnings for the Last Week of October, 1950 and 1951

(As reported by manufacturers usually employing 15 or more persons)

Province and Group	Wage-Earners				Salaried Employees			
	Proportion of Women		Proportion of Women's Wages to Men's		Proportion of Women		Proportion of Women's Salaries to Men's	
	1950	1951	1950	1951	1950	1951	1950	1951
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Newfoundland	...	11·7	...	32·6	...	21·7	...	43·6
Nova Scotia	14·7	13·2	48·6	45·8	27·0	26·2	47·7	47·1
New Brunswick	18·4	18·4	54·0	52·2	30·0	29·8	46·8	46·2
Quebec	28·8	26·4	57·4	54·8	29·7	28·9	50·5	49·3
Ontario	21·3	19·4	57·5	57·4	31·7	30·8	48·8	49·6
Manitoba	22·1	19·6	57·1	54·6	27·0	27·4	51·3	49·9
Saskatchewan	11·5	12·6	64·0	63·4	32·4	31·1	55·6	57·3
Alberta	13·7	13·1	65·0	62·5	25·1	26·4	51·9	51·8
British Columbia	11·6	11·0	57·8	55·7	25·9	25·4	50·5	49·0
Canada[1]	**22·6**	**20·7**	**56·9**	**55·4**	**30·4**	**29·6**	**49·6**	**49·5**
Durable goods manufacturing	8·4	7·1	66·5	67·3	27·1	26·4	49·8	49·7
Non-durable goods manufacturing	35·4	33·9	56·1	54·2	32·9	32·3	49·6	49·6

[1] Exclusive of Newfoundland, Prince Edward Island and the Territories in 1950 and Prince Edward Island and the Territories in 1951.

Subsection 2.—Wage Rates and Hours for Various Classes of Labour*

Statistics of rates of wages and hours of labour have been collected for many years by the Federal Department of Labour and are published monthly in the *Labour Gazette* and in annual reports supplementary to the *Labour Gazette*. The first report was issued in 1921 but the records begin, in many cases, with the year 1901. The index numbers show the general movement of wage rates for the main industrial groups as well as for individual industries, but these cannot be used to compare wage rates in one industry with those in another. The statistics are average straight-time wage rates or average straight-time piece-work earnings and do not include overtime or other premium payments.

Tables 23 and 24 show the index numbers of wage rates by main industrial groups and by industries. From 1930 to 1933, the trend in wage rates was downward but increases have been general each year since that time. During the period 1939-52, the rise in the general average index number amounted to 163·3 p.c.

* More detailed information is given in the Department of Labour publication, *Wage Rates and Hours of Labour in Canada.*

23.—Index Numbers of Wage Rates for certain Main Industrial Groups, 1943-52

(1939=100)

NOTE.—Figures back to 1901 may be obtained from the Department of Labour publication, *Wage Rates and Hours of Labour in Canada, 1951.* Figures for 1921-42 are given in the 1947 Year Book, p. 650.

Year	Logging	Coal Mining	Metal Mining	Manufacturing	Construction	Water Transportation	Steam Railways	Electric Railways	Telephones	Laundries	General Average
1943.....	143·1	124·8	123·1	136·8	127·7	138·8	125·5	121·2	121·9	127·3	133·7
1944.....	146·1	146·0	125·2	141·4	129·6	142·2	125·5	125·7	122·4	128·9	137·9
1945.....	153·3	146·2	128·2	146·5	131·1	144·6	125·5	126·6	125·6	135·4	141·8
1946.....	167·4	146·7	135·7	161·5	143·9	162·3	142·3	139·5	125·2	147·5	155·2
1947.....	195·1	166·7	157·7	183·3	155·0	183·8	142·3	162·3	132·2	170·5	173·7
1948.....	218·8	192·9	173·1	205·9	176·3	213·5	170·2	175·0	140·4	183·0	195·8
1949.....	216·2	196·1	180·8	217·9	184·2	213·8	170·2	179·0	151·5	195·0	204·6
1950.....	213·9	200·7	192·0	230·7	194·0	236·3	179·2	192·1	158·9	209·0	215·9
1951.....	246·2	217·9	222·5	261·6	217·2	256·0	207·4	215·2	175·8	222·0	243·6
1952p....	293·8	240·6	237·1	278·7	235·1	282·4	229·2	231·4	193·7	239·6	263·3

24.—Index Numbers of Wage Rates, by Industry, 1948-52

(1939=100)

Industry	1948	1949	1950	1951	1952p
Logging	**218·8**	**216·2**	**213·9**	**246·2**	**293·8**
Eastern Canada	212·0	210·1	200·5	229·7	287·4
British Columbia, coastal	244·2	239·2	264·2	308·5	317·7
Mining	**181·9**	**187·6**	**195·9**	**220·4**	**238·7**
Coal	192·9	196·1	200·7	217·9	240·6
Metal	173·1	180·8	192·0	222·5	237·1
Manufacturing	**205·9**	**217·9**	**230·7**	**261·6**	**278·7**
Primary textile products	224·2	243·3	256·0	286·4	304·4
Cotton yarns and broad woven goods	230·6	248·6	262·0	288·1	312·4
Woollen and worsted yarn and woven goods	241·3	258·6	273·0	305·5	323·3
Hosiery and knit goods	213·8	230·3	243·6	274·2	288·9
Rayon, nylon and silk textiles	218·2	248·4	256·2	294·2	305·7
Clothing	205·9	212·0	217·3	236·2	252·3
Men's and boys' suits and overcoats	214·8	207·0	216·0	241·5	257·3
Work clothing	197·1	205·8	228·7	244·6	260·8
Women's and misses' coats and suits	206·3	210·8	203·8	204·2	226·9
Dresses	196·9	213·4	213·3	223·9	241·9
Shirts	209·4	228·0	230·8	271·1	277·6

24.—Index Numbers of Wage Rates, by Industry, 1948-52—concluded

Industry	1948	1949	1950	1951	1952p
Manufacturing—concluded					
Rubber products	213·7	217·6	228·8	269·3	277·1
Pulp and paper	193·6	194·4	206·1	248·1	252·9
Pulp	214·3	216·5	227·2	275·3	283·0
Newsprint	174·3	175·6	183·5	220·4	224·7
Paper, other than newsprint	191·8	190·5	205·4	244·0	244·0
Paper boxes and containers	202·3	223·4	234·8	259·7	275·7
Printing and publishing	158·2	173·9	188·1	204·9	227·6
Daily newspapers	152·6	164·3	178·6	195·0	216·8
Job printing	165·9	188·3	202·3	219·8	243·8
Lumber and its products	226·2	238·8	257·6	293·2	309·3
Sawmills	236·5	253·0	274·0	318·1	333·3
Sash and door, and planing mills	195·9	197·5	216·9	237·7	252·6
Wooden furniture	218·8	228·3	239·0	259·3	279·3
Edible plant products	194·5	205·4	217·6	238·9	255·5
Flour mills	196·5	201·9	214·7	242·5	257·8
Bread and other bakery products	191·6	202·5	213·9	232·7	249·3
Biscuits and crackers	210·5	233·8	245·0	272·1	290·3
Confectionery	189·3	192·5	208·3	229·1	245·1
Fur products	195·6	206·6	215·2	220·5	228·7
Leather and its products	219·3	228·1	235·4	260·8	279·0
Leather tanneries	239·7	246·9	260·6	292·4	301·4
Boots and shoes	214·1	223·4	229·0	252·8	273·3
Slaughtering and meat packing	217·0	231·3	245·2	289·4	298·9
Iron and steel products	200·5	212·3	226·0	260·6	277·2
Primary iron and steel	215·3	239·6	255·1	298·3	317·6
Iron castings and machine-shop products	212·1	224·2	241·0	268·7	294·2
Machinery, engines, boilers, tanks, etc.	195·8	209·4	244·9	255·0	268·7
Aircraft and parts	173·3	181·8	192·9	212·1	230·4
Steel shipbuilding	175·7	181·5	185·6	220·8	229·6
Motor-vehicles	163·1	165·9	174·3	191·9	207·7
Motor-vehicle parts and accessories	215·3	225·1	239·1	283·8	301·1
Heating and cooking apparatus	226·6	234·2	251·1	276·1	295·5
Agricultural implements	232·0	242·5	268·2	321·0	332·5
Sheet-metal products	211·3	220·0	232·1	276·9	297·1
Tobacco products	232·2	253·9	281·8	340·8	351·0
Beverages (malt liquors)	182·9	199·7	210·4	236·5	267·3
Electric light and power	169·7	186·4	199·7	222·8	246·5
Electrical apparatus and supplies	225·6	236·5	253·0	281·6	289·1
Construction	**176·3**	**184·2**	**194·0**	**217·2**	**235·1**
Transportation and Communications	**174·3**	**175·9**	**187·3**	**212·4**	**234·2**
Transportation	178·8	179·1	191·0	217·2	239·5
Water transportation (inland and coastal)	213·5	213·8	236·3	256·0	282·4
Steam railways	170·2	170·2	179·2	207·4	229·2
Electric street-railways	175·0	179·0	192·1	215·2	231·4
Communications—telephone	140·4	151·5	158·9	175·8	193·7
Service-Laundries	**183·0**	**195·0**	**209·0**	**222·0**	**239·6**
General Averages	**195·8**	**204·6**	**215·9**	**243·6**	**263·3**

25.—Average Hourly Wage Rates for Selected Occupations in Manufacturing, by Province, 1952

Occupation	Atlantic Provinces[1]	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	$	$	$	$	$	$	$
Newsprint—							
Machine tender	2·95	2·60	2·74	..	..	..	2·82
Roll-finisher	1·35	1·34	1·39	..	..	..	1·52
Sawmills—							
Lumber grader	0·90	0·96	1·17	..	..	1·01	1·64
Edgerman	0·89	0·97	1·13	..	..	1·06	1·72
Meat Products—							
Butcher	..	1·40	1·38	1·57	1·49	1·59	1·62
Truck-driver	..	1·52	1·39	1·60	1·44	1·50	1·57
Iron and Steel Products—							
Machinist	1·41	1·35	1·54	1·38	1·33	1·57	1·86
Moulder	1·46	1·35	1·68	1·48	1·23	1·34	1·79
Woollen Yarn and Cloth—							
Spinner, male	0·82	0·96	1·15	..	..	..	..
Weaver, female	0·71	0·85	0·98	0·72	..	..	0·72

[1] Exclusive of Newfoundland.

26.—Average Standard or Normal Hours of Labour per Week for Male Employees in Selected Industries, by Province, 1948-52

Industry and Year	Atlantic Provinces[1]	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
Work clothing.....1948	41·5	45·9	41·4	40·2	—	40·0	40·1
1949	43·5	45·2	41·4	41·2	—	40·0	41·7
1950	43·5	44·4	41·1	41·0	—	40·0	40·0
1951	43·5	44·6	41·0	41·1	—	40·0	40·4
1952	43·6	45·0	41·0	40·0	—	40·0	42·7
Newsprint.....1948	48·0	48·0	48·0	—	—	—	44·0
1949	48·0	48·0	48·0	—	—	—	44·0
1950[2]	48·1	48·4	47·9	48·0	—	—	43·4
1951[2]	48·2	48·5	44·9	40·0	—	—	41·7
1952[2]	47·0	48·2	42·8	40·0	—	—	40·0
Wood products.....1948	53·1	53·7	46·4	46·1	46·3	47·5	40·7
1949	51·6	53·4	46·5	46·5	45·7	46·5	40·6
1950	51·9	53·0	46·9	46·0	44·6	46·3	40·7
1951	50·7	52·4	46·4	45·6	44·2	46·6	40·6
1952	50·4	51·7	46·2	44·2	44·0	45·7	40·6
Meat products.....1948	44·2	45·6	45·1	44·1	44·2	44·0	44·1
1949	44·0	45·8	44·4	44·4	44·0	44·4	44·0
1950	40·5	44·7	42·6	41·6	41·8	41·5	41·4
1951	40·6	44·2	42·3	41·5	41·8	41·4	40·9
1952	40·8	42·5	41·6	40·1	40·6	40·1	40·0
Iron and its products....1948	47·1	46·8	44·5	45·1	44·1	42·8	40·1
1949	44·8	44·9	43·3	45·3	44·1	41·8	40·1
1950	44·5	45·2	42·4	44·9	43·9	42·4	40·1
1951	41·3	45·0	41·9	44·2	44·0	42·6	40·1
1952	41·7	44·8	41·4	43·8	44·0	43·1	40·1
Woollen yarn and cloth..1948	49·3	48·5	46·8	45·3	45·3	45·3	45·3
1949	47·5	47·9	45·7	45·0	45·0	45·0	45·0
1950	48·5	46·5	46·1	45·2	45·2	45·2	45·2
1951	46·0	48·1	45·4	45·6	45·6	45·6	45·6
1952	46·1	47·5	45·1	45·3	45·3	45·3	45·3

[1] Exclusive of Newfoundland. [2] Data shown apply to pulp and paper as a whole.

27.—Average Hourly Wage Rates for Selected Occupations in Certain Cities, 1952

Industry and Occupation	Halifax	Montreal	Toronto	Winnipeg	Vancouver
	$	$	$	$	$
Construction—					
Bricklayer and mason	1·69	1·90	2·35	2·00	2·10
Carpenter	1·48	1·70	2·10	1·80	2·10
Electrician	1·58	1·80	2·20	1·90	2·10
Painter	1·32	1·60	1·80	1·55	1·90
Plasterer	1·60	1·90	2·00	2·00	2·10
Plumber	1·55	1·79	2·15	1·90	2·10
Sheet-metal worker	1·38	1·70	2·10	1·65	2·10
Labourer	1·06	1·15	1·10	0·95	1·50
Manufacturing—					
Unskilled factory labour, male	1·02	1·12	1·23	1·12	1·41
Transportation (Urban and Suburban)—					
One-man car and bus operator[1]	1·26	1·43	1·48	1·25	1·51
Body repairman, bus	...	1·44	1·58	1·35	1·58
Repairman, street car	1·28	1·34	1·56	1·28	1·50
Electrician	1·34	1·45	1·55	1·37	1·56
Labourer	1·13	1·10	1·35	1·00	1·31
Printing and Publishing—					
Compositor—					
News	1·76	2·26	2·42	1·72	2·25
Job	1·30	1·85	1·98	1·70	2·08
Pressman—					
News	1·64	2·17	2·41	1·68	2·25
Job, cylinder	1·16	1·83	1·94	1·70	2·05
Bindery girl	0·52	0·90	1·01	0·87	1·22

[1] Maximum rates based on length of service. Two-man car operators receive 7 cents less at Montreal and Vancouver and 5 cents less at Toronto and Winnipeg.

28.—Standard or Normal Hours of Labour per Week in Certain Cities, 1951 and 1952

Industry		Halifax	Montreal	Toronto	Winnipeg	Vancouver
		hrs.	hrs.	hrs.	hrs.	hrs.
Construction—						
Trades	1951	40	40	40	40	40
	1952	40	40	40	40	40
Labourer	1951	48	50	48	48	40
	1952	48	50	45	48	40
Transportation—						
Electric street-railway	1951	44	48	40	44	44
	1952	44	48	40	48	40
Printing and Publishing	1951	40	40	40	40	37½
	1952	40	40	40	40	37½

Section 5.—Unemployment Insurance

The Unemployment Insurance Act, which came into operation on July 1, 1941, applies to all employed persons with the following exceptions: workers in specified industries or occupations such as agriculture, fishing, Armed Forces, permanent public service of the Federal Government, provincial governments and municipal authorities, private domestic service, private-duty nursing; certain director-officers of corporations; workers on other than hourly, daily or piece rates if earning more than $4,800 per year and (except by consent of the Unemployment Insurance Commission) employees in a hospital or charitable institution not carried on for gain. All employees paid by the hour, day or on piece rate (including a mileage rate) are insured regardless of amount of earnings, together with all employees who receive $4,800 or less per annum under weekly, monthly or yearly rates.

Unemployment Insurance Fund.—Employers and employees contribute to the Fund, the total paid by each group being equal. The Federal Government contributes an amount equal normally to one-fifth of the combined employer-employee contributions, reimburses the fund for certain types of supplementary benefit payments and assumes the cost of administration. From July 1, 1941, to Mar. 31, **1952**, employers and employees contributed $927,418,439 to the Fund and the Federal Government added $187,318,241. Interest and profit on sale of securities amounted to $96,667,148 and fines of $109,541 made a total revenue of $1,211,513,369.

Benefits first became payable on Jan. 27, 1942, and from that date to Mar. 31, 1952, total benefit payments amounted to $433,314,017, leaving a balance of $778,199,352 in the Fund. Reserves of the Fund are invested in Government of Canada bonds and, as at Mar. 31, 1952, the par value of bonds held amounted to $767,611,500.

WEEKLY RATES OF CONTRIBUTION AND BENEFIT UNDER THE UNEMPLOYMENT INSURANCE ACT

Earnings	Weekly Contributions[1]		Value of Weekly Stamp[2]	Weekly Benefits[3]	
	By Employee	By Employer		Single Person	Person With One or More Dependants
	cts.	cts.	cts.	$	$
Less than $9·00	18	18	36	4·20	4·80
$ 9·00 to $14·99	24	24	48	6·00	7·50
$15·00 to $20·99	30	30	60	8·70	12·00
$21·00 to $26·99	36	36	72	10·80	15·00
$27·00 to $33·99	42	42	84	12·90	18·00
$34·00 to $47·99	48	48	96	15·00	21·00
$48·00 or more	54	54	108	17·10	24·00

[1] The daily rates of contribution in respect of each class is one-sixth of the weekly rates. [2] Unemployment insurance stamps combine both employer and employee contributions. [3] Rates calculated on the average daily contribution for the last 180 days in the two years preceding claim. The daily rate of benefit is one-sixth of the weekly benefit rate.

No benefit is payable during the first five days of unemployment in a benefit year. After that time, the duration of benefit is related to the employment and contribution history of the employee, the number of days' benefit being equal to one-fifth the number of contribution days during the previous five years, less one-third the number of benefit days in the previous three years. Insurance benefit is paid as a right on fulfilment of the following statutory conditions:—

> The payment of not less than 30 weekly (or 180 daily) contributions within two years, while in insured employment; and the payment of at least 60 daily contributions within the immediately preceding 12 months, or 45 daily contributions within the immediately preceding 6 months. (These periods of two years, 12 months and 6 months may be extended under certain circumstances.)

Disqualifications for benefit include: loss of work owing to a labour dispute in which the contributor is participating or directly interested; unwillingness to accept suitable employment; being an inmate of any prison or an institution supported out of public funds; refusal to attend a course of instruction or training if directed to do so; residence outside Canada unless otherwise prescribed. Disqualification of a claimant for a period not exceeding six weeks may be made if an employee is discharged by reason of his own misconduct or leaves the employment voluntarily without just cause or refuses suitable employment.

Supplementary benefits at a slightly lower rate are payable to certain classes whose benefits have been exhausted or who are not entitled to ordinary benefit during the period Jan. 1 to Apr. 15 in each year.

Statistics of Unemployment Insurance.*—Benefits under the Unemployment Insurance Act first became payable late in January 1942, but no applications for benefit were received until early in February. Except for unusual periods, such as the months following the cessation of hostilities in Europe in the spring of 1945, monthly totals of claims received have shown a definite seasonal variation, rising in the late autumn and winter and falling again in the spring. Monthly averages of initial and renewal claims filed have been as follows: 1947, 36,904; 1948, 54,091; 1949, 77,821; 1950, 88,165; and 1951, 95,130.

* Statistics of unemployment insurance are compiled and published by the Unemployment Insurance Section, Labour and Prices Division, Dominion Bureau of Statistics, from material supplied by the Unemployment Insurance Commission. A more detailed analysis of these data, by province and sex, is available in DBS publications, *Annual Report on Benefit Years Established and Terminated Under the Unemployment Insurance Act* and *The Monthly Statistical Report on the Operation of the Unemployment Insurance Act.*

Since September 1943, a record has also been maintained of the number of claimants on the live unemployment register on the last working day in each month. This provides a measure of recorded unemployment among insured persons on one day of each month. Monthly averages of ordinary claimants on the live register at the end of the month have been: 1947, 68,254; 1948, 88,909; 1949, 135,624; 1950, 165,304; and 1951, 138,807.

Monthly statistics on the operation of the Unemployment Insurance Act also provide data on the number of days that claimants on the live unemployment register at the end of each month have been continuously on the register, the number of claimants considered entitled and not entitled to benefit, chief reasons for non-entitlement, number of days benefit paid and amount of benefit paid.

In addition to the monthly material on the operation of the Act, annual tabulations are published of the persons employed in insurable employment and of benefit years established and benefit years terminated. The data on the insured population shown in Table **29** are obtained from returns from the renewal of insurance books and contribution cards at Apr. 1. Included are those contributing in insured employment at that time and those on claim.

The number of persons insured under the Unemployment Insurance Act, shown in Table **29**, was assumed to be those working in insurable employment as at Apr. 1, as indicated at that time from returns on those receiving insurance books and contribution cards.

Table **30** presents information on the persons who established benefit years and those benefit years that terminated during the calendar year 1949. A benefit year is established under the Unemployment Insurance Act when an insured person, upon becoming unemployed, submits a claim and proves that at least 180 daily contributions have been made on his behalf during the preceding two years. Because of other provisions of the Act or because he may regain employment before he actually receives benefit, the setting up of a benefit year does not necessarily result in the receipt of benefit payments. When a benefit year is established it means merely that the claimant's right to receive benefit at a certain rate at any time during the succeeding twelve months is determined. Thus, of the 578,111 benefit years that terminated during 1950, 70,315 were paid no benefit.

The benefit year remains in existence either until the authorized benefit rights are exhausted or until 12 months have passed since the date of its establishment, whichever occurs first.

The amount of benefit paid on benefit years terminated, as presented in Table **30**, is secured by multiplying each daily rate of benefit by the number of days paid at that rate on the ledger cards representing benefit years upon which benefit was drawn. Benefit years terminated during 1950 and benefit days paid on those benefit years are classified, in Table **31**, by duration of benefit paid.

Table **32** classifies benefit years terminated by daily rate of benefit authorized. The daily rate of benefit is determined by the amount of the daily average contribution paid on behalf of the claimant during the most recent 180 contribution days and by whether or not he has a dependant within the meaning of the Act.

Table **33** shows benefit years terminated and benefit days paid on them by age of claimant; and benefit years terminated by cause of termination and age of claimant. Benefit years terminated during 1950 and benefit days paid on them are classified by industry and age in Table **34** and by occupation in Table **35**.

29.—Persons Insured under the Unemployment Insurance Act, by Industrial Group and Sex, 1950 and 1951

NOTE.—These figures include only persons who exchanged an unemployment insurance book or were issued a book for the first time in April. They, therefore, represent an estimate of the number in insurable employment as at Apr. 1.

Industrial Group	1950		1951	
	Males	Females	Males	Females
	No.	No.	No.	No.
Agriculture	1,240	440	1,690	490
Forestry and logging	38,600	890	105,420	2,360
Fishing, hunting and trapping	420	180	320	100
Mining, Quarrying and Oil Wells—				
Metal mining	42,410	920	47,270	1,150
Fuels	27,180	400	29,180	430
Non-metal mining	6,920	220	9,180	210
Quarrying, clay and sand pits	2,150	30	2,840	40
Prospecting	1,290	160	2,400	330
Totals, Mining, Quarrying and Oil Wells	79,950	1,730	90,870	2,160
Manufacturing—				
Foods and beverages	87,770	35,230	99,060	33,500
Tobacco and tobacco products	3,340	4,820	3,650	5,250
Rubber products	13,970	5,160	15,560	5,110
Leather products	17,180	12,280	18,720	13,550
Textile products (except clothing)	42,110	26,560	50,110	31,190
Clothing (textile and fur)	34,070	68,320	36,480	75,940
Wood products	78,500	7,480	92,110	8,470
Paper products	57,190	11,270	65,390	11,420
Printing, publishing and allied industries	32,540	14,970	34,850	15,640
Iron and steel products	126,920	14,480	159,620	17,930
Transportation equipment	103,690	8,770	124,340	9,210
Non-ferrous metal products	28,780	5,430	42,200	6,380
Electrical apparatus and supplies	35,420	14,840	47,830	18,760
Non-metallic mineral products	22,670	2,750	27,340	3,560
Products of petroleum and coal	5,340	950	12,080	1,580
Chemical products	27,380	10,920	34,040	11,880
Miscellaneous manufacturing industries	15,020	10,560	17,020	11,310
Totals, Manufacturing	731,890	254,790	880,400	280,680
Construction—				
General contractors	95,660	2,450	114,290	2,590
Special trade contractors (subcontractors)	42,520	1,850	53,410	2,090
Totals, Construction	138,180	4,300	167,700	4,680
Transportation, Storage and Communication—				
Transportation	234,590	12,980	252,690	14,470
Storage	8,960	1,250	6,580	800
Communication	11,770	25,350	17,040	29,250
Totals, Transportation, Storage and Communication	255,320	39,580	276,310	44,520
Public utility operation	28,540	3,260	34,140	4,070
Trade—				
Wholesale	92,970	28,280	104,190	31,450
Retail	171,340	131,190	194,650	156,970
Totals, Trade	264,310	159,470	298,840	188,420
Finance, insurance and real estate	32,260	52,500	43,870	61,210
Service—				
Community or public	9,750	12,800	11,620	14,760
Government	72,890	26,390	83,870	26,410
Recreation	9,990	6,070	11,640	6,220
Business	15,600	13,820	20,280	16,360
Personal	56,650	67,160	60,190	74,470
Totals, Service	164,880	126,240	187,600	138,220
Unspecified	9,490	2,250	5,440	1,600
Claimants	180,200	47,640	148,240	38,500
Totals, All Industries	**1,925,280**	**693,270**	**2,240,840**	**767,010**

30.—Persons Establishing Benefit Years, Benefit Years Terminated, Benefit Days Paid on Benefit Years Terminated and Amount of Benefit Paid on those Benefit Years, classified by Province, 1950.

Province	Persons Establishing Benefit Years	Benefit Years Terminated	Benefit Days Paid on Benefit Years Terminated	Amount of Benefit Paid on Benefit Years Terminated[1]
	No.	No.	No.	$
Newfoundland	3,913	976	51,010	132,680
Prince Edward Island	3,129	3,008	224,056	485,044
Nova Scotia	32,371	33,035	2,266,825	5,360,654
New Brunswick	22,917	24,837	1,904,612	4,484,967
Quebec	184,913	186,064	13,484,186	31,218,691
Ontario	176,302	178,521	9,882,036	23,159,474
Manitoba	33,800	27,919	2,019,077	4,532,706
Saskatchewan	17,710	15,873	1,112,176	2,570,994
Alberta	31,182	25,373	1,361,675	3,275,756
British Columbia	87,112	82,505	5,551,887	13,467,063
Totals	**593,349**	**578,111**	**37,857,540**	**88,688,029**

[1] These data are obtained from the daily rate of benefit authorized at the time the benefit year is established and the number of benefit days paid during the benefit year.

31.—Benefit Years Terminated during 1950 and Benefit Days Paid on those Benefit Years, classified by Duration of Benefit Paid

Duration of Benefit Paid (days)	Benefit Years Terminated	Benefit Days Paid	Duration of Benefit Paid (days)	Benefit Years Terminated	Benefit Days Paid	Duration of Benefit Paid (days)	Benefit Years Terminated	Benefit Days Paid
No.	No.	No.	No.	No.	No.	No.	No.	No.
No benefit	70,315	—	105–109	9,535	1,020,042	215–219	1,622	351,935
1– 4	21,659	54,116	110–114	8,586	961,470	220–224	1,606	356,563
5– 9	27,044	191,569	115–119	7,917	925,970	225–229	1,496	339,547
10–14	20,372	243,786	120–124	7,369	898,748	230–234	1,430	331,776
15–19	18,233	308,512	125–129	6,615	839,743	235–239	1,374	325,585
20–24	17,563	385,565	130–134	5,948	785,030	240–244	1,287	311,447
25–29	17,343	467,994	135–139	5,452	746,698	245–249	1,285	317,397
30–34	17,270	553,043	140–144	5,025	713,393	250–254	1,188	299,351
35–39	28,892	1,065,553	145–149	4,497	660,864	255–259	1,094	281,142
40–44	23,213	975,166	150–154	4,124	626,766	260–264	1,113	291,584
45–49	22,054	1,036,019	155–159	3,762	590,603	265–269	1,130	301,763
50–54	21,596	1,122,040	160–164	3,535	572,399	270–274	1,057	287,471
55–59	20,549	1,171,163	165–169	3,189	532,399	275–279	1,059	293,349
60–64	19,796	1,226,588	170–174	2,915	501,304	280–284	1,010	284,830
65–69	18,172	1,217,229	175–179	2,680	474,021	285–289	1,009	289,500
70–74	17,201	1,238,458	180–184	2,587	470,707	290–294	1,000	291,940
75–79	15,518	1,194,441	185–189	2,386	446,170	295–299	1,038	308,268
80–84	14,272	1,169,683	190–194	2,206	423,541	300 or over	2,400	727,660
85–89	13,504	1,174,710	195–199	2,037	401,266			
90–94	12,326	1,133,716	200–204	1,949	393,633			
95–99	11,584	1,123,565	205–209	1,855	383,824	**Totals**	**578,111**	**37,857,540**
100–104	10,506	1,071,369	210–214	1,762	373,556			

32.—Benefit Years Terminated during 1950 and Benefit Days Paid on those Benefit Years, classified by Daily Rate of Benefit Authorized

Daily Rate of Benefit	Benefit Years Terminated	Benefit Days Paid	Daily Rate of Benefit	Benefit Years Terminated	Benefit Days Paid	Daily Rate of Benefit	Benefit Years Terminated	Benefit Days Paid
	No.	No.		No.	No.		No.	No.
Under $0·60	15	645	$1·40–$1·49	9,413	595,782	$2·30–$2·39	40,277	2,516,951
$0·60–$0·69	41	1,922	$1·50–$1·59	9,612	607,521	$2·40–$2·49	43,823	2,967,375
$0·70–$0·79	182	12,067	$1·60–$1·69	12,941	829,104	$2·50–$2·59	7,583	563,232
$0·80–$0·89	363	24,226	$1·70–$1·79	33,039	2,449,080	$2·60–$2·69	34,557	2,540,366
$0·90–$0·99	387	23,150	$1·80–$1·89	14,552	956,685	$2·70–$2·79	29,471	1,901,041
$1·00–$1·09	1,749	116,088	$1·90–$1·99	16,871	1,099,469	$2·80–$2·89	40,040	2,277,136
$1·10–$1·19	1,945	121,474	$2·00–$2·09	49,107	3,414,036	$2·90–$2·99	31,854	1,904,261
$1·20–$1·29	6,486	450,391	$2·10–$2·19	43,770	2,755,729	$3·00 or over	91,416	6,115,687
$1·30–$1·39	16,856	1,182,005	$2·20–$2·29	41,761	2,432,117	**Totals**	**578,111**	**37,857,540**

33.—Benefit Years Terminated during 1950, Benefit Days Paid on those Benefit Years, and Benefit Years Terminated by Cause, classified by Age of Claimant

Age Group	Benefit Years Terminated	Days Paid on Benefit Years Terminated	Benefit Years Terminated	
			Lapsed	Exhausted
	No.	No.	No.	No.
Under 20 years	28,904	1,282,857	15,490	13,414
20–24 "	112,204	6,470,611	81,630	30,574
25–29 "	93,616	5,705,028	74,543	19,073
30–34 "	67,231	3,995,197	53,711	13,520
35–39 "	56,576	3,323,637	44,300	12,276
40–44 "	48,735	2,977,965	37,401	11,334
45–49 "	41,964	2,639,921	31,862	10,102
50–54 "	35,414	2,392,910	26,047	9,367
55–59 "	27,177	2,018,604	19,059	8,118
60–64 "	24,186	2,123,296	15,439	8,747
65 years or over	34,699	4,409,725	18,714	15,985
Unspecified	7,405	517,789	4,964	2,441
Totals, All Ages	**578,111**	**37,857,540**	**423,160**	**154,951**

34.—Benefit Years Terminated during 1950 and Benefit Days Paid on those Benefit Years, classified by Industry and Age of Claimant

Industrial Group	Benefit Years Terminated			Benefit Days Paid		
	Under 25 Years of Age	25-59 Years of Age	60 Years of Age or Over	Under 25 Years of Age	25-59 Years of Age	60 Years of Age or Over
	No.	No.	No.	No.	No.	No.
Agriculture	819	1,933	228	42,852	129,105	19,597
Forestry and logging	2,844	11,127	1,456	150,691	650,972	112,713
Fishing, hunting and trapping	114	594	82	6,558	42,321	5,510
Mining, Quarrying and Oil Wells—						
Metal mining	990	3,244	473	48,458	194,800	66,139
Fuels	1,160	8,898	1,597	36,820	274,792	117,991
Non-metal mining	387	1,337	158	22,873	83,064	14,703
Quarrying, clay and sand pits	221	916	185	13,028	65,133	17,234
Prospecting	62	121	12	2,941	5,358	787
Totals, Mining, Quarrying and Oil Wells	2,820	14,516	2,425	124,120	623,147	216,854

34.—Benefit Years Terminated during 1950 and Benefit Days Paid on those Benefit Years, classified by Industry and Age of Claimant—concluded

Industrial Group	Benefit Years Terminated			Benefit Days Paid		
	Under 25 Years of Age	25-59 Years of Age	60 Years of Age or Over	Under 25 Years of Age	25-59 Years of Age	60 Years of Age or Over
	No.	No.	No.	No.	No.	No.
Manufacturing—						
Foods and beverages	9,224	18,823	3,090	510,953	1,208,164	343,834
Tobacco and tobacco products	548	978	128	39,730	82,118	20,369
Rubber products	1,858	4,387	294	74,573	131,290	24,863
Leather products	3,516	5,433	875	198,437	320,003	88,927
Textile products (except clothing)	7,131	10,081	1,126	398,919	575,117	129,201
Clothing (textile and fur)	8,478	15,157	1,522	441,829	895,050	163,789
Wood products	5,927	15,978	3,301	307,684	954,567	344,940
Paper products	3,382	9,240	1,159	191,629	536,331	165,046
Printing, publishing and allied industries	1,603	2,420	431	85,564	157,526	58,795
Iron and steel products	7,147	24,007	3,288	351,689	1,272,327	403,219
Transportation equipment	6,879	28,132	3,564	336,042	1,433,878	344,754
Non-ferrous metal products	1,917	5,849	445	107,889	298,263	56,270
Electrical apparatus and supplies	2,251	4,131	369	122,072	251,778	52,687
Non-metallic mineral products	1,951	4,170	623	99,412	252,591	74,347
Products of petroleum and coal	244	706	174	12,034	37,510	31,414
Chemical products	1,307	3,570	598	76,123	241,011	98,320
Miscellaneous manufacturing industries	1,734	2,723	368	95,345	180,282	43,716
Totals, Manufacturing	65,097	155,785	21,355	3,449,924	8,827,806	2,444,491
Construction—						
General contractors	12,137	54,946	9,480	673,483	3,565,970	811,048
Special trade contractors (subcontractors)	4,942	13,292	1,567	259,772	797,785	139,398
Totals, Construction	17,079	68,238	11,047	933,255	4,363,755	950,446
Transportation, Storage and Communication—						
Transportation	11,469	31,288	5,601	617,244	1,976,127	868,909
Storage	485	1,183	216	27,372	80,246	28,382
Communication	1,078	1,222	94	91,987	116,708	15,595
Totals, Transportation, Storage and Communication	13,032	33,693	5,911	736,603	2,173,081	912,886
Public utility operation	1,070	2,733	679	63,672	188,566	85,597
Trade—						
Wholesale	4,705	10,269	1,547	253,277	713,823	188,579
Retail	16,951	26,926	3,437	1,010,427	1,980,880	462,041
Totals, Trade	21,656	37,195	4,984	1,263,704	2,694,703	650,620
Finance, Insurance and Real Estate	2,013	3,056	726	141,760	282,035	105,095
Service—						
Community or public	952	3,194	906	55,519	249,142	98,665
Government	2,893	12,471	3,867	187,093	956,086	381,182
Recreation	963	2,170	722	55,844	158,461	70,650
Business	679	1,909	450	36,603	134,861	43,517
Personal	8,739	21,276	3,926	483,486	1,519,405	424,948
Totals, Service	14,226	41,020	9,871	818,545	3,017,955	1,018,962
Unspecified	338	823	121	21,784	59,816	10,250
Totals, All Industries[1]	**141,108**	**370,713**	**58,885**	**7,753,468**	**23,053,262**	**6,533,021**

[1] The total number of benefit years terminated was actually 578,111 since for 7,405 benefit years the age of claimant was unspecified; 517,789 benefit days were paid on these 7,405 benefit years, so that the total number of benefit days paid on benefit years terminated was 37,857,540.

35.—Benefit Years Terminated during 1950 and Benefit Days Paid on those Benefit Years, classified by Occupations

Occupation Group	Benefit Years Terminated	Benefit Days Paid	Occupation Group	Benefit Years Terminated	Benefit Days Paid
	No.	No.		No.	No.
Managerial	4,599	340,271	Fishing, trapping and logging	12,017	700,373
Professional	3,961	271,254	Fishing and trapping	*626*	*42,937*
Clerical	42,674	3,365,637	Logging (including forestry)	*11,391*	*657,436*
Transportation	44,863	2,854,992	Mining	15,474	699,134
Communication	3,973	337,152	Manufacturing and mechanical	132,079	7,651,258
Commercial	33,851	2,415,179	Electric light and power production and stationary enginemen	10,654	739,765
Financial	286	18,815	Construction	64,619	4,121,568
Service (other than professional)	49,589	3,844,451	Labourers	154,166	10,138,423
Personal (other than domestic)	*24,963*	*1,869,091*	Unspecified	2,684	187,062
Domestic	*17,135*	*1,256,633*			
Protective	*6,355*	*642,612*			
Other	*1,136*	*76,115*	**Totals, All Occupations**	**578,111**	**37,857,540**
Agricultural	2,622	172,206			

Employment Service.—The Unemployment Insurance Commission operates a free employment service under authority of the Unemployment Insurance Act, 1940. The public employment offices, which had functioned under a joint federal-provincial arrangement for more than two decades, were taken over on Aug. 1, 1941, and added to by the Commission in all provinces, except Quebec. The Commission also established offices in Quebec and the provincial government thereupon reduced the number of its own offices.

36.—Applications for Employment, Positions Offered and Placements Effected by Employment Offices, 1942-51, and by Province, 1950 and 1951

NOTE.—Figures by provinces from 1920-49 are given in the corresponding table of previous Year Books, commencing with the 1926 edition. Totals for 1920-37 are given in the 1938 edition, p. 766; for 1938 in the 1939 edition, p. 802; and for 1939-41 in the 1951 edition, p. 686.

Year and Province	Applications Registered		Vacancies Notified		Placements Effected	
	Males	Females	Males	Females	Males	Females
	No.	No.	No.	No.	No.	No.
1942	1,044,610	499,519	949,909	431,933	597,161	298,460
1943	1,681,411	1,008,211	2,002,153	1,034,447	1,239,900	704,126
1944	1,583,010	902,273	1,779,224	949,547	1,101,854	638,063
1945	1,855,036	661,948	1,733,362	687,886	1,095,641	397,940
1946	1,464,533	494,164	1,335,200	567,331	624,052	235,360
1947	1,189,646	439,577	1,060,134	476,643	549,376	220,473
1948	1,197,295	459,332	794,207	391,385	497,916	214,424
1949	1,295,690	494,956	652,853	373,837	464,363	219,816
1950	1,500,763	575,813	800,611	363,711	559,882	230,920
1951	1,541,208	623,467	943,773	387,795	655,933	262,305
Newfoundland 1950	36,862	1,944	3,107	388	1,604	169
1951	27,359	1,735	3,472	563	2,175	295
Prince Edward Island 1950	8,492	3,337	4,868	2,262	4,283	1,678
1951	7,800	3,726	4,351	2,990	3,576	2,370
Nova Scotia 1950	62,665	19,483	19,408	10,942	16,548	7,535
1951	63,025	20,038	26,643	12,493	21,649	8,880
New Brunswick 1950	68,647	17,611	24,632	8,118	19,094	5,821
1951	59,036	16,897	33,157	9,435	23,059	6,891
Quebec 1950	393,371	139,535	164,240	82,075	104,533	46,905
1951	409,910	156,213	255,863	92,036	165,120	58,859
Ontario 1950	488,571	205,200	351,171	151,514	240,540	96,758
1951	523,880	231,214	366,206	150,912	249,995	102,145
Manitoba 1950	90,234	47,853	49,671	29,335	35,806	20,473
1951	81,496	46,799	50,269	30,681	34,574	21,595
Saskatchewan 1950	55,621	23,732	33,915	14,679	25,262	9,720
1951	51,860	22,664	37,184	16,073	27,179	10,327
Alberta 1950	97,443	40,061	66,436	28,374	52,224	18,593
1951	98,375	43,108	77,954	31,906	59,435	21,986
British Columbia 1950	198,857	77,057	83,163	36,024	59,988	23,268
1951	218,467	81,073	88,674	40,706	69,171	28,957

Section 6.—Vocational Training*

The Federal Department of Labour, in co-operation with the provincial governments, carries on the following types of training: (1) youth training; (2) assistance to students by way of bursaries; (3) apprenticeship; (4) training of unemployed persons; (5) assistance to the provinces for vocational schools; (6) training of military personnel; and (7) training of workers for defence industries.

The Vocational Training Advisory Council, appointed under authority of the Vocational Training Co-ordination Act, 1942, advises the Minister of Labour on the general aspects of training plans. The Council is representative of employers, organized labour, vocational education and of veterans' and women's organizations. In November 1952, an Advisory Committee on Apprenticeship Training was appointed to advise the Minister on special problems of apprenticeship and industrial training.

Youth Training.—This phase of the training program consists, for the most part, of various general and specialized courses for rural young people in agriculture, home crafts and handicrafts and other related subjects.

Federal Government allotments to the different provinces for this type of training for the year ended Mar. 31, 1952, together with claims paid, including commitments from previous years, to Apr. 30, 1952, were as follows:—

Province	Allotment	Payment	Province	Allotment	Payment
	$	$		$	$
Newfoundland	15,000	11,605	Manitoba	20,000	16,889
Prince Edward Island	7,000	2,348	Saskatchewan	35,000	33,735
Nova Scotia	24,000	21,726	Alberta	40,000	31,019
New Brunswick	33,850	33,317	British Columbia	52,000	51,095
Quebec	155,000	124,446			
Ontario	60,000	60,000	Totals	441,850	386,180

Assistance to Students.—Under the Youth Training Division of the Vocational Training Agreement with each province, assistance may be provided for nurses-in-training at hospitals and for university students in courses leading to a degree who have good academic standing but who, without financial assistance, cannot continue training. At the discretion of the provincial authorities, assistance may be given in the form of a grant or loan, or a combination of the two.

The value of Federal Government assistance for such purposes may be assessed from the following approximate amounts paid to the provinces during the year ended Mar. 31, 1952:—

Province	Amount	Province	Amount
	$		$
Newfoundland	6,900	Manitoba	5,537
Prince Edward Island	2,348	Saskatchewan	19,654
Nova Scotia	7,203	Alberta	12,867
New Brunswick	11,967	British Columbia	29,866
Quebec	78,297		
Ontario	60,000	Total	234,637

Financial help was given to 564 nurses-in-training and 2,819 students at universities. Included in the total number of university students were 862 taking courses in medicine, 97 in dentistry, 602 in applied science and engineering, 59 in agriculture and 803 in arts and science. Total federal payments in the past 13 years, amounting to $2,318,457, have assisted 26,674 students.

* More detailed information is given in the Department of Labour publication, *Canadian Vocational Training Annual Report 1951-52.*

Apprenticeship Training.—Apprenticeship agreements are in effect with all provinces except Newfoundland, Prince Edward Island and Quebec. Of the trades designated under the provincial Acts, emphasis is being given to the building and construction trades. In some provinces, certain categories of apprentices are given full-time training of a practical as well as a technical nature for a period of one to three months each year. For other categories, part-time training is given either in afternoon or evening classes for about seven months of the year. Provision is made with employers for adequate supervision of apprentices working on the job by the appointment of instructor-supervisors who instruct full-time classes for six to eight months and supervise for the remaining part of the year. Use is also made of trade advisory committees. Costs are shared equally by the province concerned and the Federal Government. At Mar. 31, 1952, the total number of apprentices registered was 11,031 in the seven provinces having agreements with the Federal Government.

Federal Government allotments made for the year ended Mar. 31, 1952, and claims paid (including commitments from previous years) to Apr. 30, 1952, to the different provinces, were as follows:—

Province	Allotment	Payment	Province	Allotment	Payment
	$	$		$	$
Nova Scotia	40,000	23,368	Saskatchewan	45,000	40,234
New Brunswick	40,000	23,475	Alberta	161,000	158,112
Ontario	200,000	197,781	British Columbia	28,500	7,634
Manitoba	45,500	43,798	TOTALS	560,000	494,403

Training of Unemployed Persons.—The Canadian Vocational Training and Co-ordination Act provides for the training of unemployed persons in receipt of unemployment insurance benefits. An amendment passed in 1948 extends the provisions to include those not in receipt of unemployment insurance benefits. The schedule covering the training of unemployed persons was accepted by all provinces, but training has not been carried out in Newfoundland, Prince Edward Island, Quebec or Ontario, the need for it not having arisen. Approved costs are shared equally by the province concerned and the Federal Government, the province recommending to the Federal Minister of Labour the scale of training allowances that should be paid.

In the year ended Mar. 31, 1952, approximately 133,489 days' training was given to 1,191 individuals, nearly all of whom were in Nova Scotia, New Brunswick, Manitoba, Saskatchewan and Alberta. At the end of that year, 583 were under training. The largest enrolment was in classes for nurses' aides. No training under this schedule was given for the designated apprentice trades.

Federal Government allotments to the different provinces for this type of training for the year ended Mar. 31, 1952, together with claims paid (including commitments from previous years) to Apr. 30, 1952, were as follows:—

Province	Allotment	Payment	Province	Allotment	Payment
	$	$		$	$
Nova Scotia	100,000	82,244	Saskatchewan	31,000	30,017
New Brunswick	38,000	36,699	Alberta	60,000	50,060
Quebec	14,000	13,503	British Columbia	10,000	7,608
Manitoba	25,000	16,749	TOTALS	278,000	236,881

Assistance for Vocational Schools.—A ten-year agreement for vocational school assistance was signed in 1945 by nine provinces and, in 1950, an agreement was made with Newfoundland. The following payments are made by the Federal Government:—

(1) An annual grant of $10,000 to each province;
(2) an annual allotment of $1,965,800 distributed among the ten provinces in accordance with the number of young persons in each province in the age-group 15-19 years;
(3) a special allotment of $10,292,250 to be used for capital expenditure for building and equipment and to be distributed among the provinces on the same basis as the annual allotment. Allotments provided for Newfoundland amount to $65,800 for annual operation and $292,250 for capital expenditure.

All federal allotments, except the annual grant under item (1), must be matched by an expenditure of equal amount by the provincial government concerned.

The assistance given by this agreement has resulted in marked expansion of vocational training across the country. Federal approval has been given to 120 vocational building projects consisting of new schools or vocational additions to existing schools. Of these, 98 were completed by Mar. 31, 1952, and 8 were under construction. Provision has been made for young people in rural areas of facilities for training in homemaking and related subjects, vocational agriculture and farm mechanics. Since the beginning of the agreement, total federal payments under the annual allotment have amounted to approximately $12,790,788 and capital payments for buildings and equipment to about $8,090,027. Federal annual and capital allotments to each province, together with the amount of claims paid during the year ended Mar. 31, 1952, were as follows:—

Province	*Annual Allotment*		*Special Capital Allotment (Building and Equipment)*	
	Allotment[1]	*Payment*	*Allotment*	*Payment*
	$	$	$	$
Newfoundland	65,800	49,228	292,250	—
Prince Edward Island	25,700	25,990	82,000	6,403
Nova Scotia	106,400	172,263	504,300	21,944
New Brunswick	92,700	92,700	433,000	60,234
Quebec	609,400	679,368	3,139,400	117,689
Ontario	589,000	589,000	3,031,500	471,971
Manitoba	135,300	147,824	656,000	34,531
Saskatchewan	173,900	212,706	858,200	135,249
Alberta	143,800	143,800	700,200	8,178
British Columbia	123,800	195,420	595,400	1,316
TOTALS	2,065,800	2,308,299	10,292,250	857,514

[1] Includes unmatched grant of $10,000 to each province.

Training of Military Personnel.—Provision is made for the training of service tradesmen in such categories as might be requested by the Department of National Defence and for whom the provincial governments have the necessary training facilities. Training during 1951-52 was on a comparatively small scale, with an enrolment of 649 trainees in the Provinces of New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan and Alberta. The greater part of the training was given to driver-mechanics, motor-vehicle mechanics and electrical mechanics

for the Army. The cost of this type of training is paid solely by the Federal Government. Allotments made for the year ended Mar. 31, 1952, and claims paid (including commitments from previous years) to Apr. 30, 1952, were as follows:—

Province	Allotment	Payment
	$	$
New Brunswick—Army	16,000	12,129
Quebec—Army	15,000	12,719
Ontario—Air Force	6,000	5,586
Manitoba—Army	17,000	15,902
Saskatchewan—Army	328	366[1]
Alberta—Army	55,000	46,804
Totals	109,328	93,506

[1] Includes $48 given for training prior to this fiscal year.

Training of Workers for Defence Industries.—Under an Order in Council dated June 15, 1951, agreements have been entered into with the provinces of British Columbia, Alberta, Ontario, Quebec, New Brunswick and Nova Scotia under which special classes for the training of workers in defence industries have been established. Such classes have been organized in aircraft sheet-metal work, machine shop practice and machine tool operations, welding and drafting. Industrial establishments are being encouraged to organize and operate plant-training programs and special pre-employment classes may be set up to meet any general need that may develop. Federal Government allotments and payments made for the year ended Mar. 31, 1952, were as follows:—

Province	Allotment	Payment
	$	$
Nova Scotia	35,000	32,227
New Brunswick	17,000	13,026
Quebec	15,000	—
Ontario	50,000	12,096
Alberta	15,000	3,234
British Columbia	10,000	—
Totals	142,000	60,584

Section 7.—Industrial Accidents and Workmen's Compensation

Subsection 1.—Fatal Industrial Accidents

Statistics of fatal industrial accidents have been compiled by the Federal Department of Labour since 1903. The data are now obtained from provincial Workmen's Compensation Boards, the Board of Transport Commissioners and other government authorities, departmental correspondents and from press reports.

37.—Fatal Industrial Accidents, by Industry, 1949-52

(Includes Newfoundland since Apr. 1, 1949)

Industry	Numbers				Percentages of Total			
	1949	1950	1951	1952p	1949	1950	1951	1952p
Agriculture	118	60	102	102	8·5	4·7	7·2	7·1
Logging	145	160	181	174	10·5	12·5	12·8	12·2
Fishing and trapping	33	42	21	21	2·4	3·3	1·5	1·5
Mining, non-ferrous smelting and quarrying	203	173	191	209	14·7	13·6	13·5	14·6
Manufacturing	250	247	232	231	18·1	19·3	16·4	16·2
Construction	152	160	215	245	11·0	12·5	15·2	17·2
Electric light and power	42	62	31	43	3·0	4·9	2·2	3·0
Transportation and public utilities	257	199	243	250	18·5	15·6	17·2	17·5
Trade	44	54	53	47	3·2	4·2	3·7	3·3
Finance	2	—	5	1	0·1	—	0·3	0·1
Service	133	120	141	105	9·6	9·4	10·0	7·3
Unclassified	6	—	—	—	0·4	—	—	—
Totals	**1,385**	**1,277**	**1,415**	**1,428**	**100·0**	**100·0**	**100·0**	**100·0**

Causes of Industrial Fatalities.—Preliminary figures indicate that, during 1952, 391 fatal accidents to gainfully employed persons were the result of these persons being struck by tools, machinery, moving vehicles and other objects; within this group 70 deaths were caused by falling trees and branches, 46 by objects falling in mines and quarries and 42 by automobiles and trucks. Collisions, derailments, wrecks, etc., were responsible for 338 deaths; automobiles or trucks were involved in 142 of these cases, water craft in 64, tractors or loadmobiles in 51, steam railways in 43, and aircraft in 29. Falls to different levels caused 115 deaths including 78 resulting from falls into rivers, lakes, sea or harbours. Deaths of 32 workers were caused by falls from scaffolds and stagings, 27 by falls from buildings, roofs and towers and 20 by falls from ladders and stairs. Workers who died as a result of exposure to or contact with electricity numbered 60.

Subsection 2.—Workmen's Compensation*

In all provinces legislation is in force providing for compensation for injury to a workman by accident arising out of and in the course of employment, or by a specified industrial disease, except where the workman is disabled for fewer than a stated number of days. The Acts of all provinces provide for a compulsory system of collective liability on the part of employers. To ensure payment of compensation, each Act provides for an accident fund, administered by the province, to which employers are required to contribute at a rate determined by the Workmen's Compensation Board in accordance with the hazards of the industry. A workman to whom these provisions apply has no right of action against his employer for injury from an accident during employment. In Ontario and Quebec, public authorities, railway and shipping companies, and telephone and telegraph companies are individually liable for compensation as determined by the Board, and pay a proportion of the expenses of administration. A federal Act provides for compensation for accidents to Federal Government employees according to the conditions laid down by the Act of the province in which the accident occurs. Seamen who are not under a provincial Workmen's Compensation Act are entitled to compensation under the Merchant Seamen Compensation Act, 1946.

* More detailed information is given in the Department of Labour publication, *Workmen's Compensation in Canada, A Comparison of Provincial Laws.*

In all provinces, free medical aid is given to workmen during disability. Compensation is payable in all provinces for anthrax and for poisoning from arsenic, lead, mercury and phosphorus, and silicosis is compensated under certain conditions. Other diseases compensated vary according to the industries of the provinces.

Scope of the Workmen's Compensation Acts.—The Acts vary in scope but, in general, they cover construction, mining, manufacturing, lumbering, fishing, transportation and communications and the operation of public utilities. Undertakings in which not more than a stated number of workmen are usually employed may be excluded, except in Alberta and British Columbia.

Benefits.—Under each Act, except those of Saskatchewan and Alberta, if a workman is disabled from earning full wages for fewer than a stated number of days, usually called the "waiting period", he cannot recover compensation for the period of his disability or, in Manitoba and British Columbia, for the first three days of his disability. Where the disability continues beyond the required number of days, compensation is payable from the date of the accident. Medical aid is always paid from the date of the accident. In Saskatchewan and Alberta, the waiting period is one day, that is, compensation is not payable when the workman is off work only for the day on which the accident occurs. When he is disabled for any longer time, compensation begins from the day following the accident. Compensation in fatal cases is paid as follows:—

Burial expenses: $250 in Saskatchewan and British Columbia, $200 in Newfoundland, Nova Scotia, New Brunswick, Ontario, Manitoba and Alberta, $175 in Quebec, and $150 in Prince Edward Island. In seven provinces a further sum is allowed for transporting the workman's body.

To a widow or invalid widower (or to a foster mother as long as the children are under the age limit): a monthly payment of $75 in Ontario and British Columbia, $60 in Saskatchewan, $50 in Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Manitoba and Alberta, and of $45 in Quebec. In addition, a lump sum of $200 is paid in Ontario and of $100 in all other provinces.

For each child in the care of a parent or foster mother receiving compensation: a monthly payment of $25 in Ontario, Saskatchewan and Alberta, $20 in Nova Scotia, Manitoba and British Columbia, $12.50 in Prince Edward Island, $12 in Newfoundland and New Brunswick, and $10 in Quebec.

For each orphan child: a monthly payment of $35 in Ontario, $30 in Nova Scotia, Manitoba, Saskatchewan and British Columbia, $25 in Prince Edward Island, New Brunswick and Alberta (in Alberta, a further amount, not exceeding $10 a month, may be given at the discretion of the Board), $20 in Newfoundland, and $15 in Quebec, with a maximum of $100 a month to any one family in Prince Edward Island and of $120 in Nova Scotia.

Except in the case of invalids, payments to children are not continued beyond the age of 16 years in seven provinces but the Board has discretion to pay compensation to the age of 18 years if it is considered desirable to continue a child's education. In Quebec, the age limit is 18 years and in New Brunswick and British Columbia, compensation is paid to the age of 18 years if a child is regularly attending school. In New Brunswick, Ontario, Manitoba, Saskatchewan and British Columbia, payments to invalid children are continued until recovery, while the other provinces make payments only for the length of time the Board considers that the workman would have contributed to their support.

Where the only dependants are persons other than consort or children, all the Acts provide that compensation is to be a reasonable sum proportionate to the pecuniary loss but the total monthly amount to be paid to all such dependants is limited to $100 in Ontario, $85 in Alberta, $75 in British Columbia, $60 in Nova Scotia and Manitoba, and $45 in Prince Edward Island. In British Columbia, if a workman leaves dependent parents as well as a widow or orphans, the maximum payable to a parent or parents is $75 a month. Compensation to dependants other than consort or children is continued only for such time as the Board considers that the workman would have contributed to their support.

Except in Alberta and British Columbia, each Act places a maximum on the total amount of benefits payable to all dependants in case of the death of the workman. In Newfoundland, Nova Scotia and New Brunswick, the maximum is two-thirds of the workman's earnings, in Quebec and Manitoba 70 p.c., and in Prince Edward Island 75 p.c. In Ontario and Saskatchewan, the average earnings are the maximum amount payable.

Irrespective of the workman's earnings, however, compensation may not fall below certain minimum monthly amounts. The minimum payable to a consort and one child in Quebec is $55 a month or $65 if there is more than one child; in Manitoba, the minimum is $70 if there is a consort and one child and $90 if there is more than one child; in Saskatchewan, the minimum is $85 a month to a consort and child and $100 if there are more children. In Newfoundland, a widow must receive at least $50 a month with a further payment of $12 for each child under 16 years of age unless the total exceeds $100. In Ontario, the minimum payable to a widow is $75 a month with a further payment of $25 for each child, up to but not exceeding $150 a month.

Compensation for total disablement in Newfoundland, Nova Scotia and New Brunswick is a periodical payment for the duration of the disability equal to 66⅔ p.c. of average earnings; in Quebec, Manitoba and British Columbia, the rate is 70 p.c. of earnings; and in Prince Edward Island, Ontario, Saskatchewan and Alberta, 75 p.c. Except in New Brunswick, the Acts fix minimum sums to be paid for a permanent total disability. The minimum is $15 a week in Prince Edward Island, Quebec, Manitoba and British Columbia, $20 in Saskatchewan, and $25 in Alberta. In Newfoundland, the minimum is $65 a month, in Nova Scotia, $85 a month, and in Ontario, $100 a month. If, however, average earnings are less than these minima, the amount of the earnings is paid in all provinces except Nova Scotia and Saskatchewan. For partial disablement, compensation in most provinces is a percentage of the difference in earnings before and after the accident, the percentage rate being the same as in total disablement. In New Brunswick and Alberta, the amount is determined by the Board according to the diminution of earning capacity. In all provinces except British Columbia, if the impairment of earning capacity is 10 p.c. or less, a lump sum may be given.

The average earnings on which compensation is based are limited to $4,000 a year in Ontario and Saskatchewan, $3,600 in British Columbia, $3,000 in Newfoundland, Nova Scotia, New Brunswick, Quebec, Manitoba and Alberta, and $2,500 in

Prince Edward Island. If the workman's earnings at the time of the accident are not considered a proper basis for compensation, the Board may use as a basis the average earnings of another person in the same grade of work. Compensation paid workmen under 21 years of age may be raised later, if it appears that their earning power would have increased had the injury not occurred. Workmen's compensation statistics for the different provinces are not on a comparable basis and are thus presented separately in Tables 38 to 46.

Operations of the Newfoundland Workmen's Compensation Board.—The Workmen's Compensation Board of Newfoundland commenced operations on Apr. 1, 1951. During the period Apr. 1 to Dec. 31, 1951, $188,603 was paid for compensation with an estimated $370,219 required for outstanding claims; the total compensation for the first nine months, paid and outstanding, was therefore $558,822. The amount paid for medical aid was $70,869 and it was estimated that the same amount would be required to complete payment for medical aid claims, making a total of $141,738. The number of claims reported was 6,228.

During 1952, payments for compensation other than pensions amounted to $355,689 and for medical service, $112,301. It was estimated that an additional $1,126,037 would be required for the payment of outstanding claims in these two categories. The number of claims reported and compensated in 1952 was 8,766.

38.—Operations of the Prince Edward Island Workmen's Compensation Board, 1949-52

Year	Compensation	Medical Aid	Total	Claims Reported
	$	$	$	No.
1949[1]	13,100	5,984	19,084	249
1950	43,523	21,455	64,978	890
1951	62,204	25,939	88,143	878
1952	66,130	19,560	85,690	780

[1] Figures for 1949 cover the first six months of operation of the Board.

39.—Operations of the Nova Scotia Workmen's Compensation Board, 1943-52

NOTE.—Estimates for outstanding claims are not included. Statistics for 1917-42 are given in previous Year Books beginning with the 1938 edition.

Year	Compensation	Medical Aid	Total	Accidents Compensated
	$	$	$	No.
1943	2,897,718	196,511	3,094,229	16,926
1944	2,693,483	185,392	2,878,875	19,027
1945	1,243,148	207,000	1,450,148	18,396
1946	1,181,207	194,912	1,376,119	19,496
1947	1,074,399	151,896	1,226,295	18,890
1948	1,054,654	168,403	1,223,057	19,741
1949	1,097,846	171,082	1,268,928	19,423
1950	1,316,737	335,194	1,651,932	15,840
1951	1,298,363	351,686	1,650,049	16,601
1952	1,357,622	372,416	1,730,038	17,917

40.—Operations of the New Brunswick Workmen's Compensation Board, 1943-52

NOTE.—Statistics for 1920-42 are given in previous Year Books beginning with the 1938 edition.

Year	Weekly Compensation	Permanent Partial Disability	Fatal		Medical Aid		Permanent Total Disability Reserve
			Funeral Expenses	Reserve for Pensions	Doctors' Fees and Transportation	Hospital and Nursing Service	
	$	$	$	$	$	$	$
1943	486,304	113,332	2,900	94,414	115,121	82,266	5,085
1944	658,666	388,992	2,624	142,921	125,116	94,809	8,330
1945	772,210	141,998	3,392	142,624	125,300	102,256	[1]
1946	776,646	186,638	3,125	153,702	152,102	101,753	12,901
1947	834,738	244,676	3,514	230,460	168,650	136,140	128,372
1948	814,419	229,341	3,879	200,227	179,360	135,360	146,060
1949	680,138	323,799	2,450	133,844	183,208	143,350	23,650
1950	637,768	320,772	3,550	191,923	188,785	153,238	33,665
1951[r]	737,283	318,332	3,600	171,401	184,629	165,160	57,227
1952	600,895	146,742	4,788	155,007	112,635	117,340	22,038

[1] Not reported.

41.—Operations of the Quebec Workmen's Compensation Commission, 1943-52

NOTE.—Statistics for 1928-42 are given in previous Year Books beginning with the 1940 edition.

Year	Claims Schedules 1 and 2	Compensation Schedule 1	Medical Aid Schedule 1
	No.	$	$
1943	90,564	6,462,259	1,389,008
1944	84,308	7,012,031	1,414,138
1945	82,724	7,737,865	1,458,809
1946	90,900	8,595,754	1,663,587
1947	96,135	9,774,008	1,836,483
1948	93,028	9,208,381	2,001,929
1949	85,040	9,342,925	1,960,395
1950	86,246	9,241,226	2,080,876
1951	95,930	10,838,436[r]	2,575,311[r]
1952	97,177	12,337,958	2,538,268

42.—Operations of the Ontario Workmen's Compensation Board, 1943-52

NOTE.—Statistics for 1915-42 are given in previous Year Books beginning with the 1938 edition.

Year	Benefits Awarded				Accidents Reported
	Schedule 1		Schedule 2[1] and Crown	Total Benefits	
	Compensation	Medical Aid	Compensation		
	$	$	$	$	No.
1943	6,932,198	1,948,048	2,264,507	11,144,753	131,458
1944	8,317,960	1,888,846	2,278,793	12,485,599	123,820
1945	8,690,344	1,889,830	2,555,764	13,135,938	118,220
1946	11,797,877	2,358,949	2,345,197	16,502,023	138,570
1947	12,412,296	2,735,271	2,613,175	17,760,742	168,767
1948	15,272,487	4,082,032	4,355,763	23,710,282	179,811
1949	11,346,994	4,719,512	2,961,844	19,028,350	179,894
1950	12,323,631	4,943,899	3,219,866	20,487,396	182,144
1951	15,449,742	5,756,311	3,793,466	24,999,520	202,645
1952	17,975,437	6,801,195	4,250,645	27,027,277	209,974

[1] Comprises employers individually liable.

43.—Operations of the Manitoba Workmen's Compensation Board, 1943-52

NOTE.—Statistics for 1917-42 are given in previous Year Books beginning with the 1938 edition.

Year	Benefits Awarded			Accidents Compensated
	Compensation	Medical Aid	Total	
	$	$	$	No.
1943	1,386,104	240,492	1,626,596	13,948
1944	1,379,142	225,088	1,604,230	16,229
1945	1,353,094	211,125	1,564,219	16,196
1946	1,414,829	264,742	1,679,571	14,795
1947	1,439,275	295,295	1,734,570	15,746
1948	1,684,309	347,782	2,032,091	16,783
1949	1,671,686	361,033	2,032,720	17,125
1950	1,682,574	365,686	2,048,261	16,513
1951	1,641,093	434,436	2,075,529	20,441[1]
1952	2,115,498	488,161	2,603,660	21,113

[1] Accidents reported.

44.—Operations of the Saskatchewan Workmen's Compensation Board, 1943-52

NOTE.—Statistics for 1930-42 are given in previous Year Books beginning with the 1938 edition.

Year	Benefits Awarded			Accidents Compensated
	Compensation	Medical Aid	Total	
	$	$	$	No.
1943	676,592	138,355	814,947	6,921
1944	853,022	156,594	1,009,616	7,702
1945	800,516	176,697	977,213	7,509
1946	1,175,704	207,129	1,382,833	9,509
1947	1,550,635	238,257	1,788,893	11,860
1948	1,577,081	294,261	1,871,342	11,944
1949	1,588,969	306,271	1,895,240	10,830
1950	1,804,606	380,512	2,185,118	12,944
1951	1,700,302	426,703	2,127,005	13,676[1]
1952	2,374,747	469,391	2,844,138	16,350

[1] Claims reported.

45.—Operations of the Alberta Workmen's Compensation Board, 1943-52

NOTE. — Statistics for 1921-42 are given in previous Year Books beginning with the 1938 edition. Amounts shown do not include sums transferred to pension fund, administration expenses, nor sums set aside to cover estimated liabilities. Accidents compensated do not include cases for medical aid only.

Year	Benefits Awarded			Accidents Reported	Accidents Compensated
	Compensation	Medical Aid	Total		
	$	$	$	No.	No.
1943	816,493	368,299	1,184,792	19,700	7,602
1944	498,303	234,708	733,011	19,286	7,988
1945	517,879	249,639	767,518	19,154	8,891
1946	634,725	304,828	939,553	23,068	10,751
1947	721,226	365,778	1,087,004	25,864	11,632
1948	858,116	441,735	1,299,851	28,557	12,253
1949	1,110,324	572,571	1,682,895	32,396	13,213
1950	1,085,159	595,144	1,680,303	33,337	13,397
1951	1,158,684	670,885	1,829,569	35,804	13,370
1952	1,497,452	742,983	2,240,435	39,520	15,625

46.—Operations of the British Columbia Workmen's Compensation Board, 1943-52

NOTE.—Statistics for 1917-42 are given in previous Year Books beginning with the 1938 edition.

Year	Benefits Awarded			Claims (gross)
	Compensation	Medical Aid	Total	
	$	$	$	No.
1943	7,344,122	1,184,253	8,528,375	68,635
1944	8,031,613	1,182,236	9,213,849	60,463
1945	8,047,679	1,115,513	9,163,192	55,584
1946	8,413,654	1,353,596	9,767,250	59,947
1947	9,390,825	1,756,758	11,147,583	75,018
1948	10,202,450	2,270,329	12,472,780	74,064
1949	10,764,950	2,363,290	13,128,241	69,252
1950	12,164,699	2,648,484	14,813,184	71,504
1951	11,451,445	2,939,923	14,391,369	76,698
1952	12,902,019	3,373,441	16,275,460	77,943

Section 8.—Workers Affected by Collective Agreements

Statistics on the number of workers affected by collective agreements in Canada are compiled by the Department of Labour. Table 47 gives figures for the principal industrial groups. The second column shows the number of workers affected by agreements extended under the Quebec Collective Agreement Act (*see* Sect. 1, ss. 2, p. 689). Any duplication of the numbers of workers covered by agreements under this Act and by other agreements is eliminated in the third column. A more detailed table and studies of agreements in certain industries are available from the Department of Labour, Ottawa.

47.—Workers Affected by Collective Agreements, by Industry, 1951

Industrial Group	Agreements (other than those in Column 2)	Agreements Extended under Collective Agreement Act, Quebec	Total[1]
	No.	No.	No.
Agriculture	—	—	—
Forestry	**61,047**	—	**61,047**
Fishing	**8,965**	—	**8,965**
Mining (including milling), Quarrying and Oil Wells	**61,836**	**40**	**61,876**
Metal mining	31,161	—	31,161
Fuels	22,246	—	22,246
Non-metal mining	6,462	40	6,502
Quarrying, clay and sand pits	1,967	—	1,967
Manufacturing	**604,344**	**84,212**	**654,280**
Food and beverages	57,775	1,887	59,662
Tobacco products	5,878	—	5,878
Rubber products	15,061	—	15,061
Leather products	10,233	14,047	20,428
Textile products (except clothing)	44,140	1,474	45,110
Clothing (textile and fur)	46,628	37,052	64,227
Wood products	47,416	4,912	51,256
Paper products	61,025	3,139	61,750
Printing, publishing and allied industries	19,448	6,995	23,512
Iron and steel products	99,789	2,332	100,855
Transportation equipment	79,267	9,667	87,439
Non-ferrous metal products	29,108	529	29,637
Electrical apparatus and supplies	39,968	—	39,968
Non-metallic mineral products	15,485	889	16,374
Products of petroleum and coal	7,753	—	7,753
Chemical products	18,820	1,289	18,820
Miscellaneous manufacturing industries	6,550	—	6,550

For footnote, *see* end of table.

47.—Workers Affected by Collective Agreements, by Industry, 1951—concluded

Industrial Group	Agreements (other than those in Column 2)	Agreements Extended under Collective Agreement Act, Quebec	Total[1]
	No.	No.	No.
Construction	**65,523**	**104,165**	**168,092**
Transportation, Storage and Communication	**296,626**	**8,238**	**297,077**
Transportation	254,285	8,238	254,736
Storage	2,607	—	2,607
Communication	39,734	—	39,734
Public Utility Operations	**30,139**	—	**30,139**
Trade	**32,573**	**11,873**	**43,460**
Finance, Insurance and Real Estate	**990**	—	**990**
Service	**83,618**	**9,898**	**91,437**
Totals	**1,245,661**	**218,426**	**1,417,363**

[1] Duplications in columns 1 and 2 are eliminated from these totals.

Section 9.—Organized Labour in Canada*

At the beginning of 1953 there were 1,219,714 labour union members in Canada, an increase of 6·4 p.c. over the figure for the previous year. The majority of the unions in Canada are affiliated with a central labour congress and their membership is listed in Table **50**. In addition, each of the three largest congresses is discussed below.

Trades and Labor Congress of Canada. — The Trades and Labor Congress of Canada is the oldest of the central labour organizations in Canada. After the disbanding of the Canadian Labour Union, which had drawn together local unions in Ontario from 1873 to 1877, inclusive, there was no central organization until 1883, when the Trades and Labour Council of Toronto called a conference of local unions and plans were made to establish a national organization which was formally set up in 1886.

Affiliated with the Trades and Labor Congress of Canada at the present time are "international" trade unions, almost all of which are also affiliated with the American Federation of Labour, a number of Canadian or "national" unions and a number of directly charted labour unions.

Canadian Congress of Labour.—This Congress was organized in September, 1940, when the All-Canadian Congress of Labour, formed in 1927, amended its constitution to permit the affiliation with the Congress of the Canadian branches of those international unions which, in the United States, are affiliated with the Congress of Industrial Organization. The Canadian Congress includes among its members a number of unions to which it has granted charters.

Canadian and Catholic Confederation of Labour.—National Catholic unions in Canada date from 1901. In 1921, these local Catholic syndicates, grouped as far as possible into federations according to industry, formed a central organization, the Canadian and Catholic Confederation of Labour.

* Information concerning unions is published in the Department of Labour annual publication, *Labour Organization in Canada.*

48.—Membership of Labour Unions in Canada, 1918-53

Year	Members	Year	Members	Year	Members
	No.		No.		No.
1918	248,887	1930	322,449	1942	578,380
1919	378,047	1931	310,544	1943	664,533
1920	373,842	1932	283,096	1944	724,188
1921	313,320	1933	285,720	1945	711,117
1922	276,621	1934	281,274	1946	831,697
1923	278,092	1935	280,648	1947	912,124
1924	260,643	1936	322,746	1948	977,594
1925	271,064	1937	383,492	1949	1,005,639
1926	274,604	1938	381,645		
1927	290,282	1939	358,967	1951[1]	1,028,521
1928	300,602	1940	362,223	1952	1,146,121
1929	319,476	1941	461,681	1953	1,219,714

[1] Figures for 1949 and previous years are as at Dec. 31; figures from 1951 are as at Jan. 1.

49.—Union Membership and Local Branches in Canada, as at Jan. 1, 1952 and 1953

Organization	Jan. 1, 1952		Jan. 1, 1953	
	Branches	Membership	Branches	Membership
	No.	No.	No.	No.
Trades and Labour Congress of Canada	3,169	522,965	3,318	558,722
American Federation of Labour only	61	9,555	61	10,524
Canadian Congress of Labour	1,337	330,778	1,414	352,538
Congress of Industrial Organizations only	8	2,000	9	3,000
Canadian and Catholic Confederation of Labour	457	89,013	451	104,486
International Railway Brotherhoods (Independent)	387	41,385	389	41,751
Unaffiliated international, national, regional and local unions	633	150,425	593	148,693
Totals	**6,052**	**1,146,121**	**6,235**	**1,219,714**

50.—Labour Unions having 1,000 or more Members in Canada, as at Jan. 1, 1952 and 1953

Organization	Reported or Estimated Membership	
	1952	1953
International Unions	No.	No.
Automobile, Aircraft and Agricultural Implement Workers of America, International Union, United (CIO-CCL)	56,870	57,905
Bakery and Confectionery Workers' International Union of America (AFL-TLC)	4,000	4,500
Barbers, Hairdressers, Cosmetologists and Proprietors' International Union of America, The Journeymen (AFL-TLC)	1,378	1,466
Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, International Brotherhoods of (AFL-TLC)	7,700	10,541
Bookbinders, International Brotherhood of (AFL-TLC)	2,912	2,686
Brewery, Flour, Cereal, Soft Drink and Distillery Workers of America, International Union of United (CIO-CCL)	3,400	4,000
Bricklayers, Masons and Plasterers' International Union of America (AFL-TLC)	4,386	4,946
Bridge, Structural and Ornamental Iron Workers, International Association of (AFL-TLC)	3,543	5,173
Building Service Employees' International Union (AFL-TLC)	3,606	4,036
Carpenters and Joiners of America, United Brotherhood of (AFL-TLC)	45,365	52,770
Cement, Lime and Gypsum Workers' International Union, United (AFL-TLC)	2,009	2,613
Chemical Workers of America, United Gas, Coke and (CIO)	2,000	3,000
Chemical Workers' Union, International (AFL-TLC)	7,651	10,500
Clothing Workers of America, Amalgamated (CIO-CCL)	12,500	12,500
Commercial Telegraphers' Union, The (AFL-TLC)	4,265	4,246
Communications Workers of America (CIO-CCL)	2,620	2,500
Distillery, Rectifying and Wine Workers' International Union of America (AFL)	3,300	3,300

50.—Labour Unions having 1,000 or more Members in Canada, as at Jan. 1, 1952 and 1953—continued

Organization	Reported or Estimated Membership	
	1952	1953
	No.	No.
***International Unions**—concluded*		
Electrical, Radio and Machine Workers, International Union of (CIO-CCL)	2,000	4,500
Electrical, Radio and Machine Workers of America, United (Ind.)	26,200	25,700
Electrical Workers, International Brotherhood of (AFL-TLC)	17,000	20,000
Engineers, International Union of Operating (AFL)	6,389	8,560
Fire Fighters, International Association of (AFL-TLC)	6,000	6,574
Firemen and Oilers, International Brotherhood of (AFL-TLC)	2,750	3,000
Fur and Leather Workers' Union of the United States and Canada, International (Ind.)	6,000	6,000
Garment Workers of America, United (AFL-TLC)	1,507	1,500
Garment Workers' Union, International Ladies' (AFL-TLC)	14,649	15,132
Hatters, Cap and Millinery Workers' International Union, United (AFL-TLC)	3,010	2,170
Hod Carriers, Building and Common Labourers' Union of America, International (AFL-TLC)	5,956	9,896
Hotel and Restaurant Employees' and Bartenders' International Union (AFL-TLC)	9,120	10,281
Laundry Workers' International Union (AFL-TLC)	1,279	1,252
Lithographers of America, Amalgamated (CIO-CCL)	1,744	1,799
Locomotive Engineers, Brotherhood of (Ind.)	8,179	8,462
Locomotive Firemen and Enginemen, Brotherhood of (Ind.)	9,880	9,798
Longshoremen's Association, International (AFL-TLC)	5,250	6,000
Longshoremen's and Warehousemen's Union, International (CCL)	1,400	1,607
Machinists, International Association of (AFL-TLC)	37,296	44,760
Maintenance of Way Employees, Brotherhood of (AFL-TLC)	18,000	18,000
Meat Cutters and Butcher Workmen of North America, Amalgamated (AFL-TLC)	866	1,000
Metal Workers' International Association, Sheet (AFL-TLC)	3,134	3,482
Millers, American Federation of Grain (AFL)	1,200	1,000
Mine, Mill and Smelter Workers, International Union of (Ind.)	30,000	30,000
Mine Workers of America, United (CCL)	26,775	27,258
Moulders' and Foundry Workers' Union of North America, International (AFL-TLC)	8,000	5,806
Musicians of the United States and Canada, American Federation of (AFL-TLC)	9,741	10,765
Office Employees' International Union (AFL-TLC)	2,100	2,417
Oil Workers' International Union (CIO-CCL)	2,242	3,789
Packinghouse Workers of America, United (CIO-CCL)	17,750	18,000
Painters, Decorators and Paperhangers of America, Brotherhood of (AFL-TLC)	5,570	5,224
Paper Makers, International Brotherhood of (AFL-TLC)	7,040	7,358
Plasterers' and Cement Masons' International Association of the United States and Canada, Operative (AFL-TLC)	1,427	2,065
Plumbing and Pipe Fitting Industry of the United States and Canada, United Association of Journeymen and Apprentices of the (AFL-TLC)	11,200	12,360
Printing Pressmen and Assistants' Union of North America, International (AFL-TLC)	5,810	6,638
Pulp, Sulphite and Paper Mill Workers, International Brotherhood of (AFL-TLC)	29,959	30,419
Railroad Telegraphers, The Order of (AFL-TLC)	8,771	9,658
Railroad Trainmen, Brotherhood of (Ind.)	21,318	21,507
Railway and Motor Coach Employees of America, Amalgamated Association of Street, Electric (AFL-TLC)	13,146	12,338
Railway and Steamship Clerks, Freight Handlers, Express and Station Employees Brotherhood of (AFL-TLC)	14,368	16,282
Railway Carmen of America, Brotherhood of (AFL-TLC)	25,277	26,852
Railway Conductors of America, Order of (Ind.)	2,008	1,984
Retail Clerks' International Association (AFL-TLC)	2,440	2,923
Retail, Wholesale and Department Store Union (CIO-CCL)	11,000	18,500
Rubber, Cork, Linoleum and Plastic Workers of America, United (CIO-CCL)	10,667	10,900
Seafarers' International Union of North America (AFL-TLC)	9,000	6,200
Stage Employees and Moving Picture Machine Operators of the United States and Canada, International Alliance of Theatrical (AFL-TLC)	1,515	1,514
Steelworkers of America, United (CIO-CCL)	60,350	70,000
Teamsters, Chauffeurs, Warehousemen and Helpers of America, International Brotherhood of (AFL-TLC)	17,663	18,977
Textile Workers of America, United (AFL-TLC)	15,000	6,000
Textile Workers Union of America (CIO-CCL)	17,835	13,750
Tobacco Workers' International Union (AFL-TLC)	4,978	5,095
Typographical Union, International (AFL-TLC)	6,354	5,976
Upholsterers' International Union of North America (AFL-TLC)	2,115	1,599
Woodworkers of America, International (CIO-CCL)	28,519	31,185

50.—Labour Unions having 1,000 or more Members in Canada, as at Jan. 1, 1952 and 1953—concluded

Organization	Reported or Estimated Membership	
	1952	1953
	No.	No.
National Unions		
Association Ouvrière Canadienne, Inc. (Canadian Workers' Association, Inc.) (Ind.)	Incomplete	4,000
Bas Façonné et Circulaire, Inc., Fédération Nationale des Employés du (National Federation of Full Fashioned and Circular Hosiery Workers, Inc.) (CTCC)	2,700	2,200
Bâtiment et des Matériaux de Construction, Fédération Nationale Catholique des Métiers du (National Catholic Federation of Building and Construction Materials Trades) (CTCC)	16,185	20,473
Bois Ouvré du Canada, Inc., Fédération Nationale Catholique de l'Industrie du (National Catholic Federation of the Wrought Wood Industry of Canada, Inc.) (CTCC)	3,684	3,577
Chaussure du Canada, Inc., Fédération Nationale du Cuir et de la (National Federation of Leather and Shoe Workers of Canada, Inc.) (CTCC)	3,600	3,700
Civic Employees, Federation of (CCL)	1,200	2,139
Civil Service Association of Alberta, The (TLC)	4,800	5,222
Civil Service Association, The Saskatchewan (TLC)	3,945	4,010
Commerce, Inc., Fédération Nationale Catholique des Employés du (National Catholic Federation of Commerce Employees, Inc.) (CTCC)	3,000	3,260
Cultivateurs (Service Forestier), L'Union Catholique des (Catholic Union of Farmers, Forestry Service) (Ind.)	3,500	2,865
Electrical Workers, National Organization of Civic, Utility and (CCL)	[1]	[1]
Engineers of Canada, National Union of Operating (CCL)	2,500	1,800
Express Employees, Brotherhood of (CCL)	3,645	3,835
Fishermen and Allied Workers' Union, United (TLC)	8,373	8,444
Fishermen, Newfoundland Federation of (Ind.)	11,000	9,985
Fishermen's Protective Union (Ind.)	2,000	2,000
Fruit and Vegetable Workers' Unions, Federation of (TLC)	2,800	2,000
Government Employees' Association, British Columbia (TLC)	8,500	8,801
Government Employees' Association, Newfoundland (TLC)	1,100	1,378
Imprimerie du Canada Enrg., Fédération des Métiers de l' (Federation of Printing Trades of Canada, Reg.) (CTCC)	3,000	3,500
Labourers' Union, Newfoundland (Ind.)	4,000	4,700
Letter Carriers, Federated Association of (TLC)	2,650	2,560
Longshoremen's Protective Union (St. John's) (Ind.)	2,000	2,560
Lumbermen's Association, Newfoundland (Ind.)	8,000	6,000
Marine Engineers of Canada, Inc., National Association of (TLC)	1,238	1,200
Marine Workers' Federation, Maritime (CCL)	2,000	3,000
Merchant Service Guild, Inc., Canadian (TLC)	1,531	1,820
Métallurgie, Fédération Nationale de la (National Metal Trades' Federation) (CTCC)	11,130	15,801
Meuble, Inc., Fédération Nationale du (National Furniture Federation, Inc.) (CTCC)	1,300	800
Minière Inc., Fédération Nationale des Employés de l'Industrie (National Federation of Mining Industry Employees, Inc.) (CTCC)	4,125	4,607
Municipaux du Canada, Inc., Fédération Nationale des Employés (National Federation of Municipal Employees of Canada, Inc.) (CTCC)	4,845	5,212
National Council of Canadian Labour (Ind.)	3,004	5,446
One Big Union (Ind.)	12,658	12,320
Postal Employees Association, Canadian (TLC)	7,200	6,950
Public Service Employees, National Union of (CCL)[1]	2,998	3,000
Pulpe et du Papier, Inc., Fédération Nationale des Travailleurs de la (National Federation of Pulp and Paper Workers, Inc.) (CTCC)	9,000	12,000
Railway Employees and Other Transport Workers, Canadian Brotherhood of (CCL)	33,510	35,083
Services, Inc., Fédération Nationale Catholique des (National Catholic Federation of Services, Inc.) (CTCC)	4,650	4,800
Shipyard General Workers' Federation of British Columbia (CCL)	1,722	2,500
Teachers' Federation, British Columbia (TLC)	6,380	6,910
Telephone Employees' Association, Canadian (Ind.)	10,382	10,871
Telephone Workers of British Columbia, Federation of (Ind.)	3,668	3,868
Textile, Inc., Fédération Nationale Catholique du (National Catholic Textile Federation, Inc.) (CTCC)	10,000	11,000
Traffic Employees' Association (Ind.)	9,532	9,923
Unemployment Insurance Commission Association, National (TLC)	—	4,500
Vêtement, Inc., Fédération Nationale des Travailleurs de l'Industrie du (National Federation of Clothing Industry Workers, Inc.) (CTCC)	2,890	4,300

[1] Name of National Organization of Civic Utility and Electrical Workers (CCL) changed to National Union of Public Service Employees (CCL) in 1952.

Section 10.—Strikes and Lockouts*

Since the end of World War II, increased wages and related demands have constituted the central issue in the majority of stoppages. Although the cost-of-living index, which had reached an all-time high at Jan. 1, 1952, commenced levelling off and was lower by the end of the year, the time lost in disputes over wage increases was greater than in 1951. In 1952, this issue was responsible for 64 p.c. of the stoppages, involved 86 p.c. of the workers and caused 94 p.c. of the total idleness, compared with an average for the six-year period, 1946-51, of 57 p.c. of the stoppages, 69 p.c. of the workers and 86 p.c. of the total loss. In 1952, causes affecting working conditions accounted for under 12 p.c. of the total stoppages; union questions, other than for increased wages, caused under 13 p.c. of the total; and discharge of workers, suspensions, refusal to reinstate and employment of particular persons, other than in connection with union questions, were responsible for about 11 p.c. of the total stoppages. Sympathy strikes have been few in number since 1948 and, in 1952, there was only one small stoppage for that reason. Pension plans were among the issues in five stoppages in 1952.

Settlement of 76 of the 222 stoppages in 1952 was brought about by direct negotiations; provincial conciliation affected settlement in 57 cases; civic mediation in two cases; 14 were referred to labour boards, commissioners and umpires; eight were settled by arbitration; 36 by return of workers and replacement, the latter being a factor in eight cases; and 22 were indefinite in result.

* A complete review of strikes and lockouts during 1951 will be found in a supplement to the *Labour Gazette* for April 1952, and for the year 1952 in a special Department of Labour report.

51.—Summary Statistics of Strikes and Lockouts, 1943-52

Year	Strikes Beginning During the Year	Strikes and Lockouts in Existence in all Industries during the Year						
					Time Loss			
		Strikes and Lockouts	Employers	Workers Involved	In Man-Working Days	Average Days per Wage- and Salary-Earner[1]	Average Days per Worker Involved	Estimate of Working Time[1]
	No.	No.	No.	No.	No.	No.	No.	p.c.
1943	401	402	651	218,404	1,041,198	0·35	4·77	0·12
1944	195	199	400	75,290	490,139	0·16	6·51	0·06
1945	196	197	418	96,068	1,457,420	0·49	15·17	0·17
1946	225	228	1,299	139,474	4,516,393	1·49	32·38	0·50
1947	232	236	1,173	104,120	2,397,340	0·77	23·02	0·26
1948	147	154	674	42,820	885,793	0·27	20·68	0·09
1949	132	137	542	51,437	1,063,667	0·32	20·68	0·11
1950	158	161	345	192,153	1,389,039	0·40	7·23	0·13
1951	257	259	646	102,870	901,739	0·24	8·77	0·08
1952	216	222	518	120,818	2,879,955	0·76	23·84	0·29

[1] Based on the number of non-agricultural wage- and salary-earners in Canada.

53.—Strikes and Lockouts, by Industry, 1951 and 1952

Industry	1951					1952				
	No. of Strikes and Lock-outs	Workers Involved		Time Loss		No. of Strikes and Lock-outs	Workers Involved		Time Loss	
		No.	Per-centage	Man-Working Days	Per-centage		No.	Per-centage	Man-Working Days	Per-centage
Agriculture	[1]	...	...	...	...	[1]	...	...	...	...
Logging	**2**	**425**	**0·4**	**1,175**	**0·1**	**2**	**12,042**	**10·0**	**365,080**	**12·7**
Fishing and Trapping	[1]	...	...	...	...	**3**	**8,545**	**7·1**	**114,450**	**4·0**
Mining[2]	**23**	**19,189**	**18·7**	**146,969**	**16·3**	**26**	**9,539**	**7·9**	**91,825**	**3·2**
Coal	16	14,325	14·0	40,129	4·5	15	3,865	3·2	8,735	0·3
Other	7	4,864	4·7	106,840	11·8	11	5,674	4·7	83,090	2·9
Manufacturing	**162**	**73,171**	**71·1**	**670,124**	**74·3**	**112**	**65,315**	**54·1**	**1,814,584**	**63·0**
Vegetable foods, etc.	6	905	0·9	6,562	0·7	9	2,340	1·9	37,102	1·3
Tobacco and liquors	4	5,193	5·0	117,900	13·1	1	208	0·2	400	0·0
Rubber and its products (including synthetic)	10	9,264	9·0	43,344	4·8	8	4,423	3·7	114,561	4·0
Animal foods	2	296	0·3	1,030	0·1	2	313	0·3	215	0·0
Boots and shoes (leather)	3	200	0·2	1,873	0·2	3	508	0·4	6,460	0·2
Fur, leather and other animal products	4	333	0·3	6,745	0·7	4	335	0·3	2,747	0·1
Textiles, clothing, etc.	23	2,473	2·5	17,375	1·9	18	10,027	8·3	552,694	19·2
Pulp, paper and paper products	4	462	0·4	21,380	2·4	1	48	0·0	95	0·0
Printing and publishing	2	66	0·1	1,585	0·2	3	1,411	1·2	33,500	1·2
Miscellaneous wood products	25	2,417	2·3	28,214	3·1	13	23,790	19·7	711,500	24·7
Metal products	62	49,717	48·3	401,902	44·6	35	16,027	13·3	167,897	5·8
Ferrous	50	46,283	45·0	350,817	38·9	25	14,806	12·3	149,403	5·2
Non-ferrous	12	3,434	3·3	51,085	5·7	10	1,221	1·0	18,494	0·6
Shipbuilding	4	1,098	1·1	14,486	1·6	7	4,831	4·0	138,525	4·8
Non-metallic minerals, chemicals, etc.	8	652	0·6	6,205	0·7	5	638	0·5	18,178	0·6
Miscellaneous products	5	95	0·1	1,523	0·2	3	416	0·3	30,710	1·1
Construction	**32**	**5,867**	**5·7**	**68,412**	**7·6**	**39**	**16,681**	**13·8**	**346,386**	**12·0**
Buildings and structures	25	5,585	5·4	67,784	7·5	36	16,488	13·6	344,226	11·9
Railway	[1]	...	...	...	...	[1]	...	...	...	...
Bridge[3]	[1]	...	...	...	...	[1]	...	...	...	...
Highway	[1]	...	...	...	...	[1]	...	...	...	...
Canal, harbour, waterway	[1]	...	...	...	...	[1]	...	...	...	...
Miscellaneous	7	282	0·3	628	0·1	3	193	0·2	2,160	0·1
Transportation and Public Utilities	**13**	**664**	**0·6**	**1,800**	**0·2**	**18**	**5,610**	**4·6**	**71,278**	**2·5**
Steam railways	1	28	--	56	--	2	84	0·0	290	0·0
Electric railways and local bus lines	2	95	0·1	425	--	1	4,668	3·9	60,000	2·1
Other local and highway transport	7	397	0·4	454	0·1	10	379	0·3	7,098	0·3
Water transport	1	77	0·1	115	--	3	351	0·3	800	0·0
Air transport	1	58	--	550	0·1	[1]	...	...	...	...
Telegraph and telephone	[1]	...	...	...	...	[1]	...	...	...	...
Electricity and gas	1	9	--	200	--	2	128	0·1	3,090	0·1
Miscellaneous	[1]	...	...	...	...	[1]	...	...	...	...
Trade	**15**	**2,957**	**2·9**	**7,947**	**0·9**	**12**	**1,589**	**1·3**	**66,387**	**2·3**
Finance	[1]	...	...	...	...	[1]	...	...	...	...
Service	**12**	**597**	**0·6**	**5,312**	**0·6**	**10**	**1,497**	**1·2**	**9,965**	**0·3**
Public administration[4]	4	175	0·2	164	--	2	365	0·3	1,375	0·0
Recreation	[1]	...	...	...	...	1	43	0·0	900	0·0
Business and personal	8	422	0·4	5,148	0·6	7	1,089	0·9	7,690	0·3
Totals	**259**	**102,870**	**100·0**	**901,739**	**100·0**	**222**	**120,818**	**100·0**	**2,879,955**	**100·0**

[1] None reported. [2] Includes non-ferrous metal smelting. [3] Includes erection of all large bridges. [4] Includes water service.

Section 11.—Canada and the International Labour Organization

The Department of Labour is the officially designated liaison agency between the Canadian Government and the International Labour Organization. The ILO was established in 1919, in association with the League of Nations under the Treaties of Peace, with the object of improving labour and social conditions throughout the world by international agreement and legislative action. Under an agreement approved by the General Conference of the International Labour Organization at its 29th Session held at Montreal, Que., Oct. 2, 1946, and by the United Nations General Assembly on Dec. 14, 1946, the Organization became a specialized agency of the United Nations although retaining its autonomy.

The Organization is an association of 66 nations, financed by their governments and controlled by representatives of those governments and of their organized employers and workers and comprises: (1) the General Conference of representatives of the Member States; (2) the International Labour Office; and (3) the Governing Body. Its structure and field of activity has been extended considerably since 1945 by the establishment of eight tripartite committees to deal with problems of major world industries, by triennial Regional Conferences and other Special Conferences, and by the technical assistance program to aid the development of backward countries.

The Conference meets at least once a year and is composed of four delegates from each Member State—two representing the government, one representing the employers and one representing the workers. These are accompanied by technical advisers for the various items on the agenda. The principal function of the Annual Conferences is the formulation of international standards concerning working and living conditions, in the form of Conventions and Recommendations. A Convention is adopted by a two-thirds majority of delegates at the Conference and must be considered by the competent authorities in each Member State with a view to possible ratification; however, each Member State decides for itself whether or not to ratify any Convention, and only by ratification does it assume the obligation to bring its legislation in that field up to the standard set by the Convention. In Canada, the provincial legislatures are the competent authorities with jurisdiction over the subject matter of most of the ILO Conventions and Recommendations. A Recommendation is adopted by a two-thirds majority vote of Conference delegates; it contains general principles for the guidance of national governments in drafting legislation or in issuing administrative orders and is not subject to ratification by Member States.

The International Labour Office acts as the permanent secretariat of the Organization and as an information centre and publishing house with respect to all questions on industry and labour. In the operational field, it assists Member States by furnishing experts on manpower and technical assistance. The ILO maintains a Canadian branch office at 95 Rideau Street, Ottawa.

The Governing Body of the ILO consists of 32 members—16 government representatives, eight employer representatives and eight worker representatives. Of the government seats, each of the eight States of chief industrial importance (of which Canada is one) holds a permanent place, while the other eight government representatives are elected triennially by the Conference; the worker and employer members also are elected every three years at the Conference by their groups.

In addition, there are eight government, eight worker and eight employer deputy-members elected for three-year terms. The Governing Body meets three times a year and has general supervision of the work of the Office and the various committees and commissions of the Organization, in addition to framing the budget and drafting the agenda of the annual conferences. Canada's representative on the Governing Body is Dr. Arthur MacNamara, former Deputy Minister of Labour for Canada.

There have been 35 sessions of the International Labour Conference, at which 103 Conventions and 95 Recommendations have been adopted covering a wide range of subjects, such as industrial relations, freedom of association, hours of work, weekly rest, holidays with pay, minimum wages, night work of women and young persons, industrial health and safety, workmen's compensation, conditions of work for seamen and dockers, unemployment and health insurance, protection of migrant workers and many other aspects of industrial and social problems. Up to March 1953, the ratifications of the Conventions by Member States totalled about 1,350 and the Recommendations have served as valuable guides to national programs of industrial and social advancement.

During 1952, in addition to the 35th Annual Conference, the following ILO meetings were held: three sessions of the Governing Body; sessions of the Metal Trades Industrial Committee, the Iron and Steel Industrial Committee, the Chemical Industrial Committee, and the Petroleum Industrial Committee; the Fifth Regional Conference of American States Members; the Inter-American Social Security Conference; the Latin-American Manpower Technical Conference; meetings of the Advisory Committee on Salaried Employees and Professional Workers, the Committee of Experts on Application of Conventions and Recommendations, the Joint Maritime Commission, the Joint ILO/WHO Committee on Occupational Health, the Asian Advisory Committee, the Committee of Experts on Productivity, and the Committee of Experts on Prevention and Suppression of Dust in Mining, Tunnelling and Quarrying.

The following ILO meetings were scheduled for 1953: the 36th Annual Conference; three sessions of the Governing Body; sessions of the Textiles Industrial Committee, the Building, Civil Engineering and Public Works Industrial Committee, and the Coal Mines Industrial Committee; an Asian Regional Conference; a Preliminary Conference of Statistical Experts; and meetings of the Committee on Plantations, the UN/ILO Committee on Forced Labour, the Permanent Agricultural Committee, the Committee of Experts on Systems of Payment by Results in the Construction Industry, the Joint ILO/WHO Committee on the Hygiene of Seafarers, and the Committee of Experts on the Application of Conventions and Recommendations.

Canada is represented at most of these ILO meetings and accounts of the discussions and decisions are published in the *Labour Gazette* from time to time.

Canada has ratified 18 of the ILO Conventions, 12 of which concern maritime and dock labour. The Department of Labour, as the official liaison agency with the International Labour Organization, is responsible for forwarding to the Office annual reports on ratified Conventions as well as periodical reports on many other industrial and social matters. The Department also keeps provincial governments and employer and worker organizations informed of ILO activities. In these and other ways, Canada continues to fulfil its obligations as one of the leading industrial Member States of the International Labour Organization.

CHAPTER XVIII.—CAPITAL EXPENDITURES AND CONSTRUCTION

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

This Chapter provides data on the capital expenditures made by all sectors of the Canadian economy on construction and on machinery and equipment along with summaries of other available statistics on the construction industry. Section 1 describes the purpose of capital expenditures and shows the amounts spent by each of the various industrial or economic sectors.* Section 2 brings together a number of summaries of related series on construction activity: value of work performed by type of structure, value of materials used, salaries and wages paid and numbers employed; contracts awarded and building permits issued; Government aid to house-building; and construction of dwelling units.

Section 1.—Capital Expenditures on Construction and on Machinery and Equipment

Capital expenditures are those outlays made to augment and to replace the nation's stock of physical capital. This stock of capital is represented by such things as factory buildings, mines, stores, theatres, railways, telephone lines, power installations and the machinery and equipment used therewith to enable the workers to produce with greater efficiency an increasing volume of goods and services. Included also in the stock of capital are government-owned assets of a physical nature, such as roads, canals and office buildings, and all houses whether rented or owner-occupied. Excluded from capital expenditures are outlays for the accumulation of inventories and for the acquisition of land.

Capital assets are designed to last and assist in providing goods and services over a period of years; some types of assets, such as motors, may have a useful life of a very few years while others, such as buildings or power installations, may continue in profitable use for fifty years or more. The creation of these capital goods involves the diversion of resources from producing such items as food and clothing that give immediate satisfaction to the production of capital goods, which

* *See* also the Introduction to this Volume under "The Canadian Economy in 1953". Information is given in greater detail in the Department of Trade and Commerce Annual Report, *Private and Public Investment in Canada.*

will produce only items for the satisfaction of consumers over a period of future years. Thus, the extent of investment spending in the nation reflects the extent to which the nation is providing for the future, or is becoming industrialized; it also reflects the opinion of businessmen as to future prospects and of governments as to future demands for their services. It will be noted from Table 1 that since 1926 there have been two periods when capital spending accounted for a substantial portion of gross national product.

1.—Capital Expenditures in Canada, 1926-53

Year	Capital Expenditures	P.C. of Gross National Product	Year	Capital Expenditures	P.C. of Gross National Product
	$'000,000			$'000,000	
1926	917	17·3	1940	1,048	15·3
1927	1,087	19·2	1941	1,463	17·2
1928	1,296	21·2	1942	1,542	14·6
1929	1,518	24·6	1943	1,485	13·3
1930	1,287	23·2	1944	1,309	11·0
1931	881	19·3	1945	1,284	10·8
1932	491	13·0	1946	1,703	14·2
1933	327	9·2	1947	2,489	18·1
1934	416	10·3	1948	3,175	20·3
1935	505	11·6	1949	3,502	21·3
1936	590	12·6	1950	3,815	21·2
1937	828	15·5	1951	4,577	21·3
1938	773	14·8	1952	5,122	22·3
1939	765	13·4	1953	5,564	23·4

In the period from 1926 to 1930, investment accounted, on the average, for 21 p.c. of gross national product; in the period from 1947 to 1953, the average was also 21 p.c. However, in the latter period a high level of investment spending was maintained over a longer period with investment exceeding 20 p.c. of gross national product in six of the seven years while in the earlier period 20 p.c. was only exceeded in three of the five years considered. In the latter period, too, investment was at a much higher level than during 1926-30. Expenditures in 1953 were, in dollar terms, over three and one-half times those of 1929. Even if allowance is made for doubling of prices between the two years, the volume of investment was still about two-thirds greater. In addition to its significance to the long-run industrialization of the country, investment spending is very important in the year in which it is made in giving employment and income to those providing capital facilities.

Tables 2 to 6 give statistics of capital, repair and maintenance expenditures for the years 1951-53.

2.—Summary of Capital Expenditures and Repair and Maintenance Expenditures, By Sector, 1951-53

NOTE.—Actual expenditures 1951, preliminary actual 1952, intentions 1953.

(Millions of Dollars)

Type of Enterprise	Capital			Repair and Maintenance			Capital, Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Agriculture and Fishing—									
1951	69	446	515	51	103	154	120	549	669
1952	78	488	566	58	109	167	136	597	733
1953	78	447	525	58	114	172	136	561	697
Forestry—									
1951	22	36	58	14	25	39	36	61	97
1952	18	17	35	18	22	40	36	39	75
1953	19	18	37	16	22	38	35	40	75
Mining, Quarrying and Oil Wells—									
1951	108	73	181	11	41	52	119	114	233
1952	145	66	211	13	45	58	158	111	269
1953	183	93	276	14	47	61	197	140	337
Manufacturing—									
1951	268	525	793	85	337	422	353	862	1,215
1952	343	599	942	95	364	459	438	963	1,401
1953	320	636	956	95	364	459	415	1,000	1,415
Utilities—									
1951	497	403	900	243	302	545	740	705	1,445
1952	668	429	1,097	254	337	591	922	766	1,688
1953	658	500	1,158	283	356	639	941	856	1,797
Construction Industry—									
1951	7	59	66	2	39	41	9	98	107
1952	6	65	71	3	50	53	9	115	124
1953	8	42	50	3	48	51	11	90	101
Housing—									
1951	821	—	821	221	—	221	1,042	—	1,042
1952	850	—	850	231	—	231	1,081	—	1,081
1953	992	—	992	244	—	244	1,236	—	1,236
Trade, Wholesale and Retail—									
1951	110	125	235	44	39	83	154	164	318
1952	86	99	185	34	31	65	120	130	250
1953	178	138	316	37	35	72	215	173	388
Finance, Insurance and Real Estate—									
1951	52	17	69	7	2	9	59	19	78
1952	30	13	43	7	2	9	37	15	52
1953	61	16	77	8	2	10	69	18	87
Commercial Services—									
1951	40	68	108	21	45	66	61	113	174
1952	19	70	89	25	61	86	44	131	175
1953	24	65	89	25	78	103	49	143	192
Institutional Services—									
1951	206	30	236	32	7	39	238	37	275
1952	226	29	255	30	7	37	256	36	292
1953	272	36	308	30	8	38	302	44	346
Government Departments—									
1951	535	60	595	195	28	223	730	88	818
1952	688	90	778	163	32	195	851	122	973
1953	686	94	780	166	74	240	852	168	1,020
Totals—									
1951	**2,735**	**1,842**	**4,577**	**926**	**968**	**1,894**	**3,661**	**2,810**	**6,471**
1952	**3,157**	**1,965**	**5,122**	**931**	**1,060**	**1,991**	**4,088**	**3,025**	**7,113**
1953	**3,479**	**2,085**	**5,564**	**979**	**1,148**	**2,127**	**4,458**	**3,233**	**7,691**

3.—Capital Expenditures and Repair and Maintenance Expenditures by Manufacturing Industries, 1951-53

NOTE.—Actual expenditures 1951, preliminary actual 1952, intentions 1953.

(Millions of Dollars)

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital and Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Food and beverages—									
1951	28·0	51·1	79·1	11·8	34·3	46·1	39·8	85·4	125·2
1952	21·6	51·1	72·7	12·2	33·4	45·6	33·8	84·5	118·3
1953	27·3	53·5	80·8	10·5	31·7	42·2	37·8	85·2	123·0
Tobacco and tobacco products—									
1951	0·5	1·7	2·2	0·4	1·3	1·7	0·9	3·0	3·9
1952	0·3	1·6	1·9	0·5	1·5	2·0	0·8	3·1	3·9
1953	0·5	1·7	2·2	0·6	1·5	2·1	1·1	3·2	4·3
Rubber products—									
1951	2·0	5·9	7·9	0·9	5·5	6·4	2·9	11·4	14·3
1952	2·4	6·8	9·2	0·8	5·4	6·2	3·2	12·2	15·4
1953	4·9	11·4	16·3	1·0	6·1	7·1	5·9	17·5	23·4
Leather products—									
1951	0·9	1·9	2·8	0·6	2·1	2·7	1·5	4·0	5·5
1952	0·6	1·5	2·1	0·6	2·0	2·6	1·2	3·5	4·7
1953	0·6	1·3	1·9	0·7	1·9	2·6	1·3	3·2	4·5
Textile products—									
1951	9·9	29·2	39·1	4·0	16·7	20·7	13·9	45·9	59·8
1952	13·0	27·1	40·1	4·5	14·4	18·9	17·5	41·5	59·0
1953	13·7	27·4	41·1	4·0	16·2	20·2	17·7	43·6	61·3
Clothing—									
1951	4·1	9·1	13·2	1·4	4·7	6·1	5·5	13·8	19·3
1952	1·5	10·8	12·3	1·4	4·5	5·9	2·9	15·3	18·2
1953	1·9	8·1	10·0	1·8	4·3	6·1	3·7	12·4	16·1
Wood products—									
1951	11·2	27·4	38·6	7·7	24·5	32·2	18·9	51·9	70·8
1952	8·0	20·7	28·7	6·4	23·7	30·1	14·4	44·4	58·8
1953	6·7	17·7	24·4	6·4	22·7	29·1	13·1	40·4	53·5
Paper products—									
1951	41·9	83·4	125·3	9·7	69·1	78·8	51·6	152·5	204·1
1952	34·9	96·5	131·4	9·4	73·0	82·4	44·3	169·5	213·8
1953	30·0	85·3	115·3	9·8	67·9	77·7	39·8	153·2	193·0
Printing, publishing and allied industries—									
1951	6·3	18·0	24·3	1·7	4·6	6·3	8·0	22·6	30·6
1952	2·7	11·6	14·3	1·6	4·2	5·8	4·3	15·8	20·1
1953	8·8	14·5	23·3	2·3	4·3	6·6	11·1	18·8	29·9
Iron and steel products—									
1951	47·1	50·1	97·2	13·0	58·9	71·9	60·1	109·0	169·1
1952	66·1	75·0	141·1	19·0	64·7	83·7	85·1	139·7	224·8
1953	48·5	80·1	128·6	18·8	65·6	84·4	67·3	145·7	213·0
Transportation equipment—									
1951	21·8	27·1	48·9	6·9	21·5	28·4	28·7	48·6	77·3
1952	37·2	23·9	61·1	9·6	27·7	37·3	46·8	51·6	98·4
1953	31·4	51·9	83·3	10·9	29·2	40·1	42·3	81·1	123·4
Non-ferrous metal products—									
1951	22·4	26·0	48·4	6·9	30·3	37·2	29·3	56·3	85·6
1952	25·0	35·7	60·7	7·0	37·5	44·5	32·0	73·2	105·2
1953	33·8	52·0	85·8	7·6	37·7	45·3	41·4	89·7	131·1

3.—Capital Expenditures and Repair and Maintenance Expenditures by Manufacturing Industries, 1951-53—concluded

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital and Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Electrical apparatus and supplies—									
1951	16·3	15·6	31·9	2·2	11·4	13·6	18·5	27·0	45·5
1952	21·4	19·5	40·9	3·1	12·4	15·5	24·5	31·9	56·4
1953	16·4	22·6	39·0	2·8	12·1	14·9	19·2	34·7	53·9
Non-metallic mineral products—									
1951	11·5	18·9	30·4	4·7	15·6	20·3	16·2	34·5	50·7
1952	9·3	25·6	34·9	1·9	19·3	21·2	11·2	44·9	56·1
1953	7·0	16·9	23·9	1·7	20·1	21·8	8·7	37·0	45·7
Products of petroleum and coal—[1]									
1951	21·7	37·3	59·0	8·3	8·8	17·1	30·0	46·1	76·1
1952	40·2	36·2	76·4	11·2	10·4	21·6	51·4	46·6	98·0
1953	61·7	19·4	81·1	10·9	11·3	22·2	72·6	30·7	103·3
Chemical products—									
1951	19·2	38·5	57·7	4·0	24·8	28·8	23·2	63·3	86·5
1952	56·3	65·5	121·8	4·7	27·1	31·8	61·0	92·6	153·6
1953	23·3	75·9	99·2	4·2	28·4	32·6	27·5	104·3	131·8
Miscellaneous—									
1951	3·0	4·4	7·4	0·8	3·0	3·8	3·8	7·4	11·2
1952	2·7	3·9	6·6	1·0	2·7	3·7	3·7	6·6	10·3
1953	3·4	5·3	8·7	1·2	2·8	4·0	4·6	8·1	12·7
Capital items charged to operating expenses—									
1951	—	79·6	79·6	—	—	—	—	79·6	79·6
1952	—	86·2	86·2	—	—	—	—	86·2	86·2
1953	—	91·2	91·2	—	—	—	—	91·2	91·2
Totals—[2]									
1951	**267·8**	**525·2**	**793·0**	**85·0**	**337·1**	**422·1**	**352·8**	**862·3**	**1,215·1**
1952	**343·2**	**599·2**	**942·4**	**94·9**	**363·9**	**458·8**	**438·1**	**963·1**	**1,401·2**
1953	**319·9**	**636·2**	**956·1**	**95·2**	**363·8**	**459·0**	**415·1**	**1,000·0**	**1,415·1**

[1] Includes natural gas absorption plants. [2] Excludes capital expenditures made out of Government capital assistance funds.

4.—Capital Expenditures and Repair and Maintenance Expenditures by Utility Industries, 1951-53

Note.—Actual expenditures 1951, preliminary actual 1952, intentions 1953.

(Millions of Dollars)

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital and Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Central electric stations and gas works—									
1951	314·8	109·5	424·3	28·2	11·9	40·1	343·0	121·4	464·4
1952	376·9	112·3	489·2	27·7	15·3	43·0	404·6	127·6	532·2
1953	342·2	137·7	479·9	29·4	16·1	45·5	371·6	153·8	525·4

4.—Capital Expenditures and Repair and Maintenance Expenditures by Utility Industries, 1951-53—concluded

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital and Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Steam railways and telegraphs—									
1951	58·7	141·9	200·6	180·1	171·6	351·7	238·8	313·5	552·3
1952	80·4	139·1	219·5	188·5	190·9	379·4	268·9	330·0	598·9
1953	92·1	178·5	270·6	213·3	206·0	419·3	305·4	384·5	689·9
Electric railways—									
1951	16·1	7·4	23·5	5·7	13·7	19·4	21·8	21·1	42·9
1952	17·2	6·3	23·5	5·8	15·1	20·9	23·0	21·4	44·4
1953	17·4	18·5	35·9	5·9	15·2	21·1	23·3	33·7	57·0
Water transport—									
1951	1·8	22·8	24·6	2·2	18·7	20·9	4·0	41·5	45·5
1952	3·3	36·3	39·6	1·4	19·3	20·7	4·7	55·6	60·3
1953	7·6	24·8	32·4	1·8	17·9	19·7	9·4	42·7	52·1
Motor carriers—									
1951	3·8	23·3	27·1	1·3	30·8	32·1	5·1	54·1	59·2
1952	2·4	18·8	21·2	1·3	31·9	33·2	3·7	50·7	54·4
1953	2·6	14·4	17·0	1·2	31·3	32·5	3·8	45·7	49·5
Grain elevators—									
1951	8·0	3·5	11·5	3·0	2·1	5·1	11·0	5·6	16·6
1952	9·5	2·6	12·1	4·1	2·1	6·2	13·6	4·7	18·3
1953	9·1	2·4	11·5	4·2	2·0	6·2	13·3	4·4	17·7
Telephones—									
1951	53·2	72·2	125·4	13·7	36·3	50·0	66·9	108·5	175·4
1952	58·6	85·8	144·4	15·4	40·1	55·5	74·0	125·9	199·9
1953	69·3	84·7	154·0	15·3	44·2	59·5	84·6	128·9	213·5
Broadcasting—									
1951	1·2	1·6	2·8	0·2	0·6	0·8	1·4	2·2	3·6
1952	2·0	1·7	3·7	0·3	0·5	0·8	2·3	2·2	4·5
1953	2·5	5·4	7·9	0·2	0·5	0·7	2·7	5·9	8·6
Municipal waterworks—									
1951	28·6	6·8	35·4	6·9	2·0	8·9	35·5	8·8	44·3
1952	42·2	4·5	46·7	7·3	2·9	10·2	49·5	7·4	56·9
1953	40·3	8·5	48·8	8·3	2·8	11·1	48·6	11·3	59·9
Other utilities—[1]									
1951	10·4	5·8	16·2	1·8	14·1	15·9	12·2	19·9	32·1
1952	75·3	13·0	88·3	2·8	18·5	21·3	78·1	31·5	109·6
1953	74·6	15·7	90·3	3·5	20·2	23·7	78·1	35·9	114·0
Capital items charged to operating expenses—									
1951	—	8·1	8·1	—	—	—	—	8·1	8·1
1952	—	8·8	8·8	—	—	—	—	8·8	8·8
1953	—	9·8	9·8	—	—	—	—	9·8	9·8
Totals—									
1951	**496·6**	**402·9**	**899·5**	**243·1**	**301·8**	**544·9**	**739·7**	**704·7**	**1,444·4**
1952	**667·8**	**429·2**	**1,097·0**	**254·6**	**336·6**	**591·2**	**922·4**	**765·8**	**1,688·2**
1953	**657·7**	**500·4**	**1,158·1**	**283·1**	**356·2**	**639·3**	**940·8**	**856·6**	**1,797·4**

[1] Includes air transport, warehousing and oil and gas pipelines.

5.—Capital Expenditures and Repair and Maintenance Expenditures by Trade and Finance Industries, 1951-53

NOTE.—Actual expenditures 1951, preliminary actual 1952, intentions 1953.

(Millions of Dollars)

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital and Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Trade—									
Wholesale (proper)—									
1951	15·5	19·2	34·7	5·0	6·5	11·5	20·5	25·7	46·2
1952	14·2	13·6	27·8	3·9	7·0	10·9	18·1	20·6	38·7
1953	19·0	11·9	30·9	4·6	6·4	11·0	23·6	18·3	41·9
Chain stores—									
1951	24·0	20·4	44·4	7·3	6·0	13·3	31·3	26·4	57·7
1952	16·2	15·7	31·9	4·2	3·6	7·8	20·4	19·3	39·7
1953	36·0	21·7	57·7	4·7	3·9	8·6	40·7	25·6	66·3
Independent stores—									
1951	52·5	50·3	102·8	21·6	16·6	38·2	74·1	66·9	141·0
1952	37·2	39·1	76·3	15·0	11·3	26·3	52·2	50·4	102·6
1953	78·6	60·9	139·5	16·4	13·4	29·8	95·0	74·3	169·3
Department stores—									
1951	5·1	5·9	11·0	4·3	2·8	7·1	9·4	8·7	18·1
1952	3·7	4·7	8·4	3·9	2·4	6·3	7·6	7·1	14·7
1953	19·5	9·7	29·2	4·2	2·6	6·8	23·7	12·3	36·0
Automotive trade—									
1951	12·3	13·7	26·0	6·0	7·0	13·0	18·3	20·7	39·0
1952	15·1	13·2	28·3	6·3	6·9	13·2	21·4	20·1	41·5
1953	24·6	17·3	41·9	7·3	8·5	15·8	31·9	25·8	57·7
Capital items charged to operating expenses—									
1951	—	15·6	15·6	—	—	—	—	15·6	15·6
1952	—	12·4	12·4	—	—	—	—	12·4	12·4
1953	—	16·5	16·5	—	—	—	—	16·5	16·5
Totals, Trade—									
1951	**109·4**	**125·1**	**234·5**	**44·2**	**38·9**	**83·1**	**153·6**	**164·0**	**317·6**
1952	**86·4**	**98·7**	**185·1**	**33·3**	**31·2**	**64·5**	**119·7**	**129·9**	**249·6**
1953	**177·7**	**138·0**	**315·7**	**37·2**	**34·8**	**72·0**	**214·9**	**172·8**	**387·7**
Finance—									
Banks—									
1951	18·0	6·5	24·5	2·7	0·7	3·4	20·7	7·2	27·9
1952	9·2	4·8	14·0	3·2	0·8	4·0	12·4	5·6	18·0
1953	12·2	4·5	16·7	2·9	0·7	3·6	15·1	5·2	20·3
Insurance, trust and loan companies—									
1951	7·1	1·5	8·6	1·0	0·5	1·5	8·1	2·0	10·1
1952	5·3	1·3	6·6	1·5	0·5	2·0	6·8	1·8	8·6
1953	9·2	1·3	10·5	1·7	0·6	2·3	10·9	1·9	12·8
Other financial—[1]									
1951	27·3	8·7	36·0	3·8	0·6	4·4	31·1	9·3	40·4
1952	15·8	6·6	22·4	2·4	0·4	2·8	18·2	7·0	25·2
1953	40·0	10·0	50·0	3·5	0·4	3·9	43·5	10·4	53·9
Totals, Finance—									
1951	**52·4**	**16·7**	**69·1**	**7·5**	**1·8**	**9·3**	**59·9**	**18·5**	**78·4**
1952	**30·3**	**12·7**	**43·0**	**7·1**	**1·7**	**8·8**	**37·4**	**14·4**	**51·8**
1953	**61·4**	**15·8**	**77·2**	**8·1**	**1·7**	**9·8**	**69·5**	**17·5**	**87·0**
Grand Totals—									
1951	**161·8**	**141·8**	**303·6**	**51·7**	**40·7**	**92·4**	**213·5**	**182·5**	**396·0**
1952	**116·7**	**111·4**	**228·1**	**40·4**	**32·9**	**73·3**	**157·1**	**144·3**	**301·4**
1953	**239·1**	**153·8**	**392·9**	**45·3**	**36·5**	**81·8**	**284·4**	**190·3**	**474·7**

[1] The largest part of this item is accounted for by expenditures of real estate companies and companies engaged in the sale of stocks and bonds. Most of the remainder is capital outlay by insurance agents and companies conducting personal and business credit operations.

6.—Capital Expenditures and Repair and Maintenance Expenditures by Service Industries, 1951-53

NOTE.—Actual expenditures 1951, preliminary actual 1952, intentions 1953.

(Millions of Dollars)

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital and Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Commercial Services—									
Laundries and dry cleaners—									
1951	0·6	3·6	4·2	0·8	2·9	3·7	1·4	6·5	7·9
1952	0·8	3·0	3·8	0·8	1·9	2·7	1·6	4·9	6·5
1953	0·8	2·5	3·3	0·8	1·7	2·5	1·6	4·2	5·8
Theatres—									
1951	3·0	2·0	5·0	0·9	0·6	1·5	3·9	2·6	6·5
1952	2·1	1·7	3·8	0·4	0·4	0·8	2·5	2·1	4·6
1953	2·0	2·1	4·1	0·4	0·5	0·9	2·4	2·6	5·0
Hotels—									
1951	17·0	7·1	24·1	16·2	11·1	27·3	33·2	18·2	51·4
1952	6·7	6·7	13·4	20·6	11·9	32·5	27·3	18·6	45·9
1953	9·4	7·0	16·4	20·1	11·3	31·4	29·5	18·3	47·8
Other commercial services—[1]									
1951	19·1	55·6	74·7	2·7	30·9	33·6	21·8	86·5	108·3
1952	9·7	58·4	68·1	3·2	46·4	49·6	12·9	104·8	117·7
1953	11·5	53·5	65·0	3·2	64·8	68·0	14·7	118·3	133·0
Totals, Commercial Services—									
1951	**39·7**	**68·3**	**108·0**	**20·6**	**45·5**	**66·1**	**60·3**	**113·8**	**174·1**
1952	**19·3**	**69·8**	**89·1**	**25·0**	**60·6**	**85·6**	**44·3**	**130·4**	**174·7**
1953	**23·7**	**65·1**	**88·8**	**24·5**	**78·3**	**102·8**	**48·2**	**143·4**	**191·6**
Institutional Services—									
Churches—									
1951	28·3	3·8	32·1	7·0	0·8	7·8	35·3	4·6	39·9
1952	25·2	1·8	27·0	5·2	0·8	6·0	30·4	2·6	33·0
1953	29·7	2·2	31·9	4·7	0·8	5·5	34·4	3·0	37·4
Universities—									
1951	11·5	2·5	14·0	2·3	0·4	2·7	13·8	2·9	16·7
1952	10·3	3·5	13·8	2·6	0·4	3·0	12·9	3·9	16·8
1953	16·1	3·5	19·6	2·2	0·4	2·6	18·3	3·9	22·2
Schools—									
1951	101·2	10·1	111·3	14·3	1·7	16·0	115·5	11·8	127·3
1952	122·9	12·7	135·6	13·7	2·0	15·7	136·6	14·7	151·3
1953	117·7	15·9	133·6	13·8	3·2	17·0	131·5	19·1	150·6
Hospitals—									
1951	65·5	13·5	79·0	8·9	3·7	12·6	74·4	17·2	91·6
1952	67·8	10·6	78·4	8·4	3·7	12·1	76·2	14·3	90·5
1953	107·9	14·8	122·7	9·4	3·9	13·3	117·3	18·7	136·0
Totals, Institutional Services—									
1951	**206·5**	**29·9**	**236·4**	**32·5**	**6·6**	**39·1**	**239·0**	**36·5**	**275·5**
1952	**226·2**	**28·6**	**254·8**	**29·9**	**6·9**	**36·8**	**256·1**	**35·5**	**291·6**
1953	**271·4**	**36·4**	**307·8**	**30·1**	**8·3**	**38·4**	**301·5**	**44·7**	**346·2**
Government Departments—									
1951	534·5	60·1	594·6	195·0	28·2	223·2	729·5	88·3	817·8
1952	688·1	89·6	777·7	163·0	32·2	195·2	851·1	121·8	972·9
1953	685·5	94·1	779·6	166·1	74·1	240·2	851·6	168·2	1,019·8
Grand Totals—									
1951	**780·7**	**158·3**	**939·0**	**248·1**	**80·3**	**328·4**	**1,028·8**	**238·6**	**1,267·4**
1952	**933·6**	**188·0**	**1,121·6**	**217·9**	**99·7**	**317·6**	**1,151·5**	**287·7**	**1,439·2**
1953	**980·6**	**195·6**	**1,176·2**	**220·7**	**160·7**	**381·4**	**1,201·3**	**356·3**	**1,557·6**

[1] Includes estimates for other commercial vehicles not covered, recreation and amusement centres other than theatres, professional services and independent restaurants.

Section 2.—Statistics of the Construction Industry

Subsection 1.—Construction in Canada

In collecting statistics for the capital expenditures surveys for 1951 a new method was used. Previous to that year, the capital expenditures surveys, which provide basic information on private and public investment in Canada, asked only for total expenditures on construction and machinery and equipment. For 1951, a classification of construction totals by type of structure was secured and this method proved so successful that the same procedure was followed in the 1953 capital expenditures forecast surveys which collect preliminary data for 1952 along with the 1953 forecast. Thus, early in 1953, estimates of construction by type of structure were available for 1951, 1952 and 1953. The other principal statistics of the construction industry—cost of materials used, numbers employed, and salaries and wages paid—are derived from ratios of these items to value of work performed. The ratios are established from sample surveys of contractors and owner-builders.*

The summary statistics given in the following tables are not comparable with those published in earlier Year Books, the basic difference being that the earlier figures were based largely on reports from construction contractors while the current data were reported by the various industries or sectors of the economy actually paying for the work done by contractors as well as construction work done by the labour force of the particular industries. In the latter instance, all expenditures which constituted part of the total capital cost of a structure, such as architect's fees, legal fees, etc., are included. Such items would not, as a rule, be included in figures reported by construction contractors. In addition, the coverage of the capital expenditure surveys is more comprehensive.

Tables 7 to 11 provide data on capital and repair and maintenance expenditures on construction and machinery and equipment in all sectors of the Canadian economy for 1951, 1952 and 1953. All data are classified according to the Standard Industrial Classification. The 1953 construction statistics given in these capital expenditures tables do not agree exactly with those given in Section 2 of this Chapter. The capital expenditures estimates of construction outlay are more up-to-date, having been based on revised forecast estimates released in July 1953, while the Construction series for 1953 are based on the original forecast estimates released in March 1953. However, the differences between the two estimates are of relatively minor importance.

The total value of the intended construction program in Canada for 1953, both new and repair, is estimated at $4,359,000,000. This estimate covers all sectors of the Canadian economy—business, institutions, governments and housing. Although the 1953 estimate is about 7 p.c. above 1952, it is the smallest increase since 1946 in terms of both value and volume. Thus, the program for 1953 would not be expected to have the same impact on the expanded capacity of the construction industry as have those for some of the other post-war years, particularly 1946,

* Detailed figures resulting from these surveys are published in DBS annual report, *Construction in Canada.*

1947 and 1948. Evidence of this appears in the keener competitive bidding of recent years and in the easier supply situation currently in existence with regard to both labour and materials.

Year	Total New and Repair Construction	P.C. Increase Over Previous Year in—		Year	Total New and Repair Construction	P.C. Increase Over Previous Year in—	
		Value	Volume			Value	Volume
	$'000,000				$'000,000		
1946.....	1,607	33·4	11·2	1950.....	3,132	9·7	4·2
1947.....	2,016	25·5	12·4	1951.....	3,661	16·9	5·5
1948.....	2,571	27·5	13·1	1952.....	4,088	11·7	6·2
1949.....	2,856	11·1	5·7	1953.....	4,359	6·6	3·9

Construction trends in recent years in constant as well as current dollars are also of interest. These are presented in Table 7 for new and repair and total construction, along with total construction as a percentage of gross national product. The constant dollar figures, which offer a rough measure of construction volume, indicate that the expected total volume of construction in 1953, both new and repair, is nearly 63 p.c. greater than in 1946. This compares with a current value increase of 170 p.c. over the same period, illustrating the importance of keeping in mind the influence of cost factors when making value comparisons. It is also apparent from the constant dollar estimates that practically all of the volume increase from 1946 to 1953 has occurred in new construction, with repair construction remaining at a relatively constant level. In consequence, repair work is now a much smaller proportion of the total than in earlier years, having decreased from about 34 p.c. in 1946 to 21 p.c. in 1953.

7.—Value of New Construction and Repair and Maintenance Construction in Current and Constant Dollars, 1946-53

NOTE.—"Constant Dollars" means that the amount is given in terms of 1935-39 prices.

(Millions of Dollars)

Year	New Construction		Repair and Maintenance Construction		Total Construction		Total Construction as P.C. of Gross National Product	
	Current	Constant	Current	Constant	Current	Constant	Current	Constant
1946.....	1,074	753	533	385	1,607	1,138	13·4	12·6
1947.....	1,424	897	592	382	2,016	1,279	14·6	14·0
1948.....	1,877	1,049	694	397	2,571	1,446	16·5	15·3
1949.....	2,124	1,129	732	400	2,856	1,529	17·3	15·7
1950.....	2,366	1,196	766	397	3,132	1,593	17·2	16·1
1951.....	2,734	1,248	927	432	3,661	1,680	17·1	16·2
1952.....	3,158	1,375	931	409	4,089	1,784	17·8	16·2
1953.....	3,433	1,458	926	396	4,359	1,854	..	

Estimates of the value of work performed by construction contractors and by others in various branches of industry, business and government who use their own labour force to perform construction work are given in Table 8. There is little indication of any change from year to year in the proportionate division of total construction work between these two categories. The construction industry proper accounted for about 68 p.c. of the total value of all work performed in each of the three years and the remaining 32 p.c. was undertaken by other business and government bodies. A further elaboration of these data and their relationship to numbers employed, salaries and wages paid, and value of materials used is given in Table 12, p. 768.

8.—Value of Construction Work Performed and Proportion of Work Done by Contractors and by Others, 1951-53

NOTE.—Actual expenditures 1951, preliminary actual 1952, intentions 1953.

Type of Construction	1951	1952	1953
	$'000	$'000	$'000
Contract Construction—			
New	2,006,649	2,271,293	2,509,384
Repair	483,678	489,097	486,895
Totals, Contract Construction	2,490,327	2,760,390	2,996,279
Other Construction—[1]			
New	727,194	887,011	923,631
Repair	443,631	441,339	439,396
Totals, Other Construction	1,170,825	1,328,350	1,363,027
Totals, Construction	**3,661,152**	**4,088,740**	**4,359,306**
New	**2,733,843**	**3,158,304**	**3,433,015**
Repair	**927,309**	**930,436**	**926,291**

[1] Includes work performed by private and public utilities, railway companies, own account home builders and other persons or firms who are not contractors or builders.

Of the total new and repair construction program of $4,359,000,000 estimated for 1953, building construction accounts for $2,658,000,000 or 61 p.c., and engineering work for $1,701,000,000 or 39 p.c. The estimate for each of these categories is above 1952 and 1951, but the proportion that each constitutes of the total program varies somewhat from year to year. Of the total, building construction accounted for 63·1 p.c. in 1951, 59·9 p.c. in 1952 and an estimated 61·0 p.c. in 1953, while engineering construction accounted for 36·9 p.c., 40·1 p.c. and 39·0 p.c. in 1951, 1952 and 1953, respectively.

9.—Value of Construction Work Performed, by Principal Type, 1951-53

NOTE.—Actual expenditures 1951, preliminary actual 1952, intentions 1953.

Type of Construction	1951		1952		1953	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
	$'000		$'000		$'000	
Building—						
Residential	1,042,000	28·4	1,081,000	26·4	1,225,000	28·1
Industrial	483,273	13·2	538,221	13·2	499,933	11·5
Commercial	400,153	10·9	360,310	8·8	441,697	10·1
Institutional	291,071	8·0	305,480	7·5	344,482	7·9
Others	94,166	2·6	164,938	4·0	146,740	3·4
Totals, Building	**2,310,663**	**63·1**	**2,449,949**	**59·9**	**2,657,852**	**61·0**
Engineering—						
Road, highway and bridge construction	424,425	11·6	422,151	10·3	448,737	10·3
Waterworks and sewage systems	86,473	2·4	107,144	2·6	99,403	2·3
Dams and irrigation	29,903	0·8	38,914	1·0	41,128	0·9
Electric power construction	347,966	9·5	405,425	9·9	379,772	8·7
Railway, telephone and telegraph construction	275,546	7·5	314,005	7·7	349,252	8·0
Gas and oil facilities	92,400	2·5	221,490	5·4	252,595	5·8
Marine construction	36,761	1·0	47,213	1·2	44,779	1·0
Other engineering construction	57,015	1·6	82,449	2·0	85,788	2·0
Totals, Engineering	**1,350,489**	**36·9**	**1,638,791**	**40·1**	**1,701,454**	**39·0**
Totals, Construction	**3,661,152**	**100·0**	**4,088,740**	**100·0**	**4,359,306**	**100·0**

Changes in the pattern of the construction program illustrating where shifts within the program are occurring from year to year are given in Table **10**. For example, of the $208,000,000 increase in building construction indicated for 1953, $144,000,000 is accounted for by housing, $55,000,000 by stores and $34,000,000 by hospitals. These increases are offset by a $71,000,000 decline in factories, plants and workshops.

10.—Dollar Change in Value of Construction Work Performed, by Type of Structure, 1951-53

Type of Construction	1952 Minus 1951	1953 Minus 1952	Type of Construction	1952 Minus 1951	1953 Minus 1952
	$'000,000	$'000,000		$'000,000	$'000,000
Building Construction—			**Engineering Construction—** continued		
Residential	39	144	Road, etc.—concluded		
Industrial	55	−38	Gravel or stone surfaced streets, highways, roads, parking lots, etc.	−4	7
Factories, plants, workshops	62	−71	Dirt, clay or other streets, roads, parking lots, etc.	−9	4
Warehouses, storehouses, refrigerated storage, etc.	−9	21	Grading, scraping, oiling and filling	1	2
Grain elevators	2	0	Sidewalks and paths	2	0
Mine, mill buildings	−2	7	Bridges, trestles, culverts, overpasses, etc.	0	6
Stations, works offices, roadway buildings	1	3	Tunnels, subways	3	−5
Railway shops, engine houses water and fuel stations	1	2	Highway, roadside maintenance guard rails	2	2
Commercial	−40	81	Waterworks and sewage systems	21	−8
Hotels, clubs, restaurants, cafeterias, tourist cabins	−10	1	Tiledrains, drainage, ditches, storm sewers	2	0
Office buildings	−23	19	Waterworks systems and connections	15	−7
Stores (wholesale and retail)	−35	55	Sewage systems and connections	4	−1
Garages, service stations	−2	8	Water storage tanks	0	0
Theatres, arenas, amusement and recreational buildings	−5	0	Dams and irrigation	9	2
Farm buildings (excluding dwellings)	15	−1	Dams and reservoirs	10	1
Radio, television broadcasting, relay and booster stations	19	−6	Irrigation, land reclamation projects	−1	1
Aircraft hangars	0	4	Electric power construction	57	−26
Laundries, dry cleaning establishments	0	1	Electric stations, power plants, distribution lines	57	−26
Institutional	14	39	Street lighting	1	0
Schools, other educational buildings	18	3	Railway, telephone and telegraph	38	35
Churches, other religious buildings	−5	4	Railway, tracklaying, surfacing	19	10
Hospitals, sanatoria, clinics, first-aid stations, etc.	−1	34	Roadway maintenance, track	7	10
Other institutional buildings	2	−2	Signals and interlockers	0	3
Other building	71	−18	Telephone and telegraph lines, underground and marine cables	11	12
Armouries, barracks, drillhalls, etc.	66	−15	Fences, snowsheds, signs	1	1
Bunk houses, dormitories, cookeries, etc.	4	−1	Road and highway surfacing and maintenance, railway	0	0
All other building construction	2	−2	Gas and oil facilities	129	31
Totals, Building Construction	139	208	Oil refineries	28	20
Engineering Construction—			Pumping stations (oil and gas)	1	2
Road, highway and bridge	−2	27	Pipelines (oil)	64	−34
Hard surfaced or paved streets, highways, parking lots, etc.	3	11	Storage tanks (oil and gas)	13	3
			Pipelines (gas)	11	28
			Wells (oil and gas)	11	13

10.—Dollar Change in Value of Construction Work Performed, by Type of Structure, 1951-53—concluded

Type of Construction	1952 Minus 1951	1953 Minus 1952	Type of Construction	1952 Minus 1951	1953 Minus 1952
	$'000,000	$'000,000		$'000,000	$'000,000
Engineering Construction—continued			**Engineering Construction**—concluded		
Marine	10	−2	Other—concluded		
Docks, wharves, piers, breakwaters	8	1	Installation of machinery, boilers, etc.	6	2
Retaining walls, embankments, riprapping	0	0	Park systems, landscaping, sodding, etc.	2	0
Canals and waterways	0	0	Mine shafts and underground workings	−1	1
Dredging and piledriving	1	−2	All other engineering construction	4	5
Dykes	0	0			
Other marine construction	2	−1			
Other engineering construction	25	3	**Totals, Engineering Construction**	288	63
Aerodromes, landing fields, runways, tarmac	14	−5			

Table 11 provides estimates of total expenditure in Canada on each of the type of structure classifications for which the data are available. It contains more detailed data from which Tables 9 and 10 were derived.

11.—Detailed Estimates of Value of Construction Work Performed, by Type of Structure, 1951-53

NOTE.—Actual expenditures 1951, preliminary actual 1952, intentions 1953.

Type of Structure	1951			1952			1953		
	New	Repair	Total	New	Repair	Total	New	Repair	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Building Construction—									
Dwellings, single, double, duplexes and apartments	821,000	221,000	1,042,000	850,000	231,000	1,081,000	981,000	244,000	1,225,000
Factories, plants and workshops	251,111	85,602	336,713	307,286	91,356	398,642	240,647	87,463	328,110
Warehouses, storehouses, refrigerated storage, etc.	63,652	17,865	81,517	57,854	14,700	72,554	79,589	13,756	93,345
Grain elevators	5,858	2,405	8,263	8,244	2,257	10,501	7,986	2,381	10,367
Mine, mill buildings	21,985	7,105	29,090	18,841	8,716	27,557	25,941	8,612	34,553
Stations, works offices and roadway buildings	4,925	12,226	17,151	5,187	12,739	17,926	7,007	13,651	20,658
Railway shops, engine houses, water and fuel stations	3,189	7,350	10,539	3,369	7,672	11,041	4,702	8,198	12,900
Hotels, clubs, restaurants, cafeterias, tourist cabins	24,869	15,706	40,575	11,603	19,408	31,011	14,490	17,061	31,551
Office buildings	87,797	17,449	105,246	66,067	16,521	82,588	85,741	15,745	101,486
Stores, wholesale and retail	60,072	25,465	85,537	31,589	19,108	50,697	87,455	18,524	105,979
Garages, service stations	16,469	5,207	21,676	15,813	4,202	20,015	24,296	4,100	28,396
Theatres, arenas, amusement and recreation buildings	12,063	2,472	14,535	7,528	2,195	9,723	7,656	1,880	9,536
Farm buildings (excluding dwellings)	61,217	44,856	106,073	69,987	51,114	121,101	69,336	50,835	120,171
Radio, television broadcasting, relay and booster stations	15,656	4,377	20,033	32,635	6,306	38,941	28,169	5,066	33,235
Aircraft hangars	3,608	994	4,602	4,128	411	4,539	8,394	359	8,753
Laundries, dry cleaning establishments	1,021	855	1,876	881	814	1,695	1,887	703	2,590
Schools, other educational buildings	105,694	16,573	122,267	124,589	15,288	139,877	126,947	16,374	143,321

11.—Detailed Estimates of Value of Construction Work Performed, by Type of Structure, 1951-53—continued

Type of Structure	1951			1952			1953		
	New	Repair	Total	New	Repair	Total	New	Repair	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Building Construction—concluded									
Churches, other religious buildings	28,304	7,001	35,305	25,158	5,218	30,376	29,748	4,675	34,423
Hospitals, sanatoria, clinics, first aid stations, etc.	69,536	10,920	80,456	68,900	10,842	79,742	102,737	10,883	113,620
Other institutional buildings	39,129	13,914	53,043	45,941	9,544	55,485	44,572	8,546	53,118
Armouries, barracks, drillhalls, etc.	45,325	14,291	59,616	104,719	20,422	125,141	94,048	16,046	110,094
Bunkhouses, dormitories, cookeries, etc.	22,242	7,116	29,358	26,976	5,915	32,891	26,484	5,349	31,833
All other building construction	3,995	1,197	5,192	5,904	1,002	6,906	3,832	981	4,813
Totals, Building Construction	**1,768,717**	**541,946**	**2,310,663**	**1,893,199**	**556,750**	**2,449,949**	**2,102,664**	**555,188**	**2,657,852**
Engineering Construction—									
Hard surfaced, paved streets, highways, parking lots, etc.	113,964	45,114	159,078	123,705	38,348	162,053	139,961	33,040	173,001
Gravel or stone surfaced streets, highways, roads, parking lots, etc.	58,441	25,304	83,745	59,143	20,762	79,905	67,548	19,116	86,664
Dirt, clay or other streets roads, parking lots, etc.	25,537	13,072	38,609	21,465	8,640	30,105	24,922	9,207	34,129
Grading, scraping, oiling, filling	24,858	11,120	35,978	26,773	10,042	36,815	31,138	7,959	39,097
Sidewalks, paths	11,504	3,671	15,175	12,980	3,751	16,731	14,006	2,635	16,641
Bridges, trestles, culverts, overpasses, etc.	37,745	22,842	60,587	40,290	20,415	60,705	46,754	19,921	66,675
Tunnels, subways	17,061	1,238	18,299	19,900	1,036	20,936	15,097	870	15,967
Highway, roadside maintenance guard rails	8,934	4,020	12,954	11,129	3,772	14,901	13,515	3,048	16,563
Tile drains, drainage ditches, storm sewers	7,191	2,961	10,152	9,172	2,946	12,118	10,145	1,846	11,991
Waterworks systems, connections	26,559	6,169	32,728	41,554	6,002	47,556	34,172	6,334	40,506
Sewage systems, connections	30,921	10,360	41,281	35,069	10,253	45,322	37,867	6,614	44,481
Water storage tanks	565	1,747	2,312	344	1,804	2,148	495	1,930	2,425
Dams and reservoirs	17,081	1,663	18,744	26,593	1,951	28,544	28,099	1,820	29,919
Irrigation and land reclamation	8,370	2,789	11,159	8,072	2,298	10,370	8,760	2,449	11,209
Electric stations, power plants, distribution lines	314,619	29,025	343,644	369,276	30,987	400,263	341,138	33,188	374,326
Street lighting	2,940	1,382	4,322	3,779	1,383	5,162	4,188	1,258	5,446
Railway tracklaying and surfacing	29,442	57,344	86,786	46,579	59,611	106,190	52,466	63,671	116,137
Roadway maintenance, track	12,014	84,605	96,619	15,751	87,986	103,737	19,254	94,259	113,513
Signals and interlockers	4,995	3,582	8,577	5,279	3,728	9,007	8,156	3,993	12,149
Telephone and telegraph lines, underground and marine cables	46,951	22,808	69,759	56,823	23,875	80,698	66,885	25,434	92,319
Fences, snowsheds, signs	4,119	8,596	12,715	4,270	9,032	13,302	4,586	9,484	14,070
Road or highway surfacing and maintenance, railway	252	838	1,090	216	855	1,071	150	914	1,064
Oil refineries	7,316	2,289	9,605	34,820	2,943	37,763	55,058	2,825	57,883
Pumping stations (oil and gas)	6,138	267	6,405	7,006	252	7,258	8,822	264	9,086
Pipelines (oil)	3,779	249	4,028	68,137	236	68,373	33,918	245	34,163
Storage tanks (oil and gas)	6,909	499	7,408	19,834	412	20,246	22,848	397	23,245
Pipelines (gas)	8,198	1,188	9,386	19,807	1,077	20,884	47,426	1,088	48,514
Oil and gas wells	55,170	398	55,568	66,327	639	66,966	79,064	640	79,704
Docks, wharves, piers, breakwaters	17,840	5,846	23,686	26,637	4,624	31,261	27,491	4,482	31,973

11.—Detailed Estimates of Value of Construction Work Performed, by Type of Structure, 1951-53—concluded

Type of Structure	1951			1952			1953		
	New	Repair	Total	New	Repair	Total	New	Repair	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Engineering Construction—concluded									
Retaining walls, embankments, riprapping	1,724	514	2,238	1,930	408	2,338	1,795	338	2,133
Canals and waterways	2,024	659	2,683	2,508	296	2,804	2,507	255	2,762
Dredging and pile driving	4,288	1,458	5,746	5,604	868	6,472	4,053	764	4,817
Dykes	1,081	350	1,431	1,645	207	1,852	1,357	196	1,553
Other marine construction	570	407	977	1,961	525	2,486	1,034	507	1,541
Aerodromes, landing fields, runways, tarmacs	13,370	3,718	17,088	26,106	5,281	31,387	22,367	4,314	26,681
Installation of machinery, boilers, etc.	2,044	1,076	3,120	8,228	982	9,210	10,459	927	11,386
Park systems, landscaping, sodding, etc.	10,454	3,216	13,670	12,995	2,751	15,746	13,330	2,369	15,699
Mine shafts and underground workings	12,300	1,768	14,068	11,918	1,090	13,008	12,411	1,115	13,526
All other engineering construction	7,858	1,211	9,069	11,480	1,618	13,098	17,109	1,387	18,496
Totals, Engineering Construction	**965,126**	**385,363**	**1,350,489**	**1,265,105**	**373,686**	**1,638,791**	**1,330,351**	**371,103**	**1,701,454**
Totals, Construction	**2,733,843**	**927,309**	**3,661,152**	**3,158,304**	**930,436**	**4,088,740**	**3,433,015**	**926,291**	**4,359,306**

Summary statistics of the construction industry are shown by province and for contractors, utilities, governments and others in Table **12**. While the estimates given for Canada as a whole may be considered as reasonably accurate, those given for individual provinces and by class of builder are only approximations. All of the estimates given for average numbers employed, salaries and wages paid, and cost of materials used are based on ratios of these items to total value of work performed which were derived from the 1951 Census of Construction and applied to the value of work figures obtained in the capital expenditures surveys. Although these ratios were calculated in some detail by type of industry, still further refinements are required to improve the estimates for provinces and class of builder. There are also some difficulties in obtaining the precise geographical location of projects undertaken or to be undertaken by large companies operating in a number of provinces. However, if used with these qualifications in mind the table provides useful estimates.

In using the employment data it is also of value to have a knowledge of the methods used in collecting the basic data on which the employment estimates are based. Respondents are requested to report the average number of employees engaged in construction each month. They are advised on the form that one method of computing the average number of employees is to divide the number of working days in the month into the total number of man-days worked by all employees in the month. The monthly averages are added and divided by twelve to compute the annual average. Thus, the resulting figures are representative of the total number of employees working full time throughout the year. The total number on the payroll at any given time may, of course, be above or below this average.

12.—Value of Construction Work Performed, Average Numbers Employed, Value of Materials Used and Salaries and Wages Paid, by Province, 1951-53

Province		Average Employees	Salaries and Wages Paid	Cost of Materials Used	Value of Work Performed[1]
		No.	$'000	$'000	$'000
Province					
Newfoundland	1951	8,428	19,316	26,152	49,947
	1952	9,829	25,055	33,921	64,786
	1953	9,235	25,028	33,884	64,715
Prince Edward Island	1951	2,383	5,162	7,185	14,313
	1952	1,885	4,539	6,318	12,585
	1953	1,719	4,400	6,124	12,199
Nova Scotia	1951	17,905	39,194	53,237	102,331
	1952	17,871	43,498	59,082	113,566
	1953	19,227	49,759	67,586	129,913
New Brunswick	1951	15,136	34,435	50,749	93,200
	1952	13,200	33,396	49,218	90,388
	1953	11,670	31,392	46,264	84,963
Quebec	1951	129,163	307,279	473,612	898,372
	1952	125,499	331,945	511,630	970,487
	1953	121,659	342,105	527,290	1,000,191
Ontario	1951	158,552	446,164	700,794	1,349,407
	1952	160,655	502,688	789,577	1,520,362
	1953	159,495	530,480	833,230	1,604,418
Manitoba	1951	24,600	62,534	100,648	182,526
	1952	22,432	63,415	102,066	185,098
	1953	23,489	70,584	113,603	206,021
Saskatchewan	1951	19,666	49,460	84,113	153,762
	1952	20,859	58,343	99,219	181,377
	1953	23,495	69,852	118,791	217,155
Alberta	1951	46,424	122,746	199,068	379,256
	1952	48,456	142,461	231,042	440,171
	1953	51,196	159,987	259,465	494,320
British Columbia	1951	45,267	143,632	227,320	438,038
	1952	47,393	167,203	264,624	509,921
	1953	47,678	178,840	283,041	545,411
Totals	**1951**	**467,524**	**1,229,922**	**1,922,878**	**3,661,152**
	1952	**468,079**	**1,372,543**	**2,146,697**	**4,088,740**
	1953	**468,863**	**1,462,427**	**2,289,278**	**4,359,306**
Contractors and Others					
Contractors	1951	286,170	778,471	1,284,492	2,490,327
	1952	284,959	862,053	1,423,503	2,760,390
	1953	292,309	938,659	1,545,437	2,996,279
Utilities	1951	82,364	215,135	274,987	539,284
	1952	90,518	262,928	336,338	659,732
	1953	87,644	270,235	344,665	675,941
Governments	1951	67,932	145,617	167,402	327,922
	1952	61,558	146,743	168,827	330,797
	1953	57,765	146,168	167,671	328,454
Others	1951	31,058	90,699	195,997	303,619
	1952	31,044	100,819	218,029	337,821
	1953	31,145	107,365	231,505	358,632

[1] Actual expenditures 1951, preliminary actual 1952, intentions 1953.

Subsection 2.—Contracts Awarded and Building Permits Issued

In this Section statistics are given of work actually in sight either as contracts awarded or as building permits. These figures are related to those of work performed during the year only so far as the work thus provided for is completed and duly reported in the Census of Construction. Further, values of contracts awarded, and especially of building permits, are estimates (more often underestimates) of work to be done.

Contracts Awarded.—According to figures published by MacLean Building Reports Limited, the value of contracts awarded in 1952 decreased by 21 p.c. from those of 1951, the decreases being mainly accounted for by a decline in business, industrial and engineering contracts. The value of contracts awarded for residential building increased by 17 p.c. All provinces, except British Columbia, Quebec and Ontario, shared in an increase in the value of total contracts; the most important advances were made by Alberta and Saskatchewan, value of contracts in the former Province increasing from $183,000,000 to $231,000,000 and in the latter from $39,000,000 to $59,000,000.

13.—Value of Construction Contracts Awarded, 1916-52

(SOURCE: MacLean Building Reports Limited)

NOTE.—Includes Newfoundland from Apr. 1, 1949.

Year	Value of Construction Contracts	Year	Value of Construction Contracts	Year	Value of Construction Contracts
	$		$		$
1916	99,311,000	1928	472,032,600	1940	346,009,800
1917	84,841,000	1929	576,651,800	1941	393,991,300
1918	99,842,000	1930	456,999,600	1942	281,594,100
1919	190,028,000	1931	315,482,000	1943	206,103,900
1920	255,605,000	1932	132,872,400	1944	291,961,800
1921	240,133,300	1933	97,289,800	1945	409,032,700
1922	331,843,800	1934	125,811,500	1946	663,355,100
1923	314,254,300	1935	160,305,000	1947	718,137,100
1924	276,261,100	1936	162,588,000	1948	954,082,400
1925	297,973,000	1937	224,056,700	1949	1,143,547,300
1926	372,947,900	1938	187,277,900	1950	1,525,764,700
1927	418,951,600	1939	187,178,500	1951	2,295,499,200
				1952	1,812,177,600

14.—Value of Construction Contracts Awarded, by Province and Type of Construction, 1947-52

(SOURCE: MacLean Building Reports Limited)

Province	1947	1948	1949	1950	1951	1952
	$	$	$	$	$	$
Newfoundland	...	...	3,431,100[1]	10,065,000	10,509,400	21,985,300
Prince Edward Island	3,991,900	2,410,300	4,498,500	2,663,500	3,251,000	3,489,000
Nova Scotia	28,855,000	36,624,200	33,941,600	35,643,300	67,837,000	78,502,000
New Brunswick	27,017,300	28,980,100	19,536,100	34,592,100	20,983,900	25,177,000
Quebec	255,202,400	327,111,900	355,408,300	533,971,700	480,106,000	397,931,400
Ontario	258,709,300	350,612,300	421,098,900	597,161,900	1,017,426,900	732,768,100
Manitoba	34,446,100	45,414,700	78,517,300	67,985,300	91,157,700	95,690,300
Saskatchewan	23,040,200	18,273,600	43,306,200	27,563,900	39,604,700	59,170,000
Alberta	47,425,100	74,071,700	104,380,600	134,878,500	183,075,100	231,191,300
British Columbia	39,449,800	70,583,600	79,428,700	81,239,500	381,547,500	166,273,200
Grand Totals	**718,137,100**	**954,082,400**	**1,143,547,300**	**1,525,764,700**	**2,295,499,200**	**1,812,177,600**

[1] Nine months.

14.—Value of Construction Contracts Awarded, by Province and Type of Construction, 1947-52—concluded

Type of Construction	1947	1948	1949	1950	1951	1952
	$	$	$	$	$	$
RESIDENTIAL—						
Apartments	12,049,600	30,069,100	69,254,000	59,297,800	55,819,900	101,665,300
Residences	185,146,700	342,986,800	396,821,500	482,386,500	381,289,800	409,637,400
TOTALS, RESIDENTIAL	197,196,300	373,055,900	466,075,500	541,684,300	437,109,700	511,302,700
BUSINESS—						
Churches	11,263,000	16,425,500	21,677,400	24,100,400	25,274,900	26,455,700
Public garages	15,789,200	13,096,900	12,316,800	13,781,600	10,838,000	15,958,100
Hospitals	40,298,900	49,318,800	42,405,900	59,967,700	85,746,400	56,175,300
Hotels and clubs	14,541,200	27,628,800	16,957,500	41,611,000	32,095,700	23,055,600
Office buildings	34,620,600	34,137,900	40,031,400	53,240,200	29,108,200	39,640,300
Public buildings	16,197,900	19,919,400	46,078,800	61,834,500	150,483,700	149,351,000
Schools	45,648,400	79,156,000	80,982,500	99,296,400	139,938,800	130,398,800
Stores	28,685,500	42,348,000	36,218,400	43,677,100	33,497,100	41,999,300
Theatres	7,823,200	4,814,500	6,132,300	6,173,600	2,713,900	3,116,900
Warehouses	24,662,300	28,413,100	21,464,700	36,722,400	37,985,400	40,243,900
TOTALS, BUSINESS	239,530,200	315,258,900	324,265,700	440,404,900	547,682,100	526,394,900
INDUSTRIAL	113,495,000	74,878,100	104,040,300	141,043,200	451,753,200	245,851,100
ENGINEERING—						
Bridges	7,037,400	7,562,000	9,182,900	16,624,300	19,340,400	37,569,700
Dams and wharves	41,663,700	18,215,000	20,716,900	38,561,900	32,155,000	59,257,500
Sewers and water mains	16,281,200	20,038,600	27,856,400	31,005,800	63,333,300	44,919,300
Roads and streets	53,707,800	45,856,900	49,396,300	92,386,300	94,621,900	113,015,000
General engineering	49,225,500	99,217,000	142,013,300	224,054,000	649,503,600	273,867,400
TOTALS, ENGINEERING	167,915,600	190,889,500	249,165,800	402,632,300	858,954,200	528,628,900

Building Permits.—Statistics of building permits were first collected in 1910, when the series covered 35 urban centres; in 1920 they were extended to cover 58 municipalities, including unincorporated suburban areas, which were becoming increasingly important as residential areas for persons working within the municipal boundaries of urban centres. In 1940, the series was again extended to cover 204 municipalities and in 1948 the coverage was expanded further to include 507 municipalities. However, until plans are advanced, it is felt desirable to maintain comparability with earlier issues of the Year Book by retaining the '204' list.

The estimated value of proposed construction as indicated by building permits issued in 1952 amounted to $802,737,975, an increase of 18 p.c. over the 1951 value of $681,161,938.

15.—Estimated Value of Proposed Construction as Indicated by Building Permits Issued in 204 Municipalities, 1951 and 1952

NOTE.—Statistics for these series covering years previous to 1951 will be found in the corresponding tables of earlier editions of the Year Book. For the 35 cities marked (●) the record goes back to 1910; the 23 places marked (○) were added in 1920.

Province and Municipality	1951	1952	Province and Municipality	1951	1952
	$	$		$	$
Prince Edward Island—			**Nova Scotia**—concluded		
○Charlottetown	785,550	401,690	Liverpool	96,735	53,350
Nova Scotia—			○New Glasgow	753,980	288,534
Amherst	186,270	1,135,330	New Waterford	116,600	35,100
Bridgewater	283,400	209,950	North Sydney	1,541,850	622,700
Dartmouth	949,965	1,153,875	●Sydney	2,509,978	977,577
Glace Bay	828,636	329,231	Sydney Mines	406,664	174,300
●Halifax	5,440,410	7,777,130	Truro	592,910	484,215
			Yarmouth	132,387	150,075

15.—Estimated Value of Proposed Construction as Indicated by Building Permits Issued in 204 Municipalities, 1951 and 1952—continued

Province and Municipality	1951	1952
	$	$
New Brunswick—		
Campbellton	134,220	264,068
Chatham	196,800	17,300
Dalhousie	1,004,300	477,400
○Fredericton	1,274,190	2,208,683
●Moncton	2,146,841	3,896,950
Newcastle	335,200	132,900
●Saint John	2,205,830	2,737,073
St. Stephen	1,116,565	44,865
Quebec—		
Cap de la Madeleine	2,507,873	1,668,800
Chicoutimi	4,250,860	3,053,420
Coaticook	108,510	474,370
Drummondville	1,236,000	1,259,374
Granby	2,468,034	1,133,505
Grand'Mère	939,615	630,375
Hampstead	965,345	2,295,410
Hull	2,161,950	2,702,930
Iberville	199,815	564,550
Joliette	2,081,050	1,247,280
Jonquière	807,350	376,325
Lachine	5,328,297	8,280,467
Laprairie	596,700	213,200
La Tuque	241,700	275,650
Lévis	1,296,400	348,400
Longueuil	1,613,255	984,677
Mégantic	119,520	96,300
●Montreal (●Maisonneuve)	73,558,070	103,828,736
Montreal East	1,264,310	1,564,415
Montreal North	1,368,200	3,928,700
Montreal West	329,800	311,700
Mount Royal	7,359,820	4,058,212
Noranda	256,450	951,640
Outremont	1,577,500	1,831,550
Pointe-aux-Trembles	1,196,725	490,350
Pointe Claire	2,520,435	2,011,395
●Quebec	6,648,746	6,262,531
Rimouski	2,720,760	891,050
Rivière-du-Loup	200,900	379,610
Rouyn	455,125	516,785
Ste. Agathe-des-Monts	80,700	233,300
Ste. Anne-de-Bellevue	110,555	122,110
St. Hyacinthe	947,700	2,797,950
St. Jean	4,033,084	3,225,520
St. Jérôme	994,875	1,279,705
St. Joseph	210,327	76,139
St. Lambert	4,243,640	3,179,940
St. Laurent	6,351,625	14,303,950
○Shawinigan Falls	1,495,350	2,278,220
●Sherbrooke	4,817,942	8,853,475
Sorel	1,279,500	1,053,980
●Three Rivers	2,898,250	2,923,525
Val d'Or	282,935	790,020
Valleyfield	1,851,060	1,493,530
Verdun	2,718,100	1,919,700
●Westmount	2,324,455	1,940,500
Ontario—		
Amherstburg	253,200	229,199
Barrie	2,278,225	1,656,025
○Belleville	1,185,578	1,420,931
Bowmanville	360,860	231,480
Bracebridge	99,650	133,400
Brampton	1,939,508	2,333,446
●Brantford	1,866,833	1,845,438
Brockville	476,490	1,261,572
Ontario—continued		
Burlington	1,034,390	1,158,450
Campbellford	57,400	65,052
○Chatham	2,065,089	2,260,804
Cobourg	360,690	6,960,960
Cochrane	60,994	255,299
Collingwood	262,843	223,508
Cornwall	992,532	1,130,280
Dundas	449,640	1,506,625
Eastview	1,249,625	1,796,943
Etobicoke Twp	34,937,570	35,641,689
Forest Hill	3,633,087	3,324,091
Fort Erie	939,346	771,133
Fort Frances	1,566,746	1,171,277
●Fort William	2,522,160	3,030,180
○Galt	1,481,502	3,479,249
Gananoque	214,017	132,162
Gloucester Twp	2,053,162	2,391,310
Goderich	852,755	161,365
●Guelph	2,097,645	3,076,573
Haileybury	137,795	82,875
●Hamilton	24,933,959	24,227,470
Hanover	528,875	153,000
Hawkesbury	355,935	992,175
Huntsville	135,000	132,650
Ingersoll	118,012	195,485
Kapuskasing	550,810	1,037,600
Kenora	567,152	599,979
●Kingston	1,833,595	4,221,737
Kirkland Lake (Teck Twp.)	203,755	204,696
●Kitchener	4,956,234	10,524,256
Leamington	384,800	1,143,637
Leaside	3,297,098	1,803,838
Lindsay	402,875	1,501,555
Listowel	246,695	211,875
●London	7,141,120	10,586,555
Long Branch	641,525	464,490
Mimico	1,029,760	..
Napanee	1,025,750	39,000
Nepean Twp	2,031,586	3,270,996
New Liskeard	321,425	620,815
Newmarket	359,700	290,500
New Toronto	2,790,100	2,155,100
○Niagara Falls	2,151,931	1,972,734
North Bay	1,337,623	2,107,054
North York Twp	40,016,552	47,701,208
Oakville	1,614,492	2,993,670
Orillia	333,617	658,610
○Oshawa	4,506,834	9,885,076
●Ottawa	30,445,363	23,595,220
○Owen Sound	1,219,135	884,047
Paris	299,923	420,300
Parry Sound	77,035	182,225
Pembroke	893,825	2,418,200
Perth	419,690	168,170
●Peterborough	4,553,687	5,186,523
Petrolia	50,500	87,845
●Port Arthur	1,742,076	2,487,525
Port Colborne	675,045	1,193,481
Preston	652,331	938,054
Renfrew	354,005	559,040
○Riverside	2,344,643	1,463,952
●St. Catharines	4,883,581	3,392,256
St. Marys	96,050	975,150
●St. Thomas	4,406,522	1,646,356
○Sarnia	7,413,616	8,278,563
○Sault Ste. Marie	3,266,088	6,893,168
Scarboro Twp	34,771,650	36,301,565
Simcoe	371,650	1,047,350
Smiths Falls	1,042,475	287,400
●Stratford	649,476	797,111

15.—Estimated Value of Proposed Construction as Indicated by Building Permits Issued in 204 Municipalities, 1951 and 1952—concluded

Province and Municipality	1951	1952	Province and Municipality	1951	1952
	$	$		$	$
Ontario—concluded			**Saskatchewan**—concluded		
Sudbury	3,691,125	3,710,135	●Saskatoon	3,719,134	7,872,727
Swansea	834,270	738,469	Swift Current	331,935	1,053,605
Tillsonburg	236,000	308,695	Weyburn	265,990	388,100
Timmins	312,585	539,440	Yorkton	744,590	872,600
●Toronto	47,167,715	43,724,096			
Trenton	212,585	817,197			
Wallaceburg	267,350	336,524	**Alberta**—		
Waterloo	1,850,389	2,283,108			
○Welland	1,126,876	2,437,511	●Calgary	22,322,868	38,784,242
Weston	526,565	1,407,989	Drumheller	130,330	287,740
Whitby	423,135	743,270	●Edmonton	36,100,034	37,066,526
●Windsor	12,228,405	6,557,179	○Lethbridge	4,820,675	4,741,855
○Woodstock	1,105,978	1,718,383	○Medicine Hat	1,580,125	2,373,080
○York Twp.	8,542,650	11,251,270			
○York East Twp.	7,796,074	8,393,277			
			British Columbia—		
Manitoba—					
			Chilliwack	1,217,580	475,230
●Brandon	1,400,055	1,790,795	Cranbrook	869,422	472,254
Brooklands	197,240	105,650	Fernie	288,360	73,075
Dauphin	833,005	605,070	○Kamloops	1,211,016	684,805
North Kildonan	203,100	283,900	Kelowna	1,125,384	502,030
Portage la Prairie	442,620	1,146,925	○Nanaimo	330,727	976,797
○St. Boniface	888,280	4,432,890[1]	Nelson	364,438	613,755
Selkirk	194,000	595,000	●New Westminster	2,362,770	2,096,485
The Pas	131,775	257,450	○North Vancouver	1,390,895	1,988,135
Transcona	304,945	324,687	Prince George	932,825	2,238,160
●Winnipeg	16,484,300	19,293,200	○Prince Rupert	304,323	1,037,257
			Revelstoke	204,820	177,350
			Rossland	89,176	316,261
Saskatchewan—			Trail	713,225	2,880,729
			●Vancouver	23,942,309	28,387,737
Biggar	15,350	143,684	Vernon	487,158	300,518
Estevan	282,780	234,484	●Victoria	4,087,011	3,988,003
Melville	166,375	390,750			
●Moose Jaw	999,405	2,628,312	**Totals**—		
North Battleford	490,510	811,500	**204 Municipalities**	**681,161,938**	**802,737,975**
Prince Albert	1,866,717	2,034,995	**58 Municipalities●○**	**430,507,541**	**520,491,849**
●Regina	6,069,657	12,736,939	**35 Municipalities●**	**371,466,436**	**438,740,938**

[1] No reports received for September, October and November 1952.

The indexes given in Table **16** show, as far as possible, the fluctuations in building costs and their effect upon construction work and employment. The relative proportions of material and wage costs in general building are difficult to determine since such proportions vary with the type of building and the centres studied. Pre-war experience, as indicated by a special study made for 15 cities, shows that the proportions of cost of materials to cost of labour in all construction averaged two-thirds for the former to one-third for the latter. The increase in the cost of recent building operations has probably been much more than is indicated by the increase in the indexes of wholesale prices and wages shown and the proportions of these items to total costs have, no doubt, undergone some variation owing to changes in types and methods of construction and to the greater use of machinery.

Four of the largest cities—Montreal, Toronto, Winnipeg and Vancouver—accounted for $195,233,769 or 24 p.c. of the value of building permits issued in 204 municipalities in 1952. In 1951, the same cities showed a value of $161,152,394, also 24 p.c. of the total for that year.

16.—Value of Building Permits Issued in 204 Municipalities and Index Numbers of the Building Construction Industries, 1943-52

NOTE.—These 204 municipalities are named in Table 15.

Year	Value of Building Permits, 204 Municipalities	Average Index Numbers of—			
		Prices of Building Materials (1949=100)		Wages in Construction Industries [2] (1939=100)	Employment in Building Construction [3] (1949=100)
		Residential [1]	Non-residential		
	$				
1943	80,190,123	61·0	70·2	127·7	68·8
1944	128,728,465	64·3	70·9	129·6	40·9
1945	197,187,160	65·0	71·4	131·1	43·7
1946	383,596,698	67·8	75·0	143·9	62·6
1947	373,231,249	79·1	84·5	155·0	81·9
1948	536,057,597	95·4	95·9	176·3	91·4
1949	616,160,593	100·0	100·0	184·2	100·0
1950	801,765,092	106·4	105·0	194·0	104·7
1951	681,161,938	125·5	118·6	217·2	116·0
1952	802,737,975	124·9	123·2	235·1	127·1

[1] Arithmetically converted from base 1935-39=100. [2] Compiled by the Department of Labour.
[3] As reported by employers.

Subsection 3.—Government Aid to House-Building*

Federal Government Assistance, 1952.—Publicly assisted house-building in Canada operates under two types of arrangement. Under one type, Government financial assistance in the form of mortgage loans is extended to prospective home-owners and builders through the National Housing Act, 1944, together with the Canadian Farm Loan Act, 1927, the Veterans' Land Act, 1942, and the Farm Improvement Loans Act, 1944. Under the other, the Federal Government carries on direct house-building activities of veterans' rental units, armed service married quarters and, in conjunction with the provincial governments, joint housing projects for rental. During the eight-year period 1945-52, completions under these government-sponsored plans accounted for about one-third of the new permanent dwellings built in Canada.

The Central Mortgage and Housing Corporation is the Federal Government agency responsible for most of the publicly assisted housing activities. It was incorporated by an Act passed in December 1945 to administer the National Housing Act, 1944, and earlier housing Acts, to provide facilities for the rediscounting of mortgages for lending institutions and to co-ordinate government activities in the housing field. In 1948, the functions of Wartime Housing Limited were transferred to its administration. In November 1950, the charter of Wartime Housing Limited was revived to form Defence Construction Limited and entrusted with carrying out construction of defence projects requisitioned by the Department of National Defence. The Central Mortgage and Housing Corporation provides management and supervisory services to Defence Construction Limited.

The National Housing Act, 1944.—The National Housing Act constitutes the principal legislation of the Federal Government in the field of housing. During 1952, two major changes were made in lending regulations under the Act.

* Prepared in the Economic Research Department, Central Mortgage and Housing Corporation, Ottawa.

The first change occurred in September 1952 when the rate of interest payable by a borrower on joint loans was increased from 5 p.c. to 5¼ p.c. per annum calculated semi-annually. The interest rate on new loans of other types under the Act were also raised by one-quarter of one per cent. The move brought the interest rate to 3¾ p.c. on loans to limited dividend companies, 4¾ p.c. on loans to primary industries, 5 p.c. on loans for rental insurance projects and 5¼ p.c. on direct corporation loans to home-owners. The revision in interest rates under the Act conformed with a general increase that had taken place in the interest-rate structure.

A second change in National Housing Act regulations occurred in October 1952 when the maximum loan for rental housing was raised from $6,700 to $8,500 for semi-detached and row houses and from $6,700 to $7,200 for fully serviced apartments of fireproof construction.

Under the terms of the National Housing Act, the Central Mortgage and Housing Corporation joins with approved private lending institutions in making loans to prospective home-owners or builders of dwellings for sale or for rental. The Corporation advances 25 p.c. of the loan and the lending institution 75 p.c. These joint loans are amortized over a period of not more than 30 years and, in the case of loans to prospective home-owner defence workers, for a period not exceeding 25 years.

The Central Mortgage and Housing Corporation may make direct loans for house building in areas where joint financing is not available through lending institutions on a basis similar to that for joint loans. Special provisions are effective in the case of prospective home-owner defence workers or builders of dwellings for sale to defence workers. Direct loans may also be made for low-rental and medium-rental units to limited dividend companies and companies engaged in the primary industries of logging, lumbering, fishing and mining. Up to the end of 1952, 21 limited-dividend companies had been formed under the sponsorship of business companies or local groups supplemented in some cases by municipal grants or contributions from service clubs. Many of the units constructed through these companies are occupied by widows and old-age pensioners. In addition, when private lending institution funds are not available for suitable rental insurance projects, such projects may be financed by direct loans.

The Rental Insurance Plan, instituted in 1948, is designed to encourage the construction of rental housing accommodation. Owners of projects built under the Plan are guaranteed a return of rent sufficient to pay taxes, operating expenses, debt service and a minimum return of 2 p.c. on equity of the owner. From 1948 to December 1952, projects have been approved involving 18,300 units having an estimated cost of $135,000,000.

Under the land-assembly provisions of the Act, which provide for the development of raw land into serviced lots for residential purposes and the sale at prices considerably below the market price for comparable lots, lending institutions are guaranteed the recovery of their investment together with an annual return of 2 p.c. Land-assembly projects have also been undertaken directly by the Corporation.

The construction of veterans' rental housing units, first carried out by Wartime Housing Limited and from 1948 by Central Mortgage and Housing, was nearing completion by the end of 1952. These rental units were constructed under federal-municipal agreements. The administration of the construction of armed service married quarters, also in the hands of the Corporation since 1948, continued during 1952.

Sect. 35 of the National Housing Act, 1944, provides that, following agreements between a provincial government and the Government of Canada, the Central Mortgage and Housing Corporation may undertake, jointly with the province, the development of a housing or land-assembly project. Capital costs, profits and losses for such projects are shared 75 p.c. by the Federal Government and 25 p.c. by the provincial government and the province may require the municipality concerned to participate in the provincial share. By December 1952, all provinces except Prince Edward Island had passed complementary legislation and projects were under way in seven of the nine provinces with enabling legislation.

Under the legislation, three main types of housing agreement have been evolved: (1) the construction of houses for rental on an economic or sub-economic basis; (2) the assembly and servicing of residential lots for sale to builders and prospective home-owners; (3) a combined rental-housing and land-assembly project where a portion of the land developed is used for housing and the remainder sold. Completed rental-housing projects are administered by local housing authorities whose members are appointed by provincial Order in Council. Local authorities have been established in 12 municipalities.

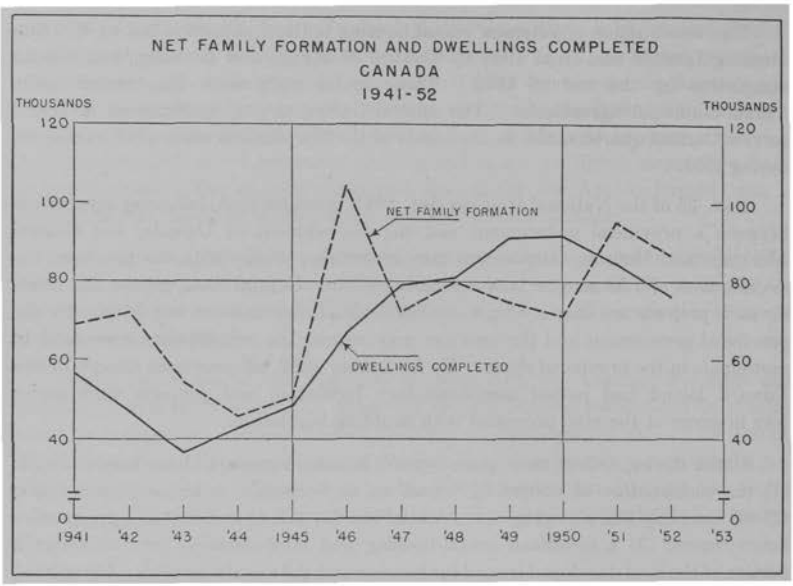
By the end of 1952, 38 projects had been approved, 13 for land-assembly only, seven for combined land-assembly and rental housing and 18 for the erection of rental-housing over the whole site. The 22 rental projects will contain 1,937 rental units and the land-assembly projects will involve the servicing of 11,530 lots. By the end of the year, 592 of these lots had been completed and sold to builders and prospective home-owners.

The Canadian Farm Loan Act, 1927.—Under this legislation federal long-term loan assistance for housing as well as for other farm purposes is provided. (*See* pp. 371-372.)

The Veterans' Land Act, 1942.—This Act is administered by the Department of Veterans Affairs and provides a form of loan and grant assistance to veterans for housing and other purposes. (*See* pp. 274-275.)

The Farm Improvement Loans Act, 1944.—This Act provides for guarantees in respect of intermediate and short-term loans made by approved lending agencies to farmers for housing and other purposes. (*See* pp. 372-373.)

Statistics of Federal Assistance in the Housing Program.—The extent of Federal Government assistance to house-building in Canada is shown in Table 17. The year 1935 marked the passage of the Dominion Housing Act and the entry of the Federal Government into the housing field on a continuing basis. This Act was succeeded by the National Housing Acts of 1938 and 1944.



A total of 76,302 dwellings were completed in Canada in 1952. About 3,900 were built directly by the Federal Government; 22,569 were built with the aid of federal loans, including joint loans under the National Housing Act, 1944; and 912 were built with guarantee assistance by the Federal Government.

17.—Dwellings Completed with and without Federal Government Assistance, 1935-52

(Exclusive of the Yukon and Northwest Territories)

Year	With Federal Government Assistance				Without Federal Government Assistance	Total
	Direct Government[1]	Loans	Guarantees	Total[1]		
	'000	'000	'000	'000	'000	'000
1935	—	0·5	—	0·5	32·4	32·9
1936	—	1·1	0·1	1·2	38·1	39·3
1937	—	1·5	0·9	2·4	46·2	48·6
1938	—	2·4	0·9	3·3	40·7	44·0
1939	—	5·2	1·1	6·3	45·4	51·7
1940	—	6·2	0·8	7·0	45·5	52·5
1941	1·7	4·9	—	6·6	50·2	56·8
1942	7·6	2·7	—	10·3	36·9	47·2
1943	6·4	1·3	0·1	7·8	29·0	36·8
1944	2·8	0·1	—	2·9	39·9	42·8
1945	3·4	2·0	0·2	5·6	42·9	48·5
1946	14·0	5·6	0·4	20·0	47·2	67·2
1947	10·0	10·6	0·4	21·0	58·2	79·2
1948	8·7	13·9	0·5	23·1	58·1	81·2
1949[2]	9·5	23·4	2·7	35·6	55·4	91·0
1950[2]	6·8	32·5	2·5	41·8	50·0	91·8
1951[2]	3·5	29·3	1·5	34·3	50·5	84·8
1952[2]	3·9	22·6	0·9	27·4	48·9	76·3
Totals, 1935-52	**78·3**	**165·8**	**13·0**	**257·1**	**815·5**	**1,072·6**

[1] Exclusive of a small number of dwellings built by Federal Government Departments as part of their normal operations. [2] Includes Newfoundland.

Details by provinces of loans approved under the National Housing Act, 1944, for the years 1945-52 are shown in Table 18.

18.—Net Loans Approved under the National Housing Act, 1944, by Province, 1945-52

Year and Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
1945—												
Loans..... No.	...	—	60	23	481	2,341	693	96	469	675	—	4,838
Dwellings.. "	...	—	60	23	701	2,480	703	96	485	839	—	5,387
Amount.... $'000	...	—	270	101	3,045	10,278	3,034	410	2,099	3,274	—	22,511
1946—												
Loans..... No.	...	4	100	84	832	3,254	1,004	215	626	1,222	—	7,341
Dwellings.. "	...	4	113	206	1,931	5,345	1,020	363	880	1,965	—	11,827
Amount.... $'000	...	21	532	1,001	8,965	26,168	5,017	1,771	4,028	8,449	—	55,951
1947—												
Loans..... No.	...	10	248	102	1,793	3,442	1,188	146	916	1,041	—	8,886
Dwellings.. "	...	37	269	104	3,186	3,676	1,289	149	991	1,232	—	10,933
Amount.... $'000	...	170	1,364	562	14,423	19,115	6,577	735	4,960	5,325	—	53,230
1948—												
Loans..... No.	...	35	285	286	2,895	6,539	1,106	94	1,972	2,125	2	15,339
Dwellings.. "	...	38	316	308	5,183	6,999	1,372	102	2,156	2,352	2	18,828
Amount.... $'000	...	223	1,629	1,871	27,163	42,075	7,576	797	11,504	11,673	13	104,524
1949—												
Loans..... No.	21	23	268	194	3,293	8,598	1,469	200	2,595	1,495	3	18,159
Dwellings.. "	21	23	296	225	8,552	9,353	1,569	193	2,837	1,832	3	24,904
Amount.... $'000	125	150	1,614	1,297	45,715	56,059	9,402	1,081	15,207	8,835	14	139,499
1950—												
Loans..... No.	48	20	504	340	7,994	16,454	1,729	356	3,935	3,059	1	34,440
Dwellings.. "	51	20	558	348	13,980	17,830	1,826	360	4,279	3,503	1	42,756
Amount.... $'000	369	140	3,526	2,450	85,686	133,050	13,163	2,255	26,444	22,137	3	289,223
1951—												
Loans..... No.	33	7	173	123	2,630	7,700	1,010	135	1,983	1,124	—	14,918
Dwellings.. "	33	7	187	126	4,233	9,416	1,100	137	2,659	1,405	—	19,303
Amount.... $'000	239	41	1,210	869	26,035	63,523	6,810	797	16,162	8,011	—	123,697
1952—												
Loans..... No.	26	9	227	167	4,092	12,336	1,380	307	3,486	1,688	—	23,718
Dwellings.. "	27	9	260	182	9,117	16,038	1,916	629	4,056	2,089	—	34,323
Amount.... $'000	198	64	2,036	1,438	60,538	123,794	13,159	4,533	28,789	14,535	—	249,084

19.—Dwellings Completed with and without Federal Government Assistance, by Province, 1952

(Exclusive of the Yukon and Northwest Territories)

Type of Assistance	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Totals
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
With Federal Government Assistance—[1]											
Direct Federal Government House-Building—											
Department of National Defence	127	—	553	67	410	1,090	254	6	372	234	3,113
Veterans' rental projects by Central Mortgage and Housing Corporation	—	—	—	—	196	—	—	—	—	98	294
Federal-provincial-municipal projects	—	—	—	88	—	338	—	—	—	—	426
Other projects	—	—	—	—	33	65	—	—	—	—	98
Totals, Direct Federal Government House-Building	127	—	553	155	639	1,493	254	6	372	332	3,931

For footnote, *see* end of table, p. 778.

19.—Dwellings Completed with and without Federal Government Assistance, by Province, 1952—concluded

Type of Assistance	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Totals
	No.	No.	No.	No.	No	No.	No.	No.	No.	No.	No.
With Federal Government Assistance—concluded [1]											
Federal Government Loans—											
National Housing Act.	16	6	497	117	3,858	10,588	1,111	181	2,934	1,579	20,887
Veterans' Land Act.....	22	11	63	42	131	885	53	60	111	266	1,644
Canadian Farm Loan Act.	—	—	—	3	—	7	4	10	11	3	38
Totals, Federal Government Loans.....	38	17	560	162	3,989	11,480	1,168	251	3,056	1,848	22,569
Federal Government Guarantees—											
Rental Insurance under the National Housing Act.	—	—	—	—	72	221	—	—	56	—	349
Farm Improvement Loans Act.....	—	3	2	4	14	89	102	161	157	31	563
Totals, Federal Government Guarantees.....	—	3	2	4	86	310	102	161	213	31	912
Totals, With Federal Government Assistance.....	**165**	**20**	**1,115**	**321**	**4,714**	**13,283**	**1,524**	**418**	**3,641**	**2,211**	**27,412**
Totals, Without Federal Government Assistance.	**986**	**22**	**879**	**1,015**	**18,890**	**15,163**	**1,618**	**2,238**	**2,725**	**5,354**	**48,890**
Grand Totals	**1,151**	**42**	**1,994**	**1,336**	**23,604**	**28,446**	**3,142**	**2,656**	**6,366**	**7,565**	**76,302**

[1] Exclusive of a small number of dwellings built by Federal Government Departments as part of their normal operations.

Provincial Government Assistance.—As stated previously (*see* p. 775), all provinces except Prince Edward Island had, by December 1952, passed complementary legislation respecting Sect. 35 of the National Housing Act, which provides for joint federal-provincial housing and land-assembly projects. In addition, separate legislation with respect to housing has been enacted in the Provinces of Quebec and Ontario.

Quebec.—An amendment (S.Q. 1952-53, c. 7) to the "Act to improve housing conditions" (S.Q. 1948, c. 6), assented to Dec. 10, 1952, empowers the Government to pay a subsidy on interest charges in excess of 3 p.c. on new dwellings built between Jan. 15, 1948, and June 1, 1955. Formerly the Act applied to dwellings completed before Jan. 15, 1953. The amendment also authorizes the expenditure of $40,000,000 for purposes of the Act.

Ontario.—The Housing Development Amendment Act, 1952, empowers the Province and a municipality to enter into joint housing projects and empowers a municipality to contribute to the cost of a housing project or to issue debentures for the purpose of a housing project without reference to its municipal board or the assent of its electors. For industries locating in rural areas and in small communities, the Province and municipality may participate with the Central Mortgage and Housing Corporation in the development of joint housing projects, part of the cost of which will be borne by the Corporation. Under certain conditions, the Province may expropriate land in municipalities for the purpose of housing projects. The Act came into force Apr. 10, 1952, and amended the Housing Development Act (R.S.O. 1950, c. 174).

Under the Planning Amendment Act, 1952, municipalities with an approved official plan may designate an area within the municipality as a redevelopment area and, upon the passage of a by-law, may acquire land within that area and clear and

prepare it for residential, commercial, industrial or other designated purpose. The Act came into force May 1, 1952, and amended the Planning Act (R.S.O. 1950, c. 227).

The Rural Housing Assistance Act, 1952, authorizes the establishment of a Crown company—the Rural Housing Finance Corporation—which is empowered to lend and invest mortgage money in order to provide financial assistance in the building of new houses in rural villages and other rural areas. The Corporation may lend money independently or in co-operation with the Central Mortgage and Housing Corporation or with any approved lending institution. The Act came into force on Apr. 10, 1952.

The Junior Farmer Establishment Act, 1952, provides for the establishment of a corporation for the purpose of making loans to assist young qualified farmers in the purchase, development and operation of their farms. The corporation may make loans for the erection and improvement of farm houses. A loan may be secured as first-mortgage on farm property and shall not exceed $15,000, repayable in 25 years. The Act came into force on Apr. 10, 1952.

The Elderly Persons Housing Aid Act, 1952, authorizes the Province to make grants to any municipality to assist in the construction and equipment of low-rental housing units for elderly persons. The amount of any grant will be based on the lower of $500 for each dwelling or of 50 p.c. of the capital cost of the project to the municipality. The Act came into force on Apr. 10, 1952.

Subsection 4.—Construction of Dwelling Units

The volume of new house-building was greater in 1952 than in the previous year. Total housing starts numbered 83,246, an increase of 21 p.c. over the number started in 1951. All regions in the country shared in the increase: in the Atlantic Provinces, housing starts rose 33 p.c. to 4,720 units; in Quebec, 24 p.c. to 26,355 units; in Ontario, 10 p.c. to 30,016 units; in the Prairies, 40 p.c. to 15,044 units; and in British Columbia, 25 p.c. to 7,111 units. Although housing starts were higher in 1952, housing completions numbered 73,087, a decline of 10 p.c. from the 1951 total. The smaller number of completions was accounted for by a reduced carry-over of uncompleted dwellings from 1951 to 1952 as compared with the number carried over from 1950 to 1951.

Of the dwellings completed in 1952, 81 p.c. were built in urban areas; 77 p.c. were one-family detached houses, 16 p.c. were apartment units and 7 p.c. were two-family dwellings.

Tables **20**, **21** and **22** summarize the results of surveys conducted by the Dominion Bureau of Statistics and the Central Mortgage and Housing Corporation.

20.—New Dwelling Units Completed, by Type, 1949-52

(Exclusive of the Yukon and Northwest Territories)

Type	1949	1950	1951	1952
New Construction—	No.	No.	No.	No.
One-family detached	68,422	68,685	60,366	55,967
Two-family detached	7,250	7,376	7,568	5,314
Row or terrace	480	145	585	99
Apartment or flat	10,962	12,540	12,540	11,707
Other	419	269	251	—
Totals, New Construction	**87,533**	**89,015**	**81,310**	**73,087**
Conversions	**3,422**	**2,739**	**3,500**	**3,215**
Grand Totals	**90,955**	**91,754**	**84,810**	**76,302**

21.—New Dwelling Units Completed, by Province, 1951 and 1952

(Exclusive of Conversions)

Province	1951			1952		
	Urban	Rural	Total	Urban	Rural	Total
	No.	No.	No.	No.	No.	No.
Newfoundland	429	512	941	615	516	1,131
Prince Edward Island	68	222	290	42	—	42
Nova Scotia	1,102	840	1,942	877	934	1,811
New Brunswick	447	696	1,143	690	541	1,231
Quebec	22,116	4,570	26,686	17,035	5,372	22,407
Ontario	26,530	5,202	31,732	22,601	4,860	27,461
Manitoba	2,499	1,311	3,810	2,592	550	3,142
Saskatchewan	1,286	740	2,026	2,172	458	2,630
Alberta	4,934	1,123	6,057	5,538	666	6,204
British Columbia	5,976	707	6,683	6,756	272	7,028
Totals	**65,387**	**15,923**	**81,310**	**58,918**	**14,169**	**73,087**

22.—New Dwelling Units Completed, by Metropolitan Area, 1949-52

(Exclusive of Conversions)

Metropolitan Area	1949	1950	1951	1952	1949	1950	1951	1952
	No.	No.	No.	No.	p.c.	p.c.	p.c.	p.c.
St. John's, N'f'ld	...	299	326	402	...	0·3	0·4	0·6
Halifax, N.S	780	708	620	636	0·9	0·8	0·8	0·9
Saint John, N.B	345	332	98	211	0·4	0·4	0·1	0·3
Quebec, Que	1,090	1,473	1,045	1,056	1·2	1·7	1·3	1·4
Montreal, Que	14,394	15,826	16,316	11,500	16·4	17·8	20·1	15·7
Ottawa, Ont	975	1,938	2,343	1,752	1·1	2·2	2·9	2·4
Toronto, Ont	6,712	9,373	13,026	9,576	7·7	10·5	16·0	13·1
Hamilton, Ont	1,909	1,511	1,757	1,877	2·2	1·7	2·2	2·6
London, Ont	1,204	1,325	1,261	1,358	1·4	1·5	1·5	1·9
Windsor, Ont	1,416	1,196	940	818	1·6	1·3	1·2	1·1
Winnipeg, Man	3,228	3,070	2,127	2,088	3·7	3·4	2·6	2·9
Vancouver, B.C	5,831	5,028	4,340	4,249	6·6	5·7	5·3	5·8
Victoria, B.C	1,021	1,166	844	715	1·2	1·3	1·0	1·0
Totals, Metropolitan Areas	**38,905**	**43,245**	**45,043**	**36,238**	**44·4**	**48·6**	**55·4**	**49·7**
Totals, Canada[1]	**87,533**	**89,015**	**81,310**	**73,087**	**100·0**	**100·0**	**100·0**	**100·0**

[1] Exclusive of the Yukon and Northwest Territories.

CHAPTER XIX.—TRANSPORTATION AND COMMUNICATIONS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Canada, nearly 4,000 miles in length from east to west, with the main topographic barriers running in a north-south direction and a relatively small population of 14,781,000 (June 1, 1953, estimate) unevenly distributed along the southern strip of this vast area, presents unusual difficulties from the standpoint of transportation and communication. Different parts of the country are shut off from each other by water barriers such as Cabot Strait and the Strait of Belle Isle separating the Island of Newfoundland from the mainland; by areas of rough, rocky forest terrain such as the region lying between New Brunswick and Quebec and the areas north of Lakes Huron and Superior dividing the industrial region of Ontario and Quebec from the agricultural areas of the Prairie Provinces; and by the mountain barriers between the prairies and the Pacific Coast. To such a country, with a population so dispersed and producing for export as well as for consumption in distant areas of the country itself, cheap transportation and efficient communication systems are necessities of existence.

The value of each of the principal agencies of transportation is appraised in Parts II, III, IV, V and VI of this Chapter and the development of communication facilities in Parts VII, VIII, IX and X. Government control over all such transportation and communication agencies is covered in Part I.

PART I.—GOVERNMENT CONTROL OVER AGENCIES OF TRANSPORTATION AND COMMUNICATION

Section 1.—Government Control Over Agencies of Transportation

The Federal Government's control and regulation of transportation reflects to a considerable extent conditions that date back to the period when the railways possessed a virtual monopoly of transportation within the country. Although federal regulation was a direct outcome of such particular matters as the prevention of unjust discrimination in rates and charges resulting from monopoly conditions in the industry and the safety of transportation facilities and operating practices, yet the railways have been so involved in the public interest that their regulation has been extended to become the most comprehensive of any industry in Canada.

In the meantime, conditions in the transportation industry have been drastically altered by the increasing competition arising from the advance of highway transportation. Unlike the competition that existed between railways in early stages of their development, to-day's competition shows little indication of starting a trend toward consolidation and a return to semi-monopolistic conditions within the industry. Since so many shippers now may provide their own transportation it is evident that a large part of the present competition between common carriers will become a permanent feature of the transportation industry.

It is not surprising that regulations, which under monopoly conditions were not onerous to the railways or were purely nominal in their effect, should be alleged to become increasingly restrictive and hampering under highly competitive conditions. Regulatory authorities are, therefore, faced with the problem of piecemeal revision of their regulations—retaining those where railway monopoly or near-monopoly conditions still make them necessary in the public interest, and relaxing those where competition can be relied on to protect the public in order to enable the railways to meet this competition more effectively. The emphasis has shifted from the regulation of monopoly to the co-ordination of several competing modes of transport.

In 1936, the Federal Department of Railways and Canals became the Department of Transport, unifying in one Department the control and supervision of railways, canals, harbours, marine and shipping, civil aviation, radio and meteorology. Road and highway development is mainly under provincial or municipal control or supervision, although the question of the control of interprovincial highway traffic is currently awaiting the decision of the Imperial Privy Council.

Under the Transport Act, 1938, the Board of Railway Commissioners became the Board of Transport Commissioners and, in addition to its authority over railways, it was given power to regulate certain aspects of water transportation on the Great Lakes, the Mackenzie River and the Yukon River.

The Royal Commission on Transportation, in its Report to Parliament in 1951, recommended a further step in the co-ordination of transport agencies by the creating of a single Board to take over the functions now discharged by the Board of Transport Commissioners, the Air Transport Board and the Canadian Maritime Commission. No action has been taken by Parliament on this recommendation.

The Board of Transport Commissioners for Canada.—An explanation of the situation that led to the introduction of railway regulation by Commission in Canada, as well as other information relating to the organization, procedure, judgments, etc., of the Board of Transport Commissioners is given in the 1940 Year Book, pp. 633-635.

The powers of the Board with regard to rail transport cover almost all aspects of railway activities including corporate organization, location, construction and operation of lines, rates and charges. The railways under the Board's jurisdiction include those operating interprovincially, the Canadian portions of United States lines and those incorporated under federal charter. In addition, the Board assumes jurisdiction over any railway which by Act of Parliament has been declared to be for the general advantage of Canada. In practice, this means that apart from provincially owned railways in Ontario and British Columbia, all railways in Canada are under the Board's authority.

Once constituted, the Board became the logical body in which to entrust the regulation of other transportation and communication agencies. The list has grown steadily and now includes express companies, telegraph companies, telephone companies other than those provincially or municipally controlled, international bridges and tunnels, inland shipping, and the recent addition of pipelines (1949). Regulation of traffic of inland-water carriers on the Great Lakes-St. Lawrence system is limited to package freight and thus excludes the important bulk traffic in grain, coal and ore.

The most recent review of transportation regulation was that undertaken by the Royal Commission on Transportation, under the chairmanship of the Honourable W. F. A. Turgeon, which held extensive hearings in 1949-50 and issued its Report in 1951. (*See* 1952-53 Year Book, p. 741.) Certain of its recommendations have been incorporated into amendments to the Railway Act and other legislation is either in effect or in course of being put into effect. These include: the equalization of freight rates between all regions of Canada, affecting chiefly the class and commodity mileage rates; the requirement that, when transcontinental competitive rates are published, the corresponding rates to intermediate points shall not be more than one-third greater than the former; the payment by the Government of Canada of the cost of maintaining the so-called 'bridge' lines of the transcontinental systems between Sudbury, Capreol and Cochrane on the one hand and Port Arthur and Armstrong on the other, up to the amount of $7,000,000 annually, the amounts so received by the railways to be offset by certain reductions in rates between Eastern and Western Canada; the requirement of a uniform classification of accounts to be prescribed by the Board of Transport Commissioners for the Canadian Pacific Railway and the Canadian National Railways; and the simplification of the capital structure of the Canadian National Railways involving the replacement of Government-held debt by preferred stock.

Certain other recommendations of the Commission have been put into effect or are being studied with a view to putting them into effect at an early date without any legislative amendments. These include the establishment of a uniform carload mixing rule and a general revision of the freight classification.

The Air Transport Board.—A summary of the administrative organization and general functions of the Air Transport Board will be found in the 1952-53 Year Book, pp. 740-741.

The air transport industry, like many another industry, has been profoundly influenced by the recent expansion of the national economy and it has been found necessary, therefore, to modify and adjust the regulatory controls and administrative procedures falling within the Air Transport Board's terms of reference. Since 1950, the Board's regulations and administrative orders have undergone complete revision as the result of a modification of the air-carrier regulatory classification.

Recent modifications in the Board's policy have reflected the use of increasingly larger aircraft coupled with the continued development in importance of route-type transportation services as opposed to fixed-base operations of various types. Policy decisions have given increased prominence to route-type services and, at the same time, some of the controls over specialty activities of various kinds and, later, small-scale charter activities have been relinquished. A considerable number of charter carriers utilizing small aircraft exclusively were freed from tariff-control and statistical-reporting requirements and, at the same time, base-protection privileges afforded by the Board were withdrawn.

The rapid industrial and commercial advancement of the country, highlighted by such developments as the exploitation of iron-ore deposits in northern Quebec, the northward movement of mining interests in the Prairie Provinces and the aluminum undertaking on the northern coast of British Columbia, necessitated the alteration of the basic policies underlying Air Transport Board regulation. Thus, the fundamental principle of single-carrier service over mainline routes is to be modified to permit some degree of competition on a regional basis.

The Air Transport Board has done much to crystallize international charter operations and, in co-operation with United States authorities, has recently created new procedures facilitating non-scheduled air-traffic movements across the international boundary.

Section 2.—Government Control Over Agencies of Communication*

The development and control of radio-communication in Canada from the beginning of the century is outlined in the 1945 Year Book, pp. 644-647.

The present phase of national radio broadcasting in Canada was entered upon in 1936 when, with the passage of the Canadian Broadcasting Act, the Canadian Broadcasting Corporation replaced the Canadian Radio Broadcasting Commission (*see* p. 887). The Act gave the Corporation wide powers in the operation of the system and gave to the Minister of Transport the technical control of all broadcasting stations and the authority to make regulations for the control of any equipment liable to cause interference with radio reception.

With the exception of those matters covered by the Canadian Broadcasting Act of 1936, radio-communications are now regulated under the Radio Act, 1938, and Regulations. In addition, all radio-communication matters are administered in accordance with the provisions of the International Telecommunication Convention and Radio Regulations annexed thereto, as well as such regional agreements as the Inter-American Telecommunications Convention and Inter-American Agreement, and the North American Regional Broadcasting Agreement.

* Revised under the direction of G. C. W. Browne, Controller, Telecommunications Division, Department of Transport, Ottawa.

By Order in Council P.C. 2526, dated June 8, 1948, responsibility for telegraph and telephone services formerly operated by the Federal Department of Public Works was transferred to the Minister of Transport. The general object of these services is to furnish wire communications for outlying and sparsely settled districts where commercial companies do not enter into the field and where the population must receive adequate communication services in the public interest.

A Crown company, Canadian Overseas Telecommunications Corporation was created by Act of Parliament (Dec. 10, 1949) to acquire for public operation all external telecommunication assets in Canada, in keeping with the Commonwealth Telegraph Agreement signed May 11, 1948. This Agreement was designed to bring about the consolidation and strengthening of the radio and cable communication systems of the Commonwealth.

Land-line telegraph and telephone tariffs and tolls charged by companies incorporated by the Federal Government are regulated by the Board of Transport Commissioners under the provisions of the Railway Act.

Tariffs and tolls charged to the public by individuals or companies for radio telephone or telegraph communications within Canada are likewise regulated by the Board of Transport Commissioners under the provisions of the Railway Act and the Regulations made under the Radio Act, 1938.

PART II.—RAILWAYS*

The treatment of rail transportation is divided into three Sections dealing, respectively, with steam railways, electric railways and express companies.

Section 1.—Steam Railways

The steam railway is the most important transportation agency from the standpoint of investment and of traffic handled and the statistical field is more completely covered for this form of transportation than for any other.

Subsection 1.—Mileage and Equipment

Construction was begun in 1835 on the first steam railway in Canada—the short link of 16 miles between Laprairie and St. Johns, Que.—but only 66 miles of railway were in operation by 1850. The first great period of construction was in the 1850's when the Grand Trunk and the Great Western Railways were built as well as numerous smaller lines. The building of the Intercolonial and the Canadian Pacific Railways contributed to another period of rapid expansion in the 1870's and 1880's. In the last period of extensive railway building from 1900 to 1917, the Grand Trunk Pacific, National Transcontinental and Canadian Northern Railways were constructed. For the consolidation and organization of the Canadian National Railway System *see* the 1940 Year Book, pp. 635-638. The Canadian National Railways took over the operation of Newfoundland's railway facilities on Apr. 1, 1949. (*See* the 1952-53 Year Book, p. 743.)

* Revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics. More detailed information is given in the annual reports of the Division. Certain of the financial statistics are compiled in co-operation with the Department of Transport.

1.—Steam-Railway Mileage, 1900-51

NOTE.—Corresponding figures of total mileage of single track for the years 1835-1909 are given in the 1941 Year Book, p. 546.

Total Mileage (Single Track)						Mileage, by Provinces				
Year	Miles in Operation	Year	Miles in Operation	Year	Miles in Operation	Type of Track and Province	1941	1949	1950	1951
	No.		No.		No.		No.	No.	No.	No.
1900....	17,657	1922...	39,358	1937...	42,727	Single—				
1905....	20,487	1923...	39,654	1938...	42,742	N.F'ld	...	705	705	705
1910....	24,731	1924...	40,059	1939...	42,637	P.E.I.	286	286	286	285
1911....	25,400	1925...	40,350	1940...	42,565	N.S.	1,396	1,396	1,397	1,396
1912....	26,840	1926...	40,350	1941...	42,441	N.B.	1,836	1,835	1,835	1,835
						Que.	4,789	4,791	4,795	4,789
1913....	29,304	1927...	40,570	1942...	42,339	Ont.	10,476	10,462	10,458	10,440
1914....	30,795	1928...	41,022	1943...	42,346	Man.	4,854	4,836	4,834	4,834
1915....	34,882	1929...	41,380	1944...	42,336	Sask.	8,777	8,739	8,739	8,739
1916....	36,985	1930...	42,047	1945...	42,352	Alta.	5,747	5,643	5,643	5,647
1917....	38,369	1931...	42,280	1946...	42,335	B.C.	3,883	3,888	3,890	3,889
						Yukon	58	58	58	58
1918....	38,252	1932...	42,409	1947...	42,322	In U.S.A.	339	339	339	339
1919[1]....	38,329	1933...	42,336	1948...	42,248	Totals, Single	42,441	42,978	42,979	42,956
1919[2]....	38,495	1934...	42,270	1949...	42,978	Second	2,499	2,494	2,498	2,487
1920....	38,805	1935...	42,916	1950...	42,979	Industrial	1,551	1,925	1,979	2,068
1921....	39,191	1936...	42,552	1951...	42,956	Yard and sidings	10,210	10,437	10,541	10,639
						Grand Totals	**56,701**	**57,834**	**57,997**	**58,150**

[1] As at June 30 for this and previous years. [2] As at Dec. 31 for this and later years.

There has been a tendency for railway mileages to decline slightly during the past decade because of the abandonment of unprofitable lines. However, three important new lines are currently nearing completion: the Quebec, North Shore and Labrador, about 360 miles in length; the 150-mile Sherridon-Lynn Lake branch line in northern Manitoba; and the 46-mile Terrace-Kitimat line in British Columbia. Of the 42,956 miles of single track operated in 1951, over 50 p.c. were Canadian National Railway lines.

Rolling-Stock.—The figures in Table 2 may be supplemented by the statement that, between 1920 and 1951, the average capacity of box cars increased from 34·779 tons to 44·166 tons, of flat cars from 33·459 tons to 43·269 tons, of coal cars from 43·404 tons to 59·579 tons, and of all freight cars from 35·141 tons to 45·961 tons. The average tractive power of the locomotive increased from 31,112 lb. in 1920 to 42,488 lb. in 1951. The steady growth in dieselization is illustrated by the advance from 54 units at the end of 1947 to 574 units at the end of 1951.

2.—Rolling-Stock of Steam Railways, as at Dec. 31, 1947-51

Rolling-Stock	1947	1948	1949[1]	1950	1951
Locomotives	No.	No.	No.	No.	No.
Steam—					
Coal burning	4,364	4,340[r]	4,351	3,730	3,553
Oil burning				542	555
Diesel electric	54	148[r]	246	350	574
Electric	33	33[r]	30	33	33
Totals, Locomotives	**4,451**	**4,521[r]**	**4,627**	**4,655**	**4,715**

For footnote, *see* end of table.

2.—Rolling-Stock of Steam Railways, as at Dec. 31, 1947-51—concluded

Rolling-Stock	1947	1948	1949[1]	1950	1951
Passenger Cars	No.	No.	No.	No.	No.
First class	1,923	1,953	1,996	2,043	2,169
Second class	183	172[r]	177	168	
Combination	361	344[r]	337	337	339
Immigrant	355	353	347	333	315
Dining	185	186[r]	195	196	196
Parlour	173	175	175	176	153
Sleeping	762	761[r]	775	795	803
Baggage, express and postal	1,619	1,677	1,766	1,808	2,201
Motor-cars	64	60	54	52	49
Other	405	418[r]	402	430	141
Totals, Passenger Cars	**6,030**	**6,099[r]**	**6,224**	**6,338**	**6,366**
Freight Cars					
Box	119,589	123,539	124,651	122,419	127,714
Flat	10,453	10,326[r]	10,951	11,263	11,062
Stock	6,277	6,115	6,648	6,655	6,509
Coal	21,618	23,451[r]	25,658	25,343	25,412
Tank	354	353[r]	454	469	460
Refrigerator	6,673	7,240	7,921	8,050	8,231
Other	1,487	1,382	1,331	1,398	1,337
Totals, Freight Cars	**166,451**	**172,406[r]**	**177,614**	**175,597**	**180,725**

[1] Includes, for the first time, 46 steam and 3 diesel locomotives, 98 passenger cars and 1,004 freight cars in service in Newfoundland.

Subsection 2.—Finances

The tables in this Subsection deal with capital liability, capital investment, earnings, operating expenses, employees and their earnings and government aid to steam railways.* Financial statistics of government-owned railways are given in Subsection 4. Other statistics of revenue in relation to traffic are included in Table 9.

Capital Liability.—Table 3 shows capital liability of steam railways from 1932. The reduction after 1937 was brought about by the Canadian National Capital Revision Act, explained in the 1939 Year Book, p. 644.

* Statistics for individual railways are given in DBS annual report, *Statistics of Steam Railways of Canada.*

3.—Capital Liability[1] of Steam Railways, 1932-51

NOTE.—Figures for the years 1876 to 1925, inclusive, are given in the 1927-28 Year Book, p. 649; those for 1926-31 in the 1947 edition, p. 662.

Year	Stocks	Funded Debt	Total	Year	Stocks	Funded Debt	Total
	$	$	$		$	$	$
1932...	1,437,489,430	2,934,182,332	4,371,671,762	1942...	1,578,254,765	1,793,579,270	3,371,834,035
1933...	1,438,834,552	2,951,690,468	4,390,525,020	1943...	1,614,936,131	1,741,664,036	3,356,600,167
1934...	1,437,334,152	2,966,505,594	4,403,839,746	1944...	1,636,064,822	1,707,801,676	3,343,866,498
1935...	1,433,849,530	3,026,414,779	4,460,264,309	1945...	1,631,973,055	1,701,786,899	3,333,759,954
1936...	1,425,193,791	3,062,411,720	4,487,605,511	1946...	1,624,753,709	1,665,844,138	3,290,597,847
1937...	1,839,619,361	1,534,450,789	3,374,070,150	1947...	1,623,607,219	1,685,010,672	3,308,617,891
1938...	1,836,882,650	1,568,269,672	3,405,152,322	1948...	1,578,057,474	1,672,282,030	3,250,339,504
1939...	1,834,329,209	1,533,373,521	3,367,702,730	1949...	1,576,734,292	1,692,898,968	3,269,633,260[2]
1940...	1,762,473,489	1,617,561,683	3,380,035,172	1950...	1,649,462,088	1,826,346,222	3,475,808,310[2]
1941...	1,697,545,699	1,699,942,865	3,397,488,564	1951...	1,646,205,772	1,925,488,160	3,571,693,932[2]

[1] Does not include Canadian railway capital owned by Canadian railways. [2] Exclusive of approximately $40,000,000 railway debt in Newfoundland assumed in 1949.

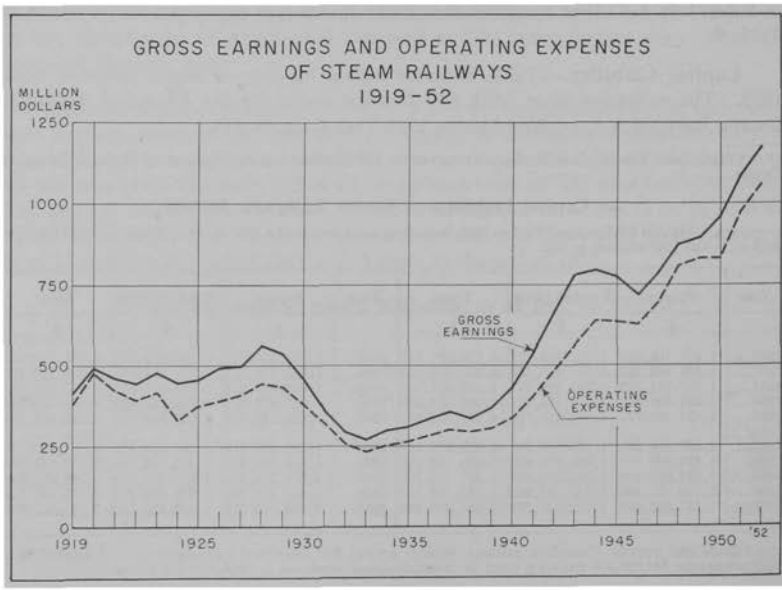
Capital Investment.—The increase of $95,885,622 in capital liability during 1951, as shown in Table 3, compares with an increase in investments in road and equipment of $156,254,921, as shown in Table 4, and reflects improvements made during the year. The investment account in recent years has been affected by write-offs for lines abandoned, transfers of property to other Government Departments, etc., as well as by high earnings during the war years.

4.—Capital Invested in Road and Equipment of Steam Railways, 1947-51

NOTE.—Expenditures for Newfoundland are included from Apr. 1, 1949.

Investment	1947	1948	1949	1950	1951
	$	$	$	$	$
New Lines—					
Road	1,071,411	1,415,132	1,428,972	6,285,165	6,301,717
Equipment	465,476	66,694	—	—	1,552,117
General	—	—	33,409	50,634	53,901
Totals	1,536,887	1,481,826	1,462,381	6,335,799	7,907,735
Additions and Betterments—					
Road	14,774,509	21,725,599	25,643,350	25,523,673	42,260,214
Equipment	39,848,412	85,736,595	75,393,226	52,666,164	107,478,591
General	48,404	Cr. 59,483	Cr. 7,175	54,058	Cr. 70,318
Undistributed	Cr. 450	Cr. 2,984	Cr. 3,494	3,399	Cr. 2,381
Totals	54,670,875	107,399,727	101,025,907	78,247,294	149,666,106
Undistributed[1]	Cr. 871,376	79,157,303	261,234	Cr. 2,645,822	Cr. 1,318,920
Totals, Investments as at Dec. 31	**3,411,979,297**	**3,600,018,153**	**3,702,767,675**	**3,784,704,946**	**3,940,959,867**

[1] Details of this item are given in DBS annual report, *Statistics of Steam Railways of Canada.*



Earnings and Expenses.—The operating ratio, or ratio of expenditure to revenue, of Canadian railways increased from about 70 p.c. to over 90 p.c. between 1917 and 1920 and remained high thereafter, owing largely to declining revenue without corresponding reductions in expenses during the depression period. The period from 1938 to 1943 showed a sharp decline in this ratio, caused primarily by increased freight traffic occasioned by World War II and a subsequent acceleration in gross earnings. A steadily rising trend since 1943 has been attributed to higher costs for materials and labour, although a decided reversal was shown for 1950 despite the nine-day strike in late August. Expenses for 1951 show a considerable increase over the previous year accounted for by the wage increases received as a result of the strike settlement.

5.—Earnings and Operating Expenses of Steam Railways, 1942-51

NOTE.—Gross earnings and operating expenses for the years 1875 to 1914 are given in the 1916-17 Year Book, p. 434; those for 1915-25 in the 1941 Year Book, p. 550; for 1926-39 in the 1942 Year Book, p. 585; and for 1940-41 in the 1951 Year Book, p. 722. Figures for Newfoundland are included from Apr. 1, 1949.

Year	Gross Earnings	Operating Expenses	Ratio of Expenses to Receipts	Per Mile of Line			Freight Train Revenue per Freight Train Mile	Passenger Train Revenue per Passenger Train Mile
				Gross Earnings	Operating Expenses	Net Earnings		
	$	$	p.c.	$	$	$	$	$
1942.....	663,610,570	485,783,584	73·20	15,659	11,463	4,196	6·53	2·93
1943.....	778,914,565	560,597,204	71·98	18,398	13,241	5,157	6·98	3·68
1944.....	796,636,786	634,774,021	79·68	18,861	15,029	3,832	6·91	3·82
1945.....	774,971,360	631,497,562	81·49	18,331	14,937	3,394	6·92	3·70
1946.....	718,501,764	623,529,472	86·79	16,967	14,724	2,243	6·83	3·21
1947.....	785,177,920	690,821,047	87·98	18,556	16,326	2,230	7·38	3·01
1948.....	875,832,290	808,126,455	92·27	20,702	19,102	1,600	8·38	2·92
1949.....	894,397,264	831,456,446	92·96	20,866	19,398	1,469	8·66	3·10
1950.....	958,985,751	833,726,562	86·94	22,311	19,397	2,914	9·45	3·19
1951.....	1,088,583,789	977,577,062	89·80	25,348	22,763	2,585	10·05	3·36

6.—Distribution of Operating Expenses of Steam Railways, 1948-51

Item	1948		1949[1]		1950		1951	
	$	p.c.	$	p.c.	$	p.c.	$	p.c.
Way and structures.....	159,963,352	19·8	164,891,364	19·8	163,998,704	19·7	202,490,988	20·7
Equipment.....	174,473,389	21·6	186,067,026	22·4	189,507,197	22·7	224,184,671	22·9
Traffic.....	16,801,286	2·1	17,612,056	2·1	18,591,724	2·2	19,958,080	2·1
Transportation.....	403,804,530	49·9	406,033,445	48·8	403,994,207	48·5	468,653,237	47·9
General and miscellaneous.	53,083,898	6·6	56,852,555	6·9	57,634,730	6·9	62,290,086	6·4
Totals.....	**808,126,455**	**100·0**	**831,456,446**	**100·0**	**833,726,562**	**100·0**	**977,577,062**	**100·0**

[1] Includes Newfoundland railways from Apr. 1.

Employment and Salaries and Wages.—The number of railway employees increased in 1951 by 58 p.c. over 1939 while salaries and wages increased by about 212 p.c. Maintenance of equipment employees, on hourly rates, worked about 2 p.c. more hours and were paid 101 p.c. more wages per hour; average hours worked

by transportation employees were slightly less than the 1939 average and their pay was increased by about 94 p.c. These figures reflect the increases received in the strike settlement in August 1950 and the conversion to the five-day week in 1951.

7.—Steam Railway Employees and Salaries and Wages, 1942-51

NOTE.—Figures for the years 1912-39 are given in the 1941 Year Book, p. 551; for 1940-41 in the 1951 edition, p. 723. Figures for Newfoundland included from Apr. 1, 1949.

Year	Employees[1]	Total Salaries and Wages[1]	Average Salaries and Wages	Ratio of Operating Salaries and Wages (Chargeable to Operating Expenses) to—	
				Gross Earnings	Operating Expenses
	No.	$	$	p.c.	p.c.
1942	157,740	291,416,755	1,847	39·6	54·1
1943	169,663	323,801,645	1,908	37·8	52·5
1944	175,095	372,064,613[2]	2,125	42·9	53·8
1945	180,603	371,814,379	2,059	43·8	53·7
1946	180,383	396,856,901	2,200	50·2	57·8
1947	184,415	429,843,142	2,331	49·9	56·7
1948	189,963	512,054,795	2,696	53·0	57·5
1949	192,366	523,453,375	2,721	52·9	56·9
1950	190,385	523,008,515	2,747	49·8	57·2
1951	204,025	624,682,754	3,062	52·0	58·0

[1] Figures include employees or wages for "outside operations" amounting to from 3 p.c. to 6 p.c. of total employees and from 2 p.c. to 5 p.c. of total salaries and wages. [2] Includes approximately $10,000,000 in wages earned in 1943.

Government Aid to Railways.—In order that the private railways of Canada might be constructed in advance of settlement as colonization roads or through sparsely settled districts where little traffic was available, it was necessary for Federal and Provincial Governments and even for municipalities to extend some form of assistance. The form of aid was, generally, a bonus of a fixed amount per mile of railway constructed and, in the early days, grants of land were also made other than for right-of-way.

As the country developed, the objections to the land-grant method became more apparent and aid was given more frequently in the form of a cash subsidy per mile of line, a loan or a subscription to the shares of the railway. Guarantees of debenture issues were given in a later period and, since the formation of the Canadian National Railways, all debenture issues of that System, except those for rolling-stock, have been guaranteed by the Federal Government. No new land grants or cash subsidies have been advanced by either the Federal or Provincial Governments since 1939. The situation, as it existed at Dec. 31, 1940, is set out in the 1942 Year Book, pp. 587-588.

During the era of railway expansion before 1918, provincial governments guaranteed the bonds of some railway lines that afterwards were incorporated in the Canadian National Railway System. These bonds as they mature or are called are paid off by the Canadian National Railways, in large measure, through funds raised by the issue of new bonds with Federal Government guarantee. Bonds guaranteed by the Governments of Ontario, Manitoba, Saskatchewan, Alberta and British Columbia have been eliminated in this manner in recent years.

8.—Railway Bonds Guaranteed by Federal and Provincial Governments, as at Dec. 31, 1951

Government	Canadian National	Other Railways	Total
	$	$	$
Federal Government	537,577,152	—	537,577,152
Government of New Brunswick	—	465,000	465,000
Totals	**537,577,152**	**465,000**	**538,042,152**[1]

[1] Does not include $6,984,883 perpetual debenture stock and guaranteed stock of the former Grand Trunk Railway, now part of the Canadian National Railway System, on which interest and dividends are guaranteed by the Federal Government.

Subsection 3.—Traffic

Passenger and Freight Traffic.—Table 9 shows the passenger and freight statistics for all steam railways for the years 1942-51. A separate analysis is given at pp. 798-799 of the operations and traffic of the Canadian National Railways, since this System is controlled by the Federal Government.

9.—Statistics of Passenger and Freight Services and Revenue Receipts, 1942-51

NOTE.—Figures for 1910-41 are given in the corresponding table of previous Year Books.

Year	PASSENGER				
	Revenue Passenger-Train Miles[1]	Passenger-Train Car Miles[1]	Passengers Carried[2]	Passengers Carried One Mile	Passengers Carried One Mile per Mile of Line
	No.	No.	No.	No.	No.
1942	43,271,994	395,118,691	47,596,602	4,989,295,894	117,728
1943	45,745,039	433,828,200	57,175,840	6,525,064,000	154,122
1944	46,575,706	450,042,986	60,335,950	6,873,188,000	162,729
1945	47,067,607	447,822,527	53,407,845	6,380,155,000	150,917
1946	45,700,856	415,890,589	43,405,177	4,648,558,000	109,773
1947	45,367,725	398,646,636	40,941,387	3,732,777,000	88,218
1948	46,101,568	410,689,409	38,279,981	3,477,273,000	82,193
1949	45,680,009	407,421,229	34,883,803	3,193,174,337	74,497
1950[3]	43,744,164	392,800,555	31,139,092	2,816,154,232	65,519
1951[3]	46,200,947	415,178,734	30,995,604	3,110,240,504	72,424
	Average Receipts per Passenger Mile	Average Receipts per Passenger	Average Passenger Journey	Average Passengers per Train	Passenger-Train Revenue per Passenger-Train Mile
	cts.	$	miles	No.	$
1942	1·83	1·92	105	115	2·93
1943	1·90	2·16	114	143	3·68
1944	1·92	2·18	114	148	3·82
1945	1·96	2·34	120	136	3·70
1946	2·15	2·30	107	102	3·21
1947	2·35	2·14	91	82	3·01
1948	2·40	2·18	91	75	2·92
1949	2·66[3]	2·44[3]	92[3]	69	3·05
1950[3]	2·79	2·52	90	64	3·19
1951[3]	2·86	2·87	100	67	3·36

For footnotes, *see* end of table, p. 792.

9.—Statistics of Passenger and Freight Services and Revenue Receipts, 1942-51—concluded

Year	Freight				
	Revenue Freight-Train Miles	Revenue Freight-Train Car Miles[4]	Freight Carried[5]	Freight Carried One Mile	Freight Carried One Mile per Mile of Line
	No.	No.	tons	tons	tons
1942	77,080,637	2,968,594,473	134,674,537	56,153,953,000	1,325,011
1943	81,443,279	3,132,419,669	153,314,264	63,915,074,000	1,509,674
1944	83,564,629	3,297,475,933	155,326,332	65,928,078,000	1,560,908
1945	80,712,589	3,189,311,345	147,348,566	63,349,095,000	1,498,465
1946	77,794,963	2,973,411,653	139,256,125	55,310,308,000	1,306,121
1947	82,377,565	3,176,646,828	152,855,820	60,143,035,000	1,421,384
1948	83,398,617	3,120,704,440	154,932,804	59,080,323,000	1,396,500
1949	81,648,053	3,091,633,447	142,719,431[2]	56,338,230,000[2]	1,314,379[2]
1950[3]	81,397,148	3,093,946,961	144,218,319	55,537,900,000	1,292,120
1951[3]	87,181,640	3,384,341,192	161,260,521	64,300,418,000	1,497,274

Year	Freight Receipts per Ton per Mile	Receipts per Ton Hauled	Average Length of Freight Haul	Average Train Load, Revenue Tons	Average Load per Loaded Car Mile	Revenue per Freight-Train Mile
	cts.	$	miles	tons	tons	$
1942	0·896	3·74	417	729	30·71	6·53
1943	0·890	3·71	417	785	32·75	6·98
1944	0·876	3·72	424	789	32·70	6·91
1945	0·882	3·79	430	785	32·57	6·92
1946	0·961	3·82	397	711	29·95	6·83
1947	1·009	3·98	393	730	30·23	7·38
1948	1·183	4·51	381	708	30·15	8·38
1949	1·256[2]	4·96[2]	395[2]	689	29·65	8·62
1950[3]	1·385	5·33	385	682	28·91	9·45
1951[3]	1·362	5·43	399	738	30·61	10·05

[1] Includes express, baggage, mail and other cars. [2] Duplications included. [3] Includes Newfoundland. [4] Includes caboose miles but excludes miles made in passenger and non-revenue trains. [5] Duplications eliminated; *see* Table **10** for details of freight carried.

Commodities Hauled.—Revenue freight carried by the railways in 1951 showed an increase of 10·6 p.c. over 1950 and exceeded the previous peak volume reached in 1944. The average haul increased from 385 miles in 1950 to 399 miles in 1951 with a corresponding increase in ton miles. The principal commodities showing increase over 1951 were wheat, coke, ores and concentrates, sand and gravel and stone. Lumber, timber and pulpwood moved in heavier volume while most items in the manufactures and miscellaneous group registered improvement. During the war years the intransit movement of war supplies, motor-vehicles, and gasoline and petroleum products between United States points over Canadian lines was particularly heavy and, with wheat, was responsible for the 1944 record.

10.—Commodities Hauled as Freight on Steam Railways, 1947-51

NOTE.—In this table duplications are eliminated, i.e., the same freight handled by two or more railways is counted only once. The statistics do not include the United States lines of the Canadian National Railways, but the link of the Canadian Pacific Railway line across Maine, U.S.A., is included, as are the Canadian sections of United States railways. Figures for Newfoundland are included from Apr. 1, 1949.

Commodity Group and Product	1947	1948	1949	1950	1951
	tons	tons	tons	tons	tons
Agricultural Products					
Wheat	12,888,800	11,221,579	12,861,460	10,180,638	15,444,631
Oats	2,929,297	2,356,099	2,523,349	1,998,361	2,679,391
Other grain	4,836,652	4,514,027	4,195,518	3,430,079	4,703,796
Flour	2,929,758	2,302,510	2,012,513	1,996,281	2,222,861
Other mill products	3,662,558	2,853,657	2,463,699	2,479,974	2,565,747
Other agricultural products	4,833,258	4,408,579	4,233,782	4,290,525	4,122,972
Totals, Agricultural Products	**32,080,323**	**27,656,451**	**28,290,321**	**24,375,858**	**31,739,398**
Animal Products					
Live stock	1,059,086	1,153,196	976,565	907,046	759,169
Meats and other edible packing-house products	960,355	942,278	894,266	764,040	815,267
Other animal products	873,652	793,995	668,644	631,139	621,891
Totals, Animal Products	**2,893,593**	**2,889,469**	**2,539,475**	**2,302,225**	**2,196,327**
Mine Products					
Coal, anthracite	5,001,377	5,675,849	4,099,390	4,481,323	4,110,389
Coal, bituminous	14,705,645	16,587,478	13,946,461	15,058,571	14,505,205
Coal, sub-bituminous	2,541,982	2,426,229	2,340,378	2,400,271	2,151,652
Coal, lignite	1,223,106	1,272,774	1,521,762	1,787,973	1,802,473
Coke	1,967,287	2,141,063	1,805,620	1,899,872	2,223,652
Ores and concentrates	9,901,768	11,187,732	11,715,952	12,312,946	13,284,529
Base bullion, matte, pig and ingot (non-ferrous metals)	1,291,728	1,457,668	1,330,464	1,427,581	1,446,910
Sand and gravel	3,210,425	3,556,854	3,118,677	3,582,966	3,900,617
Stone (crushed, ground, broken)	2,942,111	2,989,724	2,629,652	2,788,301	3,486,464
Other mine products	8,439,367	9,437,571	9,233,094	10,008,616	9,143,215
Totals, Mine Products	**51,224,796**	**56,732,942**	**51,741,450**	**55,748,426**	**56,055,106**
Forest Products					
Logs, posts, poles, piling	1,639,274	1,582,800	1,439,447	1,350,064	1,832,259
Cordwood and other firewood	799,174	623,070	457,848	440,306	355,213
Pulpwood	7,860,080	8,995,154	6,555,770	5,521,412	9,970,231
Lumber, timber, box, crate and cooperage material	7,797,668	7,514,232	6,418,854	7,778,428	7,867,659
Other forest products	740,954	727,113	724,479	740,129	810,555
Totals, Forest Products	**18,837,150**	**19,442,369**	**15,596,398**	**15,830,339**	**20,835,917**
Manufactures and Miscellaneous					
Gasoline and petroleum products	5,585,708	5,670,944	5,806,468	6,226,127	6,722,065
Iron and steel (bar, sheet, structural pipe)	2,808,025	2,989,652	2,720,250	2,633,274	3,501,728
Automobiles, trucks and parts	2,210,709	2,162,322	2,102,622	2,517,930	2,456,566
Newsprint	3,825,252	3,809,313	3,747,561	3,844,113	4,056,679
Wood-pulp	2,217,307	2,311,901	1,791,868	2,311,057	2,750,103
Other manufactures and miscellaneous	26,790,201	27,160,763	24,770,961	25,099,776	27,725,675
Merchandise (all L.C.L. freight)[1]	4,382,756	4,106,678	3,612,057	3,329,200	3,220,957
Totals, Manufactures and Miscellaneous	**47,819,958**	**48,211,573**	**44,551,787**	**45,961,477**	**50,433,773**
Grand Totals	**152,855,820**	**154,932,804**	**142,719,431**	**144,218,319**	**161,260,521**

[1] Less than carload lots.

Railway Accidents.—In Tables 11 and 12 all passengers injured are included in the figures but, for employees, only injuries are recorded that keep the employee from his work for at least three days during the ten days following the accident.

11.—Passengers, Employees and Others Killed or Injured on Steam Railways, 1942-51

NOTE.—Figures for 1919-41 are given in the corresponding tables of previous Year Books beginning with the 1922-23 edition. Figures for Newfoundland are included from Apr. 1, 1949.

Year	Passengers		Employees		Others[1]		Totals	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
	No.	No.	No.	No.	No.	No.	No.	No.
1942	44	779	120	10,008	279	743	443	11,530
1943	9	546	130	12,667	202	706	341	13,919
1944	8	562	103	13,187	242	630	353	14,379
1945	10	499	98	13,147	246	705	354	14,351
1946	3	526	105	11,406	219	706	327	12,638
1947	35	464	103	10,620	262	755	400	11,839
1948	15	351	99	9,980	271	825	385	11,156
1949	1	316	71	8,794	257	824	329	9,934
1950	18	297	67	8,108	232	744	317	9,149
1951	5	221	84	7,651	301	723	390	8,595

[1] Includes trespassers walking along tracks, stealing rides, etc., and persons crossing tracks at level crossings.

Accidents tabulated include all those in which railway trains were involved and accidents on railway property. The classification of accidents used in the Dominion Bureau of Statistics vital statistics treats collisions between motor-vehicles and trains as motor-vehicle accidents; provincial statistics also class them as motor-vehicle accidents and, consequently, adjustments should be made when compiling total accidental deaths of all kinds or comparing results of accidents of different kinds, such as train and motor-vehicle.

12.—Persons Killed or Injured on Steam Railways, by Specified Cause, 1949-51

NOTE.—Figures for Newfoundland included from Apr. 1, 1949.

Class of Person and Description of Accident	1949		1950		1951	
	Killed	Injured	Killed	Injured	Killed	Injured
	ACCIDENTS RESULTING FROM MOVEMENT OF TRAINS, LOCOMOTIVES OR CARS					
	No.	No.	No.	No.	No.	No.
Class of Person—						
Passengers	1	268	18	262	4	191
Employees	52	2,418	54	2,244	69	2,341
Trespassers	85	101	81	82	77	83
Non-trespassers	162	522	146	484	209	493
Postal clerks, expressmen, etc.	2	16	—	26	3	19
Totals	**302**	**3,325**	**299**	**3,098**	**362**	**3,127**
Description of Accidents (Employees and Passengers only)—						
Coupling and uncoupling	3	118	2	103	7	103
Collisions	13	207	37	263	21	166
Derailments	7	47	5	35	7	54
Locomotives or cars breaking down	—	2	1	3	1	4
Falling from trains or cars	4	124	5	100	5	157
Getting on or off trains	2	619	2	507	3	542
Struck by trains, etc.	18	53	15	51	21	53
Overhead and other obstruction	1	29	1	28	—	32
Other causes	5	1,487	4	1,416	8	1,421
Totals	**53**	**2,686**	**72**	**2,506**	**73**	**2,532**

12.—Persons Killed or Injured on Steam Railways, by Specified Cause, 1949-51
—concluded

Class of Person	1949		1950		1951	
	Killed	Injured	Killed	Injured	Killed	Injured
	All Other Accidents					
	No.	No.	No.	No.	No.	No.
Class of Person—						
Stationmen	3	772	1	756	1	773
Shopmen	4	2,440	6	2,218	4	1,885
Trackmen	11	2,434	2	2,266	7	1,993
Other employees	1	730	4	624	3	659
Passengers	—	48	—	35	1	30
Others	8	185	5	152	12	128
Totals	**27**	**6,609**	**18**	**6,051**	**28**	**5,468**

Subsection 4.—The Canadian National Railway System

A description of the origin and growth of Government-owned railways in Canada is given in the 1926 Year Book, pp. 601-603, in an article recording their consolidation under the Canadian National Railways in 1923. The Hudson Bay Railway is a direct liability of the Federal Government and has been operated by the Canadian National Railways for the Government since Apr. 1, 1935, but is not included in the data for Canadian National Railways; to Mar. 31, 1951, the total capital expenditure on this account was $33,466,861, exclusive of the expenditure of $6,240,096 on the terminal at Port Nelson, Man., and a cumulative loss of $5,208,585 on the Railway operation. The operating deficit for the year ended Mar. 31, 1951, was $228,420.

On Apr. 1, 1949, the Canadian National Railways took over the operation of the Newfoundland Railway embracing its 705 miles of line, 14 coastal steamers and a dry dock at St. John's; communications services of the Newfoundland Government Posts and Telegraphs were also transferred for operation to the Canadian National Railways. (The Newfoundland Hotel was consigned towards the end of the year.)

Effective Jan. 1, 1950, the Canadian National Railways took over the operation of the Témiscouata Railway which was purchased by the Government in 1949, thus adding about 69 miles of line.

The Quebec Railway, Light and Power Company (Montmorency Division), having 25·7 miles of single track, was purchased and incorporated as part of the System, Nov. 1, 1951.

The major portion of Federal Government investment in railways consists of construction costs of the Intercolonial System, the National Transcontinental Railway and the Hudson Bay Railway, and the purchase price of small railways in the eastern provinces.

In view of the interest in the publicly owned railway system, the following salient statistics are presented showing the assets, debt, operating accounts, mileage and traffic for the Canadian National Railway System. More detail is available from DBS report, *Canadian National Railways, 1923-52.*

13.—Assets of the Canadian National Railway System, as at Dec. 31, 1922 and 1952

Account	Dec. 31, 1922	Dec. 31, 1952	Increase or Decrease
	$	$	$
Investments—			
Road and equipment	1,765,323,644	2,367,435,701	+602,112,057
Improvements on leased railway property	1,492,123	1,170,841	−321,282
Sinking funds	4,629,855	—	−4,629,855
Deposits in lieu of mortgaged property sold	6,171,808	4,582,660	−1,589,148
Miscellaneous physical property	34,767,914	68,231,230	+33,463,316
Affiliated companies	24,253,323	51,256,597	+27,003,274
Other investments	5,789,464	796,428	−4,993,036
Totals, Investments	**1,842,428,131**	**2,493,473,457**	**+651,045,326**
Current Assets—			
Cash	14,651,422	15,361,916	+710,494
Special deposits	6,139,435	4,627,313	−1,512,122
Loans and bills receivable	11,600	—	−11,600
Traffic and car service, balances receivable	2,528,622	—	−2,528,622
Net balances receivable from agents and conductors	5,386,673	27,324,194	+21,937,521
Miscellaneous accounts receivable	16,857,420	20,854,458	+3,997,038
Materials and supplies	41,408,999	102,509,769	+61,100,770
Interest and dividends receivable	377,003	54,562	−322,441
Rents receivable	112,269	—	−112,269
Other current assets	106,775	6,592,542	+6,485,767
Totals, Current Assets	**87,580,218**	**177,324,754**	**+89,744,536**[1]
Deferred Assets—			
Working fund advances	166,847	509,855	+343,008
Insurance and other funds	352,488	12,843,050	+12,490,562
Pension contract fund	—	72,950,000	+72,950,000
Other deferred assets	11,805,962	2,216,508	−9,589,454
Totals, Deferred Assets	**12,325,297**	**88,519,413**	**+76,194,116**
Unadjusted Debits—			
Rents and insurance premiums paid in advance	322,059	928,168	+606,109
Discount on capital stock	634,960	—	−634,960
Discount on funded debt	1,919,635	3,045,818	+1,126,183
Other unadjusted debits	12,820,903	4,722,950	−8,097,953
Totals, Unadjusted Debits	**15,697,557**	**8,696,936**	**−7,000,621**
Grand Totals	**1,958,031,203**	**2,768,014,560**	**+809,983,357**

[1] Increase in current liabilities $6,526,863.

Capital Structure and Debt.—Major changes resulting from the Canadian Railways Capital Revision Act, 1952, were:—

(1) $736,385,405 of interest-bearing debt to the Federal Government, which represented 50 p.c. of the borrowed capital outstanding on Dec. 1, 1951, was exchanged for Canadian National Railway Company 4 p.c. *non-cumulative preferred stock*. Dividends on the 4 p.c. preferred stock must be paid to the extent that earnings are available after income tax has been paid.

(2) Outstanding loans from the Federal Government to the amount of $100,000,000 were converted into a 3¾ p.c. 20-year debenture which is to mature Jan. 1, 1972. No interest is payable on this debenture for the first 10 years.

(3) Capital stock of the Canadian National Securities Trust in the amount of $378,518,135 was transferred to the Canadian National Railway Company in exchange for a like amount of the Company's capital stock.

(4) In each of the years 1952 to 1960, inclusive, the Federal Government will purchase 4 p.c. preferred stock in amounts equal to 3 p.c. of the annual gross revenues, these funds to be used by the Railway for financing capital improvements.

As a consequence of these adjustments, the proportion of total capitalization represented by equity capital in shareholder's account was raised from 34·5 p.c. at Dec. 31, 1951, to 67·2 p.c. at Jan. 1, 1952, and the proportion of borrowed

capital was correspondingly reduced. It will be noted that these percentages are calculated exclusive of the $4,518,890 of capital stock of subsidiary companies which was held by the public on the above dates.

The following statement shows the effect of the Act on the capitalization of the system.

CAPITALIZATION OF CANADIAN NATIONAL RAILWAYS

Item	Balance at Dec. 31, 1951	Year 1952 Adjustments Effective Jan. 1, 1952, under Capital Revision Act, 1952	Year 1952 Current Transactions	Balance at Dec. 31, 1952
	$	$	$	$
EQUITY CAPITAL—				
Capital stock of Canadian National Railway Company	18,000,000	378,518,135[1]	—	396,518,135
Capital stock of the Canadian National Railways Securities Trust	378,518,135	−378,518,135[1]	—	—
4 p.c. preferred stock of Canadian National Railway Company	—	736,385,405[2]	18,486,540	754,871,945
Capital investment of Government of Canada in the Canadian Government Railways	379,877,514	—	−195,270	379,682,244
Government of Canada — Shareholders' Account	776,395,649[2]	736,385,405	18,291,270	1,531,072,324[3]
Per cent of capitalization	34·5	—	—	64·75
BORROWED CAPITAL—				
Funded debt	615,197,035	—	−9,702,206	605,494,829
Government of Canada loans and debentures	857,573,774	−736,385,405[2]	106,866,796	228,055,165
Totals, Borrowed Capital	1,472,770,809	−736,385,405	97,164,590	833,549,994
Per cent of capitalization	65·5	—	—	35·25
TOTALS, CAPITALIZATION	2,249,166,458[3]	—	115,455,860	2,364,622,318[3]

[1] The capital stock of the Securities Trust, previously owned by the Government of Canada, was transferred to the Canadian National Railway Company in consideration for a like amount of capital stock of the National Company. [2] The 4 p.c. preferred stock is represented by shares having a par value of one dollar each, in respect of which non-cumulative dividends shall, from time to time, be paid to the extent that earnings are available for distribution in any year. The amount issued under the adjustment authorized by the Capital Revision Act, and for which a like amount of Government of Canada loans have been cancelled, is equal to 50 p.c. of the borrowed capital at Dec. 31, 1951. [3] Excludes shares of subsidiary companies owned by public amounting to $4,518,890 for 1951 and $4,516,490 for 1952.

14.—Capital Structure of the Canadian National Railway System, as at Dec. 31, 1943-52

NOTE.—Information given in greater detail in DBS report, *Canadian National Railways, 1923-52*.

At Dec. 31—	Shareholders' Capital		Funded Debt Held by Public		Government Loans and Appropriations—Active Assets in Public Accounts	Totals
	Government of Canada Shareholders' Account	Capital Stock Held by Public	Guaranteed by Federal and Provincial Governments	Unguaranteed		
	$	$	$	$	$	$
1943	732,295,434	4,770,140	688,076,981	56,155,492	554,095,746	2,035,393,793
1944	754,695,486	4,669,840	579,287,482	50,166,424	661,875,853	2,050,695,085
1945	777,326,528	4,643,040	528,275,246	44,904,751	690,973,594	2,046,123,159
1946	776,018,575	4,635,440	488,772,318	41,650,680	718,537,286	2,029,614,299
1947	774,195,901	4,570,940	538,759,177	44,100,584	689,470,349	2,051,096,951
1948	774,242,649	4,567,540	492,437,507	91,795,151	760,494,825	2,123,537,672
1949	774,448,716	4,560,290	539,706,744	85,159,176	743,661,162	2,147,536,088
1950	776,395,649	4,520,890	566,418,607	92,611,634	739,847,514	2,179,794,294
1951	776,395,649	4,518,890	518,396,607	96,800,428	857,573,774	2,253,685,348
1952	1,531,072,324	4,516,490	518,396,607	87,098,222	228,055,165	2,369,138,808

Operating Finances.—Gross revenue, operating expenditure and net revenue include only those from steam railway and commercial telegraph operations, but the deficits are for the entire System, including the operating results of the Niagara, St. Catharines and Toronto Railway (electric) and other railways operated separately, hotels, commercial telegraphs, coastal steamships and all other outside operations.

Under the Canadian National Railways Capital Revision Act, 1937, interest on Federal Government loans, amounting to $530,832,598, and Government claims for interest, amounting to $43,949,039, were cancelled as liabilities of the Railway and these have been eliminated from Table **15** as fixed charges. Loans of $270,037,438 for capital and $373,823,120 for deficits were cancelled.

15.—Gross Revenue, Operating Expenditure, Net Revenue, Fixed Charges and Deficits of the Canadian National Railway System,[1] 1943-52

NOTE.—Appropriations, etc., for the Hudson Bay Railway are not included with these data; although the Railway was returned to the Government while under construction, it is not now a part of the Canadian National Railways. Figures for 1911-25 are given in the 1936 Year Book, p. 660; for 1926-39 in the 1942 Year Book, p. 590; and for 1940-42 in the 1951 edition, p. 731. Figures for Newfoundland are included from Apr. 1, 1949.

Year	Gross Operating Revenue	Operating Expenditure	Income Available for Fixed Charges	Total Fixed Charges	Net Income Deficit[2]	Cash Deficit
	$	$	$	$	$	$
1943.....	440,615,954	324,475,669	87,859,084	52,189,536	Cr. 35,669,548	Cr. 35,639,412
1944.....	441,147,510	362,547,044	73,473,733	50,474,480	Cr. 22,999,253	Cr. 23,026,924
1945.....	433,773,394	355,294,048	73,521,185	49,009,507	Cr. 24,511,678	Cr. 24,756,130
1946.....	400,586,026	357,236,718	37,239,784	46,685,316	9,445,532	8,961,570[3]
1947.....	438,197,980	397,122,607	29,330,757	45,925,891	16,595,134	15,885,194[3]
1948.....	491,269,950	464,739,970	12,502,931	46,341,727	33,838,796	33,532,741[3]
1949.....	500,723,386	478,501,660	6,152,649	48,631,896	42,479,247	42,043,027[3]
1950.....	553,831,581	493,997,079	44,084,904	47,421,983	3,337,079	3,261,235
1951.....	624,834,120	580,150,221	31,722,489	48,176,558	16,454,069	15,031,996
1952.....	675,219,415	634,852,915	25,702,660	25,415,189	Cr. 287,471	Cr. 142,327

[1] Includes the Central Vermont Railway, Inc. Contributed by the Federal Government.

[2] Includes appropriations for insurance fund.

Mileage and Traffic.—At Dec. 31, 1952, steam-railway track mileage of the Canadian National Railways (including lines in the United States and Newfoundland but exclusive of the Northern Alberta Railways and Toronto Terminals Railway, which are controlled jointly by the Canadian National and the Canadian Pacific Railways) was 24,219·6 miles. Including the Thousand Islands Railway, 4·51 miles, controlled but operated separately, the total steam-railway mileage was 24,224·1. The grand total, including 72·9 miles of electric lines, was 24,297·0 miles.

16.—Train Traffic Statistics of the Canadian National Railways (Canadian and United States Lines), 1951 and 1952

(Steam-railway mileage only)

Mileage and Traffic	1951	1952
Train Mileage—		
Passenger trains.....miles	24,412,847	25,533,678
Freight trains..... "	48,353,158	49,541,512
Totals, Train Miles..... No.	**72,766,005**	**75,075,190**

16.—Train Traffic Statistics of the Canadian National Railways (Canadian and United States Lines), 1951 and 1952—concluded

Mileage and Traffic		1951	1952
Passenger-Train Car Mileage—			
Coaches and combination	miles	70,811,169[1]	71,032,668[1]
Motor unit cars	"	660,448	969,111
Parlour, sleeping and dining cars	"	62,968,188	65,281,036
Baggage, mail, express, etc	"	90,041,623	98,324,513
Totals, Passenger-Train Car Miles	**No.**	**224,481,428**	**235,607,328**
Freight-Train Car Mileage—			
Loaded freight-car miles	miles	1,314,101,690	1,348,655,134
Empty freight-car miles	"	562,171,410	636,815,274
Caboose miles	"	48,539,588	48,778,742
Totals, Freight-Train Car Miles	**No.**	**1,924,812,688**	**2,034,249,150**
Passenger Traffic—			
Passengers carried (earning revenue)	No.	17,322,723	18,832,815
Passengers carried (earning revenue) one mile	"	1,611,153,281	1,635,201,983
Passenger-train miles per mile of road	"	1,010	1,056
Average passenger journey	miles	93·01	86·83
Average amount received per passenger	$	2·74066	2·57349
Average amount received per passenger mile	$	0·02947	0·02964
Average passengers per train mile	No.	66·00	64·04
Average passengers per car mile	"	12·82	12·75
Total passenger-train earnings per train mile	$	3·72	3·86
Total passenger-train revenue per mile of road	$	3,761·04	4,076·82
Freight Traffic—			
Revenue freight carried	tons	89,618,436	90,053,919
Revenue freight carried one mile	"	36,434,821,058	38,430,494,637
Revenue freight carried one mile per mile of road	"	1,501,578	1,584,763
Total (all classes) freight carried one mile per mile of road	"	1,624,019	1,708,033
Average tons revenue freight per train mile	No.	754	776
Average tons (all classes) freight per loaded car mile	"	29·88	30·64
Average hauls revenue freight	miles	406·55	426·75
Freight revenue per train mile	$	10·32	10·83
Freight revenue per mile of road	$	20,632·03	22,187·81
Freight revenue per ton	$	5·57	5·96
Freight revenue per ton mile	$	0·01369	0·01397

[1] Excludes work service.

Section 2.—Electric Railways*

Replacing the horse-car systems, used in Montreal and Toronto as early as 1861, electric street railways were first seen in operation in Canada in 1885, when a successful experimental railway was constructed and operated at the Toronto Exhibition Grounds. The first electric railway line in Canada, and probably the first in North America, ran between Windsor and Walkerville and was established early in June 1886 (it is recorded that it was in active operation before June 11).

Cheap and reasonably rapid passenger conveyance is a necessity of modern urban life. In some cities of Eastern Canada, electric railways are still operated by private companies under city franchises, while in a number of cities in Ontario and Western Canada the electric railways are owned and operated by the municipalities. The number of electric railways in operation declines each year as motor-buses replace electric trams.

Statistics presented in this Section cover the urban and inter-urban operations of the electric railway systems.

* More detailed information is given in DBS publication, *Electric Railways of Canada, 1951.*

Equipment.—The single overhead-trolley system is used by all electric street railways. Many municipalities have begun to use trackless trolley-buses, 1,035 of which were in service in 1951. Of the 22 systems, six operated electric cars, motor-buses and trolley-buses; nine operated trolley-buses and motor-buses; three electric cars only; two electric cars and motor-buses; and one system operated trolley-buses only. There were 1,979 motor-buses in service during 1951.

17.—Equipment of Electric Railways, 1949-51

Equipment	1949	1950	1951	Equipment	1949	1950	1951
	No.	No.	No.		No.	No.	No.
Passenger Vehicles—				**Other Vehicles—**			
Closed cars	2,829	2,594	2,399	Baggage, express and mail cars	17	16	12
Open cars	6	6	4	Freight cars	104	88	86
Combination passenger and baggage cars	6	5	5	Locomotives	58	57	54
Cars without electrical equipment	130	130	123	Snow ploughs	48	53	51
Motor-buses	1,817	1,927	1,979	Sweepers	104	81	74
Trackless trolley-buses	726	909	1,035	Trucks	150	137	139
				Miscellaneous	177	176	158
Totals, Passenger Vehicles	**5,514**	**5,571**	**5,545**	**Totals, Other Vehicles**	**658**	**608**	**574**

Finances.—When electric railways have ceased to operate because of either a decline in traffic or the substitution of motor-buses, their statistics have been excluded from Table **18.** Consequently, fluctuations in revenue, etc., have been affected by variations in traffic and by changes in the mode of local transportation. Despite these changing conditions, the gross revenue of electric railways continued to increase from the low point reached in 1933, and very marked increases were shown from 1940 to 1945. The ratio of expenses to receipts rose from a low of less than 63 p.c. in 1942 to 99 p.c. in 1951. Much of the decline in the value of stocks and the increase in funded debt during the past few years has been the result of the change in a number of systems from private to public ownership.

18.—*Financial Statistics of Electric Railways, 1942-51*

NOTE.—Figures for 1901-41 are given in the corresponding table of previous Year Books beginning with the 1926 edition.

Year	Capital Liability			Investment in Road and Equipment	Gross Earnings	Operating Expenses	Ratio of Expenses to Receipts	Employees	Salaries and Wages
	Stocks	Funded Debt	Total						
	$	$	$	$	$	$	p.c.	No.	$
1942	37,616,432	151,523,248	189,139,680	205,989,595	69,034,130	43,473,516	62·97	16,051	27,923,343
1943	37,492,392	147,433,845	184,926,237	204,586,208	80,027,414	54,548,335	68·16	17,896	33,975,281
1944	37,540,432	142,364,766	179,905,198	202,666,204	84,730,173	58,202,151	68·69	19,034	36,845,152
1945	37,329,194	142,384,083	179,713,277	205,026,475	88,939,451	64,533,940	72·56	20,091	39,364,771
1946	35,656,763	132,042,089	167,698,852	203,537,797	87,515,721	75,550,821	86·33	21,700	45,675,363
1947	33,915,932	138,246,540	172,162,472	218,439,361	86,519,712	81,787,723	94·53	22,627	50,117,441
1948	28,138,481	140,692,280	168,830,761	217,385,299	89,310,215	88,024,727	98·56	22,593	55,268,083
1949	27,425,491	143,944,716	171,370,207	242,095,483	95,596,394	92,378,848	96·63	21,661	59,155,605
1950	27,252,391	159,192,587	186,444,978	223,224,556	91,034,058	89,414,380	98·22	21,869	57,645,574
1951	20,252,391	179,159,159	199,411,550	255,057,250	99,114,548	97,880,959	98·76	21,052	64,188,551

Traffic.—The passenger mileage travelled by electric cars in 1951 amounted to 78,324,430, by trackless trolley-buses 31,167,485 and by motor-buses 57,825,006. The number of passengers carried by electric railways in the years since 1939 showed

an especially sharp rise over previous years owing to improved conditions and the curtailment of passenger-automobile traffic during the War. The 1,344,916,773 passengers carried in 1946 was by far the greatest traffic ever handled by these systems; the number in 1951 was the lowest since 1942.

19.—Statistics of Electric-Railway Operations, 1942-51

Note.—Figures for 1901-41 are given in the corresponding table of previous Year Books beginning with the 1933 edition.

Year	Miles of Road		Electric Car and Bus Mileage			Fare Passengers Carried[1]	Freight Carried[1]
	Total	With Double Track	Passenger	Other	Total		
	miles	miles	miles	miles	miles	No.	tons
1942	1,017·24	488·01	152,518,129	2,852,757	155,370,886	996,208,535	3,711,468
1943	1,019·29	487·91	164,050,357	2,773,462	166,823,819	1,177,003,883	3,751,785
1944	1,019·69	490·17	169,421,343	2,756,755	172,178,098	1,249,707,399	3,769,959
1945	1,015·54	488·30	175,498,520	2,777,976	178,276,496	1,316,571,540	3,639,989
1946	1,004·44	485·06	177,256,084	2,822,300	180,078,384	1,344,916,773	3,506,805
1947	895·25	436·95	180,204,812	2,808,252	183,013,064	1,323,723,782	3,655,278
1948	778·92	391·78	182,943,709	3,038,989	185,982,698	1,309,565,795	4,050,111
1949	719·31	356·61	173,849,096	3,048,146	176,897,242	1,240,558,812	3,702,016
1950	662·96	326·90	173,285,475	3,562,144	176,847,619	1,192,058,052	4,115,974
1951[2]	595·38	293·87	167,316,921	3,646,069	170,962,990	1,133,393,935	4,479,404

[1] Includes passengers and freight carried on buses and trackless trolley-buses operated by electric railways. [2] Includes data for Montreal Tramways Company for period Jan. 1 to Nov. 30.

20.—Passengers, Employees and Others Killed or Injured on Electric Railways, 1942-51

NOTE.—Figures for 1900-41 are given in the corresponding table of previous Year Books beginning with the 1926 edition.

Year	Passengers		Employees		Others		Totals	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
	No.	No.	No.	No.	No.	No.	No.	No
1942	2	3,157	3	489	86	1,338	91	4,984
1943	—	4,301	2	722	78	1,491	80	6,514
1944	3	3,980	7	835	88	1,556	98	6,371
1945	2	4,092	3	944	104	1,592	109	6,628
1946	8	4,009	3	904	66	1,584	77	6,497
1947	2	4,181	4	910	71	1,469	77	6,560
1948	2	3,792	5	1,336	74	1,328	81	6,456
1949	1	3,688	1	766	63	1,239	65	5,693
1950	—	3,718	1	730	44	1,204	45	5,652
1951	—	3,392	2	650	42	998	44	5,040

The Toronto Underground Electric Railway.—Construction of Canada's first underground electric railway or subway commenced at Toronto in 1949 and is expected to be put in operation in March 1954. The route of the subway follows

the general line of Yonge Street, a distance of about 4·5 miles, from Front Street to Eglinton Avenue. Twelve stations are located along the line and a pedestrian tunnel links the Union Station and the Royal York Hotel with the subway.

Cost of the Yonge Street subway alone, originally estimated at $28,250,000, is now placed at $50,500,000. Equipment for the new line will cost an additional $8,300,000. Sub-surface sections of the subway are from six to 20 feet underground. Rapid-transit cars, 104 in number, each of 62-passenger capacity will be used. The 500-foot platforms at all stations will accommodate trains of up to eight cars in length which will handle a peak load of 40,000 passengers per hour in each direction.

Section 3.—Express Companies

Express service is an expedited freight service on passenger trains, but express companies do not own the means of performing these services; railway facilities are used by virtue of contracts with the railway companies. Express companies in Canada have thus always operated in close co-operation with the railways.

Goods are sent by express for quick transit, so that express rates do not generally compete with freight rates. The Dominion Express Company, in pursuance of its contract with the Canadian Pacific Railway, gave, in its first tariff, a rate of two and one-half times the maximum first-class railway freight rate for the same goods carried the same distance. The majority of the contracts between express and railway companies for carrying express freight are on the basis of a percentage of the gross express revenue and the rates paid by the shipper are subject to the approval of the Board of Transport Commissioners. All express companies are organized under powers conferred by Acts of the Federal Government and their business consists in the expeditious shipment of valuable live stock and such perishable commodities as fresh fish, fruit, etc., the forwarding of parcels, and the issue of money orders, travellers cheques, letters of credit and other forms of financial paper.

Express Company Operations.—Four express organizations operate in Canada—three Canadian and one American. The Canadian Pacific Express Company, formerly the Dominion Express Company, is a subsidiary of the Canadian Pacific Railway and handles the express business on the railways and the inland and ocean steamship lines of the parent company. The express business of the Canadian National and Northern Alberta Railways is handled by departments of the respective railways. The Railway Express Agency, Incorporated, operates over the Canadian sections of United States railways and over the route from Skagway, Alaska, to points in Yukon Territory. No statistics are available on the volume of traffic carried by express. Much of the traffic consists of parcels and small lots that would make statistical classification and measurement very difficult. However, there is also an important movement in car lots of live stock, fresh fish, fruit, vegetables and other perishable commodities.

21.—Mileages Operated by, and Revenue and Expenditure of Express Companies, 1943-52

NOTE.—Figures for 1911-42 are given in the corresponding table of previous Year Books beginning with the 1927-28 edition.

Year or Company	Mileages Operated[1]	Gross Earnings	Operating Expenditure	Express Privileges[2]	Net Operating Revenue
	No.	$	$	$	$
1943	52,670	32,875,971	15,824,160	15,323,905	1,727,906
1944	50,668	34,357,760	18,856,659	15,301,512	199,589
1945	50,938	37,171,862	20,040,339	16,711,647	419,876
1946	51,365	39,260,553	22,670,616	16,841,229	Dr. 251,292
1947	51,341	42,314,758	25,770,190	17,650,061	Dr. 1,105,493
1948	51,840	46,809,112	30,398,053	18,785,988	Dr. 2,374,929
1949	54,806	51,966,290	32,385,223	21,226,817	Dr. 1,645,750
1950	55,581	52,017,492	32,881,689	21,355,956	Dr. 2,220,153
1951					
Canadian National Express	29,802	31,079,031	20,339,194	10,176,308	563,529
Canadian Pacific Express	21,531	27,234,716	17,050,297	9,807,890	376,529
Northern Alberta Railways	928	583,487	264,569	264,092	54,826
Railway Express Agency, Inc.	5,093	1,526,269	720,068	788,874	17,327
Totals, 1951	**57,355**	**60,423,503**	**38,374,128**	**21,037,164**	**1,012,211**
1952					
Canadian National Express	29,783	36,245,200	23,888,279	11,814,566	542,355
Canadian Pacific Express	21,531	31,705,462	19,760,413	11,550,834	394,215
Northern Alberta Railways	928	644,595	289,524	291,786	63,285
Railway Express Agency, Inc.	5,093	1,589,857	805,802	771,553	12,502
Totals, 1952	**57,335**	**70,185,114**	**44,744,018**	**24,428,739**	**1,012,357**

[1] Over railways, boat lines and motor-carrier and aircraft routes. [2] Amounts paid by express companies to the carriers, i.e., railways, steamship lines, etc., for transporting express matter.

22.—Business Transacted by Express Companies in Financial Paper, 1948-52

Description	1948	1949	1950	1951	1952
	$	$	$	$	$
Money orders, domestic and foreign	133,668,100	131,358,491	121,476,102	137,215,925	134,870,537
Travellers cheques, domestic and foreign	6,654,176	8,250,196	9,242,789	7,753,328	7,332,881
C.O.D. cheques	23,693,890	23,527,669	21,292,175	24,186,587	23,826,544
Telegraphic transfers	207,694	187,522	153,140	191,188	255,243
Totals	**164,223,860**	**163,323,878**	**152,164,206**	**169,347,028**	**166,285,205**

23.—Employees, Salaries and Wages and Commissions of Express Companies, 1943-52

Year	Full-Time Employees	Salaries and Wages[1]	Commissions Paid	Year	Full-Time Employees	Salaries and Wages[1]	Commissions Paid
	No.	$	$		No.	$	$
1943	5,936	10,837,037	1,569,453	1948	8,525	22,212,249	2,157,489
1944	6,705	13,263,739	1,729,195	1949	8,809	23,621,322	2,283,425
1945	7,160	13,945,167	1,846,884	1950	8,974	24,195,490	2,177,933
1946	7,430	16,060,439	1,975,856	1951	9,610	28,607,463	2,443,341
1947	8,017	18,308,793	1,995,947	1952	10,849	32,503,058	2,689,830

[1] Includes wages paid to part-time employees.

PART III.—ROAD TRANSPORTATION*

In this Part of the Chapter, highways and motor-vehicles are treated as related features of transportation. Following an introductory section, which summarizes provincial regulations regarding motor-vehicles and motor traffic, the entire subject of road transportation is dealt with under the headings of roads and highways and motor-vehicles.

Section 1.—Provincial Motor-Vehicle and Traffic Regulations†

NOTE.—It is obviously impossible to include here the great mass of detailed regulations in force in each province and territory; only the more important general information is given. The sources of information for detailed regulations for specific provinces and territories are given at pp. 805-808.

General.—The registration of motor-vehicles and of motor-vehicle traffic lies within the legislative jurisdiction of the provincial and territorial governments. Regulations that are common to all provinces and territories are summarized under the following headings:—

Operator's Licences.—The operator of a motor-vehicle must be over a specified age (usually 16 years) and must carry a licence, obtainable in most provinces only after prescribed qualification tests and renewable annually. Special licences are required for chauffeurs and, in some cases, for those granted licences who have not reached the specified age.

Motor-Vehicle Regulations.—In general, all motor-vehicles and trailers must be registered annually, with the payment of specified fees, and must carry two (one only in Saskatchewan) registration plates, one on the front and one on the back of the vehicle (one only for the back in the case of trailers). A change of ownership of the vehicle must be recorded with the registration authority. However, exception from registration is granted for a specified period (usually at least 90 days) in any year to visiting private vehicles registered in another province or a State that grants reciprocal treatment. Further regulations require a safe standard of efficiency in the mechanism of the vehicle and of its brakes, and provide that equipment include non-glare headlights, a proper rear light, a satisfactory locking device, a muffler, a windshield wiper, and a rear-vision mirror.

Traffic Regulations.—In all provinces and territories, vehicles keep to the right-hand side of the road. Everywhere motorists are required to observe traffic signs, lights, etc., placed at strategic points on highways and roads. Speed limits, usually of 50 miles per hour, are in effect; slower speeds are always required in cities, towns and villages, in passing schools and public playgrounds, at road intersections, railway crossings, or at other places or times where the view of the highway for a safe distance ahead is in any way obscured. Motor-vehicles must not pass a tram that has stopped to take on or discharge passengers, except where safety zones are provided. Accidents resulting in personal injury or property damage must be reported to a provincial or municipal police officer and a driver involved must not leave the scene of an accident until he has rendered all possible aid and disclosed his name to the injured party.

* Except as otherwise indicated, the material in this Part has been revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

† The information in this Section has been revised from material provided by the officials in charge of the administration of motor-vehicle and traffic Acts and Regulations in the individual provinces and territories.

Penalties.—Penalties ascend in scale from small fines for minor infractions of any of the regulations to suspension of the operator's driving permit, impounding of the car, or imprisonment for serious infractions, recklessness, driving without an operator's licence, and especially for attempting to operate a motor-vehicle while intoxicated.

There is such wide variation among the different provinces and territories regarding the bases of licences and fees, the regulation of public commercial vehicles, details of traffic rules, speed, and the use of motor-vehicles, that it is impossible even to outline them satisfactorily in the space available here.

Safety Responsibility Legislation.—All the provinces and territories of Canada, with the exception of Yukon Territory, have enacted legislation under this heading which is sometimes referred to as Safety Responsibility Legislation and at other times as Financial Responsibility Legislation. The provincial outlines beginning at the bottom of this page give the latest amendments to this legislation and the authorities responsible for the administration of motor-vehicles.

Unsatisfied Judgment Funds.—In recent years a new type of motor-vehicle legislation has been enacted in many of the provinces. This has usually taken the form of an amendment to the motor-vehicle laws of the province and provides for the establishment of an Unsatisfied Judgment Fund, out of which are paid judgments awarded for damages arising out of motor-vehicle accidents in the province which cannot be collected in the ordinary process of law. The Fund is created by the collection annually of an Unsatisfied Judgment Fund fee from the registered owner of every motor-vehicle or from every person to whom is issued a driver's licence. This fee in no case exceeds $1 per annum. A feature of this legislation which is contained in some provincial statutes provides for the payment of judgments in the case of so-called 'hit and run' accidents. In such cases, when neither the owner nor the driver can be identified, action may be taken against the Registrar of Motor Vehicles; any judgment secured against the Registrar is paid out of the Fund. All of these laws contain a provision limiting the amount that can be paid out of the Fund on one judgment. The limits are $5,000 for one person, $10,000 for two or more persons injured in one accident and $1,000 for property damage. In the case of 'hit and run' accidents payments are made only for personal injuries or death.

The following provinces now have this type of legislation in effect: Newfoundland, Prince Edward Island, Nova Scotia, Ontario, Manitoba, Alberta and British Columbia.

Newfoundland.—*Administration.*—Deputy Minister of Public Works, St. John's. *Legislation.*—The Highway Traffic Act, 1941, as amended.

Prince Edward Island.—Provision was made in the Highway Traffic Act, 1936, for cancellation of the licence of any person unable to satisfy judgment against him arising out of a motor-vehicle accident. The licence is to be reissued only when proof of financial responsibility is made to the Provincial Secretary. In 1950, a revised and consolidated Highway Traffic Act was passed.

Administration.—The Provincial Secretary, Charlottetown. *Legislation.*—The Highway Traffic Act (R.S.P.E.I. 1951, c. 73).

Nova Scotia.—*Administration.*—Motor Vehicle Branch, Department of Highways and Public Works, Halifax. *Legislation.*—The Motor Vehicle Act (1932, c. 6) as amended, and the Motor Carrier Act (R.S.N.S. 1923, c. 78) as amended.

New Brunswick.—*Administration.*—Motor Vehicle Division, Provincial Tax Branch, Department of the Provincial Secretary-Treasurer, Fredericton. *Legislation.*—The Motor Vehicle Act (R.S.N.B. 1951, c. 73) as amended.

Quebec.—In 1949, the Quebec Government passed an amendment to the Motor Vehicle Act, which provides for the suspension, for at least three months, of the driver's licence and registration certificate of any person proved guilty of driving while under the influence of liquor or narcotics, or of driving in a dangerous manner or neglecting to stop after an accident or failing to give aid to persons injured in such accident, or of driving a motor-vehicle without being provided with a licence and found guilty of an accident while doing so or while his licence is suspended. In case of a suit for damages resulting from fault, carelessness or neglect, the driver's licence and registration certificate, or either, may be suspended until judgment has been satisfied. In such case, recovery of licence or certificate may require the furnishing of a guarantee, in the form of insurance, deposit or otherwise, of sufficient financial responsibility to afford reasonable protection to the public against any future accident.

Administration.—Motor Vehicle Bureau, Provincial Revenue Offices, Treasury Department, Quebec. *Legislation.*—The Motor Vehicle Act (R.S.Q. 1941, c. 142) as amended.

Ontario.—The Financial Responsibility provisions of the Ontario Highway Traffic Act came into force in 1930. This Part of the Act provides for the automatic suspension of the driver's licence and motor-vehicle permit of a person convicted of one of the more serious offences against the Act, an offence involving the use of a motor-vehicle under the Criminal Code or for failure to satisfy a judgment arising out of a motor-vehicle accident.

Administration —Motor Vehicles Branch, Department of Highways, Toronto. *Legislation.*—The Highway Traffic Act (R.S.O. 1950, c. 167), the Public Vehicles Act (R.S.O. 1950, c. 322) and the Public Commercial Vehicles Act (R.S.O. 1950, c. 304).

Manitoba.—In 1945, the financial responsibility law of Manitoba was repealed and replaced by new safety responsibility legislation. Features under this legislation include the immediate and automatic impounding of any motor-vehicle after an accident if the operator is unable to produce proof of financial responsibility at the time. Impoundment continues until the owner or driver settles any claims for damages or bodily injury sustained, or deposits with the Provincial Treasurer security sufficient to cover any judgment that may be recovered and until the owner of the vehicle has filed proof of financial responsibility for the future. Driving privileges of financially irresponsible motorists are indefinitely suspended pending settlement of damage claims or deposit of security and the filing of proof of financial responsibility.

Administration.—Provincial Treasurer, Winnipeg. *Legislation.*—The Highway Traffic Act (R.S.M. 1940, c. 93) as amended.

Saskatchewan.—Financial responsibility legislation in this Province was placed on the Statutes in 1933 and provides that, where a judgment is rendered in any court in Canada for damages on account of death or injury to any person or on account of property damage in excess of $50, occasioned by a motor-vehicle, and the person fails to satisfy the judgment within 30 days from the date upon which it becomes final, the Board shall suspend the operator's or chauffeur's licence issued to the person against whom the judgment is rendered and the registration of every motor-vehicle registered in his name. Judgment must be satisfied before licences are reinstated and the person so liable must give proof of financial responsibility for future motor-vehicle accidents in the amount of $11,000 for a period of three years.

The Automobile Accident Insurance Act was passed by the Legislature and placed on the Statutes during 1946 and provides collision insurance, personal injury insurance, and public liability and property damage insurance in the amounts as set forth in the said Act. Saskatchewan citizens are provided with insurance against death or personal injury resulting directly from motor-vehicle accidents. Every person is automatically provided with public liability and property damage insurance to the extent of the amount paid for personal injuries or property damage which is payable by the insurance office.

Administration.—Treasury Department, Highway Traffic Board, Revenue Building, Regina. *Legislation.*—The Vehicles Act (R.S.S. 1951, c. 85).

Alberta.—In 1947, the Alberta Legislature passed the Automobile Accident Indemnity Act (later the title was amended to the Motor Vehicle Accident Indemnity Act), the main provisions of which are: the suspension of the licences of all drivers directly or indirectly involved in an accident which results in bodily injury, or in property damage exceeding $75 in value (changed from $25 in 1949), if proof of financial responsibility on the part of the driver is not forthcoming; and an Unsatisfied Judgment Fund is set up on the basis of an annual fee of $1, collected for each licensed motor-vehicle in addition to the regular registration fee. Action may be taken against the Superintendent of the Fund where a judgment for an amount exceeding $100 has been obtained following a motor-vehicle accident, if the assets of the judgment debtor are insufficient to meet the award of the court, or in cases where the driver or owner of the motor-vehicle causing the accident is unknown. Minor amendments were made to this legislation in 1948 and 1949.

Administration.—Motor Vehicle Branch, Department of the Provincial Secretary, Edmonton, and the Highway Traffic Board, Department of Highways, Edmonton. *Legislation.*—The Vehicles and Highway Traffic Act (R.S.A. 1942, c. 275) as amended, the Motor Vehicle Accident Indemnity Act (1947, c. 11) as amended, the Public Service Vehicles Act (R.S.A. 1942, c. 276), and Rules and Regulations. The Vehicles and Highway Traffic Act and the Motor Vehicle Accident Indemnity Act are administered by the Motor Vehicle Branch, Department of the Provincial Secretary, and the Public Service Vehicles Act by the Highway Traffic Board, Department of Highways.

British Columbia.—Financial responsibility legislation, which has been in effect in this Province since 1932, provides for the suspension of the driver and motor-vehicle licences on failure to pay judgments, for contravention of certain convictions in connection with speed and for offences under Section 285 of the

Criminal Code, etc. These suspensions remain in effect until the party concerned files proof of financial responsibility, which he is required to keep in full force and effect for a period of at least three years at which time he may be released under certain circumstances. In 1947, new legislation was enacted that added to the financial responsibility legislation already in effect, providing for the impounding of motor-vehicles that are involved in motor-vehicle accidents, and for which, at the time, a motor-vehicle liability insurance card or a financial responsibility card cannot be produced, and the suspension of licences until proof of financial responsibility is given and other security or satisfaction of claims is given for damages or injuries caused.

Administration and Legislation.—Enforcement of the Motor Vehicle Act, the Highway Act and the Motor Carrier Act is vested in the Royal Canadian Mounted Police and the Municipal Police, Victoria, while the Highway Act is administered by the Minister of Public Works, the Motor Carrier Act by the Public Utilities Commission, and the Motor Vehicle Act by the Superintendent of Motor Vehicles.

Yukon Territory.—*Administration.*—Commissioner of the Yukon Territory, Whitehorse, Y.T. Information regarding regulations may also be obtained from the Northern Administration and Lands Branch, Department of Resources and Development, Ottawa. *Legislation.*—The Motor Vehicle Ordinance (1947, c. 2) as amended.

Northwest Territories.—*Administration.*—Commissioner of the Northwest Territories. Address communications to the Director, Northern Administration and Lands Branch, Department of Resources and Development, Ottawa. *Legislation.*—The Motor Vehicles Ordinance, assented to Nov. 30, 1950, as amended.

Section 2.—Roads and Highways

The figures of Table 1 include the mileages of all roads under provincial jurisdiction, those in the National Parks, local roads in the Atlantic Provinces, Ontario and British Columbia and estimates of local roads in the three Prairie Provinces. There are great stretches of country in Newfoundland, the northern portions of Quebec, Ontario, the Prairie Provinces and British Columbia with very few people and very few roads, but the more extensively populated portions are well supplied. The Northwest Highway System (the Alaska Highway), built for military purposes during 1942 and extending 1,600 miles from Fort St. John, B.C., to Fairbanks, Alaska, serves civilian as well as military traffic. It opens up a vast area of hitherto virgin territory and affords a means of all-weather land communication from Alaska through Canada to the United States. Completed in 1949, the MacKenzie Highway which runs 386 miles from Grimshaw, Alta., to Hay River, N.W.T., has been of great value in the development of the Great Slave Lake region and the entire Mackenzie River Valley.

Statistics of urban streets have been collected since 1935 from cities and principal towns; the small municipalities omitted would increase the totals very little. For 1951, the total number of miles of street reported was 14,855, composed of 4,081 miles of bituminous pavements, 860 miles of portland cement concrete, 2,784 miles of bituminous surfaces, 3,532 miles of gravel and crushed stone and 110 miles of other surfaces; making a total of 11,367 miles of surfaced streets and 3,488 miles of earth roads. These figures for urban streets or roads are not included in Table 1.

1.—Mileage of each Type of Road, by Province, as at Mar. 31, 1952

NOTE.—The figures for Canada are the sums of the mileages so reported. Urban streets are not included in the figures.

Classification	N'f'ld.	P.E.I.	N.S.	N.B.[1]	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles
SURFACED ROAD												
Portland cement concrete	—	4	7	—	303	1,524	99	—	—	40	—	1,977
Bituminous pavements	30	—	25	—	5,671	4,383	—	—	—	1,504	—	11,613
Bituminous surface	97	306	1,269	1,785	869	4,397	840	846	1,339	978	—	12,726
Gravel—												
Crushed stone	1,800	1,481	6,981	9,300	21,244	51,893	8,549	15,573	19,231	9,050	1,760	146,862
Other surfaces	—	—	—	—	—	—	—	54	—	—	—	54
TOTALS, SURFACED ROAD	1,927	1,791	8,282	11,085	28,087	62,197	9,488	16,473	20,570	11,572	1,760	173,232
NON-SURFACED ROAD												
Improved earth	452	1,925	3,066	1,600	—	11,812	7,855	83,677[2]	30,082[2]	9,838	271	150,578
Other earth roads	3,940	—	3,815	524	13,678	—	74,172[2]	112,502[2]	34,265[2]	2,027	41	244,964
TOTALS, NON-SURFACED ROAD	4,392	1,925	6,881	2,124	13,678	11,812	82,027	196,179	64,347	11,865	312	395,542
Grand Totals	**6,319**	**3,716**	**15,163**	**13,209**	**41,765**	**74,009**	**91,515**	**212,652**	**84,917**	**23,437**	**2,072**	**568,774**

[1] Gravel and earth road mileages partly estimated. [2] Includes all road allowances. [3] Includes 56,896 miles of unimproved road allowances not in use.

Finances of Road Transportation.—The cost of road transportation to the people of Canada may be summarized under the following headings: expenditure on roads and highways; expenditure by individuals and corporations on owned motor-vehicles; expenditure for freight and passenger services rendered by public motor-carriers such as taxi, bus and motor-transport companies; and expenditure on garages, service stations, etc. Since expenditure on roads and highways is made almost entirely by government bodies, fairly complete statistics are available regarding them but, owing to the tremendous number of individuals and organizations that would have to be canvassed and the difficulties involved, complete statistics are not available under the other headings. Sales of gasoline are given at p. 814 and revenue of motor-carriers at p. 815.

Expenditure on Roads and Highways.—Roads in Canada, except in the Territories, the Indian reserves and the National Parks, are under the jurisdiction of either provincial or municipal authorities.

Provincial and municipal expenditure was sharply curtailed during the war years 1939-45 and a considerable backlog of essential repair, improvement and expansion work accumulated. In 1946, approximately $144,469,000 was expended on construction, general maintenance and repair of roads and bridges and from 1947 to 1951 outlays increased steadily, amounting to $232,514,000, $268,250,000, $270,170,000, $277,914,000 and $334,584,000, respectively, in those years. Unit costs per mile of new construction increased over pre-war levels and had a restrictive effect on the planned extension of first-class roads. However, the improvement and construction of the Trans-Canada Highway, as a main artery of interprovincial travel, is well under way as a joint responsibility of federal and provincial authorities.

2.—Construction, Maintenance and General Expenditure on Rural Roads, Bridges and Ferries, by Province, Years Ended Mar. 31, 1949-52

Item and Province or Territory	1949	1950	1951	1952
	$	$	$	$
Construction—				
Newfoundland	...	1,862,129	4,485,354	4,555,303
Prince Edward Island	1,406,558	1,177,213	1,564,687	2,130,750
Nova Scotia[1]	13,727,641[r]	14,606,701	16,620,796	9,267,598
New Brunswick[2]	14,197,244	9,848,276	11,667,309	6,039,885
Quebec	48,208,000	37,977,756	31,325,159	56,995,225
Ontario	30,176,894	34,200,336	41,220,136	55,768,891
Manitoba	8,058,007	7,998,782	5,361,168	9,347,887
Saskatchewan	6,107,610	6,247,962	6,677,887	9,065,930
Alberta	14,132,453	12,845,686	16,509,201	21,301,524
British Columbia	13,646,266	26,571,557	18,599,050	16,298,760
Yukon and N.W.T.	848,000	2,391,972	2,521,066	595,600
Totals, Construction[3]	**150,612,950[r]**	**156,223,856[4]**	**157,202,628[4]**	**192,810,362[4]**
Maintenance—				
Newfoundland	...	1,442,908	1,447,686	1,646,977
Prince Edward Island	678,424	888,485	1,063,116	1,001,335
Nova Scotia[1]	6,142,204[r]	7,288,235	7,640,691	6,880,574
New Brunswick[2]	6,680,846	5,278,069	8,268,063	7,083,580
Quebec	27,182,042	19,337,970	20,761,173	25,735,365
Ontario	39,147,435[r]	38,987,794	44,719,097	49,547,029
Manitoba	1,934,874	1,844,171	2,143,407	2,097,872
Saskatchewan	2,855,225	2,630,792	3,268,886	3,857,513
Alberta	10,043,604[r]	11,730,362	13,387,434	14,390,843
British Columbia	8,676,506	13,628,207	10,170,411	12,498,943
Yukon and N.W.T.	2,348,289	1,023,368	1,273,154	3,050,323
Totals, Maintenance	**105,689,449[r]**	**104,080,361**	**114,143,118**	**127,790,354**
Administration and General—				
Newfoundland	...	179,700	218,409	233,871
Prince Edward Island	72,572	87,969	53,315	68,988
Nova Scotia[1]	473,944[r]	651,425	980,022	692,893
New Brunswick[2]	20,000[5]	249,202	390,087	242,682
Quebec	1,691,000	2,010,406	2,076,995	2,436,853
Ontario	4,497,582	4,728,877	4,343,658	4,583,869
Manitoba	462,839	588,150	621,086	685,479
Saskatchewan	185,496	234,857	238,544	282,334
Alberta	49,930[5]	61,193[5]	114,693[5]	89,287[5]
British Columbia	3,454,030	921,693	3,695,307	4,353,599
Yukon and N.W.T.	1,040,000	152,253	190,423	31,039
Totals, Administration and General	**11,947,393[r]**	**9,865,725**	**13,097,937[6]**	**13,983,546[6]**
Grand Totals	**268,249,792[r]**	**270,169,942**	**284,443,683**	**334,584,262**
Distribution of All Expenditure—				
Federal	**6,447,655**	**10,312,894[4]**	**17,169,721[4,6]**	**21,667,085[4,6]**
Provincial	**245,953,448[r]**	**240,747,574**	**249,554,236**	**287,934,225**
Municipal	**15,566,285[r]**	**18,594,702**	**17,191,662**	**23,288,598**
Other[1]	**282,404**	**514,772**	**528,064**	**1,694,354**

[1] Figures shown for 1949 and 1950 are for fiscal years ended Nov. 30, 1948 and 1949; for 1951, for the 16-month period ended Mar. 31, 1951; and for 1952, for fiscal year ended Mar. 31, 1952. [2] Figures shown for 1949 and 1950 are for fiscal years ended Oct. 31, 1948 and 1949; for 1951, for the 17-month period ended Mar. 31, 1951; and for 1952 for fiscal year ended Mar. 31, 1952. [3] Includes payments from railways *re* elimination of grade crossings, etc.: 1949, $104,277; 1950, $251,911; 1951, $227,484; and 1952, $683,313. [4] Includes contributions from Railway Grade Crossing Fund toward elimination of grade crossings, etc.: 1950, $243,575; 1951, $302,021; and 1952, $759,696. The Federal Government also contributed $121,310 toward grade separations, etc., on the Trans-Canada Highway during 1951. [5] Federal administrative costs only. [6] Includes federal administrative costs *re* Trans-Canada Highway: 1951, $175,398 and 1952, $282,652.

The Trans-Canada Highway System. — An outline of the legislation, specifications and construction of the joint federal-provincial project, the Trans-Canada Highway, with a map showing the proposed route in the eight provinces participating at that date is given in the 1951 Year Book, pp. 631-634.

The estimated mileage in 1953 for the eight original provinces entering the agreement with the Federal Government in 1950 and for Nova Scotia since May 15, 1952, are: Newfoundland, 610 miles; Prince Edward Island, 74; Nova Scotia, 310; New Brunswick, 388; Ontario, 1,412; Manitoba, 305; Saskatchewan, 414; Alberta, 292; British Columbia, 692; and the National Parks, 83; making a total of 4,580 miles.

Contractual commitments for the nine participating provinces with respect to new construction work on the Highway, during the period Dec. 9, 1949, to Mar. 31, 1953, amounted to $95,856,072 of which the Federal Government's share was $47,928,036. The amounts paid during this same period in respect of prior and new construction were $3,146,031 and $30,803,040, respectively. The on-site labour expended on the Highway during the period amounted to 2,018,757 eight-hour man-days.

The Highway through the National Parks is being constructed entirely with Federal Government funds and the amount of $1,000,000 has been placed in the estimates for that purpose. Construction work commenced during 1952 and the 1953-54 program includes five miles of grading and sub-base course between Mile 4·2 and Mile 10·8 in Banff Park, Alta., and four miles of similar construction in Yoho Park, B.C.

Section 3.—Motor-Vehicles

Registration.—Automobiles were registered in Canada for the first time in 1904 and Ontario was the only province to issue licences in that year. New Brunswick began registering cars in 1905; Quebec, Saskatchewan and Alberta in 1906; British Columbia in 1907; Manitoba in 1908; Nova Scotia in 1909; Prince Edward Island in 1913; and Yukon Territory in 1914.

In 1905, only 565 motor-vehicles were registered in Canada but by 1915 the number had risen to 95,284 and by the end of the next decade to 724,048. With the exception of 1931-33, an annual increase was in evidence until 1941 when 1,572,784 motor-vehicles were registered. The number of commercial vehicles continued to increase during the war years but a considerable decline was shown in passenger cars owing to restrictions on manufacture and the rationing of tires and gasoline. However, post-war recovery was rapid, reaching a peak in 1952 when the total of 3,155,997 registrations included 2,296,479 passenger cars and taxis, 812,715 trucks and miscellaneous vehicles, 4,731 buses and 42,072 motorcycles.

3.—Motor-Vehicles Registered, by Province, 1943-52

NOTE.—Registrations given here include passenger cars, trucks, buses, motorcycles, service cars, etc., but not trailers or dealer licences. Figures for 1904-35 are given in the 1937 Year Book, p. 668, and those for 1936-42 in the 1948-49 edition, p. 707.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total[1]
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943...	...	8,032	59,194	40,205	222,676	691,615	93,494	133,839	127,559	134,691	1,511,845
1944...	...	8,412	57,933	39,570	224,042	675,057	93,297	140,992	127,416	135,090	1,502,567
1945...	...	8,835	56,699	41,577	228,681	662,719	92,758	140,257	130,153	134,788	1,497,081
1946...	...	9,192	62,660	44,654	255,172	711,106	101,090	148,206	138,868	150,234	1,622,463
1947...	...	9,948	70,300	51,589	296,547	800,058	112,149	158,512	155,386	179,684	1,835,959
1948...	...	11,290	76,319	62,366	335,953	874,933	128,000	167,515	173,950	202,126	2,034,943
1949...	13,981	13,211	83,443	67,280	384,733	970,137	139,836	185,027	200,428	230,008	2,290,628
1950...	16,375	15,383	94,743	74,415	433,701	1,104,080	157,788	199,866	230,624	270,312	2,600,511
1951...	20,058	16,896	105,262	83,023	500,729	1,205,098	171,265	215,450	259,841	291,417	2,872,420
1952...	23,630	18,717	114,982	89,839	574,974	1,291,753	187,881	237,014	291,469	321,482	3,155,997

[1] Totals include registration in the Yukon and Northwest Territories.

4.—Types of Motor-Vehicles Registered, by Province, 1951 and 1952

Year and Province or Territory	Passenger Cars[1]	Commercial Cars, Trucks, etc.[2]	Buses	Motor-cycles	Total
1951	No.	No.	No.	No.	No.
Newfoundland	13,483	5,919	264	392	20,058
Prince Edward Island	11,176	5,616	20	84	16,896
Nova Scotia	69,786	33,274	515	1,687	105,262
New Brunswick	54,327	26,623	687	1,386	83,023
Quebec	350,435	130,931	2,931	16,432	500,729
Ontario	958,082	229,585	3,961[3]	13,470	1,205,098
Manitoba	119,775	49,337	198	1,955	171,265
Saskatchewan	137,038	77,201	109	1,102	215,450
Alberta	168,482	88,380	471	2,508	259,841
British Columbia	213,770	73,503	[4]	4,144	291,417
Yukon and N.W.T.	1,240	2,094	18	29	3,381
Canada, 1951	**2,097,594**	**722,463**	**9,174**	**43,189**	**2,872,420**
1952					
Newfoundland	15,936	7,021	333	340	23,630
Prince Edward Island	11,667	6,930	20	100	18,717
Nova Scotia	74,831	38,639	[4]	1,512	114,982
New Brunswick	58,991	29,099	436	1,313	89,839
Quebec	402,864	152,970	3,124	16,016	574,974
Ontario	1,024,816	249,460	4,070[3]	13,407	1,291,753
Manitoba	131,992	53,700	189	2,000	187,881
Saskatchewan	147,824	87,996	123	1,071	237,014
Alberta	189,287	99,326	487	2,369	291,469
British Columbia	236,711	80,842	[4]	3,929	321,482
Yukon and N.W.T.	1,560	2,662	19	15	4,256
Canada, 1952	**2,296,479**	**808,645**	**8,801**	**42,072**	**3,155,997**

[1] Includes taxis. [2] Includes service cars, tractors, etc. [3] Includes trolley-buses. [4] Included with trucks.

Apparent Consumption of Automobiles.—The apparent consumption of automobiles in Canada in any year is computed by deducting the number exported from the sum of the production and imports. Statistics regarding retail sales and the financing of motor-vehicle sales in Canada are given in the Domestic Trade Chapter of this volume.

5.—Apparent Supply of New Automobiles, 1943-52

Year	Cars Made for Sale in Canada		Car Imports[1]		Re-exports of Imported Cars		Apparent Supply[1]	
	Passenger	Commercial	Passenger	Commercial	Passenger	Commercial	Passenger	Commercial
	No.	No.	No.	No.	No.	No.	No.	No.
1943	—	79,290	21	795	1	163	20	79,922
1944	—	66,013	35	3,249	5	33	30	69,229
1945	1,866	47,459	236	1,855	3	19	2,099	49,295
1946	63,501	41,318	18,642	3,600	6	72	82,137	44,846
1947	128,243	63,152	35,570	7,293	26	4	163,787	70,441
1948	135,316	73,582	17,037	3,575	17	4	152,336	77,153
1949	177,060	85,715	35,293	3,404	32	8	212,321	89,111
1950	259,481	96,826	81,722	6,806	62	20	341,141	103,612
1951	243,155	105,547	42,631	5,703	2,866	11	282,920	111,239
1952	245,443[2]	112,485[2]	35,665	4,328	999	11	280,109	116,802

[1] Does not include Armed Forces vehicles. [2] Factory shipments only.

Provincial Government Revenue from Motor-Vehicles.—The taxation of motor-vehicles, garages, drivers, chauffeurs, etc., is an important source of provincial government income. In every province, licences or permits duly issued by the provincial authorities are required for motor-vehicles of all kinds, trailers, operators or drivers, paid chauffeurs, dealers, garages and gasoline and service stations. A sales tax on gasoline is also levied by each province and to Mar. 31, 1947, there was a federal gasoline tax of 3 cents per gallon but this was withdrawn on that date and most provincial sales taxes were increased to absorb the federal rate. The rates per gallon in effect in 1953 were: for Newfoundland 14 cents; the Provinces of Prince Edward Island, New Brunswick and Quebec 13 cents; Nova Scotia 15 cents; Ontario 11 cents; Manitoba 9 cents; Saskatchewan 11 cents from April 1953; Alberta and British Columbia 10 cents; Yukon Territory 6 cents; and the Northwest Territories one cent from April 1953. The more important sources from which provincial revenue from motor-vehicles is derived are shown in Table 6. Federal Government revenue from import duties, excise and sales taxes are given in Chapter XXIII.

6.—Provincial Revenue from the Registration and Operation of Motor-Vehicles, Years Ended Mar. 31, 1951 and 1952

Year and Province or Territory	Registration Licences				Operator and Chauffeur Licences	Tax on Bus and Truck Operators	Gasoline Tax	Total, including Miscellaneous Revenue
	Passenger Car	Truck and Bus	Motor-cycle	Dealer				
	$	$	$	$	$	$	$	$
1951								
Newfoundland	185,365	242,244	2,455	1,234	72,039	—	1,251,928	1,782,135
P. E. Island	168,389	162,508	438	2,350	11,924	5,544	960,238	1,321,604
Nova Scotia[2]	1,161,726	1,424,576	[1]	13,882	241,788	92,989	6,590,526	9,793,072
New Brunswick[3]	995,512	1,288,486	8,094	2,410	201,130	[1]	5,731,589	8,407,056
Quebec	4,443,196	9,306,165	29,952	47,295	1,461,985	260,048	37,156,111	54,109,599
Ontario	8,066,603	8,144,069	28,086	44,745	1,647,684	1,206,851	65,040,229	86,605,148
Manitoba	1,443,736	621,047	7,922	16,280	224,843	456,736	5,997,075	8,866,533
Saskatchewan	1,658,303	675,545	5,676	39,822	260,953	546,013	8,331,276	12,173,064
Alberta	2,554,780	1,899,431	10,270	36,665	370,085	1,568,339	11,609,189	18,235,834
British Columbia	4,379,053	2,384,027	26,436	32,630	1,122,932[4]	328,672	12,400,167	20,920,828
Yukon and N.W.T.	9,582	12,154	100	50	4,233	12,397	78,257	117,240
Canada, 1951	**25,066,245**	**26,160,252**	**119,429**	**237,363**	**5,619,596**	**4,477,589**	**155,146,585**	**222,332,113**
1952								
Newfoundland	224,649	311,620	3,150	1,475	87,136	—	1,514,260	2,176,265
P. E. Island	184,244	169,995	450	2,540	23,671	5,249	1,002,323	1,400,339
Nova Scotia[5]	1,310,066	1,487,541	[1]	15,190	256,013	95,407	7,852,411	11,315,022
New Brunswick[6]	1,048,357	1,315,642	7,652	2,840	203,383	14,075[7]	6,322,761	9,195,690
Quebec	8,267,481	8,320,098	43,545	[1]	1,671,280	325,136	47,635,063	66,799,530
Ontario	8,244,200	8,626,875	24,785	44,729	1,699,788	1,312,109	71,382,060	93,939,548
Manitoba	1,638,628	714,514	7,931	18,180	244,664	534,774	6,679,830	9,984,942
Saskatchewan	1,996,684	926,148	5,766	57,045	296,600	440,002	9,388,465	14,028,503
Alberta	2,053,403	2,215,354	9,980	37,652	416,504	1,702,342	12,766,293	19,507,961
British Columbia	4,754,352	2,617,842	22,491	26,820	1,720,792[4]	351,853	13,843,038	23,678,818
Yukon and N.W.T.	12,925	16,293	86	1,514	10,297	23,578	118,803	186,383
Canada, 1952	**29,734,989**	**26,721,922**	**125,836**	**207,985**	**6,630,128**	**4,804,525**	**178,505,307**	**252,213,001**

[1] Included with miscellaneous. [2] Fiscal year ended Nov. 30, 1950. [3] Fiscal year ended Oct. 31, 1950. [4] Includes drivers examination fees. [5] Figures are for Dec. 1, 1950, to Mar. 31, 1952. [6] Figures are for Nov. 1, 1950, to Mar. 31, 1952. [7] Truck operators only. Bus operator taxes included with miscellaneous.

Sales of Gasoline.—Sales during the war years were, of course, materially affected by rationing; the yearly increases since that period have resulted from the removal of restrictions and the great increase in motor-vehicle registrations.

7.—Sales of Gasoline, by Province, 1947-51

Province	1947	1948	1949	1950	1951
	gal.	gal.	gal.	gal.	gal.
Newfoundland	...	...	[1]	[1]	[1]
Prince Edward Island	6,963,412	7,288,125	8,240,105	9,085,340	10,245,817
Nova Scotia	51,647,756	53,136,982	57,443,469	61,348,662	65,776,919
New Brunswick	49,935,462	54,186,447	56,685,862	58,814,989	63,615,057
Quebec	247,467,957	280,857,736	304,139,386	340,621,374	372,853,122
Ontario	501,433,196	562,530,157	623,684,828	687,729,936	766,491,887
Manitoba	83,145,966	90,601,589	104,023,413	112,495,837	127,658,248
Saskatchewan	142,368,203	147,446,058	168,266,743	176,118,129	192,585,333
Alberta	171,112,439	190,608,360	218,935,855	241,387,708	272,991,830
British Columbia	117,497,292	130,909,076	142,297,406	155,423,743	173,070,142
Totals, Gross Sales	**1,371,571,683**	**1,517,564,530**	**1,683,717,067**	**1,843,025,718**	**2,045,288,355**
Refunds and exemptions	338,664,239	384,330,757	436,022,855	461,777,271	527,198,497
Totals, Net Sales	**1,032,907,444**	**1,133,233,773**	**1,254,882,212**[1]	**1,390,090,447**[1]	**1,528,905,858**[1]

[1] Estimated net sales for Newfoundland, amounting to 7,188,000 gal. in 1949, 8,842,000 gal. in 1950, and 10,816,000 gal. in 1951, are included in net totals; gross sales are not available.

Motor-Carriers.*—The lack of statistical information regarding commercial traffic on the highways led to the institution, in 1941, of a census of motor-carriers. The carriers are divided into two classes: passenger and freight. Each of these is subdivided into (*a*) carriers with annual revenue of $20,000 or over; (*b*) carriers with revenue of $8,000 to $20,000; and (*c*) carriers with revenue under $8,000. Bus companies handling urban traffic, exclusively, are compiled as a class. Many street-railway systems operate motor-buses, but the statistics of such systems are not included here; they are included in electric-railway statistics. Licensed carriers doing highway construction work, building air-fields, etc., are excluded from the compilations. Taxi operators and urban delivery trucks are also excluded, except where their operations include inter-urban business. Carriers operating as both passenger and freight carriers are classed as passenger or freight according to the preponderance of the revenue. The passenger revenue of trucking companies and the freight revenue of bus companies are small percentages of their respective total revenue.

* Statistics are given in more detail in DBS annual report, *Motor Carriers, Freight-Passenger.*

8.—Capital, Revenue, Employees and Equipment of Motor-Carriers, 1949 and 1950

Item	Freight Carriers with—						Passenger Carriers	Total, all Carriers
	Annual Revenue of $20,000 or Over		Annual Revenue of $8,000-$20,000		Annual Revenue under $8,000			
	1949	1950	1949	1950	1949	1950	1950	1950
Carriers.....No.	622	718	622	682	1,830	2,125	426	3,951
Investments—								
Land, buildings, equipment, etc. $	42,062,072	53,745,770	5,359,223	5,954,954	5,776,917	7,187,142	74,325,711	141,213,577
Revenue—								
Freight..... $	75,495,055	90,150,972	7,645,642	8,375,810	6,589,677	7,944,623	250,751	106,722,156
Passenger—								
Intercity and rural..... $	357,446	325,453	3,787	20,436	150	—	48,089,410	48,435,299
City..... $	—	—	6,132	—	—	—	16,577,253	16,577,253
Miscellaneous. $	2,907,923	4,409,974	287,463	257,736	199,741	306,242	2,593,311	7,567,263
Totals, Revenue $	78,760,424	94,886,399	7,943,024	8,653,982	6,789,568	8,250,865	67,510,725	179,301,971
Working proprietors...No.	377	490	581	746	1,770	2,158	221	3,615
Employees—								
As at July 15. No.	14,705	15,618	1,235	1,215	637	491	10,004	27,328
As at Dec. 15. "	14,380	15,715	1,159	1,110	520	363	9,385	26,573
Total wages... $	31,302,703	35,899,329	1,811,555	1,817,013	640,121	738,658	23,640,726	62,095,726
Equipment—								
Trucks.....No.	6,268	6,767	1,534	1,617	2,157	2,560	182	11,126
Tractor, semi-trailer units. "	3,067	3,501	80	92	42	31	16	3,640
Trailers..... "	1,703	2,359	60	75	51	45	17	2,496
Buses..... "	55	73	13	20	11	7	4,610	4,710

Table 9 shows the freight and passengers carried by motor-carriers in 1949 and 1950. Traffic data were not available for the majority of the small operators. Many truck operators failed to report tons of freight carried and others reported only estimates so that these data are not complete. A difficulty in compiling weights is that much traffic is carried on a load or package basis and not on a weight basis. Records of passengers appear to be fairly complete, possibly because tickets are sold and accounted for, and the unit is not so complex as for freight carried.

9.—Traffic Carried by Motor-Carriers, 1949 and 1950

Year and Item	Freight Carriers with—			Passenger Carriers	Total all Carriers
	Annual Revenue of $20,000 or Over	Annual Revenue of $8,000-$20,000	Annual Revenue of Under $8,000		
1949					
Passengers—					
Regular Routes—					
Intercity and rural.....No.	248,415	2,335	350	139,243,269	139,494,369
City..... "	—	2,106	—	230,524,700	230,526,806
Special and Chartered Service—					
Intercity and rural.....No.	8,126	—	—	5,901,192	5,909,318
City..... "	—	—	—	256,953	256,953
Totals, Passengers.....No.	**256,541**	**4,441**	**350**	**375,926,114**	**376,187,446**
Totals, Freight, Intercity and Rural.....ton	**12,696,256**	**1,283,019**	**1,066,215**	**42,214**	**15,087,704**
1950					
Passengers—					
Regular Routes—					
Intercity and rural.....No.	270,692	21,978	—	128,911,770	129,204,440
City..... "	—	—	—	228,541,212	228,541,212
Special and Chartered Service—					
Intercity and rural.....No.	9,228	186	—	5,272,678	5,282,092
City..... "	—	—	—	314,201	314,201
Totals, Passengers.....No.	**279,920**	**22,164**	**—**	**363,039,861**	**363,341,945**
Totals, Freight, Intercity and Rural.....ton	**15,849,326**	**1,599,265**	**1,501,585**	**59,312**	**19,009,488**

Motor-Vehicle Accidents.—Motorists are required by law to report accidents but complete statistics of these accidents are not available for all provinces. The Dominion Bureau of Statistics compiles statistics on all deaths from motor-vehicle accidents and these are shown in Table **10**. A direct comparison of such statistics between the provinces is of little value owing to differences in size, population, motor-vehicle density, etc., but, to put them on somewhat the same basis, the average number of deaths per 10,000 registered motor-vehicles has also been tabulated. These data still give no weight to differences in use of motor-vehicles, variations in climate, road conditions, tourist cars, etc., all of which are factors in accidents, but it is apparent that more safety education is required in all provinces.

Table **11** shows the number of persons killed or injured in automobile accidents as reported by the motor-vehicle branches of the provincial governments. It is possible that the latter reported some persons as injured who subsequently died from injuries and these would be included in the fatalities of the vital statistics shown in Table **10**; also, accidents that occurred late in December and resulted in deaths would be charged to December by the provincial authorities but to January of the next year in the vital statistics data. Consequently, the figures of fatalities of Tables **10** and **11** are not in complete agreement.

10.—Deaths Resulting from Motor-Vehicle Accidents, by Province, 1942-51

NOTE.—This table was compiled in the Health and Welfare Division, Dominion Bureau of Statistics. Figures for 1926-35 will be found in the 1941 Year Book, p. 578, and those for 1936-41 in the 1948-49 edition, p. 712.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	DEATHS BY PLACE OF OCCURRENCE[1]										
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1942.....	...	8	72	52	363	610	52	58	62	132	1,409
1943.....	...	5	90	70	392	563	44	34	84	155	1,437
1944.....	...	11	73	56	406	526	53	43	80	124	1,372
1945.....	...	8	76	90	424	637	67	58	71	125	1,556
1946.....	...	4	84	69	482	729	94	70	91	158	1,781
1947.....	...	15	83	104	476	753	77	51	103	207	1,869
1948.....	...	5	96	118	599	782	81	87	125	193	2,086
1949.....	...	11	102	96	645	873	105	85	172	176	2,265
1950.....	18	7	94	103	682	850	75	91	162	188	2,270
1951.....	26	20	103	122	818	991	102	93	184	227	2,686
	DEATHS PER 10,000 REGISTERED MOTOR-VEHICLES										
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1942.....	...	10·61	12·23	13·77	16·31	8·53	5·58	4·46	4·94	9·93	9·24
1943.....	...	6·23	15·20	17·41	17·60	8·14	4·71	2·54	6·59	11·51	9·51
1944.....	...	13·08	12·60	14·15	18·12	7·79	5·68	3·05	6·28	9·18	9·14
1945.....	...	9·05	13·40	21·65	18·41	9·61	7·22	4·14	5·46	9·27	10·39
1946.....	...	4·35	13·40	15·45	18·89	10·25	9·30	4·72	6·55	10·52	10·98
1947.....	...	15·08	11·81	20·16	16·05	9·41	6·87	3·22	6·63	11·52	10·17
1948.....	...	4·43	12·58	18·92	17·83	8·94	6·33	5·19	7·19	9·55	10·25
1949.....	...	8·33	12·22	14·27	16·76	9·00	7·51	4·59	8·58	7·65	9·89
1950.....	10·99	4·55	9·92	13·84	15·73	7·70	4·75[r]	4·55	7·02	6·95	8·74[r]
1951.....	12·96	11·84	9·78	14·69	16·34	8·22	5·96	4·32	7·08	7·79	9·36

[1] Includes all persons killed in motor-vehicle accidents by province in which death occurred.

11.—Motor-Vehicle Accidents, by Province, 1951

NOTE.—Figures are as reported by provincial Vital Statistics authorities for the calendar year.

Item	N'fld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon-N.W.T.	Total
Accidents Reported	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Fatal— Resulting in death of one or more persons	25	18	91	97[2]	10,690	824	81	68	158	186	2	41,691
Non-fatal— Resulting in injury to one or more persons	402	111	1,594	753[2]		15,653	1,667	1,722	2,974	4,524	51	
Resulting in property damage only[1]	1,061	822	5,464	2,572[2]	71,521	38,443	7,995	5,534	8,733	15,671	162	157,978
Totals, Accidents	**1,488**	**951**	**7,149**	**3,423**	**82,211**	**54,920**	**9,743**	**7,324**	**11,865**	**20,381**	**215**	**199,669**
Persons Killed												
Drivers	2	4	17	31	..	249	30	22	63	65	2	485
Passengers	9	10	33	36	..	302	26	22	63	60	—	561
Pedestrians	14	7	47	36	..	339	33	26	47	65	—	614
Bicyclists	1	—	6	[3]	..	35	1	1	2	9	—	55
Motorcyclists and passengers	1	—	1	4	..	20	1	—	2	5	—	34
Persons in horse-drawn vehicles	—	1	1	—	..	4	1	2	—	1	—	10
Others	—	—	—	—	..	—	—	—	5	3	—	8
Totals, Persons Killed	**27**	**22**	**165**	**167**	**645**	**949**	**92**	**73**	**182**	**208**	**2**	**2,412[4]**
Persons Injured												
Drivers	43	37	580	339		6,359	711	848	1,151	1,830	35	11,933
Passengers	119	72	820	458		9,988	894	1,259	1,710	3,269	51	18,640
Pedestrians	280	41	627	295		4,287	444	237	369	1,019	3	7,602
Bicyclists	20	1	76	[3]		995	143	59	66	313	—	1,673
Motorcyclists and passengers	9	—	25	41		814	27	56	56	157	—	1,185
Persons in horse-drawn vehicles	9	3	3	1	..	114	7	—	10	35	—	182
Others	5	8	—	—	..	—	—	20[5]	15	1	1	50
Totals, Persons Injured	**485**	**162**	**2,131**	**1,134**	**13,490**	**22,557**	**2,226**	**2,479**	**3,377**	**6,624**	**90**	**54,755[4]**
Amount of Property Damage Caused[1]....$'000	**231**	**161**	**2,529**	**1,023**	..	**17,702**	**2,473**	**2,526**	**2,834**	**5,784**	**103**	**35,366**

[1] Accidents causing damage estimated at $50 or over are reported by all authorities except the following: Saskatchewan reports $100 or over; Alberta reports $75 or over (Edmonton estimated); Quebec and Yukon report $25 or over; Charlottetown, P.E.I., reports all accidents. [2] Partly estimated. [3] Included with "motorcyclists". [4] Includes Quebec total. [5] Includes 8 tractor operators.

PART IV.—WATERWAYS*

The Canada Shipping Act.—Legislation regarding all phases of shipping is consolidated under the Canada Shipping Act (R.S.C. 1952, c. 29). Under the Act and its amendments the Parliament of Canada accepts full responsibility for the regulation of Canadian shipping. The Canada Shipping Act is a comprehensive

* Information and statistics dealing with this subject have been supplied as follows: aids to navigation, canals, harbours, administrative services, and marine services, by the Department of Transport and the National Harbours Board; part of the financial statistics, by the Department of Public Works; shipping subsidies, by the Director of Subsidized Steamship Services, Canadian Maritime Commission; Panama Canal, by the Governor of the Panama Canal Zone; other canal traffic and statistics of shipping, by the Public Finance and Transportation Division, Dominion Bureau of Statistics.

piece of legislation embracing features of international agreements as well as of British and previous Canadian legislation. A brief summary of the Act is given in the 1938 Year Book, pp. 680-682.

Section 1.—Shipping Facilities and Traffic

The developments and equipment to facilitate water traffic are classified under the headings of shipping, harbours, canals and aids to navigation. Subsection 5 gives information regarding pilotage service, steamship inspection, and personnel shipped and discharged.

Under the Terms of Union of Newfoundland with Canada, the extensive marine services and facilities of that Province were incorporated with those provided by the Federal Government.

Subsection 1.—Shipping

All waterways including canals and inland lakes and rivers are open on equal terms, except in the case of the coasting trade, to the shipping of all countries of the world so that the commerce of Canada is not dependent entirely upon Canadian shipping. However, a large part of the inland and coastal traffic is carried in ships of Canadian registry.

Canadian Registry.—Under Part 1 of the Canada Shipping Act, every ship included under the definition of "British Ship" given in Sect. 6 of the Act and controlled as to management and use in Canada must be registered in Canada, unless registered elsewhere in the Commonwealth. An exception is made in the case of ships not exceeding 10 tons register and engaged solely in coastal or inland navigation. A ship which should be registered, and which is not registered in any part of the Commonwealth, is not entitled to the privileges accorded to British ships.

1.—Vessels on the Canadian Shipping Registry, by Province, as at Dec. 31, 1950-52

NOTE.—Figures for 1935-49 are given in the corresponding table of previous Year Books beginning with the 1941 edition.

Province or Territory	1950		1951		1952	
	No.	Net Tons	No.	Net Tons	No.	Net Tons
Newfoundland	2,114	97,311	1,791	82,716	1,636	77,066
Prince Edward Island	134	7,849	144	7,835	164	7,881
Nova Scotia	3,892	116,220	4,214	120,365	4,389	139,098
New Brunswick	935	39,279	963	35,554	1,012	38,939
Quebec	1,578	590,348	1,696	579,417	1,815	554,044
Ontario	1,685	410,185	1,774	432,810	1,858	503,447
Manitoba	100	10,915	107	12,233	105	12,142
Saskatchewan	1	147	1	147	1	147
Alberta	1	35	2	385	2	385
British Columbia	4,361	389,751	4,583	384,122	4,816	394,148
Yukon Territory	15	3,657	17	3,767	17	3,767
Totals	**14,816**	**1,665,697**	**15,292**	**1,659,351**	**15,815**	**1,731,064**

Shipping Traffic.—A brief description of the early development of Canadian shipping is given in the 1941 Year Book, pp. 597-598. Complete statistics, comparable with those given for the railways, showing all the freight carried by water, are not available. However, there is a record of the number and tonnage of ships calling at all ports at which there are customs collectors and of cargoes of vessels

trading between Canadian and foreign ports. Each vessel visiting a customs port or outport makes a statistical return which is forwarded to the Dominion Bureau of Statistics. Coastwise cargo has been reported from Jan. 1, 1952.

Reports are not made for vessels of less than 10 registered net tons and the tonnage of tugs is the gross ton and not the net ton used for cargo vessels. Fishing vessels are not required by customs regulations to report when operating from certain ports; consequently, the data are not on the same basis as data for cargo vessels.

2.—Vessels Entered at Canadian Ports,[1] 1943-52

NOTE.—Figures for the years ended Mar. 31, 1929-35, are given in the 1941 Year Book, p. 597, and for 1936-42 in the 1948-49 edition, p. 733.

Year	In Foreign Service[2]		In Coasting Service		Totals	
	Vessels	Net Tons Registered	Vessels	Net Tons Registered	Vessels	Net Tons Registered
	No.	No.	No.	No.	No.	No.
1943	22,901	26,345,562	65,066	40,300,778	87,967	66,646,340
1944	23,786	28,356,681	64,999	43,776,497	88,785	72,133,178
1945	24,431	29,655,984	65,410	48,098,201	89,841	77,754,185
1946	26,461	30,367,071	67,014	45,559,014	93,475	75,926,085
1947	27,868	35,926,095	73,439	51,823,502	101,307	87,749,597
1948	31,138	39,443,055	75,141	52,453,382	106,279	91,896,437
1949	30,565	40,088,377	82,012	56,037,003	112,577	96,125,380
1950	31,420	42,816,949	84,065	56,066,997	115,485	98,883,946
1951	32,304	47,508,342	86,571	60,802,798	118,875	108,311,140
1952	33,782	52,156,098	79,722	56,776,504	113,504	108,932,491

[1] Exclusive of passenger services. [2] Sea-going and inland international.

3.—Vessels Entered at each of the Principal Canadian Ports, 1952

NOTE.—For details of shipping at all ports in Canada, *see* DBS publication, *Shipping Report.*

Province and Port	In Foreign Service[1]		In Coasting Service		Totals	
	Vessels	Net Tons Registered	Vessels	Net Tons Registered	Vessels	Net Tons Registered
	No.	No.	No.	No.	No.	No.
Newfoundland—						
Bell Island	97	420,352	125	251,896	222	672,248
Botwood	70	164,420	23	32,351	93	196,771
Cornerbrook	110	266,995	498	458,791	608	725,786
Port aux Basques	18	6,995	780	325,114	798	332,109
St. John's	961	887,132	1,181	389,257	2,142	1,276,389
Totals, Newfoundland[2]	**1,993**	**2,263,708**	**6,237**	**2,335,034**	**8,230**	**4,598,742**
Prince Edward Island—						
Charlottetown	23	22,869	110	55,246	133	78,115
Totals, Prince Edward Island[2]	**53**	**58,740**	**168**	**73,444**	**221**	**132,184**
Nova Scotia—						
Digby	82	33,231	377	657,384	459	690,615
Halifax	1,165	4,469,106	898	698,447	2,063	5,167,553
North Sydney	212	92,823	1,712	482,436	1,924	575,259
Sydney	161	380,320	789	1,000,707	950	1,381,027
Yarmouth	340	125,018	256	18,860	596	143,878
Totals, Nova Scotia[2]	**3,704**	**6,275,119**	**6,218**	**3,186,463**	**9,922**	**9,461,582**

[1] Sea-going and inland international. [2] Includes small ports not shown separately.

3.—Vessels Entered at each of the Principal Canadian Ports, 1952—concluded

Province or Territory and Port	In Foreign Service[1]		In Coasting Service		Totals	
	Vessels	Net Tons Registered	Vessels	Net Tons Registered	Vessels	Net Tons Registered
	No.	No.	No.	No.	No.	No.
New Brunswick—						
Campobello	836	14,290	6	106	842	14,396
Saint John	581	1,710,972	985	887,016	1,566	2,597,988
Totals, New Brunswick[2]	**6,592**	**2,227,199**	**3,156**	**1,215,497**	**9,748**	**3,442,696**
Quebec—						
Baie Comeau	48	97,457	835	290,319	883	387,776
Montreal	1,927	5,243,219	3,460	3,750,123	5,387	8,993,342
Port Alfred	514	1,532,568	785	442,423	1,299	1,974,991
Quebec	570	2,322,437	1,947	1,632,881	2,517	3,955,318
Three Rivers	304	741,144	2,146	1,060,611	2,450	1,801,755
Totals, Quebec[2]	**3,730**	**10,453,486**	**12,151**	**8,479,903**	**15,881**	**18,933,389**
Ontario—						
Amherstburg	62	124,587	27	15,095	89	139,682
Cobourg	31	28,728	63	38,403	94	67,131
Cornwall	98	116,743	243	252,643	341	369,386
Fort William	524	1,590,073	757	2,250,668	1,281	3,840,741
Hamilton	762	2,234,888	667	635,452	1,429	2,870,340
Kingston	494	112,406	720	1,092,906	1,214	1,205,312
Midland	85	210,072	224	799,109	309	1,009,181
Port Arthur	543	1,519,243	1,006	3,400,360	1,549	4,919,603
Port Colborne	218	449,814	1,005	2,078,421	1,223	2,528,235
Port McNicoll	23	92,673	173	627,387	196	720,060
Prescott	271	441,926	295	442,443	566	884,369
St. Catharines	33	67,452	125	111,527	158	178,979
Sarnia	573	2,244,575	767	1,465,334	1,340	3,709,909
Sault Ste. Marie	537	1,847,668	355	512,904	892	2,360,572
Thorold	101	200,027	378	538,600	479	738,627
Toronto	923	1,615,439	1,136	1,271,445	2,059	2,886,884
Windsor	393	753,348	345	499,611	738	1,252,959
Totals, Ontario[2]	**7,611**	**16,022,542**	**10,658**	**18,265,754**	**18,269**	**34,288,296**
Manitoba (Churchill)	**30**	**108,079**	—	—	**30**	**108,079**
British Columbia—						
Nanaimo	654	532,788	3,367	4,269,574	4,021	4,802,362
New Westminster	690	1,239,885	2,198	782,609	2,888	2,022,494
Ocean Falls	44	182,183	800	691,417	844	873,600
Port Alberni	74	268,788	608	134,613	682	403,401
Powell River	201	242,161	3,146	832,632	3,347	1,074,793
Prince Rupert	1,402	472,924	1,641	716,730	3,043	1,189,654
Union Bay	82	237,263	541	105,561	623	342,824
Vancouver	2,909	6,679,935	22,302	11,650,929	25,211	18,330,864
Victoria	3,048	4,268,713	3,752	2,976,918	6,800	7,245,631
Totals, British Columbia[2]	**10,064**	**14,745,173**	**41,044**	**23,153,879**	**51,108**	**37,899,052**
Yukon and Northwest Territories	**6**	**2,052**	**90**	**66,530**	**96**	**68,582**
Grand Totals	**33,783**	**52,156,098**	**79,722**	**56,776,504**	**113,505**	**108,932,602**

[1] Sea-going and inland international.

[2] Includes small ports not shown separately.

4.—Cargoes at Canadian Ports Loaded or Unloaded from Vessels in Foreign Service, by Province, 1948-52

Province or Territory and Year	Loaded		Unloaded	
	Tons Weight	Tons Measurement[1]	Tons Weight	Tons Measurement[1]
Newfoundland—				
1949[2]	1,504,651	87	307,051	5,454
1950	985,483	530	451,860	1,938
1951	1,883,325	[3]	402,427	[3]
1952	2,069,750	[3]	698,138	[3]
Prince Edward Island—				
1948	47,511	—	15,853	—
1949	65,156	4,560	18,910	—
1950	47,050	626	16,539	—
1951	44,864	[3]	28,652	[3]
1952	76,248	[3]	18,246	[3]
Nova Scotia—				
1948	4,498,315	18,492	3,123,670	1,441
1949	3,634,676	7,754	1,952,617	4,182
1950	3,841,765	5,876	1,879,169	10,666
1951	4,018,764	[3]	1,841,121	[3]
1952	3,987,639	[3]	2,373,939	[3]
New Brunswick—				
1948	2,074,597	92,045	575,165	33,596
1949	1,696,869	103,216	561,113	56,185
1950	1,160,774	68,419	613,993	126,196
1951	1,745,548	[3]	656,935	[3]
1952	2,274,696	[3]	619,443	[3]
Quebec—				
1948	5,127,735	295,565	7,846,612	86,914
1949	5,551,245	208,106	6,766,754	74,279
1950	5,282,576	184,205	9,700,675	277,873
1951	7,290,701	[3]	8,921,562	[3]
1952	9,241,694	[3]	7,913,927	[3]
Ontario—				
1948	3,809,343	216	22,635,413	1,800
1949	4,444,190	—	16,230,850	221
1950	4,430,654	—	20,988,359	—
1951	5,550,453	[3]	23,383,058	[3]
1952	6,113,558	[3]	23,881,456	[3]
Manitoba—				
1948	159,433	—	958	—
1949	160,034	—	1,160	—
1950	200,846	—	3,200	—
1951	203,621	[3]	6,993	[3]
1952	283,157	[3]	14,997	[3]
British Columbia—				
1948	4,311,539	5,447	2,485,594	37,156
1949	5,057,945	2,914	2,302,938	37,601
1950	5,016,020	2,779	2,851,311	39,395
1951	6,542,254	[3]	3,028,605	[3]
1952	8,507,443	[3]	3,236,052	[3]
Yukon and Northwest Territories—				
1948	717	—	15	—
1949	329	—	19	—
1950	327	—	7	—
1951	269	[3]	41	[3]
1952	258	[3]	8	[3]
Totals—				
1948	**20,029,190**	**411,765**	**36,683,280**	**160,907**
1949	**22,115,095**	**326,637**	**28,141,412**	**177,922**
1950	**20,965,495**	**262,435**	**36,505,113**	**456,068**
1951	**27,279,799**	[3]	**38,269,394**	[3]
1952	**32,554,443**	[3]	**38,756,206**	[3]

[1] One measured ton=40 cubic feet. [2] Nine months, Apr. 1 to Dec. 31. [3] Tons measurement combined with tons weight as of January 1951.

Subsection 2.—Harbours

Water transportation cannot be studied with any degree of completeness without taking into consideration the co-ordination of land and water transportation at many of the ports. Facilities provided to enable interchange movements include the necessary docks and wharves, some for passenger traffic but most of them for freight, warehouses for the handling of general cargo, and special equipment for such bulk freight as lumber, coal, oil, grain, etc. Facilities may include cold-storage warehouses, harbour railway and switching connections, grain elevators, coal bunkers, oil-storage tanks and, in the chief harbours, dry-dock accommodation.

Eight of the principal harbours of Canada are administered by the National Harbours Board. Seven other harbours come under the supervision of the Department of Transport and are administered by commissions that include municipal as well as Federal Government appointees. In addition, there are about 300 public harbours that are under the direct supervision of the Department of Transport. These harbours are administered under rules and regulations approved by the Governor General in Council. Harbour masters have been appointed by the Minister of Transport for 131 of these harbours, their remuneration being made from fees levied on vessels under the terms of the Canada Shipping Act.

At most ports, in addition to the harbour facilities operated by the National Harbours Board or other operating commission, there are dock and handling facilities owned by private companies such as railway, pulp and paper, oil, sugar industries, etc. At a number of ports there are also dry docks that are dealt with separately (*see* p. 825).

5.—Facilities of the Six Principal Harbours, as at Dec. 31, 1952

NOTE.—The facilities include those under the control of other agencies as well as those of the National Harbours Board at these ports.

Item	Halifax	Saint John	Quebec	Three Rivers	Montreal	Vancouver
Minimum depth of approach channel ft.	50	30	35	35	35	35
Harbour railway..... miles	31	63	23	5	62	75
Piers, wharves, jetties, etc..... No.	46	20	36	3	105	28
Length of berthing..... ft.	33,420	12,915	32,500	8,690	51,060	31,440
Transit-shed floor space .....sq. ft.	1,429,500	835,700	743,600	193,000	2,225,000	1,415,500
Cold-storage warehouse capacity..cu. ft.	1,655,350	820,000	528,000	—	2,909,200	3,031,400
Grain Elevators—						
Capacity..... bu.	2,200,000	3,000,000	4,000,000	2,000,000	15,162,000	18,716,500
Loading rate.....bu. per hr.	75,000	150,000	90,000	32,000	445,000	312,000
Floating crane capacity..... tons	75	65	75	—	75	85
Coal-dock storage capacity..... tons	82,000	—	215,000	300,000	1,380,000	—
Oil-tank storage capacity..... gal.	119,245,000	21,026,600	54,186,560	1,410,000	68,000,000	162,250,000

National Harbours Board.—A description of the origin and functions of the National Harbours Board is given in the 1940 Year Book, pp. 679-681. The Board is responsible for the administration and operation of the following properties (representing a capital investment of approximately $232,000,000): port facilities such as wharves and piers, transit sheds, grain elevators, cold-storage warehouses, terminal railways, etc., at the harbours of Halifax, Saint John, Chicoutimi, Quebec, Three Rivers, Montreal, Vancouver and Churchill; grain elevators at Prescott and Port Colborne; and the Jacques Cartier Bridge at Montreal. Operating revenue and expenditure for these properties are given in Table **29**, pp. 844-845.

Harbour Traffic.—The freight movement through a large port takes a number of different forms. The overseas movement, i.e., the freight loaded on or unloaded from sea-going vessels, frequently constitutes a surprisingly small part of the total. Usually, the volume coming in and going out by coasting vessels is larger. Then there is the in-transit movement in vessels that pass through the harbour without loading or unloading. Finally, there is the movement from one point to another within the harbour, which in many ports amounts to a large volume. It is not possible to obtain statistics of the total freight handled in all the ports and harbours of Canada, as many of them are small and without the staff necessary to obtain a detailed record of freight handled. The National Harbours Board reports annually the water-borne cargo loaded and unloaded at the eight ports under its control. Six of these are among the principal ports of Canada and the cargo handled in each is shown in Table 6. The figures include freight carried by coasting and inland international, as well as by sea-going shipping; they include all cargo loaded or unloaded whether by facilities under the Board or at private docks and terminals in these ports. Cross-harbour movements, ballast (non-revenue), bunkers, ships' stores, mail and passengers' baggage are excluded.

6.—Principal Commodities in Water-Borne Cargo Loaded and Unloaded at each of Six Principal Ports, 1951 and 1952

Port and Commodity	1951		1952	
	Inward	Outward	Inward	Outward
	tons	tons	tons	tons
Montreal—				
Grain	1,506,199	2,842,770	2,509,705	4,187,520
Coal, bituminous	966,781	—	951,414	—
Gasoline	91,580	1,781,376	104,171	1,635,829
Flour, wheat	22	441,044	1	554,574
Petroleum, fuel	390,360	1,094,562	336,629	833,447
Petroleum, crude	1,345,935	276,752	801,417	295,142
Sugar, raw	309,979	11,055	311,104	—
Motor-vehicles and parts	* 41,604	68,645	39,851	26,093
Lumber (planks, boards and flooring) and square timber	8,706	70,539	6,081	62,515
Meats, canned, cured, prepared or preserved	6,950	7,015	3,331	7,068
Petroleum, refined, *n.e.s*	—	—	2,932	18,798
Manganese ore	40,271	40,181	5,616	5,600
Newsprint	8	17,502	—	17,890
Phosphate rock	92,445	—	75,235	—
Kerosene	17,631	29,464	—	—
Cement, common or portland	163,004	82,874	212,822	104,611
Pulpboard (except wallboard)	1	12,288	—	—
Gypsum, crude	189,613	34,965	204,717	54,750
Coal, anthracite	203,136	11,813	247,087	10,277
Molasses	23,206	4,482	23,221	10,959
Iron ore	231,217	231,053	206,366	202,414
Wood-pulp	1,953	93,056	9,007	48,996
Cheese	1,941	24,176	—	—
Totals, 23 Commodities	**5,632,542**	**7,175,612**	**6,050,707**	**8,076,483**
Grand Totals, All Commodities	**6,797,082**	**8,119,988**	**6,942,228**	**9,143,377**
Vancouver—				
Grain	—	2,441,719	—	3,457,423
Logs, masts, piling, pitprops, poles, posts, spars and ties (railway)	955,565	168,914	879,541	171,084
Petroleum, crude	1,224,341	—	1,137,369	28,064
Petroleum, fuel	615,075	313,244	727,906	331,338
Lumber (planks, boards and flooring) and square timber	527,817	440,407	449,556	383,001
Sand and gravel	395,499	10,991	401,588	17,756
Newsprint	142,062	10,399	139,838	7,013
Gasoline	253,495	205,313	277,977	195,274
Coal, bituminous	126,964	29,834	50,895	42,082

6.—Principal Commodities in Water-Borne Cargo Loaded and Unloaded at each of Six Principal Ports, 1951 and 1952—continued

Port and Commodity	1951		1952	
	Inward	Outward	Inward	Outward
	tons	tons	tons	tons
Vancouver—concluded				
Flour, wheat	76	239,156	60	287,308
Wood-pulp	237,082	68,600	203,542	34,514
Fish (including shellfish), canned or preserved	23,320	20,336	18,014	23,523
Fertilizers and fertilizer materials	19,027	10,377	13,992	4,918
Cement, common or portland	128,240	10,193	140,045	8,804
Hog fuel	—	86,108	—	75,759
Rock and stone	18,337	180,764	5,123	192,010
Kerosene	62,079	38,573	63,715	48,090
Totals, 17 Commodities	**4,728,979**	**4,274,928**	**4,509,161**	**5,307,961**
Grand Totals, All Commodities	**5,961,684**	**5,196,216**	**5,811,629**	**6,487,913**
Halifax—				
Petroleum, crude	1,044,436	—	1,331,903	—
Petroleum, fuel	366,300	596,484	368,710	733,092
Coal, bituminous	136,507	5	162,100	—
Gasoline	292,883	240,985	327,177	260,505
Grain	—	174,407	3,412	317,123
Flour, wheat	21	94,559	—	104,379
Motor-vehicles and parts	23,901	7,698	15,933	8,164
Logs, masts, piling, pitprops, poles, posts, spars and ties (railway)	59	15,637	—	33,819
Lumber (planks, boards and flooring) and square timber	3,466	67,106	430	75,600
Meats, canned, cured, prepared or preserved	1,787	5,366	1,612	4,262
Fish (including shellfish), fresh or frozen	37,030	1,790	33,839	384
Fish (including shellfish), dried, pickled, salted or smoked	31,708	57,551	33,337	55,781
Totals, 12 Commodities	**1,938,098**	**1,261,588**	**2,478,453**	**1,593,109**
Grand Totals, All Commodities	**2,296,266**	**1,582,009**	**2,578,784**	**1,967,218**
Saint John—				
Grain	—	357,250	—	452,043
Flour, wheat	1	256,037	—	208,271
Coal, bituminous	—	—	—	—
Lumber (planks, boards and flooring) and square timber	7,786	73,179	6,540	82,215
Sugar, raw	184,148	176	176,796	15
Motor-vehicles and parts	66,427	8,598	24,069	20,133
Newsprint	—	50,677	10	84,678
Gasoline	146,190	16,551	124,786	15,565
Petroleum, fuel	203,459	15,812	248,145	25,376
Logs, masts, piling, pitprops, poles, posts, spars and ties (railway)	65	35,369	—	183,685
Potatoes	66	40,172	—	30,285
Totals, 11 Commodities	**608,142**	**853,821**	**580,346**	**1,102,266**
Grand Totals, All Commodities	**1,028,729**	**1,338,836**	**949,663**	**1,746,728**
Three Rivers—				
Pulpwood	1,617,867	—	1,392,800	—
Coal, bituminous	492,509	—	370,925	—
Grain	308,599	358,843	430,349	653,024
Paper, newsprint	—	130,242	—	141,910
Lumber (planks, boards and flooring) and square timber	9,111	1,815	4,015	1,969
Gasoline	36,535	1,613	49,645	6,064
Sulphur	18,551	—	20,799	—
Petroleum, fuel	105,148	6,918	152,058	11,053
Sand and gravel	—	7,800	—	8,197
Totals, 9 Commodities	**2,588,320**	**507,231**	**2,420,591**	**822,217**
Grand Totals, All Commodities	**2,636,993**	**557,021**	**2,466,077**	**872,329**

6.—Principal Commodities in Water-Borne Cargo Loaded and Unloaded at each of Six Principal Ports, 1951 and 1952—*concluded*

Port and Commodity	1951		1952	
	Inward	Outward	Inward	Outward
	tons	tons	tons	tons
Quebec—				
Pulpwood	536,868	14,260	544,605	268
Coal, bituminous	621,881	3,045	365,641	1,836
Gasoline	206,867	10,621	245,527	571
Logs, masts, piling, pitprops, poles, posts, spars and ties (railway)	950	736	13	41,843
Petroleum, fuel	365,290	1,138	448,059	2,935
Lumber (planks, boards and flooring) and square timber	7,872	9,380	13,254	21,751
Cement, common or portland	57,862	1,473	67,009	1,464
Totals, 7 Commodities	**1,797,590**	**40,653**	**1,684,108**	**70,668**
Grand Totals, All Commodities	**1,948,999**	**863,951**	**1,887,105**	**1,133,067**

Dry Docks.—The Department of Public Works of the Federal Government has constructed five dry docks, one at Kingston, Ont., two at Lauzon, Que., and two at Esquimalt, B.C. The dock at Kingston is under lease to the Kingston Shipbuilding Company. The old Esquimalt dry dock was temporarily transferred to the Department of National Defence on Nov. 1, 1934, and, when commercially required, it will be returned to the control of the Department of Public Works. Each of the larger dry docks at Lauzon, Que., and Esquimalt, B.C., can be divided for use of small vessels; the larger Lauzon dock cost approximately $4,500,000 and the larger Esquimalt dock approximately $7,000,000.

7.—Dimensions of Graving Docks Owned by the Federal Government

Location	Length	Width at—			Depth of Water on Sill	Rise of Tide	
		Coping	Bottom	Entrance		Spring	Neap
	ft.	ft.	ft.	ft.	ft.	ft.	ft.
Lauzon, Que., *Champlain*	1,150·0	120·0	105·0	120·0	40·0 H.W.	18	13·3
Lauzon, Que., *Lorne*	600·3	100·0	59·5	62·0	25·7 H.W.	18	13·3
Esquimalt, B.C. (old dock)	450·8[1]	90·0	41·0	65·0	28·8 H.W.[2]	7 to 10	3 to 8
Esquimalt, B.C.	1,173·8	149·0	126·0	135·0	40·0 H.W.	7 to 10	3 to 8
Kingston, Ont.	353·5	55·0	47·0	55·0	16·8 L.W.	—	—

[1] Face of caisson to vertical face at head, 481·0 ft.; length of pad on which keel blocks rest, 403·5 ft.
[2] Over keel blocks at H.W. 10 ft., tide 26·1 ft.

8.—Dimensions and Cost of Graving Docks Subsidized under the Dry Docks Subsidies Act, 1910

Location	Length	Width	Depth Over Sill	Total Cost	Subsidy
	ft.	ft.	ft.	$	
Collingwood No. 1, Ont.	518·3	59·8	13·0	500,000	3 p.c. for 20 years[1]
Collingwood No. 2, Ont.	410·0	95·0	16·0	396,965	3 p.c. for 20 years[1]
Port Arthur, Ont.	701·0	77·5	16·2	1,258,050	3 p.c. for 20 years[1]
Montreal, Que. (floating dock), *Duke of Connaught*	601·0	100·0	38·0	3,000,000	3½ p.c. for 35 years[1]
Prince Rupert, B.C. (floating dock)	600·0	100·0	32·0[2]	2,199,168	3½ p.c. for 35 years[1]
Saint John, N.B.	1,157·8	131·5	40·3	5,500,000	4½ p.c. for 35 years
North Vancouver, B.C. (floating dock)	556·5	98·0	28·0[3]	2,500,000	4½ p.c. for 35 years

[1] Subsidy payments have been completed. [2] 28 ft. over blocks. [3] Over sill (H.W.).

Subsection 3.—Canals

The canals and canalized waters of Canada, under the jurisdiction of the Department of Transport, comprise a series of waterways providing navigation for 1,875 miles inland from salt water. The canals may be divided into two classes: (1) the main or primary canals on the St. Lawrence River and the Great Lakes, including the Lachine, Soulanges, Cornwall and Williamsburg Canals on the St. Lawrence River, the Welland Ship Canal between Lakes Ontario and Erie, and the Sault Ste. Marie Canal between Lakes Huron and Superior; and (2) subsidiary or secondary canals including the St. Peters Canal between Bras d'Or Lake and the Atlantic Ocean, Cape Breton, the St. Ours and Chambly Canals on the Richelieu River, the St. Anne, Carillon and Grenville Canals on the Ottawa River, the Rideau Canal between the Ottawa River and Lake Ontario, and the Trent and Murray Canals between Lake Ontario and Georgian Bay.

The importance of this transportation system as a highway of commerce is evidenced by the fact that, during 1952, 31,354,139 tons of freight passed through, surpassing the peak reached in 1951 when freight traffic amounted to 29,325,344 tons and comparing with 24,636,462 tons in 1938. In 1952, 26,322 vessels passed through the canals compared with 25,548 in 1951.

In addition to freight and passenger vessels there are thousands of pleasure craft locked through the canals. The number of passengers on vessels locking at Sault Ste. Marie was 97,452 in 1952 as compared with 88,153 in 1951.

Revenue from canals during the year ended Mar. 31, 1953, amounted to $1,532,210, of which $1,196,106 was derived from rentals for hydraulic and land privileges and wharfage. In the previous fiscal year the total revenue was $1,502,232, with rentals and wharfage amounting to $1,231,774.

The names of the various canals along these routes, their locations and lengths, together with the numbers and dimensions of the locks thereon and other information may be found in the Department of Transport Bulletin, *Canals of Canada*.

Under the jurisdiction of the Federal Department of Public Works are the St. Andrews Lock (length, width and draught, respectively, 215, 45 and 17 ft.) at Selkirk on the Red River, Man., and the lock at Poupore, Que. There are also a few small isolated locks, each controlled under the authority of the province in which it is situated.

9.—Lengths of Channels and Dimensions of Locks under the Control of the Department of Transport, as at Dec. 31, 1952

Name	Location	Length of Channel	Locks			
			No.	Minimum Dimensions		
				Length	Width	Depth
		miles		ft.	ft.	ft.
St. Lawrence—						
Lachine	Montreal to Lachine	8·74	5	270	45	14[1]
Soulanges	Cascades Point to Coteau Landing	14·67	5	280	46	15[1]
Cornwall	Cornwall to Dickinsons Landing	11·00	6	270	43·67	14[1]
Farran's Point	Farran's Point Rapids	1·28	1	800	50	16[1]
Rapide Plat	Morrisburg	3·89	2	270	45	14[1]
Galop	Iroquois to Cardinal	7·36	3	270	45	14[1]
Welland Ship	Port Weller, Lake Ontario, to Port Colborne, Lake Erie	27·60	8	859	80	30[2]
Sault Ste. Marie	Sault Ste. Marie, Ont.	1·38	1	900	60	18·25

For footnotes, *see* end of table.

9.—Lengths of Channels and Dimensions of Locks under the Control of the Department of Transport, as at Dec. 31, 1952—concluded

Name	Location	Length of Channel	Locks			
			No.	Minimum Dimensions		
				Length	Width	Depth
		miles		ft.	ft.	ft.
Richelieu River—						
St. Ours	St. Ours, Que	0·12	1	339	45	12
Chambly	Chambly to St. Johns, Que	11·78	9	120·5	23·25	6·5
Ottawa River—						
St. Anne	Junction of St. Lawrence and Ottawa Rivers	0·12	1	200	45	9
Carillon	Carillon Rapids, Ottawa River	0·94	2	200	45	9
Grenville	Long Sault Rapids, Ottawa River	5·94	5	200	45	9
Miscellaneous—						
Rideau	Ottawa to Kingston	123·53	47	134	33	5·5
	Rideau Lake to Perth (Tay Branch)	6·82	2	134	33	5·5
Trent	Trenton to Peterborough Lock, Peterborough	88·74	18	175	33	8[3]
	Peterborough Lock to Swift Rapids	135·71	24	134	33	6
	Swift Rapids to Big Chute[4]	8·00	—	...	...	...
	Big Chute to Port Severn	8·11	1	100	25	6
	Sturgeon Lake to Lindsay (Scugog Branch)	10·00	1	142	33	6
	Lindsay to Port Perry (Scugog Branch)	25·00	—	...	...	...
Murray	Isthmus of Murray—Bay of Quinte	7·53[5]	—	...	...	...
St. Peters	St. Peters Bay to Bras d'Or Lake, Cape Breton, N.S.	0·50	1	300	47·4	18[6]

[1] Navigable depths are occasionally less at times of extremely low water. [2] Minimum depth between locks 23 ft. 6 in. [3] Notice must be given by vessels of more than 6 ft. draught. [4] Marine railways in this section limit navigation to vessels 50 ft. long, 13·5 ft. beam, 4 ft. draught—weight not over 15 tons. [5] Minimum depth of canal with Lake Ontario at elevation 244 ft. above sea level is 9·5 ft. [6] The depth of canal prism is 17 ft.

Canal Traffic.—The canals of Canada are open to the vessels and traffic of all nations upon equal terms and thus United States traffic constitutes an important part of the total carried through certain canals, especially the Welland Ship Canal. This is shown in Tables **10** and **12**. More complete details of the traffic through canals may be found in DBS annual report, *Canal Statistics*.

10.—Traffic through Canadian Canals, by Nationality of Vessel and Origin of Freight, Navigation Seasons, 1943-52

NOTE.—Figures include duplications where cargoes use two or more canals. Figures from 1886 are available in the corresponding table of previous Year Books beginning with the 1902 edition.

Navigation Season	Nationality of Vessel				Origin of Freight Carried				
	Canadian		United States[1]		Canada		United States[1]		Total
	Vessels	Registered Tonnage	Vessels	Registered Tonnage	Tons	P.C. of Total	Tons	P.C. of Total	Tons
	No.	No.	No.	No.					
1943	20,855	18,273,304	2,617	5,686,958	7,838,429	36·5	13,637,765	63·5	21,476,194
1944	20,780	18,191,826	1,911	4,541,575	8,002,746	38·8	12,612,761	61·2	20,615,507
1945	21,064	19,068,308	1,553	3,426,069	10,491,263	47·0	11,829,136	53·0	22,320,399
1946	17,199	16,206,415	1,794	3,221,008	8,904,733	47·7	9,750,186	52·3	18,654,919
1947	18,542	18,613,576	2,332	3,796,293	10,288,481	47·8	11,225,458	52·2	21,513,939
1948	19,859	19,723,768	2,784	4,219,539	11,169,714	47·4	12,389,599	52·6	23,559,313
1949	21,724	20,773,831	2,495	3,260,038	14,800,509	60·7	9,573,243	39·3	24,373,752
1950	21,179	21,989,263	3,241	3,514,202	15,138,009	55·2	12,301,067	44·8	27,439,076
1951	22,141	22,951,468	3,407	4,297,672	16,004,284	54·6	13,320,750	45·4	29,325,034
1952	22,565	25,608,373	3,757	4,201,005	16,245,050	53·7	14,009,088	46·3	30,254,138

[1] Figures include few vessels and a small tonnage of freight of other foreign nationalities.

11.—Tonnage of Products carried by Canal, by Class of Commodity, Navigation Season, 1952

NOTE.—Figures include duplications where cargoes use two or more canals.

Canal	Agricultural Products	Animal Products	Manufactures and Miscellaneous	Forest Products	Mineral Products	Total
	tons	tons	tons	tons	tons	tons
Sault Ste. Marie	1,546,868	184	1,140,060	234,376	373,935	3,295,423
Welland Ship	4,960,493	624	4,315,323	580,126	8,054,190	17,910,756
St. Lawrence River	3,840,114	704	2,940,720	605,831	2,449,026	9,836,395
Richelieu River	—	—	88,973	—	—	88,973
St. Peters	858	496	720	76	1,652	3,802
Murray	—	—	380	—	—	380
Ottawa River	—	—	1,921	—	199,230	201,151
Rideau	—	—	140	215	566	921
Trent	12	—	118	5	—	135
St. Andrews	289	3,257	4,305	8,063	289	16,203
Totals	**10,348,634**	**5,265**	**8,492,660**	**1,428,692**	**11,078,888**	**31,354,139**

12.—Canal Traffic, by Direction and Origin, Navigation Season, 1952

NOTE.—Figures include duplications where cargoes use two or more canals.

Canal	From Canadian to Canadian Ports		From Canadian to United States Ports[1]		From United States to United States Ports[1]		From United States[1] to Canadian Ports	
	Up	Down	Up	Down	Up	Down	Up	Down
	tons	tons	tons	tons	tons	tons	tons	tons
Sault Ste. Marie	590,580	1,585,686	—	478,731	191,891	28,612	331,422	88,501
Welland Ship	992,221	5,182,363	793,771	89,146	482,951	867,123	19,597	9,483,584
St. Lawrence River	2,248,292	4,141,652	802,892	47,851	126,210	110,885	60,386	2,298,227
Richelieu River	40,450	1,663	27,161	—	—	—	—	19,699
St. Peters	1,481	2,298	—	23	—	—	—	—
Murray	380	—	—	—	—	—	—	—
Ottawa River	430	198,800	—	1,921	—	—	—	—
Rideau	382	539	—	—	—	—	—	—
Trent	62	73	—	—	—	—	—	—
St. Andrews	11,620	4,583	—	—	—	—	—	—
Totals	**3,885,898**	**11,117,657**	**1,623,824**	**617,672**	**801,052**	**1,006,620**	**411,405**	**11,890,011**

Canal	Traffic by Direction		Origins of Cargo		Total Cargo 1952	Total Cargo 1951
	Up	Down	Canada	United States[1]		
	tons	tons	tons	tons	tons	tons
Sault Ste. Marie	1,113,893	2,181,530	2,654,997	640,426	3,295,423	2,805,392
Welland Ship	2,288,540	15,622,216	7,057,501	10,853,255	17,910,756	16,197,924
St. Lawrence River	3,237,780	6,598,615	7,240,687	2,595,708	9,836,395	9,916,857
Richelieu River	67,611	21,362	69,274	19,699	88,973	98,134
St. Peters	1,481	2,321	3,802	—	3,802	8,178
Murray	380	—	380	—	380	3,333
Ottawa River	430	200,721	201,151	—	201,151	277,171
Rideau	382	539	921	—	921	1,198
Trent	62	73	135	—	135	354
St. Andrews	11,620	4,583	16,203	—	16,203	16,493
Totals	**6,722,179**	**24,631,960**	**17,245,051**	**14,109,088**	**31,354,139**	**29,325,034**

[1] Figures for the United States include small amounts of traffic from other foreign countries.

The figures in Tables 11 and 12 include duplications where the same freight passes through two or more canals, but in Table 13 duplications in the traffic passing through the St. Lawrence and Welland Ship Canals and the Canadian lock at Sault Ste. Marie have been eliminated wherever possible.

Grain trans-shipped at Georgian Bay, Lake Erie, or other ports above Montreal is treated as new cargo and as most of this grain has passed through either the Canadian or United States locks at Sault Ste. Marie there are still duplications in the data because of this treatment. These duplications cannot be avoided when net totals for the Canadian canals are computed because it is impossible to ascertain which lock at Sault Ste. Marie was used by the grain reloaded at Port Colborne, Ont., or other trans-shipping port.

13.—St. Lawrence-Great Lakes Traffic using St. Lawrence, Welland Ship and Sault Ste. Marie Canals, 1952

Canals Used	Up-Bound Freight	Down-Bound Freight	Total
	tons	tons	tons
Traffic using Canadian Canals—			
St. Lawrence only	2,005,809	2,950,647	4,956,456
St. Lawrence and Welland Ship	1,073,802	3,025,587	4,099,389
St. Lawrence, Welland Ship and Sault Ste. Marie[1]	144,579	422,560	567,139
Welland Ship only	831,090	7,769,693	8,600,783
Welland Ship and Sault Ste. Marie[1]	239,069	4,404,376	4,643,445
Sault Ste. Marie only	833,539	1,438,156	2,271,695
Totals, Traffic using Canadian Canals[1]	**5,127,888**	**20,011,019**	**25,138,907**
Totals, Traffic using United States Locks at Sault Ste. Marie only	**12,077,444**	**91,989,627**	**104,067,071**
Totals, Canal Traffic	**17,205,332**	**112,000,646**	**129,205,978**

[1] Through both Canadian and United States locks at Sault Ste. Marie.

Traffic through the Sault Ste. Marie canals, Canadian and United States, has been approximately twice as heavy as the traffic through the Panama Canal during the latest ten years for which records are available and in 1940 it was almost three times as heavy. Canal traffic has varied from 20,484,000 tons in 1932, which was less than the Panama traffic, to 120,200,814 tons in 1942. The dominant traffic, from a tonnage aspect, is iron ore and during the past 50 years this has fluctuated from 4,901,000 tons in 1892, an average of 50,000,000 tons in the 1920's, a low of 3,607,000 tons in 1932, to a peak of 94,326,578 tons in 1942. Although wheat ranks third in tonnage, its value over the past quarter-century has been greater, generally, than that of either iron ore or coal.

Other grains have been about one-quarter to one-fifth of the wheat tonnage and a smaller ratio of the value.

Soft coal has usually been second in volume to iron ore, increasing from 8,676,297 tons during the 1949 season to 13,301,048 tons in 1950; there was a decline, however, to 10,684,734 tons in 1951 and 9,901,211 tons in 1952.

The Panama Canal.—The Panama Canal, which was opened to commercial traffic on Aug. 15, 1914, has been a waterway of great importance to the ports of British Columbia, from which vessels leave direct for United Kingdom and other European ports throughout the year. As an alternative route to that of the trans-continental railway lines, this water passage is of vital importance in the solution of

the larger transportation problems of the Continent. During World War I, the great expectations based upon the opening of the Canal were not realized, owing to the scarcity of shipping. However, with the post-war decline in ocean freight rates, an increase in traffic between Canada's Pacific ports and Europe took place and, while the proportion carried in vessels of Canadian registry was comparatively small, the cargo tonnage, nevertheless, assumed considerable proportions. During World War II, the volume of Canadian traffic through the Canal was greatly reduced.

14.—Traffic to and from the East and West Coasts of Canada via the Panama Canal, Years Ended June 30, 1943-52

NOTE.—Figures for the years 1921-28 are given in the 1938 Year Book, p. 707, and those for 1929-42 in the 1948-49 edition, p. 738.

Year	Originating on—		Destined for—		Year	Originating on—		Destined for—	
	West Coast	East Coast	West Coast	East Coast		West Coast	East Coast	West Coast	East Coast
	long tons	long tons	long tons	long tons		long tons	long tons	long tons	long tons
1943.....	723,528	95,788	—	21,611	1948.....	2,824,394	244,121	162,561	67,215
1944[1].....	363,220	17,283	30,044	—	1949.....	2,298,492	188,506	154,524	145,477
1945[1].....	679,079	65,395	366,118	30,540	1950.....	2,707,047	185,076	226,673	143,395
1946.....	1,756,989	184,850	111,161	62,516	1951.....	2,910,246	240,904	372,534	142,741
1947.....	2,981,348	316,898	132,521	99,745	1952.....	3,644,888	287,872	281,960	114,319

[1] Approximate—exact figures not available.

15.—Commercial Traffic through the Panama Canal, Years Ended June 30, 1943-52

NOTE.—Figures from 1915 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Atlantic to Pacific		Pacific to Atlantic		Totals	
	Vessels	Cargo Tonnage	Vessels	Cargo Tonnage	Vessels	Cargo Tonnage
	No.	long tons	No.	long tons	No.	long tons
1943.....	824	4,945,267	998	5,654,699	1,822	10,599,966
1944.....	671	3,354,349	891	3,649,138	1,562	7,003,487
1945.....	924	4,234,935	1,015	4,368,672	1,939	8,603,607
1946.....	1,516	6,118,085	2,231	8,859,855	3,747	14,977,940
1947.....	2,021	8,294,820	2,239	13,375,698	4,260	21,670,518
1948.....	2,286	8,679,140	2,392	15,438,648	4,678	24,117,788
1949.....	2,387	9,899,088	2,406	15,406,070	4,793	25,305,158
1950.....	2,689	9,483,863	2,759	19,388,430	5,448	28,872,293
1951.....	2,784	11,132,472	2,809	18,940,550	5,593	30,073,022
1952.....	3,184	15,128,995	3,340	18,481,514	6,524	33,610,509

CANALS OF THE ST. LAWRENCE WATERWAY*

The St. Lawrence Waterway, with its ship channel and system of canals, provides a great artery of navigation from the Atlantic Ocean to the western end of Lake Superior, a distance of more than 2,000 miles, constituting the world's greatest inland navigation system.

This great waterway services a vast drainage system covering an area of 678,000 sq. miles, 493,000 of which are in Canada and 185,000 in the United States. It includes Lake Ontario, Lake Erie, Lake St. Clair, Lake Huron, Lake Michigan and Lake Superior, together with all the tributary rivers and streams, the most

* Prepared by the Information and Editorial Bureau, Department of Transport, Ottawa.

important of which are the St. Lawrence River, the Ottawa River, the St. Maurice River and the Saguenay River. The height of land in Canada at the northern limit of this drainage area averages about 1,800 ft. above sea level.

The St. Lawrence-Great Lakes waterway overcomes a difference of 600 ft. in five steps to provide navigation for through shipping. (1) From the sea to Montreal—the portion that lies wholly in Canadian territory and in which there is a rise of 20 ft. (2) The St. Lawrence River section—including the Lachine section, the Soulanges and Lake St. Francis section and the International Rapids section where the rise is 225 ft. (3) Niagara Falls—separating Lake Ontario from Lake Erie and having a rise of 326 ft. (4) The Detroit–Lake St. Clair passage—joining Lake Erie and Lake Huron where there is a rise of 8 ft. (5) St. Mary's Falls—lying between Lake Huron and Lake Superior where there is a rise of 21 ft.

For navigation, Canada has spent $300,000,000 to provide a dredged channel of 35 ft. to Montreal; a 14-ft. canal system between Montreal and Lake Ontario; a 25-ft. canal between Lake Ontario and Lake Erie; and a lock at Sault Ste. Marie. The United States has provided locks at the Sault and dredged channels between Lake Huron and Lake Erie. Canada has developed her facilities to enable wheat from the Prairies to move from the head of the Lakes by water to the sea and thus, to provide an alternate route to European markets to that via the United States through the Erie Canal and the Hudson River to New York city.

The development of the St. Lawrence as a highway of international trade has involved a series of engineering projects in keeping with the increasing demands of traffic and the safety of larger and faster ships. Originally, the Gulf of St. Lawrence as far as Quebec was navigable for the largest ships afloat but sections of the route between Quebec and Montreal were restricted by a natural depth of 10½ ft. at low water. Early operations consisted of the removal of this and other natural barriers, thus linking up the deeper sections of the river. Dredging operations between Quebec and Montreal began in 1844 and have continued through the years since then. The present ship channel above Quebec has a limiting depth of 35 ft. at extreme low water.

Lachine Canal.—Above Montreal the Lachine Rapids constitute the first barrier to upbound navigation. Early in the 18th century the Sulpician Order, under Dollier de Casson, attempted the construction of a canal to by-pass these rapids but, through lack of funds, the project was never completed. Construction of the first canal, lying along the same route, was begun in 1821 and was opened in 1825; it had seven locks and accommodated vessels of five-foot draught. The commercial growth of the country necessitated enlarging the canal and work was commenced in 1843 which, when completed in 1848, provided 16-ft. draught at two lower locks and 9-ft. throughout the remainder of the canal. In 1874, further enlargement of the canal began and, in 1885, the present canal was completed, having five locks 270 ft. by 45 ft., with a minimum depth at normal low water of 14 ft. The canal is 8·74 miles long, extending from the Port of Montreal to Lake St. Louis at the city of Lachine, and overcomes a drop of 46·24 ft. in the level of the river.

Beauharnois Canal.—Before the Beauharnois Canal was built to provide navigation between Lake St. Louis and Lake St. Francis, navigation was effected by means of four short canals built by the Royal Engineers during the latter part of the 18th century and designed for the passage of boats capable of carrying 30 bbl. of flour. Between the years 1800 and 1805 the two lower canals were superseded by the

Cascades Canal across the point between the Ottawa and St. Lawrence Rivers, having three locks, 120 ft. by 9 ft. with 6 ft. of water on the sills. With this and other improvements boats loaded with 100 bbl. of flour could be accommodated. In the course of time, these canals were found inadequate and, in 1842, construction was started on the Beauharnois Canal on the south side of the river. It was completed in 1845 and had nine locks, 200 ft. by 45 ft. with a draught of 9 ft. Although it has not been used for navigation since 1902, its dams control the levels of Lake St. Francis for navigation and other purposes.

Soulanges Canal.—Construction of the Soulanges Canal, built to replace the Beauharnois Canal, began in 1892 and was completed in 1899. It is 14·67 miles long and provides 14-ft. navigation from Lake St. Louis to Lake St. Francis, with a lift of 83·50 ft.

Cornwall Canal.—This canal was built to pass the Long Sault Rapids and extends from Cornwall to Dickinsons Landing. Construction to provide 9-ft. draught began in 1834 and was completed in 1842. The work of enlarging the canal to 14-ft. draught was started in 1876 and completed in 1904. This canal overcomes a 48-ft. difference in the levels of the river, is 11 miles long and has six locks, 270 ft. by 45 ft.

Williamsburg Canals.—The Farran's Point, Rapide Plat and Galop Canals are collectively known as the Williamsburg Canals; they have a total lift of 31·27 ft. The Farran's Point and Rapide Plat Canals were constructed to overcome rapids of the same names, and the Galop Canal by-passes the Pointe aux Iroquois, Point Cardinal and Galop rapids. The construction of these canals began in 1844 and the first two were completed in 1847 to provide 9-ft. draught. The Galop Canal experienced a number of changes before reaching its present condition. There were at first two distinct canals, one to avoid the Iroquois Rapid and the second to avoid the Galop Rapid. After a few years' experience, it was found that the Iroquois Canal was not deep enough and it was decided to connect it with the Galop Canal. Work was begun in 1851 and completed in 1856. These canals were subsequently enlarged to 14-ft. draught.

Welland Canal.—This important waterway, which overcomes the fall of 326 ft. on the Niagara River, connects Lake Ontario and Lake Erie. The original canal, built by a private company and opened in 1829, extended from Port Dalhousie on Lake Ontario to the town of Port Robinson, where a connection was made with the Welland River. The course was down this river to its junction with the Niagara River and thence to Lake Erie. This was not found satisfactory, so between the years 1831 and 1833 the canal was extended along a route from Port Robinson to Port Colborne. In 1841 the Government of Upper Canada purchased the canal and began to enlarge its capacity to provide for 9-ft. navigation. The new canal was opened in 1845. In 1871 a canal commission recommended the further enlarging of this canal and work was begun in 1873. By 1887, the Third Welland Canal was completed, providing a draught of 14 ft. Its northern terminus was at Port Dalhousie and its route extended in a southerly direction, climbing the escarpment at Thorold, and thence generally following the route of the Second Canal to Port Colborne.

The tremendous growth of the eastern movement of grain and iron ore and the western movement of coal necessitated the construction of vessels of much larger dimensions than the limiting dimensions of the Welland and St. Lawrence Canals.

To accommodate this shipping, Canada began, in 1913, the construction of the Fourth Welland Canal as a Ship Canal. Construction was suspended early in 1916 because of a shortage of material and manpower but was resumed in 1919 and the canal was formally opened on Aug. 6, 1932. The canal crosses the Niagara Peninsula in an almost straight north-south line, with Port Weller at the Lake Ontario end and Port Colborne at the Lake Erie end. It is more than 27 miles long and has eight locks constructed to give 30 ft. of water over their sills; all concrete structures were constructed for this depth. The canal itself, however, was finished to a depth of 25 ft. but the remaining depth may be readily dredged without hindering navigation whenever deepening becomes advisable.

Sault Ste. Marie Canal.—The Canadian lock at Sault Ste. Marie was constructed to overcome a mean difference in level of 19 ft. from the foot of the falls to Lake Superior. The first canal was constructed by the Northwest Fur Company in 1797 but was destroyed by the United States Army in 1814. No new lock was constructed until 1853-55, when one was built on the United States side of the river. This has since been superseded by four modern locks, constructed at intervals between the years 1870 and 1943. The existing Canadian canal was constructed between 1887 and 1895 and consists of a single lock, 900 ft. by 60 ft., with a minimum depth of water on sills of 18 ft. 3 inches.

Subsection 4.—Aids to Navigation

Included under aids to navigation are the lighthouses and the whole system of marine danger signals on the east and west coasts of Canada, on Hudson Bay and Strait, the St. Lawrence River and Gulf, the inland rivers and lakes, and at the entrances to harbours—a very extensive system designed to provide safe navigation in all Canadian waters. In addition, a pilotage service is maintained in waters where navigation is difficult; this service is described under Marine Services at p. 836. As a further aid to safe navigation, there are chains of radio signal and direction-finding stations which are described under radiotelegraphy at pp. 883-884. Lists of aids to navigation, with the exception of very minor ones, are published by the Department of Transport.

16.—Marine Danger Signals maintained in Canada, Years Ended Mar. 31, 1947-53

NOTE.—In addition to the aids to navigation listed, approximately 9,006 unlighted buoys, balises, dolphins and beacons are maintained. A table showing marine danger signals maintained during the years ended Mar. 31, 1929-40, is given in the 1941 Year Book, p. 581. Figures for 1942 will be found in the 1948-49 edition, p. 716, and for 1943-46 in the 1950 edition, p. 766.

Type of Signal	1947	1948	1949	1950	1951	1952	1953
	No.	No.	No.	No.	No.	No.	No.
Lights	2,320	2,469	2,491	2,778	2,841	2,861	2,901
Lightships	8	8	8	8	8	8	7
Light-keepers	1,122	1,120	1,094	1,416	1,353	1,131	1,154
Fog whistles	8	9	11	18	22	23	24
Sirens	2	2	2	3	3	3	3
Diaphones	169	169	176	207	212	213	216
Fog bells	39	37	38	43	44	46	46
Hand fog horns	135	137	137	134	133	127	124
Hand fog bells	9	10	10	10	10	12	12
Lighted and combination lighted whistling and bell buoys	541	552	585	618	655	681	719
Whistling buoys	40	39	39	38	38	37	37
Bell buoys	118	112	113	109	110	113	112
Fog guns and bombs	12	12	11	11	10	9	8
Fog alarm stations only	10	10	11	15	15	15	15

Navigable waters have been improved greatly by dredging in channels and harbours, by the removal of obstructions, and by the building of remedial works to maintain or control water levels. Incidental to these developments of navigable waters are works to guard shorelines and prevent erosion, and for the control of roads and bridges that cross navigable channels. Ice-breaking operations are carried on at the beginning and at the end of winter to prolong the season of navigation in important waters that freeze over—particularly in connection with seagoing shipping from Montreal—and to prevent flood conditions during the spring ice break-up.

River St. Lawrence Ship Channel.—This channel extends from about 40 miles below Quebec city to the foot of Lachine Canal at Montreal, a distance of 200 miles of which about 113 miles is dredged channel.

The first minor development began in 1844, on Lake St. Peter, where the limiting depth was 10½ feet at low water. Since 1851, progress in deepening and widening the original natural channel has been more or less continuous through a series of improvement projects in keeping with the increasing demands of trade and the safety of larger and faster vessels.

The present ship channel above Quebec has a limiting depth of 35 feet (opened in 1952) at extreme low water and a minimum width of 550 feet, with additional width up to 1,500 feet at all curves and difficult points. This section comprises about 100 miles of dredged channel. Below Quebec the limiting depth of dredged channel, about 13 miles in length, is 30 feet at low tide, with a width of 1,000 feet. An average tidal range of 15 feet in this area provides ample depth for any vessel using the St. Lawrence route.

The latest improvement project (1952) comprises the further widening of critical sections and the provision of additional anchorage and turning areas. Annual maintenance requirements due to siltation in this dredged channel are relatively minor above Quebec. Below Quebec siltation is more pronounced owing to tidal action.

The ship channel is well defined by buoys, and the centre by range lights permitting uninterrupted day and night navigation throughout the open season from about mid-April to early December.

The movements of all shipping, weather and ice conditions and obstructions to traffic throughout the entire St. Lawrence waterway from Cape Race and Belle Isle to Fort William (over 2,000 miles) are recorded and made available to all concerned through a series of reporting stations known as the Government Signal Service.

A fleet of ice-breaking vessels is maintained to facilitate the movement of shipping between Montreal and the sea during the opening and closing of navigation, as well as to alleviate flood conditions in low-lying areas.

17.—Seasons of Open Navigation on the St. Lawrence Ship Channel, 1934-53

NOTE.—Figures from 1882 are given in the corresponding table of previous Year Books, beginning with the 1934-35 edition.

Year	Channel Open, Quebec to Montreal[1]	First Arrival from Sea, Montreal Harbour	Last Departure for Sea, Montreal Harbour	Year	Channel Open, Quebec to Montreal[1]	First Arrival from Sea, Montreal Harbour	Last Departure for Sea, Montreal Harbour
1934	Mar. 28	Apr. 26	Dec. 8	1944	Apr. 20	Apr. 21	Dec. 9
1935	" 30	" 15	" 9	1945	" 1	" 9	" 3
1936	" 28	" 13	" 11	1946	" 1	" 12	" 18
1937	Apr. 9	" 19	" 8	1947	" 16	" 19	" 5
1938	" 12	" 18	" 4	1948	" 10	" 19	" 10
1939	" 29	" 29	" 12	1949	" 7	" 7	" 15
1940	" 23	" 24	" 5	1950	" 18	" 18	" 7
1941	" 14	" 19	" 17	1951	" 11	" 13	" 13
1942	" 17	May 2	" 16	1952	" 12	" 13	" 10
1943	" 29	" 24	" 13	1953	Mar. 30	" 2	" 21

[1] "Channel Open" means the route can be navigated although there may be floating ice in the river.

Subsection 5.—Marine Services of the Federal Government

The services covered in this Subsection are those dealing with steamship inspection, pilotage service, sea-faring personnel, and the operations of the Canadian Government Merchant Marine Limited and the Canadian National (West Indies) Steamships Limited.

Steamship Inspection.—The Steamship Inspection Service, provided for under Part VII of the Canada Shipping Act, 1934, consists of a headquarters staff at Ottawa and staffs of inspectors at the principal ocean and inland ports. The Board of Steamship Inspection decides on questions arising out of the administration of the Act. The Service is responsible for the administration and carrying out of the provisions of the Act respecting the periodic inspection of power-driven ships and the issue of inspection certificates; the assignment of load lines; the conditions under which dangerous goods may be carried in ships; the protection against accident of workers employed in loading or unloading ships; and also for the administration and carrying out of the provisions relating to the certification and employment of marine engineers.

18.—Summary Statistics of Steamship Inspection, Year Ended Mar. 31, 1952

Port	Vessels Subject to Inspection when in Commission		Vessels Inspected				Vessels Not Inspected	
			Registered or Owned in Canada		Registered or Owned Elsewhere			
	No.	gross tonnage	No.	gross tonnage	No.	gross tonnage	No.	gross tonnage
St. John's, N'f'ld..	82	34,391	82	34,391	—	—	—	—
Halifax, N.S.....	190	317,394	176	270,604	4	43,201	10	3,589
Saint John, N.B...	42	48,423	41	39,721	1	8,702	—	—
Quebec, Que.....	100	108,237	97	108,039	—	—	3	198
Sorel, Que.....	82	30,584	61	25,058	—	—	21	5,526
Montreal, Que.....	162	335,294	92	227,212	—	—	70	108,082
Kingston, Ont.....	111	88,829	111	88,829	—	—	—	—
Toronto, Ont.....	181	319,936	178	317,605	1	1,620	2	711
St. Catharines, Ont.	65	177,394	65	177,394	—	—	—	—
Collingwood, Ont.	52	83,070	50	83,004	—	—	2	66
Midland, Ont.....	107	117,809	84	116,178	—	—	23	1,631
Port Arthur, Ont...	133	35,964	58	29,987	—	—	75	5,977
Vancouver, B.C....	434	184,132	398	177,958	—	—	36	6,174
Victoria, B.C.....	81	109,457	69	95,597	—	—	12	13,860
Totals.....	**1,822**	**1,994,914**	**1,562**	**1,791,577**	**6**	**53,523**	**254**	**145,814**

Pilotage.—Pilotage service functions under the provisions of Part VI of the Canada Shipping Act, 1934. Wherever a pilotage district has been created by the Governor in Council, qualified pilots are licensed by the pilotage authority of the district.

There are in Canada 42 pilotage districts in nine of which the Minister of Transport is the pilotage authority *(see* Table **19**), while in each of the other districts the pilotage authority is a local body appointed by the Governor in Council.

19.—Pilotage Service by Districts, Years Ended Mar. 31, 1951 and 1952

District	1951		1952	
	Ships	Net Registered Tonnage	Ships	Net Registered Tonnage
	No.		No.	
Bras d'Or Lake, N.S.	60	164,679	57	248,006
Sydney, N.S.	1,589	3,490,551	1,828	3,567,800
Halifax, N.S.	2,576	8,623,043	2,967	10,868,837
Saint John, N.B.	1,087	3,251,310	1,276	3,609,643
Quebec, Que.	4,197	13,595,068	4,552	15,269,456
Montreal, Que	7,528	16,565,344	8,235	14,755,504
St. Lawrence-Kingston-Ottawa, Ont.	..	..	..	..
Churchill, Man	40	153,138	42	177,224
British Columbia	3,210	7,750,099	3,365	8,838,804
Totals	**20,287**	**53,593,232**	**22,322**	**57,335,274**

In addition, there are 21 districts in the Province of Newfoundland under local pilotage authority. These districts are administered under Newfoundland statutes which, since the date of union with Canada, come under federal jurisdiction. Part VI of the Canada Shipping Act with respect to pilotage has not been proclaimed in force in Newfoundland.

Seamen Shipped and Discharged.—Seamen shipped and discharged at Canadian ports under the provisions of the Canada Shipping Act, 1934, during the years ended Mar. 31, 1943-52, are shown in Table **20.**

20.—Seamen Shipped and Discharged at Canadian Ports, Years Ended Mar. 31, 1943-52

NOTE.—Figures from 1918 are given in the corresponding table of previous Year Books beginning with the 1941 edition. Figures for Newfoundland are included from Apr. 1, 1949.

Year	Seamen Shipped	Seamen Discharged	Year	Seamen Shipped	Seamen Discharged
	No.	No.		No.	No.
1943	19,255	15,250	1948	59,768	60,793
1944	26,068	20,491	1949	50,379	49,544
1945	29,230	25,056	1950	43,677	43,194
1946	30,361	27,042	1951	40,241	40,535
1947	43,973	42,205	1952	43,724	40,661

Canadian Government Merchant Marine Limited.—The circumstances under which the Canadian Government became possessed of, and responsible for, the operations of a merchant marine are explained in the 1934-35 Year Book, p. 776. A table showing the operating results from 1919 to 1936 is given in the 1937 Year Book, p. 689.

The original fleet of the Canadian Government Merchant Marine Limited consisted of 66 vessels with a total deadweight tonnage of 391,212. The original cost of the fleet was $79,661,921 and the capital loss thereon was $74,239,356. The total capital recovery of $5,422,565 was as follows: (1) the sale of 56 vessels for $2,378,018; (2) the proceeds of insurance on four vessels lost, amounting to $2,111,475; and (3) the sale of six vessels for $933,072 to the Canadian National (West Indies) Steamships Limited.

The charter of the Canadian Government Merchant Marine Limited and its subsidiary companies, although inactive since 1936, was not surrendered and, in 1940, the Company was reconstituted and is operating, on behalf of the Canadian Government, certain ships seized in prize and either requisitioned for use by the Canadian Government or condemned by the Court. Settlement with the owners of requisitioned ships for charter hire has not been completed.

Canadian National (West Indies) Steamships Limited.—In conformity with the Canada-West Indies Trade Agreement of 1926 (16-17 Geo. V, c. 16) the Federal Government has provided direct steamship services to the West Indies through the medium of Canadian National (West Indies) Steamships Limited.

At the end of 1953, the Canadian National Steamships owned and operated eight vessels in service between Canada and the British West Indies.

21.—Financial Statistics of Canadian National (West Indies) Steamships Limited, 1943-52

NOTE.—Figures for the years 1929-38 are given in the 1942 Year Book, p. 620, and for 1939-42 in the 1950 edition, p. 777.

Year	Operating Revenue	Operating Expenditure	Operating Net	Depreciation	Interest	Book Loss or Surplus
	$	$	$	$	$	$
1943	4,492,189	2,949,216	+1,542,973	239,363	813,073	+438,837
1944	5,378,059	3,160,568	+2,217,491	243,158	651,246	+1,271,387
1945	4,412,252	2,569,626	+1,842,626	279,466	612,999	+1,116,086
1946	6,669,129	4,671,148	+1,997,981	288,092	596,499	+1,302,052
1947	7,857,471	6,534,600	+1,322,871	493,594	573,298	+522,677
1948	7,964,720	6,828,392	+1,136,328	492,222	563,794	+166,044
1949	6,595,007	5,985,873	+609,134	492,222	577,410	−460,498
1950	5,124,200	5,220,806	−96,606	371,699	560,462	−1,028,767
1951	6,808,478	6,337,987	+470,491	371,699	565,784	−466,992
1952	7,449,247	6,605,514	+843,733	372,392	475,250	−3,909

Subsection 6.—The St. Lawrence Seaway and Power Project

The St. Lawrence seaway project envisages the extension of deep-draught navigation from Montreal, Que., to the head of the Great Lakes. A depth of 27 ft. has been settled upon, whereas at present only 14 ft. is provided in the St. Lawrence Canals and 25 ft. in the Welland Ship Canal. In the channels connecting the upper lakes, the limiting depths are 25 ft. downbound and 21 ft. upbound.

Negotiations related to the matter have been carried on between Canada and the United States since the end of the 19th century. Power development in the international rapids section of the St. Lawrence River became a part of the project at an early date. The proposals were formalized in the St. Lawrence Deep Waterway Treaty of 1932, but this treaty was rejected by the Senate of the United States.

Renewed negotiations produced the Great Lakes-St. Lawrence Agreement of 1941 but it was never approved by the United States Congress and has since been superseded by a new plan for an all-Canadian seaway.

Canada's new plan involves the undertaking of the international power development by separate entities to be named by the respective federal governments (in Canada, The Hydro-Electric Power Commission of Ontario). Canada would build the canals in this section and complete the seaway from Montreal to Lake Erie.

The Canadian Parliament, late in 1951, enacted legislation for the establishment of the St. Lawrence Seaway Authority, a Crown company, to undertake the construction and operation of the navigational works of the project. Approval was given also to an agreement with Ontario respecting the power development. On June 30, 1952, separate applications by Canada and the United States were made to the International Joint Commission for approval of the key power works. The Commission's approval was given on Oct. 29, and on Nov. 4, 1952, Canada notified the United States that it no longer looked for ratification of the 1941 agreement.

The final step in authorizing the power project was taken on Nov. 5, 1953, when the President of the United States signed an executive order designating the New York State Power Authority as the United States entity to join with The Ontario Hydro-Electric Power Commission in construction and administration of the project. Assuming that pending (November 1953) court actions to halt the participation of New York State in the joint venture are unsuccessful, construction may begin in 1954.

Section 2.—Financial Statistics of Waterways

The principal statistics available of the cost of water-borne traffic consist of the record of public expenditure on waterways. Such expenditure may be classified as capital expenditure, or investment and expenditure for maintenance and operation. Revenue from operation is also recorded. In so far as capital expenditure for the permanent improvement of waterways is concerned, that of the Federal Government covers the major part. There has been some expenditure by municipalities on local harbour facilities, and private capital expenditure is also confined almost entirely to terminal or dockage facilities. The investment in shipping, however, with the exception of the Canadian Government Merchant Marine Limited and the Canadian National (West Indies) Steamships Limited, has come almost entirely from private sources. No figures are available regarding private investment in shipping except those appearing in the reports of the operating companies that cover only a portion of the field. There are no statistics showing the revenue of ship operators from passenger and freight traffic.

Capital Expenditure.—The only figures available of federal capital expenditure on Canadian waterways are those compiled from the *Public Accounts* and the annual reports of the Departments of Transport, Public Works and Finance. However, such expenditure cannot be regarded as any indication of the present worth of the undertakings represented. The cost of building canals and other waterways and permanent works to facilitate water transportation in Canada is represented in such reports at their original book values, no deductions having been made from the cumulative totals for depreciation from year to year or for abandonment of earlier works which have been superseded, as for instance, in the first Welland Canals. To this extent such figures are an overstatement of the present value of the works

in use. There is a further limitation that should be noted in regard to such figures: they do not include the cost of maintenance and improvements or the operation of these works, such charges having been made to the consolidated deficit account as annual expenditure and not to capital account. Table **22**, which shows capital expenditure on canals, marine services and miscellaneous water-transport facilities to have reached the grand total of $425,089,977, must be interpreted with the above qualifications in mind. In Table **23**, the capital values of the fixed assets administered by the National Harbours Board are shown as at Dec. 31, 1951 and 1952, and are in addition to the capital expenditure of Table **22**. Figures in Table **23** reflect the capital situation in regard to the national harbours of Canada far better than do those of Table **22** in the case of waterways and facilities, inasmuch as they include all buildings, machinery and durable plant improvements; they also have been subject to deductions for depreciation and the scrapping or abandonment of plant and hence more nearly approach the present value of the properties under the administration of the National Harbours Board.

Table **24** on p. 841 shows the amounts advanced by the Federal Government to the National Harbours Board for capital expenditure in 1950, 1951 and 1952.

22.—Capital Expenditure of the Federal Government on Canals, Marine Services and Miscellaneous Water-Transport Facilities, as at Mar. 31, 1951 and 1952

NOTE.—Compiled from the annual reports of the Department of Transport.

Canals	Expenditure			Canals and Marine Services	Expenditure		
	Years Ended Mar. 31—		Total to Mar. 31, 1952		Years Ended Mar. 31—		Total to Mar. 31, 1952
	1951	1952			1951	1952	
Canals	$	$	$	**Canals**—concluded	$	$	$
Quebec Canals—							
Beauharnois (old)	Cr. 7,500	Cr. 4,500	1,622,969	Welland Ship	Cr. 46,548	Cr. 11,982	131,801,275
Carillon and Grenville	—	—	4,191,727	Prior Welland Canals	Cr. 13,673	Cr. 16,235	27,269,052
Chambly (Richelieu R.)	—	—	780,619	Canals generally	—	—	34,967
Lachine	—	Cr. 24,977	14,018,460	Adjustment suspense	—	—	165,361
Lake St. Francis	—	—	75,907	**Totals, Canals**	Cr. 73,461[1]	Cr. 58,096[1]	243,482,994
Lake St. Louis	—	—	298,176				
Soulanges	—	Cr. 1	7,897,119	**Marine Services**			
Ste. Annes	—	—	1,320,216				
St. Ours	—	—	735,964	River St. Lawrence Ship Channel Contract Dredging	3,612,568	1,103,572	102,016,095
Ontario-St. Lawrence Canals—							
Cornwall	Cr. 5,680	—	7,233,823				
Williamsburg Canals	—	—	1,334,552	Canadian Government Ships—			
Farran's Point	—	—	877,091	*Alexander MacKenzie*	248,921	3,543	919,188
Rapide Plat	—	—	2,159,881	*C. D. Howe*	691,392	226,863	3,229,293
Galop	—	—	6,143,468	*Chesterfield*	—	—	233,941
Galop Channel	—	—	1,039,896	*d'Iberville*	15,981	2,450,839	2,497,618
North Channel	—	—	1,995,143	*Edward Cornwallis*	88,183	—	1,709,767
River Reaches	—	—	483,830	*Ernest Lapointe*	—	—	760,699
St. Peters, N.S.	—	—	648,547	*Lightship No. 2* (Lurcher)	57,492	—	663,406
Culbute Lock and Dam (Ottawa R.)	—	—	382,391	*Ocean Eagle*	—	—	91,071
Rideau	—	—	4,213,961	*Sea Beacon*	215	57,581	57,796
Tay	—	—	489,599	*St. Catharines* (Pacific Weather Ship)	765,807	61,741	850,258
St. Lawrence Ship (Surveys)	—	—	133,897	*Stonetown* (Pacific Weather Ship)	765,807	61,741	919,839
Sault Ste. Marie	—	—	4,935,809				
Trent	Cr. 60	Cr. 401	19,950,347				
Murray	—	—	1,248,917				

[1] Sales of property, stone, etc.

22.—Capital Expenditure of the Federal Government on Canals, Marine Services and Miscellaneous Water-Transport Facilities, as at March, 1951 and 1952—concluded

Marine Services and Miscellaneous Facilities	Expenditure		
	Years Ended Mar. 31—		Total to Mar. 31, 1952
	1951	1952	
	$	$	$
Marine Services—concl.			
Workboat—Parry Sound, Ont.	5,569	—	31,385
Transferred from—River St. Lawrence Ship Channel Contract Dredging[1]	—	909,837	909,837
Ordinary Appns[1]	—	5,086,686	5,086,686
War Appns	—	712,676	712,676
Other Depts	—	137,111	137,111
Auto Ferry for Service between Yarmouth, N.S., and New England States	16,356	—	16,356
Trans. to Investment—Railways	—	Cr.16,356	Cr.16,356
Totals, Marine Services	**6,268,291**	**10,795,834**	**120,826,666**
Miscellaneous Facilities[2]			
Bare Point breakwater	—	—	217,996
Burlington Bay Canal	—	—	308,328
Burlington Channel improvements	76,864	190	1,473,989
Cape Tormentine Harbour	—	—	95,000
Esquimalt graving dock	123,634	134,752	8,177,758
Georgian Bay to Montreal waterway survey	—	—	918,797
Halifax elevator site	—	—	86,512
Kingston graving dock	—	—	556,589
Lake St. Peter	—	—	1,164,235
Lévis graving dock	356,601	393,125	2,139,947

Miscellaneous Facilities	Expenditure		
	Years Ended Mar. 31—		Total to Mar. 31, 1952
	1951	1952	
	$	$	$
Miscellaneous Facilities[2]—concl.			
Miscellaneous wharves	—	—	1,005,929
Port Arthur, Fort William and River Kaministikwia improvements	1,048,091	1,367,860	20,220,494
Port Colborne Harbour	68,053	104,865	1,127,620
Rainy River Lock and Dam	—	—	134
Sorel Harbour improvements	887,451	299,601	3,304,053
St. Andrews Rapids and Red River improvements	145,428	171,578	1,998,808
Tiffin Harbour improvements	—	—	481,622
Toronto Harbour improvements	203,835	579,580	10,923,863
Upper St. Lawrence River Channel improvements	—	—	468,098
Victoria, B.C., Harbour improvements	150,752	8,360	5,347,001
Victoria, Ont., Harbour improvements	603	641	763,544
Totals, Miscellaneous	**3,061,312**	**3,060,552**	**60,780,317**
Summary			
Canals	Cr.73,461	Cr.58,095	243,482,994
Marine Services	6,268,291	10,795,834	120,826,666
Miscellaneous facilities	3,061,312	3,060,552	60,780,317
Grand Totals	**9,256,142**	**13,798,291**	**425,089,977**

[1] Represents costs of floating equipment brought into departmental investment account in 1951-52.
[2] These are works not covered elsewhere in these tables and are shown in the *Public Accounts* as schedules to the Balance Sheet of the Government of Canada.

23.—Capital Values of Fixed Assets administered by the National Harbours Board, as at Dec. 31, 1951 and 1952

NOTE.—Compiled from the annual reports of the National Harbours Board.

Item	1951	1952	Item	1951	1952
	$	$		$	$
Harbour dredging	12,305,212	12,199,604	*Harbour buildings*	1,184,138	1,753,361
Real estate	12,828,869	12,382,257	Central heating plants	150,657	128,073
Vehicular bridges	202,206	202,186	Harbour shops	326,188	336,375
Roads, fences and boundaries	1,842,641	2,001,902	Electric power systems	1,219,773	1,260,242
Sewers and drains	689,701	825,919	Water supply systems	768,923	984,235
Miscellaneous structures	756,924	737,850	Floating equipment	2,186,561	2,212,700
Wharves and piers	95,213,985	92,294,626	Shore equipment	927,145	980,848
Permanent sheds	22,530,403	24,356,545	Miscellaneous small plant	587,107	598,044
Shed hoists and electrical cranes	248,973	249,283	Engineering—general surveys	606,403	109,441
Railway systems	7,788,175	7,748,661	Works under construction	1,544,992	827,753
Grain elevator systems	42,625,179	41,862,130	Sundry expenditure—undistributed	5,386,080	3,769,450
Cold-storage systems	5,779,504	5,881,970	Bridge construction, right-of-way, etc.	18,563,715	18,565,765
Office furniture and appliances	181,353	197,888	**Totals**	**236,444,807**	**232,467,108**

24.—Amounts Advanced by the Federal Government to the National Harbours Board for Capital Expenditure, 1950-52

NOTE.—Compiled from the annual reports of the National Harbours Board.

Harbours and Properties	1950	1951	1952	Harbours and Properties	1950	1951	1952
	$	$	$		$	$	$
Halifax	496,606	1,042,951	322,169	Port Colborne elevator	120,283	49,648	—
Saint John	260,452	—	721,455	Churchill	249,954	174,882	2,234
Chicoutimi	558	—	—	Vancouver	90,243	90,698	307,399
Quebec	260,250	27,254	139,667	**Totals**	**2,993,179**	**2,286,798**	**2,147,082**
Three Rivers	—	2,542	—				
Montreal	1,514,824	898,823	654,158				

Waterway Expenditure and Revenue on Consolidated Fund Account.—Expenditure under this heading (Tables **25** to **27**) is mainly for the operation and maintenance of various facilities for water transport but, unfortunately, the line between operation and maintenance expenditure is not as finely drawn as is desirable.

In addition to the recurrent expenditure shown here, to facilitate water transportation, the Federal Government expends annually a considerable amount to cover deficits of the Canadian National (West Indies) Steamships Limited and of the National Harbours Board, for mail subsidies and steamship subventions as shown in Table **30**. Operating expenditure and revenue of facilities administered by the National Harbours Board are shown separately in Table **29**. The National Harbours Board operates as a statutory corporation. The improvement in the financial results since control was unified under the Board is indicated by the increase of consolidated operating income from $2,452,000 in 1935 to $8,110,876 in 1952. Revenue in connection with waterways of the Department of Transport and the Department of Public Works is shown in Table **28**.

25.—Expenditure on Canals Charged to Consolidated Deficit Account, Years Ended Mar. 31, 1951 and 1952

NOTE.—Compiled from the annual reports of the Department of Transport.

Canal	Expenditure on Improvements			Canal	Expenditure on Improvements		
	Year Ended Mar. 31, 1951	Year Ended Mar. 31, 1952	Total to Mar. 31, 1952		Year Ended Mar. 31, 1951	Year Ended Mar. 31, 1952	Total to Mar. 31, 1952
	$	$	$		$	$	$
Main Canals—				Secondary Canals—			
Quebec Canals—				Carillon and Grenville	6,000	—	1,114,215
Beauharnois (old)	—	32,804	388,444	Chambly (Richelieu River)	6,658	19,356	1,313,980
Hungry Bay Dyke	—	—	55,659	Rideau and Tay	51,923	27,635	1,354,495
Lachine	3,466,450	2,597,530	9,547,411	Ste. Annes	—	—	232,812
Lake St. Francis	—	—	55,324	St. Ours (Richelieu River)	3,494	1,816	217,632
Quebec Dredging Fleet	—	—	185,149	St. Peters	—	—	961,842
Soulanges	11,607	31,541	782,548	Trent	48,689	178,621	4,944,756
Superintending Engineer	—	2,174	2,174	Murray	5,928	—	220,987
Ontario-St. Lawrence Canals	—	—	336,906	Miscellaneous—			
Cornwall	113,851	202,401	1,459,356	Bay Verte, Chignecto	—	—	44,388
Williamsburg	32,483	17,928	561,538	Culbute Lock and Dam (Ottawa R.)	—	—	60,923
Welland Canals—				Surveys and inspections	—	—	572,990
Welland Ship	52,716	87,405	2,164,419	Canals generally	—	—	190,509
Prior Welland Canals	—	—	2,650,121	**Totals**	**3,811,286**	**3,258,518**	**30,051,218**
Sault Ste. Marie	11,487	59,307	632,640				

25. — Expenditure on Canals Charged to Consolidated Deficit Account, Years Ended Mar. 31, 1951 and 1952—concluded

Canal	Expenditure on Operation and Maintenance		Canal	Expenditure on Operation and Maintenance	
	Year Ended Mar. 31, 1951	Year Ended Mar. 31, 1952		Year Ended Mar. 31, 1951	Year Ended Mar. 31, 1952
	$	$		$	$
Administration, Ottawa	87,933	97,779	Ontario-St. Lawrence Canals—		
Quebec Canals—			Head Office	81,889	84,447
Head Office	55,772	56,702	Cornwall	413,188	407,120
Beauharnois (old)	9,818	24,968	Williamsburg Canals	182,055	210,271
Carillon and Grenville Canals	107,845	130,910	St. Peters, N.S.	36,613	40,790
Chambly (Richelieu River)	153,721	157,371	Rideau and Tay Canals	369,073	383,839
Hungry Bay and Ste. Barbe Dykes	4,622	4,452	Sault Ste. Marie	134,880	152,594
Lachine	747,141	707,613	Trent	461,349	425,209
Quebec Dredging Fleet	45,023	38,799	Murray	21,696	24,661
Soulanges	299,585	360,508	Welland Canals	1,219,332	1,365,829
Ste. Annes	21,600	21,823	Flow Measurements— Beauharnois	520	—
St. Ours (Richelieu River)	18,999	20,241	St. Lawrence Ship Canal Surveys, etc	5,760	16,100
			Totals	**4,478,414**	**4,732,026**

26.—Marine Service Expenditure charged to Consolidated Deficit Account, Years Ended Mar. 31, 1951 and 1952

NOTE.—Compiled from the annual reports of the Department of Transport.

Marine Services	1951	1952	Marine Services	1951	1952
	$	$		$	$
Marine Services—administration, including agencies	456,709	500,778	Write-off from active assets of the balance of advances for loans made to the Halifax and Sydney Pilotage Districts	8,358	—
Aids to navigation (construction, maintenance and supervision)	4,540,012	4,740,680	Pensions to former pilots	2,400	2,243
Maintenance and repairs to wharves	3,054	—	Life Saving Service	122,019	—
Breaking ice—Thunder Bay	30,000	—	Subsidies for wrecking plants	65,000	—
Nautical Services—administration	—	142,688	Replacement of machinery destroyed by fire at l'Ecole d'Arts et Métiers de Rimouski, Que	—	90,950
Nautical Services—administration, operation and maintenance, including grants	303,899	334,807	Steamship Inspection	380,927	453,953
Nautical Services—construction	—	21,309	Marine Service Steamers—administration	54,603	57,784
Navigation and Shipping—miscellaneous	135,123	—	Marine Service Steamers—operation and maintenance	3,643,555	4,251,733
North Atlantic Ice Patrol	20,000	—	Marine Signal Service	144,004	161,997
Grants to Sailors Institutes	600	—	River St. Lawrence Ship Channel Service—operation and maintenance	609,336	1,368,825
Marine Services — War Appropriations	499	70	Transferred to Marine Services—investment	—	−5,746,075
Pilotage Service — administration	400,773	398,675	**Totals**	**10,920,871**	**6,845,045**
Pilotage Service — construction	—	64,628			

27.—Expenditure on Waterways charged to Consolidated Fund Account by Department of Public Works, Years Ended Mar. 31, 1951 and 1952

NOTE.—Compiled from the annual reports of the Departments concerned by the Comptroller of the Treasury, Department of Finance.

Year and Item	Dredging	Construction	Improvements and Repairs	Staff and Sundries	Total
	$	$	$	$	$
1951					
Harbours and Rivers—					
Newfoundland	244,921	251,874	309,477	109,806	916,078
Prince Edward Island	342,861	614,929	225,065	50,128	1,232,983
Nova Scotia	758,546	1,089,791	1,369,740	127,686	3,345,763
New Brunswick	723,677	1,175,499	737,584	339,549	2,976,309
Quebec	851,289	5,136,836	2,397,321	776,480	9,161,926
Ontario	1,658,245	822,477	2,239,096	364,389	5,084,207
Manitoba	118,319	119,466	106,055	93,144	436,984
Saskatchewan	1,284	20,979	29,085	23,347	74,695
Alberta	24,494	23,725	59,906	56,712	164,837
British Columbia	1,417,625	1,252,083	1,429,124	506,977	4,605,809
Yukon Territory	16,883	—	—	10,058	26,941
Northwest Territories	44,813	19,332	20,354	—	84,499
General	—	—	—	140,458	140,458
Totals, Harbours[1] and Rivers	6,202,957	10,526,991	8,922,807	2,598,734	28,251,489
Dredging plant	—	1,073,976	54,337	—	1,128,313
Roads and bridges	—	—	92,425	79,471	171,896
Totals, 1951	**6,202,957**	**11,600,967**	**9,069,569**	**2,678,205**	**29,551,698**
1952					
Harbours and Rivers—					
Newfoundland	676,494	821,829	837,327	137,245	2,472,895
Prince Edward Island	307,622	275,966	564,724	67,002	1,215,314
Nova Scotia	474,364	922,533	784,181	140,117	2,321,195
New Brunswick	806,420	309,531	425,037	346,802	1,887,790
Quebec	708,039	3,511,693	1,488,198	519,441	6,227,371
Ontario	1,340,505	526,242	2,357,660	373,181	4,597,588
Manitoba	154,697	133,248	74,918	85,582	448,445
Saskatchewan	—	73,054	3,147	1,495	77,696
Alberta	25,223	709	47,165	63,524	136,621
British Columbia	1,084,160	2,389,829	466,080	660,225	4,600,294
Yukon Territory	7,718	—	426	7,580	15,724
Northwest Territories	39,304	54,550	27,223	—	121,077
General	—	38,607	—	152,204	190,811
Totals, Harbours[1] and Rivers	5,624,546	9,057,791	7,076,086	2,554,398	24,312,821
Dredging plant	—	663,372	72,252	—	735,624
Roads and bridges	—	23,425	75,570	35,847	134,842
Totals, 1952	**5,624,546**	**9,744,588**	**7,223,908**	**2,590,245**	**25,183,287**

[1] Exclusive of harbours under the National Harbours Board as shown in Table 29.

28.—Revenue of the Federal Government in connection with Waterways, Years Ended Mar. 31, 1951 and 1952

NOTE.—Compiled from the annual reports of the Departments concerned by the Comptroller of the Treasury, Department of Finance.

Item	1951	1952
	$	$
Department of Transport		
CANALS SERVICE		
Lachine	316,027	317,093
Soulanges	3,060	3,017
Chambly	2,733	3,726
Ste. Annes Lock	572	836
St. Ours	—	270
Carillon and Grenville	925	1,652
Beauharnois	49,872	49,395
Quebec dredging fleet	3,996	73
Cornwall	53,419	66,739
Williamsburg	34,218	13,737
St. Peters	237	237
Welland Canals	749,805	899,714
Sault Ste. Marie	6,242	3,099
Rideau	19,692	17,097
Trent	87,793	88,837
Murray	450	551
Fines and forfeitures	—	—
Sale of publications	38	39
Premium, discount and exchange	—	3
Sundry services	—	—
Miscellaneous	32	142
Refunds of previous year's expenditure	6,175	36,063
TOTALS, CANALS SERVICE	1,335,286	1,502,320
MARINE SERVICE		
Fines and forfeitures	17,347	19,660
Steamship inspection	162,788	176,909
Wharf revenue	227,629	237,256
Harbour dues	47,115	57,327
Measuring surveyors' fees	770	381
Examinations—masters' and mates' fees	7,136	7,389
Pilots' licence fees (pilotage)	126	248
Pilotage dues	2,200	1,469
Shipping fees	3,125	3,996
Marine steamers' earnings	3,827	35,223
Signal station dues	1,264	1,462
Rentals — water lots and lighthouse sites	13,669	20,390
Rentals — miscellaneous	10,989	12,262
Sale of land, buildings, etc	1,302	6,073
Merchant seamen's identity certificates	2,782	3,182
MARINE SERVICE—concluded		
Miscellaneous	4,073	13,552
Refund of previous year's expenditure	77,715	24,171
TOTALS, MARINE SERVICE	583,857	620,950
BOARD OF TRANSPORT COMMISSIONERS		
Licences to ships	2,793	1,885
Sale of publications	—	213
Sundries	175	100
TOTALS, BOARD OF TRANSPORT COMMISSIONERS	2,968	2,198
Totals, Dept. of Transport	**1,922,111**	**2,125,486**
Department of Public Works		
EARNINGS OF DRY DOCKS		
Champlain Dock, Lauzon, Que	69,518	86,366
Lorne Dock, Lauzon, Que	20,040	29,000
Esquimalt new dock	77,730	95,797
Esquimalt old dock	1,429	1,925
Selkirk repair slip	2,300	3,566
TOTALS, EARNINGS	171,017	216,654
WORKS AND PLANTS LEASED		
Kingston dry dock	9,025	9,025
Ferry privileges	445	484
Dredges and plants	9,992	35,512
TOTALS, LEASED	19,462	45,021
Rents from water lots, etc	19,474	18,456
Refunds against expenditure reported in previous years	87,035	74,605
Sundry receipts	9,858	11,357
Totals, Dept. of Public Works	**306,846**	**366,093**

29.—Operating Revenue and Expenditure of Harbours, Elevators and Bridges under the National Harbours Board, 1948-52

Harbour and Year	Operating Revenue	Operating Expenditure	Operating Income	Harbour and Year	Operating Revenue	Operating Expenditure	Operating Income
	$	$	$		$	$	$
Halifax—				**Saint John—**			
1948	1,270,564	862,529	408,035	1948	805,364	472,365	332,999
1949	1,300,605	893,699	406,906	1949	715,423	501,163	214,260
1950	1,158,425	895,757	262,668	1950	627,860	511,328	116,532
1951	1,338,348	1,044,779	293,569	1951	728,648	576,255	152,393
1952	1,606,576	1,251,530	355,046	1952	906,517	661,184	245,333

29.—Operating Revenue and Expenditure of Harbours, Elevators and Bridges under the National Harbours Board, 1948-52—concluded

Harbour and Year	Operating Revenue	Operating Expenditure	Operating Income	Harbour and Year	Operating Revenue	Operating Expenditure	Operating Income
	$	$	$		$	$	$
Three Rivers—				**Port Colborne Elevator—**			
1948	219,712	43,264	176,448	1948	252,185	189,414	62,771
1949	213,745	45,194	168,551	1949	485,718	293,881	191,837
1950	265,209	64,159	201,050	1950	588,357	325,954	262,403
1951	296,923	37,168	259,755	1951	630,423	394,843	235,580
1952	336,628	63,584	273,044	1952	860,348	485,315	375,033
Montreal—				**Prescott Elevator—**			
1948	5,608,899	3,186,639	2,422,260	1948	120,037	160,253	−40,216
1949	6,272,697	3,663,798	2,608,899	1949	264,004	150,155	113,849
1950	6,324,037	3,500,606	2,823,431	1950	283,680	143,904	139,776
1951	7,478,227	4,053,329	3,424,898	1951	276,544	159,139	117,405
1952	8,692,656	4,567,823	412,433	1952	479,079	208,977	270,102
Chicoutimi—				**Churchill—**			
1948	50,310	20,512	29,798	1948	278,712	321,337	−42,625
1949	58,386	19,440	38,946	1949	256,487	339,944	−83,457
1950	69,816	22,172	47,644	1950	368,472	556,659	−188,187
1951	82,416	29,185	53,231	1951	409,141	463,887	−54,746
1952	86,450	26,037	60,413	1952	480,345	532,432	−52,087
Quebec—				**Vancouver—**			
1948	684,128	833,283	−149,155	1948	2,311,011	1,293,633	1,017,378
1949	871,022	813,289	57,733	1949	2,260,677	1,209,250	1,051,427
1950	978,667	818,594	160,073	1950	2,985,966	1,594,580	1,391,386
1951	1,415,577	1,217,085	198,492	1951	3,305,429	1,853,730	1,451,699
1952	1,722,137	2,130,402	−408,265	1952	3,528,272	2,063,370	1,464,902
Jacques Cartier Bridge (Montreal)				**Second Narrows Bridge (Vancouver)**			
1948	974,764	129,372	845,392	1948	255,096	95,974	159,122
1949	1,104,921	141,727	963,194	1949	269,012	89,082	179,930
1950	1,231,537	148,385	1,083,152	1950	283,319	92,908	190,411
1951	1,413,381	168,165	1,245,216	1951	[1]	[1]	[1]
1952	1,599,684	197,162	1,402,522				

[1] Reverted to former owners in 1951.

Shipping Subsidies.—Table 30 shows the amounts of steamship subventions paid in connection with contracts made under statutory authority for ocean, coastal and inland water-shipping services. The payment of these subventions is administered by the Canadian Maritime Commission.

30.—Steamship Subventions, Years Ended Mar. 31, 1951-53

Services	1951	1952	1953
	$	$	$
Pacific Coast Services—			
Vancouver and northern ports of British Columbia and Queen Charlotte Islands	345,000	345,000	345,000
Victoria and west coast of Vancouver Island	100,000	146,555	87,500
Local Services—			
Baddeck and Iona, N.S.	12,000	12,000	12,000
Campobello, N.B., and Lubec, Maine	6,000	6,000	6,000
Dalhousie, N.B., and Miguasha, Que.	22,000	19,000	19,000
Deer Island, Campobello Island and St. Stephens, N.B.	2,000	2,000	—
Grand Manan and the mainland, N.B.	95,000	95,000	95,000
Halifax, Canso and Guysborough, N.S.	20,000	20,000	20,000
Halifax, Sherbrooke, Spry Bay and Torbay, N.S.	14,000	2,333	—
Halifax, Torbay, Ile Madame and ports on west coast of Cape Breton Island, N.S.	—	15,000	15,000
Halifax, Ile Madame and west coast of Cape Breton Island, N.S.	10,000	—	—
Ile-aux-Coudres and Les Eboulements, Que.	12,000	15,000	15,000

30.—Steamship Subventions, Years Ended Mar. 31, 1951-53—concluded

Services	1951	1952	1953
	$	$	$
Local Services—concluded			
Ile-aux-Grues and Montmagny, Que.	2,500	2,500	2,500
Mulgrave and Arichat, N.S.	31,000	31,000	31,000
Mulgrave and Canso, N.S.	82,000	82,000	82,000
Mulgrave, Guysborough and Queensport, N.S.	16,500	16,500	14,422
Murray Bay and north shore St. Lawrence, Que. (Winter Service).	50,000	50,000	50,000
Owen Sound and ports on Manitoulin Island and Georgian Bay, Ont.	73,164	83,231	72,816
Pelee Island and the mainland, Ont.	19,000	43,537	30,000
Pictou, Mulgrave and Cheticamp, N.S.	13,500	13,500	13,500
Pictou, N.S., Charlottetown, P.E.I., and Magdalen Islands, Que.	120,000	120,000	120,000
Prescott, Ont., and Ogdensburg, N.Y.	—	8,782[1]	8,782
Prince Edward Island and Nova Scotia	130,000	130,000	158,000
Quebec, Natashquan and Harrington, Que., and other ports on the north shore, Gulf of St. Lawrence	520,000	520,000	520,000
Quebec or Montreal, Gaspe, Que., and Magdalen Islands, calling at way ports	156,500	156,500	156,500
Rimouski, Matane and ports on the north shore of the St. Lawrence, Que.	125,500	125,500	125,500
Rivière-du-Loup and St. Simeon, Que.	21,000	21,000	21,000
Saint John, N.B., Westport and Yarmouth, N.S., calling at way ports	29,625	29,625	29,625
Sydney and Bay St. Lawrence, Cape Breton Island, calling at way ports	40,000	40,000	40,000
Sydney, Bras d'Or Lake ports, ports on the west coast of Cape Breton Island and Prince Edward Island	30,000	30,000	—
Sydney and Whycocomagh, Cape Breton Island, calling at way ports	28,000	28,000	28,000
Yarmouth, N.S., and Boston, Mass.	25,654	25,541	33,334
Newfoundland Coastal Steamship Services	1,250,000	1,590,000	1,536,000
Ocean Services—			
Canada, New Zealand and Australia	—	166,667	166,667
Assistance for Canadian Flag Ocean Shipping Industry	2,358,973	337,500	—
Totals	**5,760,916**	**4,329,271**	**3,854,146**

[1] Amount shown as spent in 1952 was refunded in 1953.

Canadian Maritime Commission.—By authority of an Act (R.S.C. 1952, c. 38) passed in the 1947 session of Parliament, the Canadian Maritime Commission was constituted for the purpose of examining into, keeping records of, and advising the Minister of Transport on matters pertaining to Canadian shipping and shipbuilding services.

In addition to these duties, the Act also empowers the Commission to:—

(1) exercise and perform on behalf of the Minister such powers, duties and functions of the Minister under the Canada Shipping Act, 1934, as the Minister may require;

(2) administer, in accordance with regulations of the Governor in Council, any steamship subventions voted by Parliament; and

(3) exercise or perform any other powers, duties or functions conferred on or required to be performed by the Commission by or pursuant to any other Act or order of the Governor in Council.

PART V.—CIVIL AIR TRANSPORTATION*

Section 1.—Administration and Development

Historical Developments.—Canada's aviation history dates back to 1909 when the *Silver Dart* piloted by Jack McCurdy (Hon. J. A. D. McCurdy, former Lieutenant-Governor of Nova Scotia) flew at Baddeck, N.S. This was the first aeroplane flight by a British subject in the British Empire.

* Sections 1 and 2 of this Part were revised in the Department of Transport and Section 3, except where otherwise indicated, in the Transportation Section, Public Finance and Transportation Division, Dominion Bureau of Statistics. For military air transportation, *see* Chapter on Defence of Canada.

There was little aviation development in this country until World War I. Following the War, many of Canada's wartime aviators assisted in developing air transportation services into inaccessible areas, air forestry patrols and inter-city air services. During this period, the flying clubs movement received Government assistance in the training of pilots and engineers required by Canada's civil aviation industry.

World War II was a period of intensive construction of airports and aerodromes to meet the requirements for training of airmen under the British Commonwealth Air Training Plan. At the end of the War, many Service-trained Canadian airmen turned to commercial flying and were absorbed in existing operating companies or helped to develop other flying services. Transatlantic air services, which were inaugurated by the Department of Transport during the War, were turned over to Trans-Canada Air Lines which came into being by Act of Parliament in 1937 to provide for the development of a government-controlled transcontinental air service for operation as regular scheduled operations. Canadian Pacific Air Lines was created by the amalgamation of small commercial operators for the servicing of Canada's northland. In 1949, the Canadian Pacific Air Lines was designated to provide transpacific services on behalf of Canada and began its scheduled operations from Vancouver to Australia and New Zealand in July of that year and to Japan, China and Hong Kong in September.

The Control of Civil Aviation.—The control of civil aviation in Canada is under the jurisdiction of the Federal Government and is administered under the authority of the Aeronautics Act, 1919, and amendments thereto. The Aeronautics Act is in three parts. Broadly speaking, Part I deals with the technical side of civil aviation, comprising matters of registration of aircraft, licensing of airmen, the establishment and maintenance of airports and facilities for air navigation, air traffic control, accident investigation and the safe operation of aircraft. This Part of the Act is administered by the Controller of Civil Aviation under the supervision of the Director of Air Services, Department of Transport. Part II of the Act deals with the social and economic aspects of commercial air services and assigns to the Air Transport Board certain statutory functions with respect to the regulation of commercial air services. Part III of the Act deals with matters of government internal administration in connection with the Act.

Weather Services.—Weather services of the Meteorological Division of the Department of Transport have been broadened to meet the demands of aviation for weather information and forecasts at higher levels, over new areas and for extended routes. A Central Analysis Office has been established at Montreal, Que., and an Arctic Forecast Team at Edmonton, Alta. New machine methods are being used in processing weather data, and the network of surface and upper air observing stations has been expanded. Forty forecast offices were in operation in 1952, linked by teletype, radio teletype and an enlarging facsimile system. Arctic weather stations and a Pacific weather station 1,000 miles to the west of Vancouver, B.C., were maintained under international agreement.

Royal Canadian Flying Clubs.—At the end of 1952 there were 36 member clubs of the Royal Canadian Flying Clubs Association with an approximate membership of 4,000. During 1952, with 1951 figures in brackets, instructional hours flown totalled 59,252 (51,190), and the number of aircraft utilized for instructional purposes was 161 (140). The number of students instructed and graduated as private pilots was 796 (709), and 156 (116) graduated as commercial pilots.

Air Industries and Transport Association.—Commercial flying schools that are members of the Air Industries and Transport Association numbered 49 at the end of 1952 as compared with 44 in 1951. During 1952, with 1951 figures in brackets, the number of students instructed and graduated as private pilots was 723 (516), and the number graduated as commercial pilots, 215 (134). The number of instructional hours flown was 39,161 (33,063).

International Air Agreements.—The position of Canada in the field of aviation as well as its geographical location makes co-operation with other nations of the world engaged in international civil aviation imperative. Canada played a major part in the original discussions that led to the establishment of the International Civil Aviation Organization, generally known as ICAO, which has its headquarters at Montreal, Que. A special article on "The International Civil Aviation Organization and Canada's Participation Therein" appeared in the 1952-53 Year Book, pp. 820-827.

In recent years, Canada has been a signatory to agreements concerning civil aviation with: Australia and New Zealand; Belgium, Denmark, France, Germany, Ireland, Iceland, The Netherlands, Norway, Portugal, Sweden, South Africa, and the United Kingdom; and with the United States.

Section 2.—Air Services

Air Transport Services.—These services are grouped into two broad classes—Scheduled Services and Non-Scheduled Services.

Scheduled Services provide regular point-to-point service on scheduled advertised routes and Non-Scheduled Services include:—

(1) Specific Point Services from a designated base to specific points on the basis of unit rates that may be undertaken as the traffic warrants and that are not on a time schedule;
(2) Chartered Services operated on the basis of the private chartering of an entire aircraft for a specific trip;
(3) Contract Air Services which operate on one or more specific contracts. These do not operate on a time schedule nor need the contractor take the entire space of the aircraft;
(4) Specialty Air Services concerned with large-scale forestry and utility surveys according to some specific agreement.

Trans-Canada Air Lines.—Under an amendment to the Trans-Canada Air Lines Act, given Royal Assent on May 14, 1953, all property, rights, obligations and liabilities of Trans-Canada Air Lines (Atlantic), Limited, that existed prior to Jan. 1, 1952, were transferred to Trans-Canada Air Lines. As a result, computation of statistical information on the operations of both domestic and international operations of TCA have been computed for the year 1952 on an all-inclusive basis.

Trans-Canada Air Lines flew 14 p.c. more scheduled miles on all services in 1952 than in the preceding year. Flight frequencies were increased on a number of routes. On the transcontinental route, a fifth daily service was operated during the summer months. On the North Atlantic service, daily flights were operated in all months except November and December, while Caribbean schedules were increased during the winter season.

The first direct air service between Canada and Germany was inaugurated on Nov. 5 with an initial schedule of one round flight a week. This new service is calculated to serve also the air transport needs of Canadian troops stationed in

Germany. Improvements to domestic services included the extension of the *North Star* service from Montreal to Newfoundland, adding Fredericton, N.B., to the domestic route pattern, and the inauguration of a weekly flight from Montreal to Goose Bay, which had been previously serviced by North Atlantic operations.

TCA increased its domestic service for the winter months of 1952-53 by 8 p.c. over the corresponding season of 1951-52, reflecting the healthy trend of domestic confidence in air travel, due in no small measure to the operational dependability of the air line with its reputation of having completed 97 p.c. of all scheduled miles.

The unit cost of providing air transportation during the year decreased to 39·6 cents per available ton-mile owing to greater volume of business and increased productivity of staff and equipment.

During the year, the volume of passenger traffic increased by 20 p.c., freight and express by 30 p.c. and mail by 8 p.c. Operating revenues increased by 15 p.c. and operating expenses rose by 22 p.c. owing primarily to increased cost of operation and expenses incurred in carrying out the fleet expansion program.

1.—Passenger, Freight and Mail Traffic of Trans-Canada Air Lines, 1943-52

Source: Trans-Canada Air Lines Annual Report.

Year	Revenue Passenger Traffic[1]		Revenue Commodity Traffic[2]		Mail Traffic
	No.	passenger miles	lb.	ton-miles	ton-miles
1943	140,276	78,508,427	1,114,206	526,363	1,623,802
1944	156,884	84,425,354	1,117,747	510,760	1,760,486
1945	183,121	106,088,111	1,261,935	500,687	1,571,180
1946	305,442	155,777,319	1,453,743	513,493	1,210,716
1947	427,967	179,808,562	2,041,315	764,105	1,275,909
1948	532,555	249,575,544	4,313,297	1,608,102	2,294,088
1949	648,574	310,699,767	5,471,013	2,160,644	3,403,810
1950	790,808	379,605,810	9,518,009	3,585,775	3,644,752
1951	930,691	450,840,623	10,826,333	3,861,583	3,969,371
1952	1,132,518	653,961,415	19,757,969	7,042,427	4,843,052

[1] Includes non-scheduled service. [2] Includes excess baggage and express.

2.—Operating Revenue and Expenditure of Trans-Canada Air Lines, 1943-52

Source: Trans-Canada Air Lines Annual Report.

Year	Passenger	Freight[1]	Mail	Total Operating Revenue[2]	Operating Expenditure[3]	Net Surplus (+) or Deficit (−)[4]
	$	$	$	$	$	$
1943	4,213,599	390,163	3,515,807	9,379,501	8,974,902	+147,889
1944	4,456,768	376,516	3,802,395	9,192,522	8,948,388	+7,409
1945	5,462,940	361,177	4,250,939	10,512,588	10,250,272	+32,772
1946	8,047,124	378,185	3,780,509	12,810,805	13,926,061	−1,269,624
1947	10,450,524	534,359	3,808,197	15,297,347	16,796,492	−1,761,043
1948	14,469,578	888,917	4,648,775	20,866,936	21,624,057	−1,183,022
1949	19,460,395	1,161,612	5,400,000	26,523,969	27,472,728	−1,419,444
1950	24,183,501	1,667,827	5,400,000	31,810,684	31,318,613	+492,071
1951	28,666,505	1,913,703	5,741,000	37,043,289	32,670,654	+4,372,635
1952	42,022,616	3,730,521	7,698,641	55,057,708	52,744,741	+2,312,967

[1] Express and excess baggage. [2] Includes other revenue. [3] Interest and exchange charges excluded except for 1946, 1947, 1948 and 1949. [4] Includes interest on capital invested.

Canadian Pacific Air Lines Limited.—This Company operates scheduled domestic services with a total of 9,525 route miles, and overseas services from Vancouver to Australia, New Zealand and the Orient, totalling 15,295 route miles. In addition, a regular passenger service between Vancouver, Mexico City and Lima, Peru was started on Oct. 24, 1953.

Domestic services are concentrated mainly in the western and northern regions of Canada, although daily service is flown in the Montreal-Quebec-Toronto area. The Company has five pressurized 40-passenger Convair-Liners operating on certain domestic routes.

Service on overseas lines has recently been greatly improved through the purchase of four Douglas Super DC-6B aircraft. These are four-engined transports with a normal seating capacity of 64 passengers but which are capable of carrying 82 tourist passengers if desired. The new aircraft are in use on the North and South Pacific routes.

Following are traffic statistics for the year 1952:—

Item		*Domestic*	*North Pacific*	*South Pacific*
Revenue miles	No.	5,942,627	2,229,113	464,665
Revenue passengers	No.	193,514	11,536	1,672
Revenue goods	lb.	5,817,470	89,493	3,438
Mail	lb.	2,122,596	54,418	3,036

Independent Air Lines.—In addition to Trans-Canada Air Lines and Canadian Pacific Air Lines, there are four other domestic air lines licensed to operate scheduled services in Canada. These are:—

Central Northern Airways Limited, Winnipeg, Man.
Maritime Central Airways Limited, Charlottetown, P.E.I.
Queen Charlotte Airlines Limited, Vancouver, B.C.
Quebecair Incorporated, Mont Joli, Que.

Licensed domestic air carriers operating in Canada held valid operating certificates as at Dec. 31, 1952, covering 37 scheduled, 87 flying training, and 461 non-scheduled and specialty commercial air services.

Non-scheduled services are operated by the majority of the independent air lines. These services provide effective access to sections of Canada that are inaccessible by other means of transportation, and act as feeders to the scheduled air lines. They also provide specialty services such as recreational flying, aerial photography and survey, aerial pest control, and aerial advertising.

Commonwealth and Foreign Scheduled Commercial Air Services.—At the end of December 1952 there were 14 Commonwealth and foreign air carriers holding a total of 18 valid operating certificates covering international scheduled commercial air services operating into Canada, as follows:—

Air France (Compagnie Nationale Air France).—Operating between points in Metropolitan France and Montreal, Que., Canada, direct, or via Shannon, Ireland, Keflavik, Iceland, or The Azores and Gander, N'f'ld., Canada; and New York, N.Y., U.S.A.

American Airlines, Inc.—Operating between Toronto, Ont., Canada, and New York, N.Y., U.S.A./Newark, N.J., U.S.A., direct, or via Buffalo, N.Y., U.S.A.

British Commonwealth Pacific Airlines, Ltd.—The Canadian portion of the route between San Francisco, Cal., U.S.A., and Vancouver, B.C., Canada, of the Transpacific service between Sydney, N.S.W., Australia, and/or Auckland, New Zealand, and Vancouver, B.C., Canada.

British Overseas Airways Corp.—Operating between London, England, and Montreal, Canada, and between London, England, and New York, U.S.A., both routes via Prestwick, Scotland, or Shannon, Ireland, and Gander, N'f'ld., Canada; and between London, England; Gander, N'f'ld., Canada; Bermuda; Nassau, The Bahamas; and Montego Bay, Jamaica, B.W.I.

Colonial Airlines, Inc.—Operating *(a)* between the terminals Ottawa, Ont., Canada, and Montreal, Que., Canada, and New York, N.Y., U.S.A., via Burlington, Vt., U.S.A., and *(b)* between the terminals Ottawa, Ont., Canada, and Montreal, Que., Canada, and Washington, D.C., U.S.A., via Massena, N.Y., and/or Syracuse, N.Y., U.S.A.

K.L.M. Royal Dutch Airlines.—The Canadian portion of the route between the terminals Amsterdam, The Netherlands, and Montreal, Que., Canada; and the Canadian portion of the route between the terminals Montreal, Que., Canada, and Willemstad, Curaçao, Netherlands Antilles.

Northeast Airlines, Inc.—Operating between Montreal, Que., Canada, and Boston, Mass., U.S.A., via Burlington, Vt., Montpelier-Barre, Vt., White River Junction, Vt., (Lebanon Airport, N.H.), and Concord, N.H., U.S.A.

Northwest Airlines, Inc.—Operating between Winnipeg, Man., Canada, and Fargo, North Dakota, U.S.A.; and between Minneapolis/St. Paul, Minn., U.S.A.; Edmonton, Alta., Canada; Anchorage, Alaska, U.S.A.; and beyond.

Pan American World Airways, Inc.—Operating between Seattle, Wash., and Fairbanks, Alaska, via Juneau, Alaska, U.S.A. and Whitehorse, Y.T., with a refuelling stop at Port Hardy, B.C., and/or Comox, B.C.; and between New York, N.Y., Boston, Mass., U.S.A.; and Gander, N'f'ld., Canada; Shannon, Ireland; London, England; and beyond.

Sabena (Société Anonyme Belge d'Exploitation de la Navigation Aérienne).—Operating between Brussels, Belgium, and New York, N.Y., U.S.A., via Shannon, Ireland, and Gander, N'f'ld., Canada.

Scandinavian Airlines System.—Between Stockholm, Sweden; Oslo, Norway; Copenhagen, Denmark; Prestwick, Scotland; Gander, N'f'ld., Canada; and New York, N.Y., U.S.A.

T.W.A. (Trans-World Airlines, Inc.).—Operating between New York, N.Y.; Philadelphia, Penn.; Boston, Mass., U.S.A.; and Gander, N'f'ld., Canada; The Azores; Shannon, Ireland; London, England; Paris, France; Lisbon, Portugal; and beyond.

United Air Lines, Inc.—Operating between Vancouver, B.C., Canada, and Seattle, Wash., via Bellingham, Wash., U.S.A.

Western Air Lines, Inc.—Operating between Great Falls, Mont.; Cut Bank, Mont., U.S.A., and Lethbridge, Alta.; Edmonton, Alta., Canada; via Calgary and Penhold, Alta., Canada.

Section 3.—Civil Aviation Statistics

Ground Facilities.—Early ground facilities for civil aviation consisted chiefly of municipal or flying-club airports adjacent to the larger urban centres and of numerous terminals from which commercial flying services operated, mainly into the northern mining regions. These airports formed the nucleus of the chain of airports now operated by the Department of Transport. These airports and aerodromes have been progressiveiy improved and enlarged to meet the requirements of larger and heavier aircraft. Instrument Landing Systems (ILS) designed to facilitate

safe landings under low visibility conditions have been installed at 17 airports. Twelve of Canada's civil airports are regular ports of call for international commercial air services.

3.—Aerodromes, by Province, as at Oct. 1, 1953

NOTE.—An aerodrome is defined by the Air Regulations 1951 as: a defined area on land or water (including any buildings, installations and equipment) intended to be used wholly or in part for the arrival, departure, movement and servicing of aircraft. This table was compiled by the Aeronautical Charting Section, Department of Mines and Technical Surveys, and the aerodromes included are in a usable condition.

Operator	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T.	Yukon	Canada
Landing Areas													
Canadian Pacific Air Lines—													
Land	—	—	—	—	1	—	—	—	1	1	—	2	5
Water	—	—	—	—	1	5	5	—	3	—	2	1	17
Dept. of Resources and Development—													
Land	—	—	—	—	—	—	—	—	2	—	—	2	4
Water	—	—	—	—	—	—	—	—	—	—	—	1	1
Dept. of Transport—													
Land	3	—	4	3	6	34	6	8	6	22	8	—	100
Water	—	—	—	—	—	—	—	—	—	2	4	—	6
Municipal—													
Land	—	1	2	2	7	14	5	8	9	16	—	—	64
Water	—	—	—	—	—	1	—	—	1	2	—	—	4
Provincial—													
Land	—	—	—	—	—	—	—	3	—	1	—	4	8
Water	—	—	—	—	—	17	5	1	—	—	3	2	28
Private—													
Land	—	1	—	2	12	14	1	3	4	8	3	2	50
Water	1	—	—	—	13	20	7	1	—	4	—	—	46
Royal Canadian Air Force—													
Land	1	1	1	2	6	15	7	1	7	4	3	4	52
Water	1	—	—	—	—	2	1	—	1	3	1	—	9
Royal Canadian Navy—													
Land	—	—	1	—	—	—	—	—	—	—	—	—	1
Water	—	—	1	—	—	—	—	—	—	—	—	—	1
Canadian Army—													
Land	—	—	—	—	—	—	—	—	—	3	—	5	8
United States Air Force—													
Land	1	—	—	—	—	—	—	—	—	—	1	—	2
United States Navy—													
Land	1	—	—	—	—	—	—	—	—	—	—	—	1
Totals, Landing Areas	8	3	9	9	46	122	37	25	34	66	25	23	407
Land	6	3	8	9	32	77	19	23	29	55	15	19	295
Water	2	—	1	—	14	45	18	2	5	11	10	4	112
Auxiliary Facilities													
Hard-Surfaced Aerodromes—													
Land	5	2	8	7	16	41	13	11	13	21	2	1	140
Lighted Aerodromes—													
Land	6	2	4	4	11	32	10	9	17	29	11	8	143
Water	1	—	1	—	—	—	—	—	—	2	—	—	4

Air Traffic Control, 1952.—The primary functions of Air Traffic Control are to expedite and maintain an orderly flow of air traffic and to prevent collision between aircraft operating within controlled airspace and between aircraft and obstructions on the movement area of controlled airports. This is accomplished through provision of airport-control service and area-control service. In addition, the following services are provided: (*a*) flight information, (*b*) alerting for search and rescue, (*c*) customs notification and (*d*) aircraft identification.

Airport Control is designed particularly to provide air-traffic control service in the vicinity of major civil airports where the volume and type of aircraft operations, together with weather conditions and other factors, indicate its need in the interest of safety. The service includes the control of pedestrians and vehicles on the manœuvring area of the airport. Control is effected by means of direct radio-telephone communication, or visual signals, to aircraft and surface vehicles on and in the vicinity of controlled airports. The two new control towers opened during 1952 at Seven Islands, Que., and Torbay, N'f'ld., brought to 21 the total number of controlled airports. Control towers are located at Patricia Bay and Vancouver, B.C.; Lethbridge, Calgary and Edmonton, Alta.; Saskatoon and Regina, Sask.; Winnipeg, Man.; Windsor, London, Toronto, Ottawa and North Bay, Ont.; Montreal, Cartierville, Quebec and Seven Islands, Que.; Moncton, N.B.; Sydney, N.S.; and Gander and Torbay, N'f'ld. Most of these control towers are in continuous operation but a few provide only 16-hour daily service.

Area Control is designed particularly to provide air-traffic control service to aircraft operating within controlled airspace during weather conditions that prevent a pilot from seeing other aircraft or obstructions and necessitate his reliance on instruments to conduct the flight. This service is provided by area-control centres at Vancouver, B.C.; Edmonton, Alta.; Winnipeg, Man.; Toronto, Ont.; Montreal, Que.; Moncton, N.B.; and Gander, N'f'ld. Each of these centres is connected to the control towers, radio range stations and operations offices within its control area by means of an extensive system of local and long-line interphone or radio circuits and through the radio communication facilities available at these offices to all aircraft requiring area-control service. Each area-control centre is similarly connected with the adjacent centres, including centres in the United States, for the purpose of co-ordinating the control of aircraft operating through more than one control area. This communications system permits each centre to maintain a continuous detailed record of the movements of all aircraft operating in accordance with the Instrument Flight Rules, and a general record of the movements of all aircraft operating in accordance with the Visual Flight Rules within its control area. In addition to providing area-control service to aircraft operating within the controlled airspace over Newfoundland, the Gander area-control centre provides this service within the airspace over approximately one-half of the North Atlantic.

Flight Information is designed to provide advice and information useful for the safe and efficient conduct of flight, including weather reports and forecasts, field condition reports, data concerning aids to navigation, traffic information, refuelling and transportation facilities and other related data of assistance to the pilot in planning or conducting a flight. This service is provided by all air-traffic control units but particularly by the area-control centres, which are made responsible for flight-information service in seven regions—for each of which one area-control centre is responsible.

Alerting for Search and Rescue is designed to ensure that the appropriate organizations are notified of aircraft in need of search and rescue aid and to otherwise assist such organizations as required. Area-control centres are responsible for notifying these organizations promptly of non-arrival at destination of any aircraft for which a flight plan or flight notification has been received. This requires the maintenance and constant supervision of a continuous record of active flights to ensure that non-arrival of any aircraft is detected immediately. The service is available to any pilot who files either a flight plan or a flight notification with any communications agency of the Air Services Branch of the Department of Transport or directly with one of the area-control centres or control towers.

Customs Notification Service is provided to facilitate the routine notification of the appropriate customs agency by pilots who plan to cross the Canada-United States boundary. Utilization is made of the air-traffic control communications system and units connected therewith for forwarding pilot requests to notify the customs officer at the airport of destination.

Aircraft Identification Service is provided by area-control centres to assist the Department of National Defence in establishing the identification of all aircraft operating within specified areas.

Air Traffic Control employs 111 airport controllers, 74 area controllers, 84 air-traffic control assistants and a headquarters staff of six. The number of controlled aircraft operations in Canada during 1952 was 1,312,153—an increase of 35·5 p.c. over the preceding year. Of this total, 76 p.c. represented civil and 24 p.c. military operations. This was the first year that controlled operations exceeded 1,000,000.

Summary of Operation Statistics.—The statistics given in Table 4 show the remarkable increase in recent years in passenger freight and mail traffic.

4.—Summary Statistics of Civil Aviation, 1947-52

NOTE.—Figures from 1921 are given in the corresponding table of previous Year Books beginning with the 1924 edition.

Item		1947[1]	1948[1]	1949	1950	1951	1952
Aircraft Miles Flown—							
Revenue	No.	33,186,617	35,852,977	35,925,311	39,901,935	46,253,726	52,125,891
Non-revenue	"	2,845,952	2,481,124	1,821,675	1,466,559	1,905,996	..
Totals	No.	36,032,569	38,334,101	37,746,986	41,368,494	48,159,722	52,125,891
Passengers Carried—	No.						
Revenue[2]	"	836,047	1,054,778	1,211,149	1,452,081	1,788,558	2,154,434
Non-revenue[3]		46,450	41,695	45,763	48,113	53,154	57,330
Totals[2]	No.	893,171	1,103,798	1,267,865	1,511,021	1,888,689	2,289,779
Passenger Miles—							
Revenue	No.	237,986,178	321,704,118	392,507,141	474,367,165	585,701,475	679,136,075[4]
Non-revenue[3]	"	19,959,207	20,981,112	23,882,322	25,213,468	25,228,048	27,559,456
Totals	No.	257,945,385	342,685,230	416,389,463	499,580,633	610,929,523	706,695,531
Freight Carried—							
Revenue[5]	lb.	31,633,437	33,633,045	32,852,373	42,141,292	53,542,103	133,118,754
Non-revenue	"	2,357,529	2,696,744	3,232,369	3,443,521	4,129,524	5,237,779
Totals[5]	lb.	34,241,378	37,262,712	37,097,767	46,681,194	61,693,191	138,416,758
Freight Ton Miles—							
Revenue	No.	2,985,618	4,248,630	4,669,861	6,420,693	8,274,995	7,722,018
Non-revenue	"	684,622	1,209,630	1,645,052	1,658,520	1,900,940	1,915,559
Totals	No.	3,670,240	5,458,260	6,314,913	8,079,213	10,175,935	9,637,577
Mail carried	lb.	6,965,895	10,110,252	13,506,220	14,241,523	16,485,558	17,877,593
Mail ton-miles	No.	1,646,136	2,860,796	4,108,488	4,293,447	4,736,524	4,953,326
Hours Flown by Aircraft—							
Transportation revenue	No.	218,713	230,857	227,563	246,653	478,523	358,081
Transportation non-revenue	"	25,338	20,373	14,770	12,409	22,738	20,490
Patrols, surveys, etc.	"	39,411	48,308	37,988	48,654	50,475	80,267
Totals	No.	283,462	299,538	280,321	307,716	551,736	458,838

For footnotes, *see* end of table.

4.—Summary Statistics of Civil Aviation, 1947-52—concluded

Item	1947[1]	1948[1]	1949	1950	1951	1952
Gasoline consumption...gal.	13,922,451[6]	17,030,203[6]	16,987,122	22,088,575	29,596,490	38,323,977
Lubricating oil consumption..... "	184,454[6]	225,239[6]	227,382	275,370	333,557	456,187
Licensed civil airports (all types).....No.	273	286	336	279	..	419
				Year Ended Mar. 31—		
				1951	1952	1953
Licensed Civil Aircraft (all types)—						
Gross weight—						
Up to 2,000 lb.....No.	986	1,001	1,018	1,169	1,170	1,242
2,001- 4,000 lb..... "	440	403	414	483	527	567
4,001-10,000 lb..... "	312	451	398	446	454	450
Over 10,000 lb..... "	135	166	—	—	—	—
10,001-20,000 lb..... "	—	—	30	32	31	33
Over 20,000 lb..... "	—	—	113	112	119	136
Totals, Aircraft.....No.	1,873	2,021	1,973	2,242	2,301	2,428
Ownership, Commercial—						
Up to 2,000 lb.....No.	635	456	557	593	577	540
2,001- 4,000 lb..... "	310	258	264	279	282	279
4,001-10,000 lb..... "	261	356	261	300	387	285
Over 10,000 lb..... "	124	151	—	—	—	—
10,001-20,000 lb..... "	—	—	23	24	25	25
Over 20,000 lb..... "	—	—	102	101	113	121
Ownership, Other—						
Up to 2,000 lb.....No.	351	545	461	576	593	702
2,001- 4,000 lb..... "	130	145	150	204	245	288
4,001-10,000 lb..... "	51	95	137	146	67	165
Over 10,000 lb..... "	11	15	—	—	—	—
10,001-20,000 lb..... "	—	—	7	8	6	8
Over 20,000 lb..... "	—	—	11	11	6	15
	Year Ended Mar. 31—					
	1948	1949	1950			
Licensed Civil Air Personnel—						
Commercial pilots....No.	76	65	56	44[7]	38[7]	20[7]
Commercial pilots.... "	—	—	—	484[8]	807[8]	1,199[8]
Senior commercial.... "	—	—	—	157	165	218
Airline transport..... "	—	—	—	87	165	458
Glider pilots..... "	—	—	—	33	77	107
Limited commercial pilots..... "	1,087	864	653	—	—	—
Transport pilots..... "	801	837	775	651	612	269
Private pilots..... "	1,910	2,491	2,603	3,546	4,444	4,483
Air navigators..... "	—	—	—	—	28	43
Air traffic controllers.. "	—	—	—	—	172	183
Air engineers..... "	1,534	1,640	1,623	1,546	1,402	169
Aircraft maintenance engineers[9]..... "	—	—	—	—	—	1,249

[1] Excludes figures for non-commercial aviation. [2] Exclusive of passengers carried between foreign stations who are included in totals. [3] Includes employees other than crews. [4] Exclusive of charter services, figures for which are not available. [5] Exclusive of freight carried between stations which is included in totals. [6] Includes purchases made by foreign carriers in Canada. [7] Old type. [8] New type. [9] New type of licence for air engineers.

Table 5 shows civil aviation figures for 1952 by type of service. For a definition of scheduled and non-scheduled carriers, *see* p. 848. Statistics for international carriers include traffic over Canadian territory for both Canadian and foreign operators; a small traffic across Canadian territory and between foreign stations is also included. Statistics for Canadian carriers operating international routes are included both as "international" and "Canadian" but duplications are excluded from the totals.

5.—Summary Statistics of Civil Aviation, by Type of Service, 1952

Item		Canadian Carriers		Foreign International	Total
		Scheduled	Non-Scheduled and Other		
Aircraft Miles Flown—					
Revenue transportation	No.	35,120,093	14,982,855	2,022,943	52,125,891
Non-revenue transportation	"	..	..	..	..
Totals	No.	35,120,093	14,982,855	2,022,943	52,125,891
Passengers Carried—					
Revenue	No.	1,488,772	264,473	401,189	2,154,434
Between foreign stations	"	77,615	—	—	77,615
Non-revenue	"	43,861	6,527	7,342	57,730
Totals	No.	1,610,248	271,000	408,531	2,289,779
Passenger Miles—[1]					
Revenue	No.	637,303,444	1,545,486	40,287,145	679,136,075
Non-revenue	"	25,255,281	14,005	2,290,170	27,559,456
Totals	No.	662,558,725	1,559,491	42,577,315	706,695,531
Freight Carried—					
Revenue	lb.	38,984,515	86,370,257	7,763,982	133,118,754
Between foreign stations	"	60,225	—	—	60,225
Non-revenue	"	3,260,845	1,260,660	716,274	5,237,779
Totals	lb.	42,305,585	87,630,917	8,480,256	138,416,758
Freight Ton Miles—[1]					
Revenue	No.	6,693,482	166,342	862,194	7,722,018
Non-revenue	"	1,700,044	3,248	212,267	1,915,559
Totals	No.	8,393,526	169,590	1,074,461	9,637,577
Mail carried	lb.	14,323,202	547,610	3,006,781[2]	17,877,593
Mail ton-miles	No.	4,746,684	40,126	166,516	4,953,326
Hours Flown by Aircraft—					
Transportation revenue	No.	210,669	137,055	10,357	358,081
Transportation non-revenue	"	9,407	11,053	30	20,490
Patrols, surveys, etc.	"	1,242	79,025	—	80,267
Totals	No.	221,318	227,133	10,387	458,838
Gasoline consumption	gal.	26,053,911	5,612,739	6,657,327	38,323,977
Lubricating oil consumption	"	305,946	86,962	63,279	456,187

[1] Exclusive of charter service, figures for which are not available.

[2] Includes 1,481,510 lb. of mail between foreign stations.

6.—Capital Investment of the Department of Transport in Air Services, as at Mar. 31, 1950-52

NOTE.—Compiled from Department of Transport records.

Item	1950	1951	1952	Total as at Mar. 31, 1952
	$	$	$	$
Airways and Airports—				
Civil Aviation—				
Ordinary appropriations	—	—	—	849,053
Capital appropriations	10,127,684	6,114,094	4,547,948	42,172,686
War appropriations—				
Transferred from other government departments	135,849,609	233,011	Cr. 705,977	
Value of properties transferred to Crown Assets Disposal Corporation	—	Cr. 58,644,833	Cr. 14,342,687	
Property retired through obsolescence, loss or abandonment	Cr. 7,576	Cr. 367,675	—	185,581,537
Northwest Communication System transferred to Telecommunications Division	—	—	Cr. 12,423,493	
Air Ministry of United Kingdom	—	—	—	4,913,091
Telecommunications Division—				
Aviation Radio Aids—				
Ordinary appropriations	—	—	—	336,180
Capital appropriations	1,274,764	1,303,894	3,077,489	15,217,302
War appropriations—				
Transferred from other government departments	4,390,149	—	—	5,645,960
Northwest Communication System transferred from Civil Aviation Division	—	—	12,423,493	12,423,493
Totals, Airways and Airports	**151,152,844**[1]	**Cr. 51,361,509**	**Cr. 7,423,227**	**267,139,302**
Other Radio Facilities—				
Telecommunications Division (excluding Aviation Radio Aids)—				
Radio Act and Regulations	17,002	64,368	48,160	134,108
Radio Aids to Marine Navigation—				
Ordinary appropriations	202,418	207,688	164,645	751,409
War appropriations	—	—	—	797,281
Suppression of radio interference	16,878	12,302	20,219	60,641
Totals, Other Radio Facilities	**236,298**	**284,358**	**233,024**	**1,743,439**
Meteorological Facilities (General)—				
Ordinary appropriations	331,689	390,219	353,985	1,564,303
War appropriations	489,279	—	—	492,099
Totals, Meteorological Facilities	**800,394**[1]	**390,219**	**353,985**	**2,056,402**
Canadian Government Transatlantic Air Service	—	—	—	4,788,369
Grand Totals	**152,189,536**	**Cr. 50,686,932**	**Cr. 6,836,218**	**275,727,512**

[1] Includes other items not specified.

7.—Expenditure and Revenue of the Department of Transport in Connection with Air Services, Years Ended Mar. 31, 1950-52

NOTE.—Compiled from Department of Transport records.

Expenditure	1950	1951	1952
Expenditure	$	$	$
Air Transport Board	184,451	216,293	230,116
Air Services Administration	167,213	218,166	203,876
Airways and Airports—Civil Aviation and Aviation Radio Aids—			
Control of Civil Aviation	647,810	672,540	735,619
Construction Services—administration	—	712,994	676,318
Grants to aeroplane clubs	158,000	252,177	266,850
Grants to National Research Council	50,000	50,000	50,000

7.—Expenditure and Revenue of the Department of Transport in Connection with Air Services, Years Ended Mar. 31, 1950-52—continued

Expenditure and Revenue	1950	1951	1952
	$	$	$
Expenditure—concluded			
Airways and Airports—Civil Aviation and Aviation Radio Aids —concluded			
Airways and Airports, Operation and Maintenance—			
Ordinary	6,468,470	7,914,467	8,730,267
Aviation radio aids	4,022,365	4,064,678	4,628,160
Contributions to assist municipalities	97,297	196,027	108,319
Contributions to State of Michigan	30,420	24,849	30,420
Contribution to International Civil Aviation Organization *re* Iceland Government air-aids to navigation	37,079	22,333	40,636
Contribution to Denmark in joint support of North Atlantic Air Navigation facilities in the Faroes and Greenland	174,311	70,172	75,153
Contribution to South Pacific Air Transport Council	—	224,500	112,500
Investigation of the "Canadian Pilgrims" aircraft accident	—	3,469	—
Airway and airport traffic control	991,496	1,054,674	1,178,631
Deficit of Trans-Canada Air Lines	4,317,593	—	—
Northwest Communication System—			
Operating deficit—demobilization and reconversion	54,310	—	—
Ordinary	—	39,703	109,820
Refund of land rentals to Trans-Canada Air Lines	—	—	3,300
Contribution *re* construction landing strip, Goldfields, Sask	—	—	80,000
War appropriations expenditure	1,016,085	—	—
Totals, Airways and Airports	18,065,236	15,302,583	16,825,993
Telecommunications Division (excluding Aviation Radio Aids)—			
Administration of Radio Act and Regulations—Ordinary	1,011,211	802,727	828,008
Radio Aids to Marine Navigation—Ordinary	1,534,935	1,546,860	1,788,846
Suppression of radio interferences	296,574	323,997	368,697
Issue of radio receiving licences	637,381	675,780	699,857
Telegraph and Telephone Services—			
Administration, operation and maintenance	1,217,171	1,216,860	1,294,759
Construction and improvements	326,160	226,939	303,777
Totals, Telecommunications Division (excluding Aviation Radio Aids)	5,023,432	4,793,163	5,283,944
Meteorological Facilities (General)—			
Operation and maintenance	4,550,319	5,126,975	5,760,842
Totals, Meteorological Facilities (General)	4,550,319	5,126,975	5,760,842
Totals, Expenditure	**27,990,651**	**25,657,180**	**28,304,771**
Revenue and Receipts			
Civil Aviation—			
Airways and Airports (including Aviation Radio Aids)—			
Private air pilots' certificates	2,589	3,995	4,839
Aircraft registration fees	3,703	3,586	4,263
Airport licences	366	580	430
Airworthiness certificates	905	815	1,060
Fines—Aeronautics Act and Regulations	1,207	793	560
Airport landing fees	1,558,816	1,791,191	1,603,538
Rental at airports	337,413	621,088	476,249
Outside and hangar space rental	309,350	364,472	319,671
Rental of equipment	10,499	11,927	9,188
Rental—employees quarters	192,151	128,568	282,147
Miscellaneous rentals	23,401	48,532	25,582
Power service	61,515	72,163	67,726
Concessions—			
Gasoline and oil	326,827	361,088	344,333
Taxi	20,379	21,743	24,789
Telephone	2,841	4,162	4,756
Restaurants and snack bars	5,649	19,684	19,500
Other	7,665	14,355	36,797
Telephone service	41,461	23,939	22,250
Airport radio service to aircraft	75,104	229,564	302,276
Radio message tolls	28,727	35,960	41,260
Mess receipts	23,957	29,262	24,241
Mess halls accommodation	—	5,388	5,454
Sales, miscellaneous	9,272	5,890	5,811

7.—Expenditure and Revenue of the Department of Transport in Connection with Air Services, Years Ended Mar. 31, 1950-52—concluded

Revenue and Receipts	1950	1951	1952
Revenue and Receipts—concluded	$	$	$
Civil Aviation—concluded			
Airways and Airports (including Aviation Radio Aids)—concl.			
Aircraft servicing other than repairs	10,938	7,362	1,216
Observation roof—turnstiles	—	17,952	15,244
Miscellaneous revenue	18,163	47,540	53,526
Gander Airport—			
Airlines hotel accommodation	31,565	33,799	29,326
Skyways Club	64,356	81,629	98,953
Terminal charges	187,527	298,606	135,855
Novelty shop	49,280	12,362	—
Coal sales	22,361	27,832	27,287
Mess hall board	180,944	58,915	8,477
Airlines hotel dining-room	114,433	121,893	75,158
Airlines hotel bar	31,184	49,305	45,454
Skyways Club snack bar	281,220	290,222	267,693
Skyways Club bar	82,158	114,006	140,713
Laundry	28,595	34,018	34,374
Dry-cleaning plant	15,648	15,657	16,141
Recoverable services	35,057	57,508	46,489
Heating	78,675	112,021	122,998
Electricity	79,668	101,803	95,873
Bakery	34,774	49,945	58,199
Sanitary fees	7,875	7,774	5,685
Bus operation	16,868	5,313	2,165
Sundries	4,847	111	5
Refund of previous year's expenditure	21,516	113,273	84,949
Totals, Airways and Airports (including Aviation Radio Aids)	4,441,449	5,457,591	4,972,500
Telecommunications Division (excluding Aviation Radio Aids)—			
Radio operators' examination fees	1,013	990	1,170
Radio Station Licenses—			
Aircraft station	7,819	8,755	10,143
Amateur experimental station	15,974	16,856	17,269
Commercial receiving station	224	239	382
Experimental station	880	760	855
Limited coast station	650	750	800
Municipal police private commercial station	133	413	210
Private commercial station	26,139	32,958	45,721
Public commercial station	4,880	6,790	7,680
Ship station	22,606	26,774	32,291
Technical or training school station	30	32	27
Sale of transport publications	1,104	357	1,293
Fines—Radio Act and Regulations	28,851	37,839	37,056
Radio Message Tolls—			
Department of Transport operated coast stations	113,580	100,475	111,867
Marconi operated coast stations	59,237	65,477	69,228
Rentals—living quarters—employees	22,104	22,345	25,449
Other	2,506	1,860	4,541
Government telegraph and telephone tolls	521,729	610,601	693,790
Mess receipts	1,854	1,816	736
Sundries	6,236	623	912
Refund of previous year's expenditure	8,831	63,836	5,738
Totals, Telecommunications Division (excluding Aviation Radio Aids)	846,380	1,000,546	1,067,158
Meteorological Facilities (General)—			
Rentals—living quarters—employees	29,403	36,849	16,396
Other	29	87	254
Sale of transport publications	1,034	1,574	975
Radio commercial message tolls—			
Department of Transport operated coast stations	1,495	1,530	911
Air-ground radio service	960	880	280
Communication facilities—inter-office	361	603	393
Power Service	—	—	994
Sundries	1,171	6	2,104
Refunds of previous year's expenditure	4,773	8,454	10,017
Totals, Meteorological Facilities (General)	39,226	49,983	32,324
Totals, Revenue and Receipts	**5,327,055**	**9,508,120**	**6,071,982**

No statistics are available regarding total expenditure on flying operations by the Federal and Provincial Governments or by private individuals, but capital expenditure made by commercial air carriers for property as reported for the end of 1951 is shown in Table 8.

8.—Cost of Property, Revenue and Expenditure for Scheduled and Other Commercial Air Carriers, 1951

Item	Commercial Canadian Carriers		
	Scheduled	Other	Total
	$	$	$
Property Account—			
Aircraft	12,060,973	1,976,524	14,037,497
Aircraft engines	3,167,559	402,006	3,569,565
Buildings and improvements	3,067,268	353,337	3,420,605
Miscellaneous	3,215,317	551,717	3,767,034
Totals, Cost of Property	**21,511,117**	**3,283,584**	**24,794,701**
Revenue and Expenditure—			
Revenue	55,381,454	6,703,065	62,084,519
Expenditure	48,893,874	6,501,608	55,395,482

Employees and Salaries and Wages.—The numbers of civil air personnel licensed in recent years are shown in Table 4, p. 855. However, the figures in Table 9 include pilots and engineers in the employ of the Federal Government and of private individuals as well as those not employed at all in the ordinary sense.

9.—Employees and Salaries and Wages in Civil Aviation, 1951

Class of Employee	Scheduled		Non-Scheduled		Totals	
	Employees	Salaries and Wages	Employees	Salaries and Wages	Employees	Salaries and Wages
	No.	$	No.	$	No.	$
General officers	348	2,067,958	54	256,701	402	2,324,659
Clerks	942	2,219,649	64	124,121	1,006	2,343,770
Pilots	240	2,226,752	195	761,563	435	2,988,315
Co-pilots	228	1,106,386	1	1,311	229	1,107,697
Despatchers	65	281,688	11	29,720	76	311,408
Communication operators	498	1,282,728	12	14,444	510	1,297,172
Stewards or other attendants	262	687,766	3	9,422	265	697,188
Air engineers	297	1,130,416	87	273,999	384	1,404,415
Mechanics	1,470	4,969,365	143	301,329	1,613	5,270,694
Airport employees	899	2,508,665	45	73,166	944	2,581,831
Stores employees	202	542,342	13	30,123	215	572,465
Other employees	736	2,201,296	59	102,096	795	2,303,392
Unclassified	—	—	68	175,391	68	175,391
Totals	**6,187**	**21,225,011**	**755**	**2,153,386**	**6,942**	**23,378,397**

PART VI.—OIL AND GAS PIPELINES

Section 1.—Pipeline Construction

The first major pipeline in Canada, constructed from Edmonton, Alta., to the head of the Great Lakes, came into operation in 1950 and only since then has the pipeline become a significant means of transportation in Canada. The subject is being covered for the first time in the present edition of the Year Book and is being introduced by a special article covering the history and development of pipeline construction.

HISTORY OF PIPELINE CONSTRUCTION IN CANADA*

Early Pipelines in the United States.—The use of pipelines in North America is as old as the petroleum and natural gas industry. The history† of development in the United States shows that in 1825 at Fredonia, N.Y., gas from a well 27 ft. deep was transmitted through wooden logs to two stores in that village and used for gas lights in greeting General Lafayette. Also, in 1865, a well drilled 480 ft. deep at Bloomfield, N.Y., encountered natural gas which in 1870 was piped 25 miles to Rochester. The pipeline was made of white pine logs bored to about 8-inch inside diameter and turned down to about 12½-inch outside diameter, with joints of the bell and spigot type similar to those used for cast iron pipes.

The first iron pipeline of appreciable length was laid in 1872 and was of 2-inch inside diameter and 5½ miles long from a gas well at Newton to Titusville, Pa. The early pipelines were for relatively short distances only and, until 1890, were made of wrought iron with screw couplings. The size did not exceed 8 inches and the pipeline pressure was not more than 80 lb. per sq. inch.

High-pressure gas lines were first used in the United States in 1891 by the Indiana Natural Gas and Oil Company, when two parallel lines, each 8 inches in diameter, were built to transport gas 120 miles from gas fields in northern Indiana to Chicago, Ill., at an initial pressure of 525 lb. per sq. inch. The development of the mid-continent area led to the construction of a number of pipelines of substantial size and length and the tendency, with larger available reserves, was to build larger lines as being more economical for large markets.

Much interest was aroused during World War II by the building of the "Big Inch" (24-inch) line from Longview, Tex., to Phoenixville, Pa., a distance of 1,250 miles. It was designed to carry 300,000 bbl. of oil a day but after the War it was changed over to gas transmission. About the same time the "Little Big Inch" (20-inch) products line was built from Beaumont, Tex., to Bayonne, N.J., a distance of 1,485 miles, and carried 235,000 bbl. of refined oil products a day. These pipelines inaugurated an era of long-distance and large-diameter pipeline construction for the delivery of crude oil to the refineries and refined products to the markets. Many such lines have been built since that time, examples being the 24, 26 and 30-inch line of the El Paso Natural Gas Company from the Texas Panhandle to Los Angeles, a total distance of 1,200 miles, designed for pressures up to 850 lb. per sq. inch, and the Transcontinental Gas Pipe Line Corporation's 1,840-mile line from the Texas Rio Grande Valley to metropolitan New York, completed in 1950.

In the United States from 1939 to the end of 1952, 119,611 miles of pipelines were constructed, 13,247 miles of which were built in 1952.

Early Pipelines in Ontario.—In Canada the early oil development centred in the peninsula of southwestern Ontario between Lakes Huron, Erie and Ontario. This area, although still producing some oil, is important now on account of its gas production which, through the years, has been piped to various centres of population. Gas-field development followed the oil-field explorations which were commenced in a substantial way about 1860. The first well drilled for natural gas was located

* Prepared by Dr. G. S. Hume, Director General of Scientific Services, Department of Mines and Technical Surveys.

† See *Problems of Long Distance Transportation of Natural Gas*, Federal Power Commission, Natural Gas Investigation, Docket No. G580, Nov. 1947.

near Port Colborne, Ont., and was undertaken by the Port Colborne Gas, Light and Fuel Company. It reached a depth of 763 ft. and had a capacity of only 7,000 cu. feet a day. However, this was the beginning of a considerable expansion of drilling which led to development of gas areas in Humberstone and Bertie townships in Welland county. In 1891, so much gas was available that the Provincial Natural Gas and Fuel Company began to export it across the border to Buffalo, N.Y. At that time there were 15 wells with an average open flow of 2,500 M cu. feet per day and the field covered about 28 sq. miles. The present city of Welland was supplied with natural gas in 1893 and Niagara Falls in 1904. Export ceased in 1908 with the decline of pressures in the gas area.

In Kent county a number of gas fields were found beginning with the Tilbury field in 1906. In 1921, the Dawn gas field in Lambton county was discovered and for some years this field has been used by the Union Gas Company for storage of gas obtained partly from the United States in the off-peak season for use during the winter when the demand is at a maximum. Since 1930, there has been a reasonably intense search for gas fields with considerable success in southwestern Ontario. Reserves of gas are estimated at 150,000,000 M cu. feet and, taking into consideration the curtailment of outlets, the supply position at present is relatively good. Markets could be greatly extended if large gas volumes were available at attractive competitive prices. Many of the cities in southwestern Ontario, including Toronto, have plants that make artificial gas, mainly from coal. This gas has a heating value of less than one-half that of natural gas and sells at a considerably higher price per unit volume. This puts it in a very unfavourable position compared with natural gas but on account of the convenience it is used quite extensively, particularly for cooking and for water heating. It is piped only within each distributing area where the gas is manufactured.

In the early days* transportation in the oil fields of Ontario was by horse-drawn wagons. "In 1862 there were 400 teams drawing oil from Oil Springs to Wyoming station, a distance of 13 miles" but later the field expanded and in 1880 there were many more teams. In 1875, small-sized pipelines were built from the wells to the main gravelled road and later these were collected into receiving stations. Presumably these were the first oil-gathering lines in Ontario.

Early Pipelines in Alberta.—In Western Canada the first pipeline of considerable length was built in 1912 from the Bow Island gas field in southern Alberta to Calgary. The main pipeline was 16 inches in diameter and 170 miles long. Branch lines were constructed to supply gas to the various towns *en route*. In 1921, when the early developments following the 1914 boom in Turner Valley gave some substantial flows of gas, a 6-inch line was built from Turner Valley to Okotoks where it joined the main Bow Island-Calgary gas line. In 1924, a connection was made by 10-inch pipeline from Bow Island to Foremost, about 30 miles distant. In 1928, after Turner Valley had been developed considerably following the finding of large gas volumes in the Palæozoic limestone in 1924, a 14-inch gas pipeline was built from the field to Pine Creek at DeWinton where it joined the Bow Island-Calgary 16-inch line. In 1930, the Bow Island field was approaching exhaustion and, as there was large wastage of gas in Turner Valley owing to an excess made available in the production of light oil, it was decided to repressure the Bow Island

* Harkness, R. B. *Canadian Oil and Gas Industries*, Vol. 4, No. 3, March 1951, p. 36.

field with gas that would otherwise be wasted. This was started in 1930 through seven wells, four wells being used for observation. The operation continued until 1939 and was resumed in 1945.

In 1914, the Viking gas field, 90 miles east of Edmonton, was discovered and was later extended to include the Kinsella field. A pipeline from Viking to Edmonton was built in 1923 and, in 1940, the line was extended to the Kinsella field. In 1947, the main pipeline was branched east of Edmonton and extended southward to supply the communities *en route* as far as Red Deer; previously it had been extended north to Vegreville.

In 1926, a 4-inch pipeline was constructed from the town of Fabyan to supply gas to the town of Wainwright, a distance of eight miles.

In 1928, Royalite Oil Company constructed a 4-inch oil line from Turner Valley to the Imperial oil refinery at East Calgary. Previously, the naphtha from Turner Valley gas-cap wells had all been trucked from Turner Valley to Okotoks. In 1929, another 4-inch oil line was constructed by the Alberta Pipe Line Company to serve the Regal refinery at Calgary. It will be recalled that Turner Valley Royalties well encountered crude oil on the west flank of the Turner Valley structure in 1936. A 6-inch pipeline was laid parallel to the Regal line to the south side of the Sarcee Indian Reserve and in 1938 this line was extended to Calgary. This brought the capacity of the three oil pipelines to 28,000 bbl. a day. A maximum production rate of slightly more than 29,000 bbl. a day was reached in Turner Valley in February 1942 but this was not sustained and the pipeline capacity proved adequate for all subsequent Turner Valley production.

The Canol Pipeline.—During World War II, the Canol pipeline was built from the Norman Wells field in the Mackenzie River area of the Northwest Territories across the Cordillera to Whitehorse in Yukon Territory, a distance of 598 miles. The pipeline was 6 inches in diameter for 140 miles on the Whitehorse end; the remainder was 4 inches. The work on the Canol agreement was commenced in 1942 and the contract was terminated in 1945. The line, with 10 pumping stations, was designed for the delivery of 3,000 bbl. a day at the Whitehorse refinery but actually it operated for a time above that amount. Oil was put in the pipeline in December 1943 and more than 1,000,000 bbl. were delivered during the period of operation. At the end of 1944, there were 56 oil wells in the Norman Wells field. The amount of oil actually delivered under the Canol project was 1,649,604 bbl. but, of this, 356,112 bbl. were processed in the Norman Wells refinery for the use of contractors on the project. After the War, the pipeline was abandoned and the pipe removed since, on account of its size, it could never have been operated economically.

Recent Pipeline Developments.—Following the finding of oil at Leduc, Alta., in 1947, a pipeline 8 miles in length and 8 inches in diameter was constructed from the field to Nisku on the Edmonton-Calgary Canadian Pacific Railway line. The reconstruction at Edmonton, in 1948, of the refinery used in Whitehorse under the Canol project led to the extension of this line from Nisku to East Edmonton. With the extension of the Leduc field to Woodbend late in 1947 and the discovery of the Redwater field in 1948, it became apparent that cheaper transportation than could be provided by the railways was needed in order that Alberta oil might reach more distant markets. Accordingly, early in 1949, Imperial Oil Limited proposed to build a 16-inch oil line from Edmonton, Alta., to Regina, Sask. The

original conception for this line was a capacity of 50,000 to 60,000 bbl. of oil a day which, by the addition of six more pumping stations, could be increased to 100,000 to 120,000 bbl. a day. Early in 1949 the Golden Spike field, west of Leduc, was discovered and in May the Leduc-Nisku oil pipeline was extended 8 miles to Golden Spike.

At present, in addition to the 8-inch line from Leduc to Nisku, a second 8-inch line extends eastward from the Golden Spike field through the North Woodbend area, across the North Saskatchewan River, to Edmonton. A 6-inch branch line, six miles long from the Acheson field to the north, feeds into this. The maximum capacity through the Nisku terminal is about 37,800 bbl. a day and the initial capacity of the Woodbend line was 28,000 bbl. a day without a booster pump station. As the production increased, a pump station was built about 15 miles from Edmonton, allowing for a maximum delivery of 36,000 bbl. a day or a total delivery through the two lines of more than 70,000 bbl. a day from the Leduc, Woodbend, Acheson and Golden Spike fields. To increase delivery, the pipeline from Leduc to Nisku, a distance of 5·5 miles, will be looped in 1953, raising its capacity about 13 p.c. and the 14-mile Nisku-Edmonton line will be doubled by another 8-inch line. Summer capacity of these lines is somewhat greater than winter capacity owing to the greater viscosity of the oil in cold weather. This new construction will increase the 8-inch lines in the Leduc and adjacent areas to 74 miles and the total Imperial Oil pipeline systems to 274·5 miles, of which 181·3 miles are in the Leduc-Woodbend-Golden Spike-Acheson areas, 79·2 miles in the Redwater field, and 14 miles in the Excelsior field.

In addition to the Golden Spike field, several new discoveries were made in 1949, including Joseph Lake, Stettler, Campbell, and Excelsior in south-central Alberta and Normandville in the Peace River area. When it therefore became evident early in 1949 that there would be a large increase in oil reserves, Imperial Oil Limited modified its original plans for a pipeline to Regina and in May announced that the line would be built by the Interprovincial Pipe Line Company Limited from Edmonton to the head of the Great Lakes. Canada's consumption of petroleum at that time was about 300,000 bbl. a day and it was estimated that it would reach 500,000 bbl. a day by 1958. To support a production of 300,000 bbl. a day, reserves of 2·5 to 3,000,000,000 bbl. would be necessary and in 1949 the reserves in Alberta were estimated to be about 750,000,000 bbl. The line as finally designed was for 20-inch pipe for 439 miles from Edmonton, Alta., to Regina, Sask., 16-inch for 336 miles from Regina to Gretna, Man., where the pipeline crossed the International Boundary to the United States, and 18-inch pipe for 322 miles from Gretna to Superior, Wis., U.S.A., at the head of the Great Lakes. The cost of construction was estimated at about $90,000,000. Initially, the through-put was to be 95,000 bbl. daily from Edmonton to Regina, to be increased as need arose by new pumping stations. Tankers on the Great Lakes were to carry the oil to Sarnia, Ont., where Imperial Oil Limited operates a refinery which was then using 57,000 bbl. of crude oil a day, and storage was to be provided at Superior for decreased deliveries during the winter when navigation is closed.

The pipeline was built in 1950, actually in 150 days construction time, and was joined from Edmonton to the Redwater field by 30 miles of 16-inch pipeline, thus making the total length 1,127 miles. A 10-inch branch line from Gretna, with an initial through-put capacity of 14,000 bbl. a day, was built 75 miles to Winnipeg to supply a new $10,000,000 refinery constructed there. The pipeline was connected

to the refinery of North Star Oil Limited at St. Boniface, Man., by a 3·5-mile 8-inch line. So rapid was the increase in oil reserves in Alberta that before the main pipeline was completed pipeline officials announced that the number of pumping stations would be increased so that the capacity of the Edmonton-Regina part of the line would be brought up to 120,000 bbl. a day, and, east of Regina, from 70,000 to 100,000 bbl. a day. The pipeline was welded at the joints, mechanically cleaned of all scale and rust, coated against corrosion with an application of specially processed hot coal-tar enamel, and then wrapped by machines with a coating of fibre glass and a wrapper of coal-tar saturated asbestos felt before being lowered into a trench and covered.

Oil was started in the pipeline in October 1950, and moved through it at about four miles an hour. The initial transmission charge from Redwater to Regina was 31 cents, or 29 cents from Edmonton, against a rail haul rate at that time of $1.37 a barrel. The estimated cost of the rail haul from Edmonton to Superior was $2.43 a barrel as against a pipeline rate of 54 cents. Two large tankers, each with a capacity of 115,000 bbl., were put in operation on the Great Lakes by Imperial Oil Limited and a third was constructed in 1951. British American Oil Company also built a lake tanker of the same size in 1952 to supply the Clarkson refinery near Toronto, Ont.

Storage facilities for oil had to be provided at each of the terminals. Thus, the storage was 840,000 bbl. at Edmonton, Alta.; 50,000 bbl. at the Moose Jaw, Sask., terminal; 252,000 bbl. at Regina, Sask.; 28,000 bbl. at Brandon, Man.; 168,000 bbl. at Gretna, Man.; 155,000 bbl. at the Winnipeg refinery; and 1,800,000 bbl. at Superior, Wis. It was found in the winter of 1950 that the storage at Superior, provided by 12 tanks each with a capacity of 150,000 bbl., was insufficient and was therefore increased by the addition of 12 more 217,000-bbl. tanks.

In the summer of 1951, a refinery built at Superior, Wis., at the terminus of Interprovincial's pipeline went into operation at 4,000 bbl. a day. This was the first Alberta oil to be refined in the United States and constituted a milestone in the history of oil development in Canada made possible by pipeline construction.

In 1953, Interprovincial's pipeline will be extended 635 miles from Superior to Sarnia, Ont., by Lakehead Pipe Line Company, through the construction of a 30-inch pipeline, the estimated cost of which is $76,000,000. This will give a carrying capacity of about 300,000 bbl. a day and, in order to get this volume of oil to Superior, the Interprovincial line will be further looped with a 24-inch line on the Regina-Gretna sector. When completed to Sarnia, the oil pipeline from Alberta will be 1,765 miles in length, the longest oil pipeline in the world.

In May 1950, Imperial Oil Limited opened a new $5,500,000 gas-processing plant at Devon, Alta., in the Leduc field. This plant was built not only to recover the gasoline, propane and butane from the gas produced with the oil but also to make the gas available for use. A gas pipeline was built from Leduc to Edmonton to deliver 7,000 M cu. feet daily to the Edmonton City power plant. It was also tied in to the gas system of Northwestern Utilities Limited which supplies Edmonton. In addition, short branch lines were built to supply gas to the towns of Devon and Leduc.

In November 1950, a pipeline 17·5 miles long and 4·5 inches in diameter, constructed by Westcoast Transmission Company from the Pouce Coupe field in the Peace River area of Alberta near the British Columbia boundary to Dawson

Creek, B.C., was put in operation thereby constituting the first export of gas from Alberta. Three wells in the Pouce Coupe field were attached to the line which was built at a cost of about $200,000.

In 1951, Northwestern Utilities of Edmonton greatly expanded its facilities by drilling new wells in the Viking-Kinsella field and by building extensions of its distribution system to serve the town of St. Albert and the Namao airport, a distance of 13·4 miles. Also, a new 35-mile 16-inch transmission line was built from the gas field to a point midway between the towns of Ryley and Tofield. This expansion was made necessary mainly by the increase in the population of Edmonton resulting from industrial development subsequent to the discovery of oil.

In the Calgary area, Shell Oil Company in 1951 built a new plant at Jumping Pound for the extraction of sulphur and entered into a contract to supply gas to Calgary at a minimum rate of 20,000 M cu. feet a day. A 12-inch pipeline, 20 miles long and costing $375,000, was built to Calgary and a westward extension constructed to supply the cement plant at Exshaw and the town of Banff.

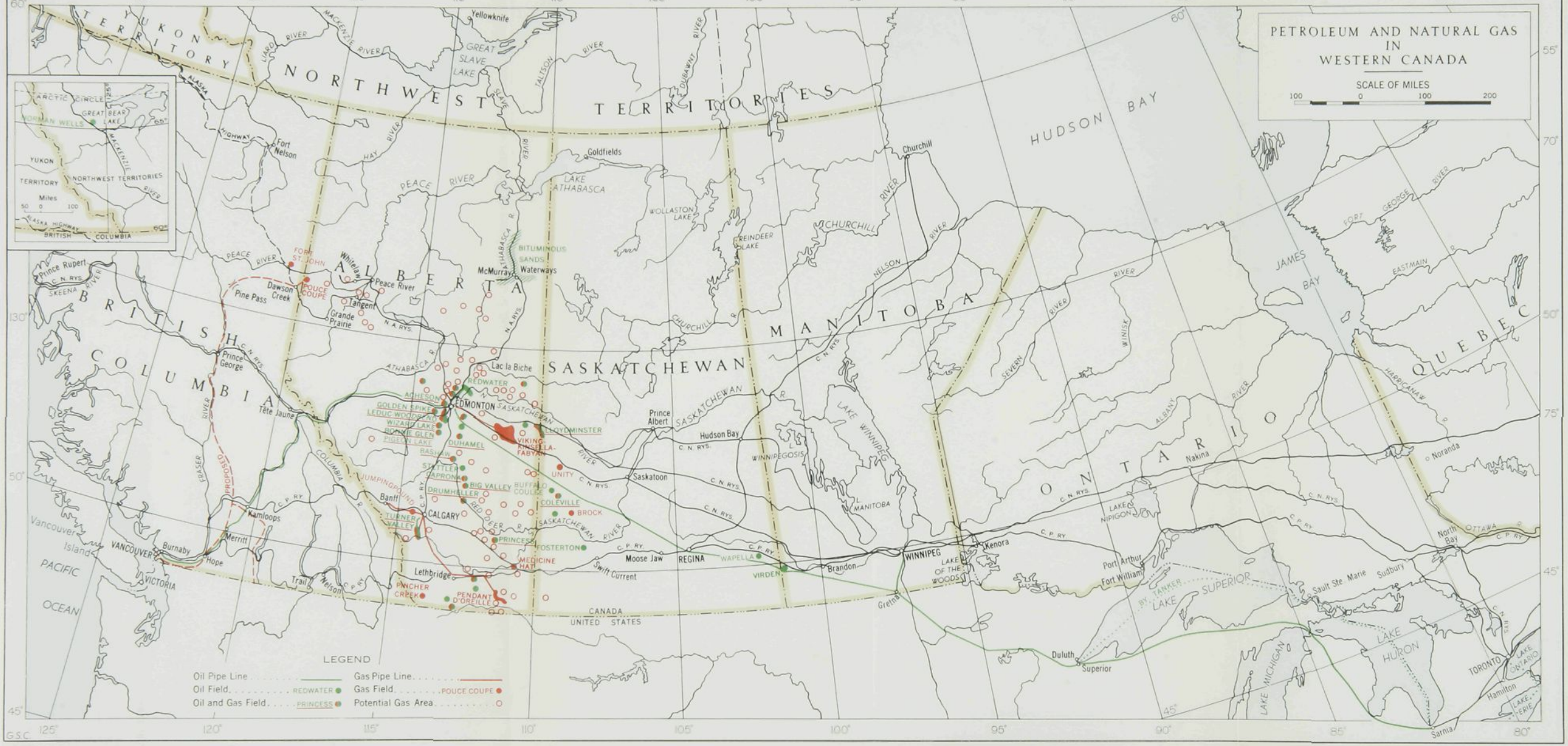
In 1951, the Alberta Government authorized export of natural gas from the Pakowki Lake area of southern Alberta to Montana Power Company in the United States to supply Anaconda's metal-refining operations at Butte. The permit allowed a maximum export rate of 30,000 M cu. feet a day from Apr. 7, 1951, to Apr. 6, 1952, and 35,000 M cu. feet for the next three years and 40,000 M cu. feet to the end of the permit five-year period. The total amount to be withdrawn was limited to 43,800 M cu. feet but, in case of necessity, the permit may be revised in the first two years. The pipeline, 16 inches in diameter, was built from the gas fields south to the International Boundary where delivery was taken by Montana Power Company.

In 1951, a 6-inch oil pipeline was built by Edmonton Pipe Line Company Limited from the Joseph Lake field to the Edmonton terminal of the Interprovincial pipeline, 20 miles distant, and in 1952 was extended 12 miles south to the Armena oil field. Formerly, the oil from the Joseph Lake field was trucked to Nisku on the Edmonton-Calgary CPR line at a cost of 33 cents a barrel and from Nisku the oil moved through the Leduc line to Edmonton. The new pipeline allowed an increase of 20 cents a barrel to the oil producers in the Joseph Lake field which in 1952 had an estimated reserve of 15,000,000 bbl.

In 1952, Canadian Gulf Company laid gathering lines for oil in the Caprona-Fenn, Big Valley and Stettler fields and built a 12-inch line from Stettler through the New Norway field to Edmonton.

The development of the Wizard Lake field in 1951 south of Leduc by McColl-Frontenac and Texas Oil Companies led to the building of an 8-inch pipeline from that field to Edmonton and of 6-inch gathering lines within the field, the total length being 54 miles. The initial capacity of the line was 12,000 bbl. a day but this may be increased to 30,000 bbl. a day. The discovery of the Bonnie Glen field south of the Wizard Lake field in early 1952 made it necessary to provide for additional pipeline capacity.

Trans Mountain Pipeline.—The increase in reserves of oil toward the end of 1951 led to the consideration of plans for the construction of a 24-inch pipeline from Edmonton, Alta., to Vancouver, B.C., to serve the Pacific Coast market. Accordingly, the Trans Mountain pipeline, 718 miles long through the Yellowhead Pass and via Coquihalla Valley, was partly built in 1952 and was completed in the autumn


PETROLEUM AND NATURAL GAS IN WESTERN CANADA
SCALE OF MILES
100 0 100 200
YUKON TERRITORY
NORTHWEST TERRITORIES
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
QUEBEC
HUDSON BAY
JAMES BAY
PACIFIC OCEAN
Yellowknife
Fort Nelson
Goldfields
Churchill
Prince Rupert
Dawson Creek
Pine Pass
Fort St. John
Whitelaw
Peace River
Tangent
Grande Prairie
McMurray
Bituminous Sands Waterways
Lac la Biche
Prince George
Tête Jaune
Kamloops
Merritt
Hope
Vancouver
Burnaby
Victoria
Vancouver Island
Banff
Calgary
Lethbridge
Pincher Creek
Pendant d'Oreille
Trail
Nelson
Edmonton
Redwater
Acheson
Golden Spike
Leduc Woodbend
Wizard Lake
Bonnie Glen
Pigeon Lake
Duhamel
Bashaw
Settler
Capronia
Big Valley
Drumheller
Turner Valley
Jumping Pound
Coleville
Brock
Princess
Fosterton
Medicine Hat
Viking-Kinsella-Fabyan
Unity
Lloydminster
Prince Albert
Saskatoon
Moose Jaw
Regina
Swift Current
Wapella
Virden
Brandon
Winnipeg
Lake of the Woods
Kenora
Port Arthur
Fort William
Nakina
Noranda
Lake Nipigon
Hudson Bay
Churchill
Nelson River
Churchill River
Severn River
Winisk River
Albany River
Fort George
Eastmain
Habricanaw
Great Slave Lake
Lake Athabasca
Wollaston Lake
Reindeer Lake
Lake Winnipegosis
Lake Manitoba
Lake Winnipeg
Peace River
Athabasca R.
Mackenzie River
Liard River
Slave River
Hay River
Skeena River
Fraser River
Columbia R.
Saskatchewan River
Red Deer R.
Churchill R.
Proposed
C.N. Rys.
C.P. Rly
N.A. Rys.
Canada
United States
Greenstone
Duluth
Superior
Lake Michigan
Lake Superior
Lake Huron
Lake Ontario
Lake Erie
Sault Ste Marie
Sudbury
North Bay
Ottawa R.
Toronto
Hamilton
Sarnia
By Tanker
LEGEND
Oil Pipe Line
Oil Field ... REDWATER
Oil and Gas Field ... PRINCESS
Gas Pipe Line
Gas Field ... POUCE COUPE
Potential Gas Area
Arctic Circle
Great Bear Lake
Norman Wells
Alaska Highway
Mackenzie River
Miles
50 0 100
G.S.C.

of 1953. An extension southward from the Vancouver area will serve refineries in the State of Washington. The terminus of the line in the Vancouver area is at Burnaby and connections by pipeline are made to various refineries and to the Barnet marine loading terminal on Burrard Inlet. The pipeline has four pumping stations which increased its capacity from 75,000 bbl. as originally designed to 150,000 bbl. a day. This through-put may be increased by further pumping stations to 300,000 bbl. a day. The pipeline required about 150,000 tons of steel and when full contains 2,100,000 bbl. of oil. The largest river crossing, 5,700 feet in length, was built during the winter of 1952 across the Fraser River at Port Mann near Burnaby. The pipeline throughout its length is buried 24 to 30 inches deep.

Westcoast Transmission Gas Pipeline.—A 24-inch gas pipeline from the Peace River area of British Columbia and Alberta is proposed by Westcoast Transmission Company Limited. As there is not a sufficiently large gas market on the West Coast of Canada to justify the building of this pipeline, application has been made to the Federal Power Commission at Washington, D.C., for permission to extend it to Seattle and Portland in the United States. The Board of Transport Commissioners for Canada, at Ottawa, has already granted the Company permission to build the line to the Vancouver area. Reserves of gas have been established in the Fort St. John area of British Columbia and in various fields of the Peace River district of Alberta.

Gas Line to Ontario and Western Quebec.—Hearings began in June 1953 before the Petroleum and Natural Gas Conservation Board in Alberta for the right to export gas from southern Alberta. There were several proposals but the Federal Minister of Trade and Commerce and of Defence Production announced in the House of Commons on Mar. 13, 1953, that no further permits would be granted for the export of gas from Canada "until such time as we are convinced that there can be no economic use, present or future, for that natural gas within Canada", but there is no question about the market to be served when Alberta gives official sanction for taking the gas out of the Province. It is expected therefore that a pipeline ultimately will be built across northern Ontario to Toronto and on to Montreal, with a branch line to serve Ottawa. This pipeline would serve all communities *en route* for several miles on each side of it and would be joined with the gas distribution system of southwestern Ontario. It may be of interest to note that a band 10 miles wide, i.e., five miles on either side of the pipeline, contains more than 50 p.c. of the urban population of the four provinces that the pipeline would serve, namely Saskatchewan Manitoba, Ontario and Quebec. One proposal is to build a 30-inch line capable of delivering up to 500,000 M cu. feet a day. In heating value and efficiency of burning this would be the equivalent of about 25,000 tons of good-grade coal a day. One of the features of such a line is the possibility of using the depleted fields of southwestern Ontario as storage basins during the off-peak summer period so that the pipeline could be operated at a high volume in both summer and winter. A pipeline built from the presently producing gas fields of southwestern Ontario, as soon as the pipeline project from Alberta is approved, would not only build up a market for natural gas in the Toronto area during the two or three years the main pipeline is under construction but, by drawing the gas from these fields, would make them available for storage when the pipeline finally began delivery of gas from Alberta.

Pipelines in Saskatchewan.—In 1953, a 10-inch gas pipeline from the Brock-Coleville fields near Rosetown to Saskatoon, a distance of 140 miles, will be built by the Saskatchewan Power Corporation, a provincial Crown company. The

route selected is via Rosetown, Zealandia, Harris, Tessier, Laura, Delisle and Vanscoy. Estimated consumption will be 3,000,000 M cu. feet in the first year, 7,000,000 M in the second year and 10,000,000 M in the fifth year. The reserves of gas, as estimated by Phillips Petroleum Company and Husky Oil and Refining Limited, are 417,295,000 M cu. feet in the Coleville field and 62,033,000 M cu. feet in the Brock field.

Socony Vacuum Oil Company, which has several small oil fields near the Fosterton field, has announced that it will drill 150 wells in these fields in 1953. Should the reserves justify a pipeline, one will be built to Regina, 165 miles to the east.

In 1952, a crude oil line was built by Saskatoon Pipeline Company from the Interprovincial pipeline at Milden, 20 miles south of Rosetown, to the Hiway Refineries Limited plant at Saskatoon, a distance of 56·9 miles. The line is 6 inches in diameter with an initial through-put of 3,000 bbl. a day but with a rated maximum capacity of 12,000 bbl. a day. Instead of using a heavy coating of coal-tar enamel and a wrapping of fibre glass and tar-impregnated asbestos, the Company used an insulation of an eighth-inch coating of special wax enclosed in aluminum foil for the pipeline.

The only gas lines in operation in Saskatchewan are those that supply gas to Brock and Kindersley from the Brock field.

Oil Pipelines in Eastern Canada.—In 1941, a 12-inch line, 236 miles long, was built from Portland, Me., U.S.A., to Montreal, Que., to bring crude oil to Montreal refineries. The pipeline originally had a capacity of about 60,000 bbl. a day but in 1947, by increasing the pressure, the flow was brought up to 70,000 bbl. In 1951, another 18-inch pipeline was laid along the same route and the number of pumping stations was reduced, cutting the capacity of the 12-inch line to 27,000 bbl. and giving the 18-inch line a capacity for light and medium grades of oil of 100,000 bbl. a day. One of the formerly used pump stations was maintained so that eventually the combined capacity of the two lines may be increased to 153,000 bbl. a day. The Montreal area, by the end of 1953, will have a refining capacity of 194,000 bbl. a day, about 35 p.c. of the Canadian total.

In recent years nearly all the oil entering the Portland-Montreal pipeline has been of South American origin, mostly from Venezuela. Little or no oil has been entering Canada from the United States via this route; crude oil from that source enters Canada mainly at Sarnia, Ont., and at Vancouver, B.C. Some additional oil from the Near East comes to Canadian eastern refineries via ocean tankers.

Products Lines in Ontario and Quebec.—In 1951, Trans Northern Pipe Line Company built a 400-mile 10-inch pipeline from Montreal, Que., to Toronto and Hamilton, Ont., with a 6-inch branch line, 44 miles long, from a junction near Cornwall to Ottawa, Ont. This line was designed for a capacity of 40,000 bbl. daily of products from the refineries of British American, Shell Oil of Canada, and McColl-Frontenac oil refineries at Montreal, Que.

In 1952, a pipeline consisting of 132 miles of 12-inch pipe from Sarnia to Waterdown, Ont., and 56 miles of 10-inch pipe from Waterdown to Toronto went into operation to deliver oil products from the Sarnia refinery of Imperial Oil Limited. Initial through-put was 22,000 bbl. a day but, by installing an additional pumping station at London, Ont., the capacity may be raised to 49,000 bbl. Hamilton is supplied by two 6-inch lines, about 6 miles long, with take-off at Waterdown. These lines cross Hamilton harbour, about a mile wide.

Future Pipelines in Canada.—New oil fields which will undoubtedly be found in Western Canada will make necessary the building of new pipelines. Already an oil find at Sturgeon Lake east of Grande Prairie in the Peace River area of Alberta has raised the question of a new outlet, perhaps a feeder line to the Trans Mountain oil line to the west coast. The production of oil in many fields is accompanied by the production of gas and new gas outlets must be established to avoid waste, which in Alberta has now reached more than 1,500,000 M cu. feet a month. Saskatchewan also has established considerable gas reserves and these no doubt will increase.

The logical presently available outlet, in accordance with federal policy, is the large fuel market in Ontario and Quebec and this, according to a recent survey is "the most economic outlet for southern Alberta gas". There is no doubt about the availability of the market but the estimates of costs have varied considerably. There can be no doubt either that natural gas made available by pipeline to the fuel-deficient market of central Canada would prove a tremendous asset to this country and, in part, relieve its dependence on sources for fuel beyond its control.

Section 2.—Oil Pipeline Statistics*

Oil pipelines operated in Canada number sixteen, of which nine are directly linked with the Interprovincial Pipe Line Company's system. The British American Alberta Pipe Line Limited, Canadian Gulf, Edmonton and Imperial Pipe Line Companies, and the Texaco Exploration Company, all deliver crude oil to Interprovincial either at Redwater, Alta., or at the Edmonton terminal. The British American Saskatchewan Pipe Line Limited and Saskatoon Pipe Line Company link the Interprovincial system to Moose Jaw and Saskatoon, respectively, while Anglo Canadian Oils Limited and the Winnipeg Pipe Line Company are offshoots which supply crude oil to Brandon and Winnipeg, Man. The Valley Pipe Line Company transports crude oil and natural gasoline from the Turner Valley to refineries at Hartell and Calgary, Alta. Oil from Venezuela, Arabia and other countries reaches Montreal refineries from Portland, Me., U.S.A., through the lines of the Montreal Pipe Line Company. The Trans-Northern Pipe Line Company, which links refineries at Montreal, Que., and Clarkson, Ont., with numerous consuming centres, including Ottawa, Belleville, Kingston, Toronto and Hamilton, carries a large variety of petroleum products. The Imperial Oil Sarnia Products Pipe Line Division supplies London, Hamilton and Toronto, Ont., with products of Sarnia refineries. The Sun Pipe Line Company carries refined oils from the United States to that Company's distributing centre at Sarnia, Ont. This Company is presently constructing a products line from Sarnia to Toronto. Sarnia refineries are supplied with considerable quantities of United States crude oil through the line of the Transit and Storage Company.

Pipeline deliveries shown in the following tables include deliveries to non-pipeline carriers, foreign pipelines and terminals including refineries and distributing centres. Comparable statistics for years prior to 1950 are not complete but would be relatively small as the system of the Interprovincial Pipe Line Company did not go into operation until the latter part of 1950. Net gathering-system deliveries in Alberta fell sharply after the opening of the Interprovincial system as the new trunk line carried most of the oil formerly moved eastward in railway tank cars.

* Statistics of oil pipelines are given in greater detail in the DBS monthly report, *Pipe Lines (Oil) Statistics.*

1.—Oil Delivered by Pipeline, by Province in which Shipments Terminated or were Transferred to Other Carriers, 1950-52

Province	1950	1951	1952
	bbl.	bbl.	bbl.
Alberta[1] —Gathering	10,481,002	2,802,125	2,004,346
Trunk	10,040,785	11,105,921	14,049,411
Saskatchewan—Trunk	2,089,487	9,782,698	11,164,892
Manitoba[2] —Trunk	1,100,602	19,088,726	27,630,314
Ontario[3] —Trunk	—	—	3,093,944
Quebec —Trunk	26,991,972	45,645,037	49,852,761
Net Delivered —Trunk	**40,222,846**	**85,622,382**	**105,791,322**
Total	**50,704,848**	**88,424,507**	**107,795,668**

[1] Includes natural gasoline. [2] Including deliveries to U.S. pipelines at Gretna, Man. amounting to 949,470 bbl. in 1950, 14,525,755 bbl. in 1951, and 21,520,764 bbl. in 1952. [3] Products of refineries.

2.—Oil Delivered by Pipeline, by Month in which Shipments Terminated or were Transferred to Other Carriers, 1951 and 1952

Month	1951		1952	
	Gathering	Trunk	Gathering	Trunk
	bbl.	bbl.	bbl.	bbl.
January	209,140	5,808,354	127,279	6,937,411
February	255,669	5,333,853	150,898	6,483,721
March	214,919	5,239,498	125,607	6,676,710
April	152,348	5,896,839	113,643	6,982,455
May	261,639	7,766,973	120,162	9,408,182
June	270,888	7,538,006	113,800	9,036,456
July	268,820	8,229,815	134,116	9,952,143
August	391,624	8,235,160	120,376	10,081,605
September	243,892	8,084,435	173,080	9,322,098
October	202,607	8,537,820	280,672	10,567,070
November	204,738	7,870,201	244,838	9,794,425
December	125,841	7,081,428	299,875	10,549,046
Totals	**2,802,125**	**85,622,382**	**2,004,346**	**105,791,322**
Grand Totals	**88,424,507**		**107,795,668**	

Employee and revenue data shown in Table 3 do not include statistics for two pipelines, Anglo Canadian Oils Limited and the Sarnia Products Pipe Line Division of Imperial Oil Limited, which are operated as departments of the oil companies and manned by employees who are on the regular payroll of those companies.

3.—Operating Statistics of Oil Pipelines, 1951 and 1952

Item		1951	1952
Barrels Handled—Daily Average—			
Gathering	bbl.	112,781	134,838
Trunk	"	272,445	358,250
Barrel miles (trunk lines)	'000,000	23,615	31,978
Average miles per barrel (trunk lines)	No.	237·4	243·9
Average employees	"	536	697
Salaries and wages	$	2,064,050	2,933,064
Man hours worked by wage-earners (including overtime)	No.	399,668	498,095
Operating revenues	$	16,471,706	21,271,008

PART VII.—WIRE COMMUNICATIONS*

Section 1.—Telegraphs

The early history of telegraphic communication in Canada is given in the 1934-35 Year Book, p. 778.

Federal Government Telegraph and Telephone Service.†—The function of the Telegraph and Telephone Section of the Department of Transport is to furnish wire communications for outlying and sparsely settled districts where commercial companies do not enter into the field and where the population must receive adequate communication services in the public interest. These services include: telegraph and telephone services to scattered settlements along the coast of Cape Breton Island; cable services to Campobello, Grand Manan and other islands in the Bay of Fundy, to Prince Edward Island and to a number of small islands in the Gulf of St. Lawrence; cable connections with Pelee and Manitoulin Islands in Ontario as well as telephone lines on the latter; some lines to northern outlying districts in Saskatchewan; telegraph lines from Edmonton to the Athabasca and Peace River country in Alberta in addition to an extensive telephone system in the latter area; telegraph and telephone communications around the coast of Vancouver Island, B.C., and adjacent islands; service to fishing, lumbering and mining centres in the interior; and an overland telegraph and telephone line serving communities from Ashcroft, B.C., to Dawson, Y.T.

As at Mar. 31, 1953, the Telegraph and Telephone Service comprised 6,995 miles of pole line, 24,580 miles of wire, 224·5 nautical miles of submarine cable, 50 radio stations and 399 offices. The number of messages handled during the year was 1,548,451, producing a gross revenue of $1,417,318 and a net revenue of $991,564.

Telegraph Systems.—The Canadian telegraph systems are composed of lines owned by the Federal Government and by chartered railway and telegraph companies. The Canadian facilities, in proportion to population, are among the most extensive in the world and are operated under great climatic and geographical difficulties.

* Except where otherwise noted, this Part has been revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics. The Division issues annual reports dealing with telegraph and telephone statistics.

† Revised by G. C. W. Browne, Controller of Telecommunications, Telecommunications Division, Department of Transport, Ottawa.

1.—Summary Statistics of Canadian Telegraphs, 1943-52

NOTE.—Figures from 1920 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Gross Revenue	Operating Expenses	Net Operating Revenue	Pole-Line Mileage	Wire Mileage	Employees[1]	Offices	Messages, Land[2]	Cablegrams and Marconigrams[3]	Money Transferred
	$	$	$	miles	miles	No.	No.	No.	No.	$
1943...	16,955,288	12,942,108	4,013,180	52,414	384,350	8,330	4,908	16,469,564	3,013,752	7,677,080
1944...	16,986,491	14,404,835	2,581,656	52,414	387,677	8,050	4,834	16,445,450	2,324,863	8,242,926
1945...	18,016,289	15,062,231	2,954,058	52,447	391,476	8,230	4,804	17,666,904	2,192,173	8,006,128
1946...	17,997,726	16,028,900	1,968,826	52,523	400,981	8,603	4,707	18,441,841	1,845,539	9,247,100
1947...	18,514,525	17,359,796	1,154,729	51,024	401,803	8,711	4,640	18,987,774	1,613,621	10,988,591
1948...	19,422,788	20,292,402	Dr.869,614	50,958	405,640	9,093	4,679	19,013,468	1,579,679	11,512,194
1949...	22,256,557	22,062,943	193,614	52,535	413,759	9,555	5,288	20,063,078	1,642,278	12,469,348
1950...	23,922,225	22,545,625	1,376,600	51,999	414,943	9,757	5,277	20,477,775	1,687,721	12,733,989
1951...	29,128,473	27,807,547	1,320,926	53,580	435,348	10,611	5,233	21,815,837	1,785,836	16,955,699
1952...	33,093,843	31,617,156	1,476,687	52,699	437,581	11,272	5,256	21,614,196	1,934,433	19,514,490

[1] Excludes commission operators. [2] Includes messages to and from vessels on the Great Lakes and the St. Lawrence River and messages to and from stations. [3] Excludes messages relayed and includes paid wireless messages to and from ships in the Gulf of St. Lawrence and on the Atlantic Ocean.

Submarine Cables.—Four cable companies operate submarine cables landing in Canada: Cable and Wireless Limited; the Commercial Cable Company; the Western Union Telegraph Company; and the French Telegraph Cable Company. These companies operate to stations in the United Kingdom, Ireland, the United States, Bermuda, Australia, New Zealand and St. Pierre and Miquelon Islands. The number of cables operating between connected stations and the length of cables are given in the following table.

2.—Cable Landings in Canada, 1952

Company and Station	Cables	Nautical Miles
	No.	No.
Cable and Wireless Limited—		
Halifax, N.S. to Harbour Grace, N'f'ld. — Harbour Grace, N'f'ld. to Porthcurnow, England	1	2,917
Halifax, N.S. to Horta, Azores—Horta, Azores to Porthcurnow, England	1	3,223
Bamfield, B.C. to Sydney, Australia	1	7,837
Bamfield, B.C. to Auckland, New Zealand	1	6,768
Halifax, N.S. to Bermuda	1	877
Commercial Cable Company—		
Canso, N.S. to Port aux Basques, N'f'ld	1	200
Canso, N.S. to Waterville, Ireland, via St. John's, N'f'ld	2	4,502
Canso, N.S. to Far Rockaway, N.Y., U.S.A	3	2,891
Canso, N.S. to Horta, Fayal, Azores—Horta, Azores to Waterville, Ireland	2	5,873
St. John's, N'f'ld. to Waterville, Ireland	2	3,718
St. John's, N'f'ld. to Far Rockaway, N.Y., U.S.A	2	2,594
Western Union Telegraph Company—		
North Sydney, N.S. to St. Pierre and Miquelon Islands	2	396
North Sydney, N.S. to Island Cove, N'f'ld	2	634
North Sydney, N.S. to Colinet, N'f'ld	1	323
Canso, N.S. to Hammel, N.Y., U.S.A	2	1,594
Canso, N.S. to Duxbury, Mass., U.S.A	1	573
Canso, N.S. to St. Pierre and Miquelon Islands	1	254
North Sydney, N.S. to Canso, N.S	2	253
Hearts Content, N'f'ld. to Valentia, Ireland	4	7,505
Hearts Content, N'f'ld. to Rantem Hut, N'f'ld	3	76
Bay Roberts, N'f'ld. to Penzance, England	4	8,419
Bay Roberts, N'f'ld. to Horta, Azores	1	1,341
Bay Roberts, N'f'ld. to Hammel, N.Y	2	2,757
Placentia, N'f'ld. to St. Pierre and Miquelon Islands	2	249
Islands Cove Hut, N'f'ld. to St. Pierre and Miquelon Islands	1	130
French Telegraph Cable Company—		
Canso, N.S. to St. Pierre and Miquelon Islands	1	257

Section 2.—Telephones

A brief account of the early development of telephones in Canada is given in the 1934-35 Year Book, p. 781.

Telephony in Canada to-day is moving ahead at a pace matching that of national progress generally. New devices, new systems and new services are being introduced to provide more and better communications. Operator dialing of long-distance calls is an important step towards faster and more accurate continent-wide telephone service. New equipment and methods fit into a long-range program to enable operators to dial calls straight through to distant telephones in Canada or the United States without the assistance of other operators along the route.

One of the new devices playing an increasingly important role in this development is the transistor, a discovery of telephone research. This tiny and amazingly simple electronic amplifier, based on an entirely new principle, can perform efficiently many of the functions of the ordinary vacuum tube and do many other things besides. The transistor's small size, low power consumption and expected

long life make it suitable for application to submarine cable, compact military electronic equipment, computers and other devices for which the vacuum tube is not as well suited. In telephony very wide applications of the transistor are in prospect to increase the speed, accuracy and economy of switching equipment.

Telephone circuits to carry the growing volume of intercity traffic and to perform special communications functions are being provided on a scale to equal the development of switching systems. Canada's first microwave radio relay system, capable of carrying many simultaneous telephone conversations as well as television programs, was opened to service early in 1953, reaching from Toronto through Ottawa to Montreal. Extensions of this system are already being engineered and constructed further to improve long-distance telephone service and to extend the scope of television network broadcasting in Canada.

Telephone Systems.—The 2,904 telephone systems operating in 1951 included the three large provincial systems in Manitoba, Saskatchewan and Alberta, and smaller governmental systems in Ontario, Quebec and New Brunswick, together with the system operated by the Federal Department of Transport and the National Parks of Canada, Department of Resources and Development. Also included were 22 municipal systems, the largest being operated by the Cities of Edmonton, Fort William and Port Arthur. Of the 2,255 co-operative telephone companies, 1,003 were in Saskatchewan, 816 were in Alberta and 207 in Nova Scotia. The largest among the 448 stock companies operating telephone systems in 1951 were the Bell Telephone Company and the British Columbia Telephone Company. Over 63 p.c. of the total telephone investment in Canada belongs to the Bell Telephone Company, and their telephones in Quebec and Ontario constitute 59 p.c. of the total number for Canada.

Telephone Equipment.—During the period 1942-51, there was an increase of 1,485,991 in the number of telephones in use, representing an advance of 58 p.c. in telephones per 100 population.

Of the 3,113,766 telephones in Canada in 1951, 2,004,665 or 64 p.c. were operated from automatic switchboards and the remainder from manual switchboards. Automatic switchboards have completely displaced manual switchboards in the principal cities of the Prairie Provinces and are rapidly displacing them in the other provinces.

3.—Mileages of Pole Line and Wire and Telephones in Use, 1942-51

NOTE.—Figures from 1911 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Systems	Pole-Line Mileage	Mileage of Wire	Telephones in Use					
				Business	Residential	Rural[1]	Public Pay	Total	Per 100 Population
	No.	miles	miles	No.	No.	No.	No.	No.	No.
1942....	3,192	217,958	6,014,596	463,827	867,307	266,176	30,465	1,627,775	14·0
1943....	3,187	218,702	6,057,880	484,429	901,228	275,202	31,303	1,692,162	14·3
1944....	3,174	220,161	6,108,070	504,791	928,061	286,521	32,550	1,751,923	14·6
1945....	3,151	222,435	6,333,761	531,697	983,074	300,757	33,266	1,848,794	15·3
1946....	3,114	228,983	6,770,137	585,982	1,079,769	326,405	33,962	2,026,118	16·5
1947....	3,056	232,054	7,285,681	645,154	1,194,840	354,779	35,824	2,230,597	17·7
1948....	2,992	235,379	7,913,068	701,869	1,328,373	383,227	38,399	2,451,868	19·0
1949....	2,971	242,147	8,725,760	762,294	1,481,876	414,061	41,381	2,699,612	19·9
1950....	2,912	245,443	9,488,467	813,352	1,611,759	447,691	44,290	2,917,092	21·1
1951....	2,904	249,638	10,330,751	864,015	1,735,355	467,171	47,225	3,113,766	22·2

[1] Includes telephones on rural exchange lines and urban exchange lines that have more than four parties.

The density of telephones in the different provinces is influenced by the urbanization of the population because the number of telephones used for business purposes is much greater in cities and towns than in rural areas.

4.—Telephones in Use, by Province, 1951

Province or Territory	On Individual Lines		On 2- and 4-Party Lines		On Rural Lines		Private Branch Exchanges and Extensions		Public Pay Stations	Total	Telephones per 100 Population
	Business	Residence	Business	Residence	Business	Residence	Business	Residence			
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
N'f'ld...	3,967	3,361	37	8,803	24	545	4,160	1,397	266	22,560	6·2
P.E.I...	1,356	1,323	236	3,323	358	3,814	1,290	383	70	12,153	12·4
N.S.....	10,938	25,928	905	35,743	2,015	19,645	14,154	6,294	1,319	116,941	18·2
N.B.....	6,806	13,067	1,199	25,744	1,761	14,682	11,110	3,474	1,078	78,921	15·3
Que.....	80,140	105,790	11,915	310,766	15,511	65,732	141,674	29,745	18,800	780,073	19·2
Ont.....	122,714	169,692	15,182	535,101	11,091	165,494	222,832	76,201	18,158	1,336,465	29·1
Man.....	16,767	48,969	257	37,968	4,063	23,058	24,032	5,613	2,631	163,358	21·0
Sask....	17,904	49,432	1	33	3,608	57,473	11,669	2,782	769	143,671	17·3
Alta....	28,914	72,210	155	1,023	1,358	24,577	25,658	5,741	1,330	161,166	17·2
B.C.....	36,060	8,744	882	137,422	5,292	46,799	51,016	9,193	2,804	298,212	25·3
Yukon..	22	5	63	85	23	48	—	—	—	246	2·7
Totals..	**325,588**	**498,521**	**30,832**	**1,096,011**	**45,304**	**421,867**	**507,595**	**140,823**	**47,225**	**3,113,766**	**22·2**

Telephone Finances and Calls Serviced.—The steady increases in capitalization, revenue and expenditure, salaries and wages and number of employees of telephone companies over the ten years 1942-51 are shown in Table 5.

5.—Financial Statistics of Telephones, 1942-51

NOTE.—Figures from 1911 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Capitalization		Cost of Property and Equipment	Gross Revenue	Operating Expenses	Net Operating Revenue	Salaries and Wages[1,2]	Employees[2]
	Capital Stock	Funded Debt						
	$	$	$	$	$	$	$	No.
1942.....	135,034,375	165,634,194	386,164,071	87,057,252	75,221,887	11,835,365	31,580,290	20,360
1943.....	136,566,967	163,430,008	393,230,035	94,406,757	81,894,162	12,512,595	33,581,699	20,694
1944.....	137,719,691	161,307,878	401,862,799	101,082,353	87,739,283	13,343,070	37,261,134	21,978
1945.....	138,680,893	153,934,250	418,434,346	109,899,862	96,417,884	13,481,978	41,830,117	25,599
1946.....	158,430,612	156,099,974	454,214,793	120,675,038	105,750,974	14,924,064	54,147,432	33,170
1947.....	183,469,710	171,810,793	521,183,575	134,666,857	116,623,149	18,043,708	66,623,983	35,578
1948.....	194,465,399	238,762,614	615,941,540	150,533,349	131,570,434	18,962,915	77,497,980	38,851
1949.....	229,208,219	280,736,941	716,519,781	169,113,048	153,066,308	16,046,740	90,634,477	42,326
1950.....	274,088,405	300,765,453	806,826,198	198,823,483	178,193,661	20,629,822	102,093,078	45,396
1951.....	286,003,119	360,533,546	909,581,399	240,762,657	213,824,471	26,938,186	117,677,652	47,387

[1] Includes salaries and wages charged to capital account. [2] Excludes rural lines in Saskatchewan.

6.—Financial Statistics of Telephones, by Province, 1951

Province or Territory	Capital Liability	Cost of Property and Equipment	Gross Revenue	Expenses	Net Income	Salaries and Wages[1]	Employees
	$	$	$	$	$	$	No.
N'f'ld	4,137,860	4,617,436	862,469	752,390	110,079	362,192	267
P.E.I	1,538,328	2,453,706	596,010	558,275	37,735	260,092	168
N.S	21,547,213	29,702,715	6,587,268	5,966,748	620,520	3,361,164	1,757
N.B	19,930,391	25,712,337	5,810,057	5,086,754	723,303	2,567,169	1,273
Que	407,251,799[2]	236,610,762	166,673,032[2]	149,831,902[2]	16,841,130[2]	34,785,746	12,837
Ont	11,086,222[2]	388,303,982	6,882,991[2]	6,100,139[2]	782,852[2]	49,167,407	19,220
Man	38,898,117	55,257,033	9,182,564	8,747,226	435,338	6,066,661	2,886
Sask	48,675,405	47,520,792	10,305,004	8,303,075	2,001,929	3,493,886[3]	1,523[3]
Alta	29,592,355	42,636,063	11,613,153	7,899,744	3,713,409	5,185,001	1,966
B.C	63,813,975	76,735,650	22,230,338	20,559,537	1,670,801	12,413,917	5,487
Yukon	65,000	30,923	19,771	18,681	1,090	14,417	3
Totals	**646,536,665**	**909,581,399**	**240,762,657**	**213,824,471**	**26,938,186**	**117,677,652**	**47,387**

[1] Includes wages charged to expenses and to capital. [2] Statistics of the Bell Telephone Company in both Quebec and Ontario are included under Quebec. [3] Excludes wages and employees for rural systems.

Telephone Calls.—Table 7 is based on estimates made by systems operating almost 90 p.c. of all telephones in Canada. Actual count of calls on days of normal business was made and, after adjustment for incompleted calls, holidays, Sundays, etc., the average was multiplied by 365. The long-distance calls, in practically all cases, were those actually completed.

7.—Local and Long-Distance Calls and Averages per Telephone and per Capita, 1942-51

NOTE.—Figures from 1928 will be found in the corresponding tables of previous Year Books beginning with the 1939 edition.

Year	Local Calls	Long-Distance Calls	Total Calls	Total Calls per Capita[1]	Average Calls per Telephone		
					Local	Long-Distance	Total
	No.	No.	No.	No.	No.	No.	No.
1942	2,954,644,000	44,230,000	2,998,874,000	257	1,815	27·2	1,842
1943	2,929,446,000	50,348,000	2,979,794,000	253	1,731	29·8	1,761
1944	2,955,975,000	56,678,000	3,012,653,000	252	1,687	32·4	1,719
1945	3,145,492,000	64,788,000	3,210,280,000	266	1,701	35·0	1,736
1946	3,484,248,000	74,757,000	3,559,005,000	290	1,720	36·9	1,757
1947	3,760,569,000	82,695,000	3,843,264,000	306	1,686	37·1	1,723
1948	4,025,342,000	91,875,000	4,117,217,000	321	1,642	37·5	1,680
1949	4,454,024,000	105,232,000	4,559,256,000	339	1,650	39·0	1,689
1950	4,894,719,000	117,892,000	5,012,611,000	366	1,678	40·4	1,718
1951	5,146,238,000	127,406,000	5,273,644,000	376	1,653	40·9	1,694

[1] Per capita figures are based on official estimates of population given at p. 129.

PART VIII.—RADIO COMMUNICATIONS

In the 1945 Year Book, pp. 644-646, an outline is given of the development of administrative control over radio-communication in Canada. *See* also p. 784 of this volume.

Section 1.—Administration*

The administration and regulation of radio-communication in Canada is carried out by the Telecommunications Division of the Department of Transport. The radio activities of the Division may be summarized as follows: (1) the administration of national and international radio laws and regulations and of regional agreements, involving the issuance of radio licences, inspection of radio stations, certification of radio equipment, examination of operators, allocation and monitoring of frequencies, compilation and settling of international accounts for radio messages, investigation and suppression of inductive interference to radio reception; and (2) construction, maintenance and operation of radio-communication stations and of radio aids to marine and air navigation.

National and international radio laws and regulations include: the Canadian Broadcasting Act, 1936, the Radio Act, 1938, and Regulations made thereunder; the International Telecommunication Convention and Radio Regulations annexed thereto; the Inter-American Radiocommunications Convention; the Inter-American Arrangement Concerning Radiocommunications; the North American Regional Broadcasting Agreement; those Articles of the International Civil Aviation Convention applicable to aeronautical radio requirements; the Canada Shipping Act, 1934, and Radio Regulations for Ship Stations issued thereunder, and that part of the International Convention for the Safety of Life at Sea applicable to radio requirements for ships.

Licensing and Operation.—In all branches of radio, basic control is exercised over the right to establish a station, assignment of frequencies, operator standards, operating procedure, and general regulations concerning the manner in which radio stations are used.

Under the Broadcasting Act, 1936, applications for licences to establish broadcasting stations, or for modification of existing stations, are referred to the Canadian Broadcasting Corporation for its recommendations to the Minister of Transport before being dealt with by the Department of Transport. The Canadian Broadcasting Corporation also controls the linking-up of stations that form networks and, in addition, the character of programs being broadcast. With these exceptions, the control of broadcasting stations is carried out by the Telecommunications Division of the Department of Transport.

The standard broadcast band is crowded with stations that are capable of interfering with one another over the entire North American region, particularly at night. A plan for the accommodation of the largest number of stations with the least interference was evolved as a result of extensive studies conducted by Canada, Cuba, the Dominican Republic, Haiti, the Bahama Islands, Mexico and the United States and was embodied in the North American Regional Broadcasting Agreement.

* Revised in the Department of Transport, Ottawa.

Before a new standard broadcasting station can be licensed or before modifications can be made in an existing station, engineering briefs covering the selection or change of frequency, amount of power and design of the directional antenna system must be approved by the Department of Transport and notification sent to the signatory countries of the North American Regional Broadcasting Agreement. After the establishment or change is completed, proof of performance must be submitted to establish that the actual installation is in accordance with the approved plan.

The allocation of high frequencies and their efficient utilization requires reasonably accurate information on the transmission properties of the ionosphere which vary with the season, the sunspot cycle and other factors. This information is obtained from hourly measurements of the ionosphere made at some 70 points throughout the world and analysed by the United States Bureau of Standards at Washington, D.C. The Canadian measurement stations are located at St. John's, N'f'ld.; Resolute Bay, Cornwallis Island and Baker Lake, N.W.T.; Fort Chimo, Que.; Churchill, Headingley and The Pas, Man.; Ottawa, Ont.; and Prince Rupert, B.C. Data from these stations are correlated by the Defence Research Board. Six frequency monitoring stations are maintained at suitable points across Canada to check operating frequencies of all classes of radio stations to ensure that they do not depart from the assigned frequency by an amount greater than permitted by the international conventions.

Under the Safety of Life at Sea Convention and the Canada Shipping Act, most passenger ships and larger cargo ships must be fitted with radiotelegraph or radiotelephone equipment, primarily for use in case of distress. Approval is given for each make and model of equipment that comes up to the required standard and, in addition, the ship station as a whole is inspected before the licence is issued and periodically thereafter. Foreign ships are subject to inspection before sailing from Canadian ports to ensure that they conform with the requirements of the Safety of Life at Sea Convention.

Analogous inspections of aircraft radio stations are carried out. Standards are provided specifying in detail the requirements to be met to ensure an airworthy installation. A certificate of airworthiness is granted to manufacturers for each type or model of aircraft radio equipment that has been demonstrated to meet the requirements. Only type-certificated equipment is accepted for use on scheduled airlines, though other equipment, if inspected, is acceptable for other aircraft.

Marine and aeronautical radio operator standards and related regulations are covered by international agreement. The International Telecommunication Convention prescribes the qualifications for radio operators on mobile stations and the Radio Act, 1938, provides that all operators, both commercial and amateur, must pass examinations to prove their ability to operate the respective classes of stations on which they are engaged. Competent operators are required on all classes of stations in order that the technical requirements prescribed under international agreement be closely adhered to and are particularly essential in the case of ships and aircraft stations in the interests of safety of life.

Investigation and Suppression of Inductive Interference.—Under the Broadcasting Act, the use of electrical equipment that will produce harmful interference to broadcast reception is not permitted. The Telecommunications Division of the Department of Transport maintains 54 cars equipped for measuring and locating sources of interference to broadcast reception. In addition to locating the sources of interference, advice is given as to how it can be suppressed or eliminated. These cars operate from the permanent Radio Inspection Offices located in 25 cities throughout Canada.

1.—Investigations of Inductive Interference, Years Ended Mar. 31, 1949-52

Item	1949	1950	1951	1952
	No.	No.	No.	No.
Sources Investigated—				
Electrical distribution systems and power lines	1,602	1,919	1,836	2,307
Domestic and commercial electrical apparatus	5,499	5,383	7,756	5,022
Defective receivers and radio apparatus	1,031	934	1,054	1,123
Industrial, scientific and medical apparatus	887	1,196	456	50
Miscellaneous (external cross-modulation, etc.)	—	2	2	4
Totals	**9,019**	**9,434**	**11,104**	**8,506**
Action Taken—				
Sources definitely reported cured	7,289	7,219	8,976	7,177
Sources not reported cured	1,635	2,130	2,029	1,287
Sources having no economic cure	95	85	99	42

Industrial, scientific and medical apparatus is brought under strict control, in accordance with Regulations for Controlling Radio Interference and under the authority of Section 23 of the Canadian Broadcasting Act, 1936. Regulations require that radiation from such apparatus, which is liable to cause interference to radiocommunications. must be suppressed either by shielding or by replacing the apparatus with a non-interfering type. The Department of Transport conducts type-tests on diathermy and industrial heating apparatus submitted by manufacturers, and the types that fulfil the requirements of the Department are listed as non-interfering. The radiation from all such sources on communication frequencies must not exceed the tolerances specified by the Canadian Standards Association.

Radio Revenue.—Regulations concerning the rendering and settlement of international accounts are contained in the International Telecommunication Convention and Regulations. Sources of revenue include commercial ship and land stations and interstation messages handled by Departmental ships and land stations, radiotelegrams exchanged by foreign ships through Canadian coast stations, private commercial traffic via Departmental airway radio stations, and radio services rendered to aircraft of private airline companies by such stations. The volume of messages and words handled during the year ended Mar. 31, 1953, and the revenue therefrom, together with revenue from licence fees, examination fees, fines and forfeitures, rentals, etc., are given in Table 2.

2.—Messages Handled (including retransmissions) and Revenue Collected by the Department of Transport, Year Ended Mar. 31, 1953

Item	Messages	Words	Revenue
	No.	No.	$
Marine—			
East Coast	375,559	11,328,153	94,864
Great Lakes	58,495	962,853	28,762
West Coast	403,011	11,893,455	64,755
Hudson Bay and Straits	169,118	10,152,927	5,881
Premium revenue	—	—	5,626
Airways—			
Private, commercial and airline messages	4,367,054	92,340,235	27,263
Radio service to airline companies			314,859
Telephone service			923
Totals, Marine and Airways	**5,373,237**	**126,677,623**	**542,932**
Other Radio Revenue—			
Examination fees—Radiotelegraph Operators' Certificates of Proficiency			1,385
Fines and forfeitures under the Radio Act, 1938			34,295
Licence Fees—			
Aircraft stations			12,004
Amateur experimental stations			17,623
Private commercial stations			56,447
Public commercial stations			8,580
Ship stations			33,649
Miscellaneous			2,056
Mess Receipts—Radio Aviation			11,001
Publications			1,448
Power service			6,296
Refunds on previous year's expenditure			7,064
Rentals—			
Living quarters			133,293
Space, control lines and power			32,215
Transmission line privileges			401
Miscellaneous			2,854
Sundry sales and services			276
Miscellaneous			287
Total, Other Radio Revenue			**361,172**
Grand Total, Radio Revenue[1]			**904,105**
Revenue from radio receiving and private broadcasting station licences, etc.[2]			5,429,386

[1] Applied to the operations of the Department of Transport. [2] Section 14 (1) of the Canadian Broadcasting Act, 1936, provides that "The Minister of Finance shall deposit, from time to time, in the Bank of Canada, or in a chartered bank to be designated by him, to the credit of the Corporation (a) the gross amount of moneys received in each year from licence fees in respect of private receiving licences and private station broadcasting licences without deducting therefrom any costs of collection or administration".

Table 3 shows the number of receiving station licences issued in the year ended Mar. 31, 1953, in comparison with previous years.

3.—Private Receiving Station Licences[1] Issued, by Province, Years Ended Mar. 31, 1949-53

Province or Territory	1949	1950	1951	1952	1953
	No.	No.	No.	No.	No.
Newfoundland	...	21,323	44,483	48,874	49,778
Prince Edward Island	11,825	11,152	10,862	11,323	9,224
Nova Scotia	99,477	102,927	105,317	109,422	104,167
New Brunswick	75,559	76,581	74,418	75,363	70,284
Quebec	567,257	616,200	635,002	659,742	642,709
Ontario	704,993	715,290	708,012	724,892	716,707
Manitoba	126,586	135,582	125,371	137,647	140,965
Saskatchewan	155,177	164,751	164,070	169,842	173,583
Alberta	134,666	147,132	157,345	174,588	169,646
British Columbia	181,821	186,108	187,142	194,527	186,423
Yukon and N.W.T.	438	399	413	384	330
Canada	**2,057,799**	**2,177,445**	**2,212,435**	**2,306,604**	**2,263,816**

[1] Includes licences issued free, numbering 12,782 in 1949, 15,810 in 1950, 18,056 in 1951, 20,303 in 1952 and 22,973 in 1953. *See* Table 4 for classification for 1953.

Section 2.—Total Radio Stations and Radio Services

The total number of radio stations in operation in Canada and on ships and aircraft registered therein are shown by classes in Table 4. Of these stations, 519 were operated by the Department of Transport. The Department of National Defence, in addition to stations established for military purposes, operated 11 permanent stations and two summer stations, situated along the Mackenzie River and in Yukon Territory, on behalf of the Department of Resources and Development. The Department of Resources and Development operated 102 stations to provide communication and time-signal service for survey parties and for the protection and administration of National Parks. The Department of Public Works operated three stations, the Department of Agriculture five stations, the Department of National Health and Welfare 12 stations, the Department of National Revenue two stations, the Department of Citizenship and Immigration four stations, the Department of Fisheries five stations, the Department of Mines and Technical Surveys 55 stations, the Royal Canadian Mounted Police 812 stations, and the National Research Council 19 stations, 16 of which were experimental.

Stations operated by the Canadian Broadcasting Corporation numbered 80 and those by private owners, 178.

4.—Radio Stations in Operation, by Class, as at Mar. 31, 1953

Class	No.	Class	No.
Department of Transport Stations		**Department of Transport Stations —concluded**	
Coast stations	8		
Combined coast, and radiotelephone stations	25	Fan marker stations	13
Combined coast, radiotelephone and M.F. direction finding stations	10	Weather reporting stations	5[2]
Combined coast, radiotelephone, M.F. direction finding and radar stations	1	**Other Stations**	
Combined coast, radiotelephone, and frequency modulated radio relay stations	1	Ship stations (Class A)	3,582
Combined coast, radiotelephone and radiobeacon stations	2	Ship stations (Class B—Receiving only)	21
Radiobeacon stations	32	Limited coast stations	17
Combined radiobeacon and radiotelephone stations	19	Aircraft stations	1,314
Combined radiobeacon and M.F. direction finding stations	2	Public commercial stations	332
Radiotelephone stations	18	Private commercial stations	9,252
Lighthouse radiotelephone stations	153	Municipal services stations	252
Loran stations	3	Private commercial broadcasting stations—	
Frequency modulated radio relay stations	7	Operated by the Canadian Broadcasting Corporation	80[3]
Ionosphere stations	10	Operated by private owners	178
H.F. direction finding stations	2	Technical or training schools	13
Monitoring stations	6	Experimental stations	226
Land stations	1	Commercial receiving stations	377
Ship stations (Class A)	40	Commercial receiving stations (special)	174
Aircraft stations	24	Amateur experimental stations	7,060
Radio range stations	39[1]	**Private Radio Receiving Stations**	
Combined radio range, radiotelegraph and radiotelephone stations	53[1]	Fee paid	2,240,843
Combined homing, radiotelephone and radiotelegraph stations	3	Free to the blind	10,684
Field intensity stations	4	Free to hospitals and charitable institutions	102
Instrument landing installations	23	Free to schools	12,031
Homing beacons	13	Free to crystal receivers	3
Combined aeronautical radiotelephone and radiotelegraph stations	2	Free to Federal Government	153
			2,263,816
		Total, All Stations	**2,287,213**

[1] Station location ("Z") markers are installed at 91 radio range stations. [2] Two stations at Port Harrison, Que., and Coppermine, N.W.T., also perform restricted coast station service during the season of navigation, but since they are primarily weather-reporting stations they are shown under this heading only. [3] Includes 27 repeater stations and two television stations.

The foregoing classes are numerous and complicated by the fact that many of them perform closely related functions. Descriptions of the services provided by different types of government-operated stations are given in the 1951 Year Book, pp. 804-808.

The Canadian Overseas Telecommunication Corporation.—By virtue of the Canadian Overseas Telecommunication Corporation Act which came into force on Jan. 1, 1950 (R.S.C. 1952, c. 42), the Canadian Overseas Telecommunication Corporation was established to acquire, maintain and operate the external telecommunication facilities in Canada of Cable and Wireless Limited and the Canadian Marconi Company Limited. The Corporation consists of five Directors, one of whom is also the President and General Manager of the Corporation.

By proclamation in the *Canada Gazette* of June 7, 1950, the said facilities of Cable and Wireless Limited and of the Canadian Marconi Company Limited were expropriated and since that date the Corporation has been successfully operating and maintaining these external telecommunication facilities in Canada. On May 1, 1952, a final settlement was made with respect to the acquisition of the physical assets at a total cost of $3,143,781. These physical assets include Headquarters established at Montreal, Que., overseas cable stations at Bamfield, B.C., Halifax, N.S., and Harbour Grace, N'f'ld., and wireless transmitting and receiving stations at Drummondville and Yamachiche, Que., respectively.

The purposes of the Corporation are:—

(*a*) to establish, maintain and operate in Canada and elsewhere external telecommunication services for the conduct of public communications;
(*b*) to carry on the business of public communications by cable, radiotelegraph, radiotelephone or any other means of telecommunication between Canada and any other place and between Newfoundland and any other part of Canada;
(*c*) to make use of all developments in cable and radio transmission or reception for external telecommunication purposes as related to public communication services;
(*d*) to conduct investigations and researches with the object of improving the efficiency of telecommunication services generally; and
(*e*) to co-ordinate Canada's external telecommunication services with the telecommunication services of other parts of the Commonwealth.

Commercial Point-to-Point Radiotelephone Services.—The North-West Telephone Company operates a radiotelephone service between points in British Columbia not hitherto served by telephone communications. Under licences granted by the Department of Transport, the Company has established a number of permanent public commercial radiotelephone stations in that Province. These stations are authorized to provide communication to private commercial radiotelephone stations located at isolated points in the Province. This Company is also licensed to establish limited coast stations at Lulu Island, Powell River, Vancouver, Nanaimo, Victoria, Harrison Lake, Parksville, Althorp Point, Alert Bay, Campbell River and Prince Rupert, B.C., to provide a ship-to-shore service. These stations, used in conjunction with the ordinary telephone exchange, provide a duplex-radiotelephone service to isolated points and to certain ships at sea, and also provide a limited amount of service to stations of the land mobile category.

The North-West Telephone Company is also licensed to provide emergency radiotelephone communication at any point in British Columbia and to carry out tests with a view to extending the existing radiotelephone service throughout the Province.

In order to provide trans-river communication in the lower St. Lawrence area, the following companies operate stations in the Province of Quebec at La Malbaie, Tadoussac, Rivière du Loup, Rimouski, Matane, Montmagny, St. Antoine, Ile aux Grues, Cap Chat, Forestville, Trinity Bay, Baie Comeau, Clarke City, Gaspe Copper Mines, Mont Louis, Chicoutimi, and Tour à Pica: La Compagnie de Telephone de Charlevoix et Saguenay, La Compagnie de Telephone de Kamouraska, the Quebec Telephone Corporation, Gulf of St. Lawrence Telephone Company, and La Compagnie du Telephone Saguenay.

The wire-line facilities between Saint John, N.B., and Digby, N.S., between Charlottetown, P.E.I., and New Glasgow, N.S.. and between Red Head, N.B., and Mount Hanley, N.S., are supplemented by radiotelephone links. The stations at Saint John and Red Head are operated by the New Brunswick Telephone Company and the station at Charlottetown is operated by the Island Telephone Company. Terminals at Digby, New Glasgow and Mount Hanley are operated by the Maritime Telegraph and Telephone Company.

The Bell Telephone Company of Canada provides a land mobile terminal radiotelephone service at numerous points in Ontario and operates a microwave link between Toronto and Ottawa, Ont., and Montreal, Que., which carries television programs and is capable of providing many additional telephone circuits. Radio links are also maintained between Pelee Island and Leamington, Ont., and across the St. Lawrence between Sorel and Joliette, Que.

The Canadian National Railway Company operates an extensive radiotelegraph and radiotelephone service in Newfoundland including links between Table Mountain, N'f'ld., Cape North, N.S., and New Waterford, N.S. This Company is also authorized to provide a limited coast-station service at Port aux Basques, N'f'ld.

The Avalon Telephone Company operates public commercial stations in Newfoundland to supplement its wire lines and to provide telephonic communication with isolated communities.

The Manitoba Telephone System operates radiotelephone links involving stations at the following points: Riverton, Manigotagan, Hecla Island, Gimli, Norway House, Bissett, Great Falls, The Pas, Snow Lake and Winnipeg, Man. In addition, the Manitoba Telephone System operates stations at Gimli, The Pas and Norway House, Man., to provide terminal service for ships operating on Lake Winnipeg.

Norwesto Communications Limited operates a public commercial radiotelephone service consisting of stations located at Kenora, Red Lake, Ball Lake, Sioux Narrows, Dryden, Sioux Lookout, Minaki and Redditt, which are used in conjunction with the ordinary telephone exchanges to provide telephonic communication to privately owned stations at isolated points throughout the northwestern part of the Province of Ontario.

The Red Lake Telephone Company operates a public commercial radiotelephone station at Madsen, Ont., to provide a connection between the local wire telephone system and the Norwesto Communications Limited network.

The Okanagan Telephone Company operates a public radiotelephone service between Revelstoke and Arrowhead, B.C., and a public commercial terminal station at Kelowna to provide telephonic communication to privately owned stations at isolated points in the Kelowna area.

Provincial Government Services.—Provincial authorities use radio services in many Departments. Table 5 shows the number of stations operated by the Provincial Governments.

5.—Radiocommunication Stations Operated by Provincial Governments, as at Mar. 31, 1953

Province	Stations	Province	Stations
	No.		No.
Newfoundland	9	Manitoba	167
Nova Scotia	14	Saskatchewan	487
New Brunswick	30	Alberta	254
Quebec	238	British Columbia	625
Ontario	943	**Total**	**2,767**

Other Radiocommunication Services.—Radiotelegraphy and radiotelephony are used throughout Canada to provide means of maintaining contact with isolated points beyond the reach of the regular telegraph and telephone facilities.

Municipal government departments have steadily increased their use of radio to facilitate operations. This increase is noted in all categories of municipal services using radio as a medium of communication with vehicles, i.e., police, fire, engineering, hydro, etc. In addition, the trend toward expansion in the employment of radio for urban land mobile communication has continued and has shown no signs of abating. Such services as taxi, heavy construction, ready-mix concrete, oil pipeline construction and operation, veterinarian and rural medical have participated extensively in this increase. Public mobile radio relay message services (telephone answering service) have also been licensed to operate in a number of cities including Montreal, Toronto and Edmonton.

Public utilities, power companies, provincial power commissions, oil exploration and mineral development organizations have expanded their use of radio to a considerable degree; this expansion has occurred in both urban mobile and point-to-point radio fields.

Commercial air-carrier organizations including those performing off-route charter services were licensed to operate 893 ground communications stations, 30 navigational aids stations and 516 aircraft stations. A relatively large number of licences were also issued to individuals, manufacturers, mining and oil companies, etc., to authorize the operation of aircraft stations and associated ground stations in conjunction with normal business activities.

A total of 1,083 ground stations and 1,314 aircraft stations were operated by commercial air-carrier organizations, individuals and business concerns during the year ended Mar. 31, 1953.

Radio Aids to Navigation.—*Marine Radio Stations.*—Detailed information covering all marine radio aids to navigation is contained in the annual publication, *Radio Aids to Marine Navigation.* Copies of this publication and of supplementary *Notices to Mariners* issued in connection therewith may be obtained upon request from the Department of Transport, Ottawa.

Coast Radio Stations.—The primary purpose of the coast radio station organization is to provide radiocommunication facilities whereby any ship within 500 miles of Canada's coast may establish communication with shore. Twenty stations on the East Coast and Hudson Bay and Strait, seven stations on the Great Lakes and nine stations on the West Coast broadcast information daily to navigators at advertised hours. In addition, urgent information, such as hurricane warnings, is broadcast immediately upon receipt.

Coast stations CFH Halifax and CKN Vancouver, operated jointly by the Department of Transport and the Royal Canadian Navy, participate in the British Commonwealth scheme for providing long-range communication with ships.

Coast Radio Direction Finding Service.—There are 14 coast radio direction finding stations in operation—eight on the East Coast, five on Hudson Bay and Strait, and one on the West Coast. These direction finding stations continue to enjoy an enviable reputation for efficiency and accuracy. During the year ended Mar. 31, 1953, 15,755 bearings were given without charge to ships and aircraft.

Radio-beacon Service.—Radio beacons are established for the purpose of enabling any ship or aircraft equipped with a direction finder to determine its bearing or direction in relation to the radio-beacon station. There are 54 radio beacons in operation—29 on the East Coast, 16 on the Great Lakes, and 9 on the Pacific Coast.

Generally speaking, in clear weather each station at advertised hours transmits its characteristic for three periods of one minute separated by silent intervals of two minutes. In foggy weather all stations operate continuously, maintaining a uniform time cycle of three minutes, each station transmitting in its proper sequence for one minute separated by silent intervals of two minutes.

At Flat Point, N.S., Partridge Island, N.B., Red Islet, Cap des Rosiers, Bicquette Island, Que., Caribou Island, Hope Island, Main Duck, Southeast Shoal, Cove Island, Burlington Bay, Michipicoten Harbour, Long Point, Port Weller, Ont., Amphitrite Point, Pachena Point and Point Atkinson, B.C., the radio-beacon signals are synchronized with the emissions of the fog alarms for distance finding at those points during foggy weather.

In addition to the above radio-beacon facilities, ships equipped with direction finding apparatus may, upon request, obtain signals for the purpose of taking bearings from any of the coast stations. During the year ended Mar. 31, 1953, 282 such requests for signals were handled.

Loran Stations.—Loran (long-range aid to navigation) is a system of position finding based on the difference in the time arrival of pulse type radio signals transmitted from a pair of stations. This time difference is measured on a Loran receiver and is used in conjunction with specially prepared charts or tables to establish a line of position. The intersection of two or more lines of position determined from two or more pairs of stations provides the required position.

Medical Advice to Ships at Sea.—Ships at sea may obtain medical advice through any of the Department of Transport's coast stations. Messages from ships in this connection are forwarded to the nearest medical officer of the Department of National Health and Welfare and the reply is transmitted to the ship.

Assistance Rendered by Radio to Vessels in Emergency.—Government radio stations rendered assistance to 277 ships and aircraft reported in danger or distress, during the fiscal year ended Mar. 31, 1953.

Aids to Air Navigation.—Radio aids to air navigation are provided from coast to coast and from the United States border to the Arctic along the airways used by the many Canadian airlines, United States airlines flying over Canadian territory, and Canadian and United States military aircraft. To construct and maintain these many facilities, trained engineers and technicians are located at six district offices: Moncton, N.B.; Montreal, Que.; Toronto, Ont.; Winnipeg, Man.; Edmonton, Alta.; and Vancouver, B.C. The large communication stations at Gander, N'f'ld., are under the administration of the Moncton office.

Radio Ranges.—The principal radio aid to air navigation provided by the Department of Transport is the radio range. These stations, located approximately every 100 miles along airways, provide specific track guidance to pilots by means of audible signals. The signals may also be used for the purpose of obtaining direction finding bearings from the aircraft. In addition, radiotelephone communications are provided between the ground and aircraft by means of which pilots may obtain weather and other information concerning the safety of flight. There are now 93 stations in operation. Work has commenced on the establishment of additional radio ranges to serve the airports at Terrace and Nanaimo, B.C.

Radio Beacons.—These stations provide radio signals with which pilots may use their direction finding equipment to obtain relative directional bearings to assist in the navigation of their aircraft. Sixteen of these stations are now in operation, new ones having been established at Embarras, Alta., and Laberge, Y.T. The radio beacons at Prince Albert and Embarras are equipped with radiotelephone facilities to provide communications to and from aircraft. Surveys have been completed for a beacon facility to be installed at Eon, Que., to replace the Mecantina radio range destroyed by fire in the summer of 1952. Additional radio beacons at Hope, Terrace, Kitimat, and Mill Bay in British Columbia, and at Beaverlodge, Sask., are in various stages of planning or construction.

Fan Markers.—These facilities, operating on very high frequencies, provide a pilot with an indication of when he is directly overhead. Normally, they are placed on an airway to inform the pilot when he may safely lose altitude after passing high terrain or to indicate accurately the distance from an airport. Eleven of these stations are now in operation.

Station Location Markers.—These facilities are similar to fan markers except that the signal radiated is such that aircraft may receive the same indication irrespective of the direction of flight. They are installed at the same location as a radio range to enable a pilot to determine when he is exactly over the station, thus obtaining definite indication of position. Station location markers are installed at all radio range sites except Killaloe, Ont.

Direction Finding Stations.—A direction finding station for determining the bearing of aircraft from the station is in operation at Cape Harrison, N'f'ld.

Instrument Landing Systems.—Instrument Landing Systems provide radio signals which, when received by special radio equipment aboard aircraft, permit pilots to approach airports for landing during periods of very low visibility. An installation normally consists of a localizer transmitter providing lateral guidance to the runway, a glide path transmitter providing slope guidance to the approach end of the runway, two marker transmitters providing distance indications from the runway at approximately four and one-half miles and 3,500 ft. from the runway, and a low-power radio beacon (compass locator) to assist in holding procedures

and lining up on the localizer course. The localizer and marker transmitters operate on very high frequencies, the glide path on ultra high frequencies and the compass locators on low and medium frequencies. Twenty-three instrument landing systems are now in operation, a new installation having been completed at Gander, N'f'ld. Construction work is continuing on installations at Patricia Bay and Vancouver, B.C., and at Sydney, N.S. The system under construction to serve Runway 26 at Patricia Bay airport will have a localizer differing from those normally used in that it is highly directive, having only a front course, and is so controlled that clearance indication is shown only out to nine degrees on either side of the centre of the on-course signal. When this system is commissioned, the Patricia Bay radio beacon will become the middle marker compass locator and the fan marker at the same location will become the middle marker.

Aeronautical Communication Stations.—To assist in providing the required communication between aircraft and the ground, 33 radio stations operating for the most part on high frequencies are located at strategic points across the country and into the Arctic. These stations provide communication to both domestic and international air carriers. The international communications stations at Vancouver, B.C., Montreal, Que., Moncton, N.B., and at Goose Bay and Gander, N'f'ld., form a major contribution on the part of Canada to international aviation. During 1953 two new international stations, at Sydney and Yarmouth, N.S., were placed in operation to provide very high frequency coverage to many international airlines flying the Gander–New York route. The services provided by these international stations may be divided broadly into three classes: (1) communication facilities for Meteorological Services; (2) communication facilities for the Air Traffic Control Services; and (3) facilities for the benefit of the airline operating agencies to provide communication with their aircraft and between their despatch offices.

Since Class 3 is provided solely for the convenience of the airline operating agencies, a system of charges has been introduced to recover from the airlines the cost of providing this portion of the service. The charge is $13 per aircraft per oceanic crossing. Revenue for the year ended Mar. 31, 1953, was approximately $195,000.

Very High Frequency Communications.—Owing to the overcrowded conditions of the high frequency portion of the radio spectrum and to the fact that communication in the very high frequency portion of the spectrum is relatively free from atmospheric interference, progress is being made in providing air-ground communications on the latter frequencies. Very high frequency air-ground communication facilities are now provided at 75 range stations and all 21 airport control towers. Very high frequency equipment has been provided also in all control towers and in a large number of airport vehicles to facilitate direction to traffic on the airport surface.

Weather Reporting Stations.—Weather reporting stations are located at strategic points throughout the country from coast to coast and into the Far North. Reports from these stations enable meteorological personnel to forecast weather trends that are of great importance to both domestic and transoceanic flying operations. Some of these stations are located in remote areas with which radio is the only means of communication. At such points, radio stations are established to enable the weather reports to be rapidly forwarded to meteorological offices where the data are correlated. Four such communications stations are located at Dease Lake, B.C., Nitchequon and Indian House Lake, Que., and Coppermine, N.W.T.

Marine Communications.—Two coast stations operating on both medium and high frequencies are maintained in conjunction with the aeronautical stations at Seven Islands, Que., and Goose Bay, N'f'ld., for the exchange of communications between ships and the shore. Communications are conducted by both radiotelegraph and radiotelephone. Another station at Frobisher, N.W.T., provides radiotelephone facilities on high frequencies only.

Improvements in Radio Aids to Air Navigation.—A decision was reached during 1953 to equip the Montreal to Windsor airway with VHF omnidirectional ranges. This type of facility enables the pilot in the aircraft to select, at will, his desired course. These stations operate in the very high frequency band between the portion reserved for the ILS localizers and that portion used for very high frequency aeronautical communications.

Specifications for the radio equipment have been prepared and put out for tender. A mobile omnidirectional range has been constructed so that sites for permanent installations can be flight-tested before they are approved. A contract has been let for a ground-controlled approach system for Gander airport. Preliminary work on the design of buildings, towers and underground cable system is under way. Site problems in connection with this installation are also under discussion.

Negotiations were completed with the Civil Aeronautics Administration of the Government of the United States whereby they installed, in an aircraft owned by the Department of Transport, a radio installation capable of flight-testing VHF omnidirectional ranges, 1,000 megacycle distance-measuring equipment and instrument-landing systems.

Wireline Services.—The Airway Traffic Control interphone system was expanded to satisfy requirements stemming from an increasing volume of both civil and military air operations. Telecommunications Division teletype circuits were revised to facilitate the handling of air operational traffic. Additional local teletype, telephone and control-line facilities were engaged to meet new and increased requirements of the Branch. Major revisions to and repair of various government-owned control lines were undertaken.

Other Communication Facilities.—Public address systems were provided for Air Terminal Buildings and major revisions to several existing systems were undertaken. Co-ordination of various wireline service requirements was undertaken. Existing systems, such as pneumatic tube facilities, were analysed and evaluated.

Establishment was initiated of a National Weatherfax System to be used for transmitting weather data in the form of maps by wire line to designated stations across the country. Equipment considered to best suit requirements was selected for this network.

Section 3.—The Canadian Broadcasting Corporation

The history of the Canadian Broadcasting Corporation is given in the 1947 Year Book, pp. 737-740. The Corporation operates under authority of the Canadian Broadcasting Act, 1936, and is headed by a Board of 10 Governors, chosen to give representation to the principal geographic divisions of Canada, and a full-time chairman. The Board determines and supervises policy but day-to-day operations and executive direction are the responsibility of the General Manager.

The organization of the CBC consists of the following divisions: Program, International Service, Engineering, Commercial, Press and Information, Broadcast Regulations, Station Relations, Personnel and Administration, and Treasury.

Under the Canadian Broadcasting Act, 1936, the CBC is responsible for regulations controlling the establishment of networks and the proportion of time that may be devoted to advertising in broadcast programs. The CBC neither exercises nor authorizes any private station to exercise on its behalf censorship of any broadcast program. The responsibility for seeing that the regulations are observed rests with the individual station management.

Frequency Modulation.—The development of frequency modulation is given in the 1948-49 Year Book, p. 773. On Apr. 1, 1953, there were five CBC and 29 privately owned frequency modulation stations in operation.

Television.—Television in Canada is being developed on the same basic principles that governed the establishment of the national radio system—a combination of public and private ownership and operation of transmitting stations, co-operating in extended program coverage over a vast area.

The first two television transmitters and program production centres of the Canadian Broadcasting Corporation began regular service at Montreal and Toronto in September 1952 (Stations CBFT and CBLT). Another station (CBOT) was opened in June 1953 at Ottawa and connected at once with the other stations by microwave relay, thus forming the first direct-connection television network in Canada. These three stations, situated in the most densely populated areas of Canada, cover more than 40 p.c. of the Canadian population.

Other CBC television stations are planned for Vancouver, Winnipeg and Halifax. In a statement of policy on television development (Dec. 8, 1952) the Government announced that applications for licences to establish privately owned television stations would be accepted for areas not now served or those to be served, as listed above, by publicly owned CBC stations. The object is to provide television in as many different areas of Canada as possible as quickly as possible and, therefore, at the present time, two stations will not be licensed to serve the same area.

At a meeting of the CBC Board of Governors in April 1953, the issue of licences for the operation of privately owned television stations at Sydney, N.S., Moncton, N.B., Quebec, Que., and at Hamilton, London, Windsor and Sudbury in Ontario was recommended to the Minister of Transport.

The Government announced in February 1953 that the radio-listener licence fee of $2.50, established at the inception of the national broadcasting system, would be abolished and that there would be no licence fee to be paid by the owners of television sets. Instead, revenues of the Canadian Broadcasting Corporation will come from statutory grants provided by the Federal Government, from the existing excise tax on radio and television sets and tubes and from the sale of advertising time. The income of privately owned commercial television stations will come exclusively from the sale of advertising time to sponsors. As in the case of radio, privately owned television stations will be provided with a certain number of hours of CBC programs each week, free of charge, and will benefit from a share of the income from commercial programs sold on a network basis. Until such time as extensive network facilities become available in Canada, distribution of programs will be made by kinescope recordings.

Broadcasting Facilities.—Under Sect. 24 of the Canadian Broadcasting Act, the CBC is required to review all applications for licences for new stations and applications for increases in power and for changes in frequency or location. Two considerations are involved: (1) non-interference with the present and proposed facilities of the CBC, and (2) that high-power transmission facilities, on both longwave and shortwave bands, are reserved for use by the CBC. Within these limitations, it is the policy of the Board to serve community interests by giving every practical encouragement and assistance to local stations.

The CBC operates three networks: the Trans-Canada and Dominion networks serving English-language audiences from the Atlantic to the Pacific, and the French network serving French-language listeners in Quebec, Ontario and the Prairie Provinces. The French network's program service was extended to French-language stations in Western Canada during the summer of 1952, and the construction of a station at Moncton, N.B., which will carry the French network to listeners in that area, is planned.

The Trans-Canada network is made up of 24 basic stations—11 CBC-owned and 13 privately owned. There are 16 supplementary stations, four of which are CBC-owned Newfoundland stations. The Dominion network consists of 31 basic stations of which 30 are privately owned. Seventeen supplementary privately owned stations receive Dominion network service. The French network has three basic CBC-owned stations, and 18 privately owned affiliated supplementary stations.

In 1953, the CBC had 20 stations, eight of which had 50,000-watt transmitters. In order to present programs at suitable times and to give expression to varying interests in the six regions, CBC maintains regional offices and production facilities at St. John's, N'f'ld., Halifax, N.S., Chicoutimi, Quebec City and Montreal, Que., Ottawa and Toronto, Ont., Winnipeg, Man., Edmonton, Alta., and Vancouver, B.C.

6.—Broadcasting Stations of CBC Networks, as at Apr. 1, 1953

NOTE.—The stations marked with an asterisk (*) are CBC-owned.

Station Location		Frequency	Power	Station Location		Frequency	Power
		kc.	watts			kc.	watts
Trans-Canada Basic Network—				**Trans-Canada Supplementary—**			
CBI*	Sydney	1,570	1,000	CBN*	St. John's	640	10,000
CBH*	Halifax	1,330	100	CBY*	Corner Brook	790	1,000
CBA*	Sackville	1,070	50,000	CBG*	Gander	1,450	250
CHSJ	Saint John	1,150	5,000	CBT*	Grand Falls	1,350	1,000
CFNB	Fredericton	550	5,000	CKBW	Bridgewater	1,000	1,000
CBM*	Montreal	940	50,000	CJQC	Quebec	1,340	250
CBO*	Ottawa	910	1,000	CKOC	Hamilton	1,150	5,000
CKWS	Kingston	960	5,000	CHLO	St. Thomas	680	1,000
CBL*	Toronto	740	50,000	CHOK	Sarnia	1,070	[1]
CFCH	North Bay	600	1,000	CFAR	Flin Flon	590	1,000
CJKL	Kirkland Lake	560	5,000	CFGP	Grande Prairie	1,050	1,000
CKGB	Timmins	580	5,000	CKLN	Nelson	1,240	250
CKSO	Sudbury	790	5,000	CKPG	Prince George	550	250
CBE*	Windsor	1,550	10,000	CFPR*	Prince Rupert	1,240	250
CJIC	Sault Ste. Marie	1,490	250	CJDC	Dawson Creek	1,350	1,000
CKPR	Fort William	580	1,000	CJCA	Edmonton	930	5,000
CBW*	Winnipeg	990	50,000	CKCK	Regina	620	5,000
CBK*	Watrous	540	50,000	CFAC	Calgary	960	5,000
CBX*	Edmonton	1,010	50,000				
CJOC	Lethbridge	1,220	5,000	**Dominion Basic Network—**			
CFJC	Kamloops	910	1,000	CJCB	Sydney	1,270	[1]
CKOV	Kelowna	630	1,000	CHNS	Halifax	960	5,000
CJAT	Trail	610	1,000	CJFX	Antigonish	580	5,000
CBU*	Vancouver	690	10,000	CJLS	Yarmouth	1,340	250

[1] 5,000 watts during daytime; 1,000 watts at night.

6.—Broadcasting Stations of CBC Networks, as at Apr. 1, 1953—concluded

Station Location		Frequency	Power
		kc.	watts
Dominion Basic Network—concl.			
CFCY	Charlottetown	630	[1]
CKCW	Moncton	1,220	5,000
CFBC	Saint John	930	5,000
CKNB	Campbellton	950	1,000
CKTS	Sherbrooke	1,240	250
CFCF	Montreal	600	5,000
CKOY	Ottawa	1,310	[1]
CHOV	Pembroke	1,350	1,000
CFJR	Brockville	1,450	250
CHEX	Peterborough	1,430	1,000
CJBC*	Toronto	860	50,000
CFPL	London	980	5,000
CFCO	Chatham	630	1,000
CFPA	Port Arthur	1,230	250
CJRL	Kenora	1,220	1,000
CKRC	Winnipeg	630	5,000
CKX	Brandon	1,150	1,000
CJGX	Yorkton	940	1,000
CKBI	Prince Albert	900	5,000
CFQC	Saskatoon	600	5,000
CHAB	Moose Jaw	800	5,000
CKRM	Regina	980	5,000
CFRN	Edmonton	1,260	5,000
CFCN	Calgary	1,060	10,000
CHWK	Chilliwack	1,270	1,000
CJOR	Vancouver	600	5,000
CJVI	Victoria	900	1,000
Dominion Supplementary—			
CHML	Hamilton	900	5,000
CKTB	St. Catharines	620	1,000
CFOR	Orillia	1,570	1,000
CHNO	Sudbury	1,440	1,000
CHAT	Medicine Hat	1,270	1,000
CJIB	Vernon	940	1,000
CKFI	Fort Frances	800	1,000
CKCV	Quebec	1,280	1,000
Dominion Supplementary —concluded			
CKSF	Cornwall	1,230	250
CJBQ	Belleville	1,230	250
CKCR	Kitchener	1,490	250
CJCS	Stratford	1,240	250
CKPC	Brantford	1,380	1,000
CKNX	Wingham	920	1,000
CFOS	Owen Sound	1,470	1,000
CKLW	Windsor	800	50,000
CKRD	Red Deer	1,230	250
French Basic Network—			
CBJ*	Chicoutimi	1,580	10,000
CBV*	Quebec	980	1,000
CBF*	Montreal	690	50,000
French Supplementary—			
CHNC	New Carlisle	610	5,000
CJEM	Edmundston	1,380	1,000
CJBR	Rimouski	900	5,000
CHLT	Sherbrooke	900	1,000
CHGB	Ste. Anne de la Pocatière	1,350	[2]
CKCH	Hull	970	1,000
CJFP	Rivière du Loup	1,400	250
CKVD	Val d'Or	1,230	250
CHAD	Amos	1,340	250
CKRN	Rouyn	1,400	250
CKLS	La Sarre	1,240	250
CKLD	Thetford Mines	1,230	250
CFCL	Timmins	580	1,000
CKSB	St. Boniface	1,250	1,000
CHFA	Edmonton	680	5,000
CFNS	Saskatoon	1,170	1,000
CFRG	Gravelbourg	1,230	250
CHNO	Sudbury	1,440	1,000

[1] 5,000 watts during daytime; 1,000 watts at night. [2] 1,000 watts during daytime; 250 watts at night.

CBC International Service (Shortwave).—The International Service, inaugurated on Feb. 25, 1945, is operated by the CBC on behalf of the Canadian Government. Its aim is to tell the people of other countries about Canadian life and thought and to help unify the western world in the defence of freedom.

The International Service, now in its ninth year of operation, has grown to meet the requirements of Canada's expanding interest and influence abroad. The two 50,000-watt transmitters at Sackville, N.B., are linked by approximately 600 miles of land lines with studio and program headquarters in the Radio Canada Building, Montreal, Que., from which programs are broadcast daily in English, French, German, Dutch, Danish, Norwegian, Swedish, Finnish, Italian, Spanish, Portuguese, Czech, Slovak, Russian, Ukrainian and Polish. With technical facilities transmitting a signal unequalled in Europe by any other from the North American Continent, the International Service has succeeded in reaching increasingly large audiences in Europe, Central and South America, the Caribbean and the South Pacific area.

More than 200,000 letters have been received from listeners in all parts of the world attesting to the strength of the International Service signal and to a wide interest in Canada and Canadian programs. Many listeners request specific

information on a variety of topics ranging from trade conditions to social and educational matters. These inquiries are answered by the language sections or referred to the government department directly concerned. Reception reports are also verified.

In addition to broadcasting Canadian programs more than 15 hours daily, the International Service has developed a liaison with broadcasting organizations in other countries so that an increasing number of programs are relayed over national networks, thus reaching an even wider audience. Each week the *Voice of Canada* broadcasts programs to the Canadian Armed Forces in Europe and Korea and provides, as well, special programs on tape for Canadian Forces at sea.

Each month, 120,000 illustrated program booklets designed for audiences in Europe and in Latin America are sent to listeners, upon request, by the International Service. These booklets contain broadcast schedules and program details in various languages.

Domestic Program Service.—During the year ended Mar. 31, 1953, 75,797 programs representing 24,926 hours of broadcasting were presented over the CBC Trans-Canada, Dominion and French networks. Of the total broadcasting hours, 78·7 p.c. were devoted to non-commercial and public-service programs and the remainder to commercial presentations. Of the total broadcasting hours in 1952-53, 66 p.c. was scheduled on the Trans-Canada network; the Dominion network released more than 11 p.c. and the remainder was released on the French network.

The CBC originated and produced 82·7 p.c. of its network broadcasts. Of the remainder, 2·6 p.c. came from private stations and 14·7 p.c. were exchange programs from the United States and the British Broadcasting Corporation. Various categories of light music made up the greatest number of broadcast hours, followed in order by drama and feature, news, classical music, talks, variety, agriculture programs, women's programs, semi-classical music, educational broadcasts, children's programs, religious periods, dance music, sports programs, old-time music, symphony music, band music, sacred music, prose and poetry, and opera. Table 7 shows the proportion of time devoted to sustaining programs as compared with commercial programs and analyses those made up of music as compared with the spoken word.

7.—Classification of CBC Programs, Year Ended Mar. 31, 1953

NOTE.—Dashes in this table indicate that no programs were reported under these particular items.

Class of Program	Sustaining			Commercial		
	Programs	Time	P.C. of Total Hours	Programs	Time	P.C. of Total Hours
Musical	No.	hrs. mins.		No.	hrs. mins.	
Opera	40	36·45	0·19	20	62·00	1·17
Symphony	276	277·05	1·41	52	51·00	0·96
Sacred	477	188·25	0·96	16	4·30	0·08
Classical	3,379	2,145·35	10·94	5	2·30	0·05
Semi-classical	1,859	794·45	4·05	91	24·40	0·46
Variety	492	224·05	1·14	2,715	1,136·15	21·37
Light	15,494	5,783·40	29·50	1,476	386·30	7·27
Dance	1,370	617·15	3·15	—	—	—
Old-time	1,045	340·30	1·74	237	70·55	1·33
Band	597	202·40	1·03	95	23·45	0·45
Totals, Musical	**25,029**	**10,610·45**	**54·11**	**4,707**	**1,762·05**	**33·14**

7.—Classification of CBC Programs, Year Ended Mar. 31, 1953—concluded

Class of Program	Sustaining			Commercial		
	Programs	Time	P.C. of Total Hours	Programs	Time	P.C. of Total Hours
Oral	No.	hrs. mins.		No.	hrs. mins.	
Drama and feature	1,117	699·00	3·56	8,655	2,473·05	46·51
Prose and poetry	147	55·30	0·28	441	110·15	2·07
Talks—informative	4,781	1,517·45	7·74	737	221·45	4·17
Educational	2,135	772·10	3·94	—	—	—
News commentary	833	181·40	0·93	—	—	—
News events	311	84·55	0·43	—	—	—
News résumés	13,459	2,192·15	11·18	619	213·30	4·02
Agriculture	3,006	1,169·45	5·97	—	—	—
Sports events	65	48·50	0·25	146	193·35	3·64
Sports résumés	1,660	361·55	1·85	43	10·45	0·20
Women's	2,161	654·15	3·34	865	217·45	4·09
Children's	1,946	576·10	2·94	310	114·45	2·16
Religious	2,557	666·30	3·40	—	—	—
Stock-market quotations	67	16·35	0·08	—	—	—
Totals, Oral	**34,245**	**8,997·15**	**45·89**	**11,816**	**3,555·25**	**66·86**
Grand Totals	**59,274**	**19,608·00**	**100·00**	**16,523**	**5,317·30**	**100·00**
Live talent	34,210	9,539·55	49·65	10,360	3,450·05	64·88
Recording	16,439	6,550·20	33·41	544	119·30	2·25
Delayed	8,625	3,517·45	17·94	5,619	1,747·55	32·87

Finances of the CBC.—A net surplus of $376,360 was recorded for the year ended Mar. 31, 1953, after providing for depreciation and obsolescence. The Sound Broadcasting Service realized an operating surplus of $2,939,479 for the year, while the Television Service sustained an operating loss of $2,563,119.

Income of the Sound Broadcasting Service included the statutory grant, radio licence fees, commercial broadcasting, interest on investments and miscellaneous revenues. Except for earned revenues of $585,497, the Television Service was financed by loans. A third loan in the amount of $2,000,000 for the Television Service was authorized under Appropriation Act, No. 4, 1952, and is to be amortized by 30 semi-annual instalments commencing Jan. 1, 1958.

Capital expenditure for the Sound Broadcasting Service amounted to $712,219, the main expenditure being for the Carman and Lulu Island transmitters and the Montreal, Toronto and Winnipeg studios. Fixed assets costing $239,947 were written off, the principal item being the Verchères transmitter which was destroyed by fire. The Television Service had expenditures of $1,875,935 on capital account. The major portion of these expenditures were required to complete the television production centres at Montreal and Toronto.

The CBC operates the International Service on behalf of the Government of Canada and all maintenance and operational costs are borne by the Government. These costs are not considered as chargeable to the CBC because the annual statutory grant and the revenue from licence fees are used only to serve listeners within Canada. Gross operating expenditure in the year ended Mar. 31, 1953, exceeded 1952 expenditure by $103,159. The value of Crown assets in the custody of the Corporation increased $85,466 during the year after write-offs amounting to $6,373.

8.—Income and Expenditure of the CBC, Year Ended Mar. 31, 1953

Income and Expenditure	Sound		Television		Total	
	$	p.c.	$	p.c.	$	p.c.
Income						
Statutory grant	6,250,000	37·39	—	—	6,250,000	36·13
Licence fees	5,725,000	34·25	—	—	5,725,000	33·09
Commercial broadcasting	2,513,715	15·04	518,380	88·54	3,032,095	17·52
Miscellaneous	187,808	1·12	67,117	11·46	254,925	1·47
International Service	2,040,716	12·20	—	—	2,040,716	11·79
Totals, Net Income	**16,717,239**	**100·00**	**585,497**	**100·00**	**17,302,736**	**100·00**
Expenditure						
Programs	6,473,965	46·99	1,854,590	58·90	8,328,555	49·20
Engineering	2,236,490	16·23	667,940	21·21	2,904,430	17·16
Station networks	1,431,449	10·39	11,115	0·35	1,442,564	8·52
Administration	690,293	5·01	9,677	0·31	699,970	4·14
Press and information	348,339	2·53	22,246	0·71	370,585	2·19
Commercial	248,864	1·81	19,548	0·62	268,412	1·59
Interest on loans	94,063	0·68	195,438	6·21	289,501	1·71
Depreciation	445,245	3·23	233,732	7·42	678,977	4·01
Supervision (allocated to television)	−134,330	−0·97	134,330	4·27	—	—
International Service	1,943,382	14·10	—	—	1,943,382	11·48
Totals, Expenditure	**13,777,760**	**100·00**	**3,148,616**	**100·00**	**16,926,376**	**100·00**
Operating surplus or deficit, as compared with 1952	2,939,479	...	−2,563,119	...	376,360	...

Music and Drama.—Music and drama are two of the chief items in the CBC schedules. Music makes up about 50 p.c. of the network programs, while those in the 'drama and feature' category take up the largest percentage of time among spoken-word programs. High-quality programs of both types are heard frequently at good listening hours. Apart from regular broadcasts by Canadian symphony orchestras, the Metropolitan Opera and similar programs, much fine music is presented on CBC Wednesday Night—an evening of serious programming on the Trans-Canada network—and on Monday evenings by the recently formed CBC Symphony Orchestra. Chamber music by various groups, as well as choral music originating in many Canadian points and recitals by Canadian artists and those of international reputation, are important features of the music schedules. Productions by the CBC Opera Company (which in the 1952-53 season included *Il Trovatore, School for Fathers, The Prisoner, Gianni Schicchi, Carmen, The Rake's Progress* and *Falstaff*) and by the CBC Light Opera Company (which has presented many of the world's favourite musical comedies and Gilbert and Sullivan operettas) are heard throughout the season.

During an average year more than 1,000 plays are produced by the CBC for its radio networks. Chief among these are the annual *Stage* series broadcast Sundays to a national audience, and the longer dramas on CBC Wednesday Night. In this category, plays have ranged from adaptations of the humorous stories of Stephen Leacock to two-hour performances of Shakespearean plays. CBC Wednesday Night has also introduced the radio anthology, an evening of prose, poetry, drama and music woven about a central theme.

Lighter fare is broadcast from production points across Canada and includes a high percentage of works by Canadian writers, both English and French. A highlight of French network drama productions during the 1952-53 season was

the performance of 20 original one-hour plays by Canadians—the three prize-winners and the next best entries in the previous season's play-writing competition—under the title *Le Théâtre du Grand Prix*. *Le Théâtre de Radio-Canada* presented a series of 22 adaptations of plays by Molière, Beaumarchais, Shakespeare, Pirandello and others, as well as original plays by Canadian authors. Fifty plays, all by Canadians, appeared under the title *Nouveautés dramatiques*.

Section 4.—Privately Owned Radio Broadcasting Stations*

Privately owned (non-government) broadcasting stations began operations during the early 1920's, about 12 years before any other broadcasting service was available in Canada. By 1929, 65 of these stations, operating mainly in non-metropolitan areas, provided regular broadcasting service to Canadian communities. In 1953, such stations numbered 139, with a total wattage of 382,750 in daytime and 354,900 at night. Operating in conjunction with AM stations are 29 FM stations with combined power of 50,045 watts. In addition, there are eight shortwave stations operating in conjunction with AM stations, having a combined wattage of 6,685.

Generally, the privately owned stations are limited in power to 5,000 watts, many operating at 1,000 watts and some at 250 watts. Two non-government stations (CFRB Toronto and CKLW Windsor) have, since 1948, operated at 50,000 watts. Privately owned stations serve, primarily, the localities in which they are situated, the nature of the "community" served varying with circumstances. Many such stations are located in relatively small urban centres. Here, however, they serve not only the urban centre population but a larger population located in surrounding rural areas. Others serve medium-sized and metropolitan cities and, in addition, the population of cities or towns adjacent to the centre in which the station is located together with rural audiences in districts between or beyond the urban areas.

Privately owned stations have a combined capital investment currently estimated at approximately $30,000,000, employ more than 3,800 persons, and disburse in salaries and wages an estimated $10,000,000 annually. Revenue is obtained entirely from commercial advertising and these stations receive no part of the special 15-p.c. excise tax charged against the purchase of receivers and parts. The privately owned stations are required to pay transmitter licence fees to the Canadian Broadcasting Corporation; these totalled approximately $187,000 in the year ended Mar. 31, 1952.

Recent years have shown a marked increase in the interest taken in broadcasting at commercial, political and legal levels, since it has become more generally recognized that broadcasting is a form of publication and a basic means of mass communication in North America. A review of this development may be found in Minute Book No. 5 of the 1951 Special Committee on Radio Broadcasting, Nov. 28, 1951, and in Minute Book No. 9 of the 1953 Special Committee, Apr. 29, 1953.

According to figures submitted to the Royal Commission on National Development in the Arts, Letters and Sciences in April 1950, the privately owned stations showed a net profit of 9 p.c. in 1948, figured as a percentage of capital, as against 7 p.c. in 1947 and 8 p.c. in 1946. The 1948 profit, as a percentage of operating

* Revised by T. J. Allard, Executive Vice-President, Canadian Association of Broadcasters, Ottawa.

revenue, was 10 p.c. as against 8 p.c. in 1947 and 10 p.c. in 1946. These figures are based on reports obtained by the Department of Transport from 109 stations in 1948, 108 stations in 1947, and 88 stations in 1946. Thus, the average net profit per station was $12,516 in 1948, $8,597 in 1947 and $11,228 in 1946. Of the 109 stations reporting in 1948, 79 showed an aggregate surplus and the remainder an aggregate loss. While no official compilations have been prepared since that time, unofficial estimates indicate that the 1953 position was relatively the same in terms of percentages.

Administration.—The non-government stations operate under the Canadian Broadcasting Act which is administered by the Canadian Broadcasting Corporation, and under regulations made by the CBC, in addition to the Radio Act which is administered by the Department of Transport, and regulations made thereunder by that Department. Proof-of-performance statements showing that public service obligations have been fulfilled, together with financial statements, must be filed annually with the CBC in the former instance and the Department of Transport in the latter. Regulations limit the amount of advertising that may be carried in any spot announcement or program and the number of announcements that may be carried in any given period of time. Program schedules must be approved in advance by the CBC and food, drug and medicine continuity must be approved by the Department of National Health and Welfare.

Licences of the privately owned stations, valid for three years, are granted by the Government of Canada upon recommendation of the Board of Governors of the Canadian Broadcasting Corporation. The Royal Commission on National Development in the Arts, Letters and Sciences recommended that the period be increased to five years and this recommendation is currently under review by Government authorities. The sale or transfer of any stock or shares held in any broadcasting station must be approved by the Government of Canada.

Network Operations.—Network operation in Canada is at present restricted to the CBC in both AM and television fields. The CBC also has sole right, except in the case of four stations, to bring in commercial and other network programs from the United States. Many privately owned stations, however, serve as outlets—either basic or supplementary—for CBC network programs. On occasion, all stations are required to carry CBC or other programs.

Television.—At the end of October 1953, there were nine non-government television stations licensed in Canada, located at: Regina, Sask.; Windsor, London, Sudbury and Hamilton, Ont.; Rimouski and Quebec City, Que.; Saint John, N.B.; and Sydney, N.S. The same terms of licence and regulations applying to AM broadcasting apply also to telecasting, with the additional requirement that the television licensee must carry a minimum of 10½ hours weekly of CBC-produced material. Government policy permits the licensing of one non-government station in any area in Canada other than Toronto, Montreal, Ottawa, Vancouver, Winnipeg and Halifax, these areas being reserved exclusively for the Canadian Broadcasting Corporation. On Mar. 30, 1953, the Government announced in the House of Commons that consideration was being given to licensing of two or more non-government stations in any area in Canada, including those areas presently reserved for the Canadian Broadcasting Corporation.

PART IX.—THE POST OFFICE

The Canada Post Office Department was created at the time of Confederation in 1867 by the Canada Post Office Act to superintend and manage the postal service of Canada under the direction of a Postmaster General. For almost a century prior to Confederation, postal services in the Canadian provinces had been controlled by the British Postmaster General and administered by his deputies. Under the French régime a courier service had been organized as early as 1703 between Quebec, Three Rivers and Montreal, while in 1734 a post road was constructed over the same route and post houses, complete with post horses and vehicles, were established for the use of travellers. In 1851, the control of their post offices was assumed by the different provinces of British North America and at Confederation, these systems merged to form the Canada Post Office.

Functions.—The basic task of the Canadian Postal Service is the handling and transmission of postal matter—letters, parcels, newspapers, magazines, etc.—and in discharging this duty it maintains a wide variety of services—post offices and air, railway, land and water transportation facilities.

This basic task involves many associated functions which include the sale of postage stamps and other articles of postage; the furnishing of information to the public respecting postage rates and other postal matters; the registration of letters and other articles of mail; the insuring of parcels; the acceptance of C.O.D. articles for mail and dispatch; the sorting, making up and dispatching of ordinary and registered mail to other offices; the sorting and delivery of incoming mail of all kinds; and the transaction of money-order and Post Office Savings Bank business.

All functions of the Postal Service, as far as the public is concerned, are centred in the post offices, of which 12,254 were in operation at Mar. 31, 1953, as against 12,305 at the same date in 1952. Postage paid in 1952-53 by means of postage stamps amounted to $67,182,548 ($65,093,099 in 1952). Post office money orders are issued for any amount up to and including $100 at more than 7,000 post offices, for payment in Canada or in almost every country in the world. Orders payable in Canada only for amounts under $16 are issued at more than 4,000 additional post offices. Post Office Savings Banks are in operation in all parts of the country and, on Mar. 31, 1953, had total deposits of $39,322,229, an increase of $1,290,997 over the $38,031,232 deposited in 1952.

Post offices are established for the transaction of all kinds of postal business wherever the population warrants. The post office is a complete entity in rural districts and smaller urban centres. In the larger towns and cities there is a main post office and, if size of population calls for extra services, postal stations and sub-post offices are operated. Letter-carrier delivery is given in 127 cities and towns by over 5,100 uniformed letter carriers.

Postal stations are maintained on the same lines as the main post offices and perform full postal business, including general-delivery service and a post-office lock-box delivery as well as letter-carrier delivery service, accommodating the surrounding district.

Because of its widespread facilities, it has been found expedient for the Post Office to assist other Government Departments in the performance of certain tasks that include the sale of unemployment insurance stamps, the collection of Government annuity payments, the distribution of income-tax forms, Civil Service application forms and the display of Government posters.

Organization.—The Canada Post Office is divided into two parts: the Operating Service and Headquarters at Ottawa. The Operating Service is organized into five regions each under a Regional Director, who is the field representative of the Deputy Postmaster General. There are four Headquarters Branches, viz., Administration, Operations, Transportation and Financial, each under a Director.

Operating and secretarial features in the operating field affecting the post offices and local mail services in urban centres are taken care of by the local Postmaster. District office functions relating to services in the district, and all inspections and investigations, are under District Post Office Inspectors situated at strategic centres across the country.

Postal service is provided in Canada from Newfoundland to the west coast of Vancouver Island and from Pelee Island, Ont. (the most southerly point of Canada), to settlements and missions far within the Arctic.

Canada's air-mail system provides several flights daily from east to west and constitutes a great air artery from St. John's, N'f'ld., to Victoria, B.C., intersected by branch lines and connecting lines radiating to every quarter and linking up with the United States air-mail system. Since July 1, 1948, all first-class domestic mail up to and including one ounce in weight has been carried by air between one Canadian point and another, whenever delivery can thus be expedited. Air-stage service provides the sole means of communication with the outside for many areas in the hinterland. There were approximately 29,500 miles of air-mail and air-stage routes in Canada in 1953 as compared with 24,000 miles in 1952.

The principal means of mail transportation is the railway mail service which operates along about 40,000 miles of track and, in 1953, covered over 47,380,000 of track mileage. The railway mail service employed a staff of 1,332 mail clerks in 1953. This staff prepares the mails for prompt delivery and dispatch while *en route* in the railway mail cars. Like its air-mail service, Canada's railway mail service is one of the most extensive in the world.

The rural mail delivery organization provides direct postal facilities to residents in the rural sections of the country: approximately 5,240 rural mail routes were in operation in 1953, involving about 120,950 route miles and serving 404,277 rural mail boxes. Rural mail routes are generally circular in pattern and average about 23 miles in length. About 4,700 side services were in operation in 1953 to transport mail between post offices, railway stations, steamer wharves and air ports, while 3,050 stage services operated to convey mail to and from post offices not located on railway lines. In 1953, there were approximately 500 city mail services, transporting mails to and from post offices, postal stations and sub-post offices, collecting mails from street letter-boxes and delivering parcel post. In all, about 13,450 land mail service couriers are employed and travel in the neighbourhood of 50,000,000 miles annually. Land mail services are performed under a contract system, the contracts being awarded to the person submitting the lowest tender and competent to provide all the requisite equipment.

The increase in postal business is one of the impressive features of Canada's economic development during the past ten years. From $55,477,159 in 1942, gross revenue has increased year by year to $129,388,365 by Mar. 31, 1953, an all-time high.

Section 1.—Post Office Statistics

Tables 1, 2 and 3 give the numbers of post offices in operation together with revenue and expenditure for the past few years.

1.—Post Offices in Operation, by Province, as at Mar. 31, 1950-53

Province or Territory	1950	1951	1952	1953
	No.	No.	No.	No.
Newfoundland	553	573	592	605
Prince Edward Island	105	105	105	105
Nova Scotia	1,315	1,278	1,245	1,215
New Brunswick	909	874	837	834
Quebec	2,560	2,545	2,530	2,515
Ontario	2,586	2,602	2,598	2,612
Manitoba	809	823	823	829
Saskatchewan	1,404	1,407	1,397	1,384
Alberta	1,184	1,179	1,179	1,156
British Columbia	952	958	955	955
Yukon Territory	15	15	13	13
Northwest Territories	26	31	31	31
Canada	**12,418**	**12,390**	**12,305**	**12,254**

2.—Revenue and Expenditure of the Post Office Department, Years Ended Mar. 31, 1944-53

NOTE.—Figures for 1868-1943 will be found in the corresponding table of previous Year Books beginning with the 1911 edition. Figures for Newfoundland are included from 1950.

Year	Gross Revenue	Net Revenue[1]	Expenditure[2]	Surplus (+) or Deficit (−)
	$	$	$	$
1944	73,004,399	61,070,919	48,485,009	+12,585,910
1945	79,533,903	66,071,815	54,629,281	+11,442,534
1946	83,763,007	68,635,559	57,729,646	+10,905,913
1947	86,400,951	72,986,624	64,213,050	+8,773,574
1948	91,613,618	77,770,967	67,943,476	+9,827,491
1949	95,957,469	80,618,401	77,642,621	+2,975,780
1950	101,277,435	84,528,655	82,639,741	+1,888,914
1951	105,545,456	90,454,678	91,781,466	−1,326,788
1952	122,266,675	104,622,208	97,973,263	+6,648,945
1953	129,388,365	112,024,245	105,553,191	+6,471,054

[1] Gross revenue less commissions and allowances to postmasters and other smaller items. [2] Excludes rental of service staff and staff post offices.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1952 and 1953

NOTE.—The post offices shown in this table do not include those established at military camps. Money order commissions are not included in gross postal revenue. Provincial totals of postal revenue include post offices not separately listed.

Province and Post Office	1952	1953	Province and Post Office	1952	1953
Newfoundland	$	$	**Newfoundland**—concl.	$	$
Botwood	[1]	10,131	Grand Falls	21,419	25,305
Buchans	10,045	10,694	St. John's	549,975	607,597
Channel	[1]	10,431	Wabana	[1]	15,245
Corner Brook	66,231	71,883			
Gander	28,999	36,092	**Totals, Newfoundland**	1,109,669	1,263,414
Goose Airport	16,761	25,192			
Goose Airport Sub-Office A	[1]	10,677			

[1] Less than $10,000.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1952 and 1953—continued

Province and Post Office	1952	1953
	$	$
P. E. Island		
Charlottetown	204,871	212,805
Montague	11,075	11,328
Summerside	67,567	70,335
Totals, P. E. Island	**469,447**	**424,442**
Nova Scotia		
Amherst	74,560	76,779
Annapolis Royal	13,574	13,886
Antigonish	47,177	48,723
Armdale	19,783	21,345
Bedford	11,125	11,978
Berwick	12,056	11,582
Bridgetown	16,703	16,825
Bridgewater	43,144	43,972
Chester	10,595	10,929
Cornwallis	14,463	17,473
Digby	30,930	29,119
Glace Bay	59,661	65,683
Halifax	1,876,993	2,031,385
Hantsport	10,397	10,439
Inverness	10,710	10,720
Kentville	60,536	64,234
Kingston	16,844	20,619
Liverpool	31,944	32,102
Lunenburg	25,406	26,361
Middleton	22,887	24,421
New Glasgow	94,267	95,137
New Waterford	21,700	23,815
North Sydney	34,788	38,227
Parrsboro	12,711	12,504
Pictou	25,483	26,519
Shelburne	16,479	16,616
Springhill	23,785	24,562
Stellarton	24,147	24,997
Sydney	215,033	228,123
Sydney Mines	19,245	21,094
Truro	135,951	145,428
Westville	11,456	11,647
Windsor	35,393	35,532
Wolfville	26,937	27,320
Yarmouth	66,107	68,406
Totals, Nova Scotia	**3,904,511**	**4,149,099**
New Brunswick		
Bathurst	45,153	47,089
Campbellton	56,918	59,936
Chatham	32,306	31,466
Dalhousie	22,049	22,945
Edmundston	47,064	52,218
Fredericton	290,145	286,565
Grand Falls	20,538	21,538
Hartland	11,637	11,727
Harvey Station	[1]	11,300
Minto	10,088	[1]
Moncton	1,225,556	1,225,258
Newcastle	38,197	35,547
Perth	10,488	10,476
Plaster Rock	10,529	10,942
Saint John	679,709	711,109
St. Andrews	21,984	23,485
St. George	10,054	10,521
New Brunswick—concl.		
St. Stephen	36,779	38,812
Sackville	43,759	45,226
Shediac	10,677	11,582
Sussex	31,230	31,547
Woodstock	42,986	41,600
Totals, New Brunswick	**3,283,426**	**3,335,647**
Quebec		
Acton Vale	11,762	12,172
Amos	40,518	41,873
Amqui	19,770	19,097
Arvida	38,931	43,081
Asbestos	27,727	30,199
Aylmer East	11,274	10,778
Bagotville	16,696	18,675
Baie Comeau	30,437	32,622
Baie St. Paul	11,653	12,242
Basilique Ste. Anne	50,850	40,738
Beauceville East	13,831	15,689
Beauharnois	26,845	27,527
Bedford	18,766	17,454
Berthierville	16,467	17,037
Bourlamaque	15,694	14,116
Brownsburg	10,977	11,418
Buckingham	23,747	24,160
Cap-de-la-Madeleine	72,123	75,302
Chambly	12,351	12,997
Chandler	15,527	18,199
Chicoutimi	152,501	167,465
Coaticook	26,104	25,648
Cookshire	[1]	10,036
Cowansville	30,491	34,348
Danville	12,951	13,013
Dolbeau	26,647	25,115
Donnacona	13,644	13,159
Dorion-Vaudreuil	13,510	14,652
Drummondville	131,248	136,067
East Angus	13,362	12,976
Farnham	28,881	29,839
Gardenvale	49,181	81,576
Gaspe	22,111	26,201
Gatineau	20,710	22,595
Granby	141,550	152,090
Grand'Mère	44,810	47,042
Hull	139,794	139,933
Huntingdon	23,191	23,874
Iberville	17,374	18,689
Joliette	84,146	89,318
Jonquière-Kenogami	75,001	76,397
Knowlton	11,139	11,611
Lachute	29,476	30,498
Lachute Mills	11,556	11,948
Lac Mégantic	28,761	30,792
Lacolle	11,220	14,048
La Malbaie	17,247	20,830
Laprairie	10,982	11,577
La Sarre	27,244	26,867
L'Assomption	12,577	14,140
La Tuque	38,446	41,028
Lennoxville	27,195	28,166
Lévis	126,850	131,651
Loretteville	13,404	15,154
Louiseville	15,900	15,458
Magog	44,067	48,758
Malartic	22,592	24,508
Maniwaki	22,158	22,356
Marieville	13,795	15,036
Matane	37,316	39,629

[1] Less than $10,000.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1952 and 1953—continued

Province and Post Office	1952	1953	Province and Post Office	1952	1953
Quebec—concluded	$	$	**Ontario**	$	$
Mont Joli	32,922	34,056	Acton	21,063	22,342
Mont Laurier	24,190	27,758	Agincourt	12,539	14,706
Montmagny	38,780	40,867	Ajax	24,756	28,665
Montmorency	[1]	11,152	Aldershot	[1]	10,082
Montreal	15,722,772	16,719,623	Alexandria	16,153	16,101
Neuville	18,816	23,359	Alliston	15,131	15,986
New Carlisle	13,097	14,113	Almonte	15,871	15,989
Nicolet	29,274	42,438	Amherstburg	29,290	29,595
Noranda	65,074	62,290	Ancaster	[1]	10,497
Parent	12,253	11,169	Arnprior	33,007	35,284
Plessisville	20,598	21,415	Atikokan	14,904	17,084
Plessisville Station	14,188	13,696	Aurora	33,315	36,030
Port Alfred	14,403	14,980	Aylmer West	40,743	39,697
Princeville	10,218	10,874	Bancroft	15,179	16,335
Quebec	2,482,655	2,645,036	Barrie	121,731	133,624
Rawdon	10,441	10,891	Batawa	17,163	20,150
Richmond	19,134	20,573	Beamsville	19,250	21,537
Rigaud	10,726	10,465	Beaverton	10,204	10,975
Rimouski	107,210	115,150	Belleville	215,451	227,934
Rivière-du-Loup	51,483	51,442	Billings Bridge (Ottawa)	12,576	13,824
Roberval	26,494	31,522	Blenheim	25,654	27,792
Rock Island	31,816	30,170	Blind River	15,658	14,217
Rouyn	64,461	69,196	Bowmanville	40,567	42,637
Ste. Agathe-des-Monts	37,615	38,745	Bracebridge	34,729	33,676
Ste. Anne de Beaupré	20,736	12,744	Bradford	15,300	16,852
Ste. Anne-de-Bellevue	19,267	20,710	Brampton	90,658	106,108
Ste. Anne-de-la-Pocatière	16,844	17,171	Brantford	417,440	433,187
St. Eustache	13,431	14,805	Brighton	15,134	16,201
St. Félicien	16,762	19,085	Brockville	125,038	133,555
St. Gabriel-de-Brandon	11,081	11,633	Burks Falls	[1]	10,173
St. Georges-Ouest	[1]	10,138	Burlington	63,872	85,166
St. Hubert	[1]	14,891	Caledonia	12,815	14,159
St. Hyacinthe	129,764	138,890	Campbellford	23,169	23,434
St. Jean	117,170	125,189	Capreol	[1]	10,332
St. Jean-Port-Joli	[1]	10,537	Cardinal	13,933	13,411
St. Jérôme	69,530	71,395	Carleton Place	28,624	30,017
St. Joseph-d'Alma	34,877	39,439	Chalk River	[1]	10,879
St. Joseph-de-Beauce	12,812	12,808	Chapleau	23,153	23,450
St. Joseph-de-Sorel	10,922	[2]	Chatham	247,415	253,419
St. Jovite	10,406	10,381	Chesley	13,923	14,032
Ste. Marie-Beauce	18,151	22,434	Chesterville	10,111	10,608
St. Pascal	12,239	12,719	Chippawa	10,642	12,183
St. Raymond	13,536	13,435	Clarkson	[1]	10,479
Ste. Rose	12,162	14,663	Cliffcrest	11,143	13,600
Ste. Thérèse-de-Blainville	33,287	37,555	Clinton	33,056	30,243
St. Tite	10,985	12,304	Cobalt	16,926	18,099
St. Vincent-de-Paul	10,369	11,052	Cobourg	64,279	68,829
St. Zacharie	10,975	[1]	Cochrane	33,091	33,144
Sanmaur	10,822	[1]	Collingwood	44,414	46,522
Senneterre	14,810	14,541	Cooksville	24,095	29,317
Seven Islands	25,293	47,625	Copper Cliff	34,565	32,195
Shawinigan Falls	110,975	115,230	Cornwall	162,495	169,819
Shawville	12,061	12,489	Deep River	13,255	15,407
Sherbrooke	405,340	428,623	Delhi	26,911	27,383
Sorel	59,606	72,233	Dresden	15,318	15,906
Sutton	11,684	11,642	Dryden	31,631	34,352
Terrebonne	14,218	16,982	Dundas	50,676	55,053
Thetford Mines	72,346	75,872	Dunnville	43,917	45,580
Three Rivers	250,730	276,687	Durham	13,843	15,165
Timiskaming Station	15,839	14,854	Eganville	12,588	14,474
Trois-Pistoles	16,781	17,061	Elmira	20,824	21,035
Val d'Or	59,207	64,048	Elora	10,951	11,229
Valleyfield	77,362	75,929	Englehart	12,647	13,083
Victoriaville	72,964	74,603	Espanola	21,769	19,572
Ville Marie	10,878	11,107	Essex	25,498	26,560
Ville St. Georges	26,603	28,011	Exeter	20,667	20,647
Warwick	11,349	10,914	Fenelon Falls	12,254	12,626
Waterloo	26,995	25,806	Fergus	38,085	38,018
Windsor	12,685	12,868	Forest	15,906	16,191
			Fort Erie	75,556	86,645
Totals, Quebec	**25,715,448**	**27,218,926**	Fort Frances	55,967	56,341
			Fort William	286,423	306,788

[1] Less than $10,000.

[2] Closed Sept. 20, 1952.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1952 and 1953—continued

Province and Post Office	1952	1953	Province and Post Office	1952	1953
Ontario—continued	$	$	**Ontario**—continued	$	$
Freeman	10,652[2]	—	Oshawa	402,209	478,646
Galt	180,650	191,892	Ottawa	2,458,658	2,641,906
Gananoque	42,444	42,145	Owen Sound	166,567	173,386
Georgetown	69,912	70,862	Palmerston	13,609	12,888
Geraldton	24,156	23,520	Paris	84,448	44,000
Goderich	37,527	39,490	Parry Sound	41,532	43,795
Gore Bay	10,303	10,571	Pembroke	88,352	92,016
Gravenhurst	27,885	29,664	Penetanguishene	18,503	18,785
Grimsby	31,512	35,318	Perth	50,877	50,530
Guelph	268,222	277,365	Peterborough	364,491	368,775
Hagersville	18,886	19,674	Petrolia	20,780	19,960
Haileybury	20,192	20,595	Pickering	13,080	13,026
Haliburton	12,409	13,093	Picton	52,092	53,115
Hamilton	2,044,761	2,148,929	Point Edward	11,694	13,557
Hanover	29,921	30,332	Port Arthur	247,428	257,218
Harriston	13,223	13,687	Port Colborne	71,615	75,698
Harrow	18,254	18,509	Port Credit	54,143	61,625
Hawkesbury	27,950	28,897	Port Dalhousie	16,291	16,726
Hearst	24,698	24,430	Port Dover	18,380	19,301
Hespeler	24,867	25,274	Port Elgin	13,452	13,800
Highland Creek	[1]	10,795	Port Hope	58,338	61,406
Hornepayne	10,575	10,572	Port Perry	12,154	12,914
Huntsville	45,101	46,284	Prescott	28,711	33,274
Ingersoll	49,825	48,606	Preston	69,126	73,257
Iroquois	10,704	10,360	Rainy River	10,133	10,434
Iroquois Falls	13,887	13,489	Red Lake	13,196	13,499
Jamestown	[1]	13,514	Renfrew	55,200	55,443
Kapuskasing	42,656	40,562	Richmond Hill	21,590	23,411
Kemptville	16,385	17,006	Ridgetown	18,695	18,513
Kenora	74,071	78,446	Ridgeway	12,604	13,204
Kincardine	21,659	21,476	Rodney	10,594	10,218
Kingston	367,610	393,685	St. Catharines	373,317	409,174
Kingsville	28,044	28,597	St. Mary's	32,233	33,007
Kirkland Lake	103,643	99,916	St. Thomas	160,513	175,747
Kitchener	460,993	497,227	Sarnia	239,862	258,933
Lakefield	14,067	14,379	Sault Ste. Marie	219,371	241,702
Lakeview	13,195	17,048	Scarborough	16,541	21,036
Lambeth	10,116	12,545	Scarborough Bluffs	[1]	11,252
Leamington	64,225	73,658	Schreiber	10,380	10,372
Lindsay	87,988	87,513	Schumacher	20,146	19,136
Listowel	26,881	27,342	Seaforth	20,836	19,632
Little Current	14,165	14,756	Shelburne	11,241	11,677
London	1,586,787	1,614,550	Simcoe	97,728	97,086
Lucknow	[1]	10,057	Sioux Lookout	25,381	24,562
Madoc	11,939	12,602	Smiths Falls	57,592	58,711
Malton	22,295	27,817	Smooth Rock Falls	11,715	11,153
Maple	10,214	11,092	Southampton	12,046	12,100
Marathon	15,362	16,651	South Porcupine	25,253	25,876
Markham	11,755	12,400	Stayner	10,630	11,308
Matheson	10,608	10,679	Stoney Creek	16,914	19,726
Mattawa	16,028	14,856	Stouffville	15,410	16,275
Meaford	22,108	23,992	Stratford	157,750	163,895
Midland	47,935	50,861	Strathroy	31,425	32,294
Milton West	25,460	26,638	Streetsville	16,147	18,056
Minden	10,215	10,154	Sturgeon Falls	21,945	21,916
Mitchell	12,768	13,068	Sudbury	340,555	371,172
Morrisburg	15,760	15,725	Tecumseh	12,105	13,689
Mount Forest	17,599	18,358	Thamesville	10,468	11,403
Napanee	36,488	37,442	Thessalon	13,084	12,346
New Hamburg	12,078	13,314	Thornhill	[1]	11,562
New Liskeard	63,329	65,474	Thorold	58,929	64,587
Newmarket	46,458	51,849	Tilbury	21,185	22,898
Newton Brook	11,276	16,179	Tillsonburg	51,197	51,893
Niagara Falls	397,518	427,684	Timmins	149,961	150,480
Niagara-on-the-Lake	31,924	38,181	Toronto	23,883,460	25,065,689
Nipigon	12,424	12,908	Trenton	68,546	72,643
North Bay	183,579	195,429	Tweed	16,562	17,512
Norwich	13,268	12,955	Uxbridge	14,970	16,437
Oakville	104,769	123,916	Walkerton	26,545	27,350
Orangeville	29,884	31,218	Wallaceburg	57,212	63,899
Orillia	116,583	120,877	Waterdown	[1]	10,506

[1] Less than $10,000.

[2] Closed Jan. 29, 1952.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1952 and 1953—continued

Province and Post Office	1952	1953
	$	$
Ontario—concluded		
Waterford	13,256	14,026
Waterloo	169,985	180,442
Watford	12,181	12,387
Welland	185,194	193,310
Westboro (Ottawa)	31,997	31,915
West Hill	14,426	15,933
Whitby	34,391	37,248
Wiarton	14,705	15,196
Willowdale	140,389	114,576
Winchester	12,566	12,994
Windsor	1,223,835	1,306,839
Wingham	23,213	23,599
Woodbridge	12,746	14,604
Woodstock	162,926	162,622
Totals, Ontario	**46,518,156**	**48,823,629**
Manitoba		
Altona	13,420	13,679
Beauséjour	10,104	11,192
Boissevain	12,425	12,101
Brandon	217,122	229,612
Carman	17,275	17,688
Dauphin	52,266	56,875
Flin Flon	53,136	55,952
Gimli	16,597	15,588
Killarney	12,726	12,843
Minnedosa	18,195	18,808
Morden	15,446	15,263
Morris	11,321	10,606
Neepawa	27,214	28,000
Pine Falls	16,183	13,204
Portage la Prairie	74,069	85,278
Roblin	13,063	13,397
Russell	12,699	12,782
Selkirk	28,848	31,055
Sifton	[1]	10,502
Souris	13,836	13,556
Steinbach	17,141	17,767
Swan River	25,075	25,200
The Pas	27,653	27,620
Transcona	16,944	17,986
Virden	19,127	20,576
Wawanesa	10,975	11,676
Winkler	11,729	11,615
Winnipeg	6,713,897	6,810,638
Totals, Manitoba	**8,355,009**	**8,483,456**
Saskatchewan		
Assiniboia	23,862	24,724
Biggar	17,378	17,307
Big River	10,316	[1]
Broadview	11,653	11,251
Canora	17,256	17,166
Carlyle	10,658	10,844
Estevan	35,667	35,946
Eston	11,940	12,766
Foam Lake	11,102	11,178
Fort San	10,068	10,043
Gravelbourg	12,866	14,006
Grenfell	[1]	10,642
Hudson Bay	11,777	12,087
Humboldt	29,645	30,349
Indian Head	14,181	14,686
Kamsack	17,739	17,891
Kerrobert	11,682	11,416
Kindersley	18,880	20,975
Lloydminster	43,942	49,502

Province and Post Office	1952	1953
	$	$
Saskatchewan—concl.		
Maple Creek	18,641	20,050
Meadow Lake	17,033	17,572
Melfort	35,600	36,685
Melville	34,239	34,566
Moose Jaw	229,378	239,703
Moosomin	15,498	15,955
Nipawin	25,384	24,897
North Battleford	93,347	95,307
Outlook	[1]	10,277
Prince Albert	163,137	173,170
Regina	2,047,476	2,118,312
Rosetown	23,569	24,185
Rosthern	12,537	13,842
Saskatoon	789,314	856,356
Shaunavon	18,611	20,513
Shellbrook	10,543	10,864
Swift Current	83,131	88,199
Tisdale	29,698	31,045
Unity	14,230	17,371
Wadena	15,013	15,388
Watrous	11,639	11,855
Weyburn	52,722	53,598
Wilkie	15,568	16,622
Wynyard	12,920	13,276
Yorkton	92,425	97,084
Totals, Saskatchewan	**5,912,930**	**6,106,509**
Alberta		
Athabasca	12,468	13,130
Banff	44,179	53,821
Barrhead	15,918	16,086
Blairmore	15,897	15,220
Bonnyville	11,509	13,119
Bowden	11,241	12,013
Brooks	25,866	26,742
Calgary	1,896,797	2,101,012
Camrose	45,639	52,571
Cardston	20,359	20,644
Claresholm	19,667	26,405
Coaldale	10,114	10,470
Coleman	16,665	17,549
Didsbury	15,279	14,779
Drumheller	44,337	45,599
Edmonton	2,243,434	2,517,995
Edson	21,320	22,266
Fairview	13,057	13,470
Fort Macleod	17,481	18,313
Grande Prairie	44,762	50,716
Hanna	20,485	21,119
High Prairie	13,663	14,199
High River	21,214	22,661
Innisfail	20,078	21,118
Jasper	20,701	26,584
Lacombe	30,470	32,514
Leduc	17,327	17,231
Lethbridge	264,534	287,433
Medicine Hat	119,321	128,284
Nanton	10,346	11,358
North Edmonton	13,386	15,511
Olds	23,918	25,066
Peace River	33,141	34,195
Pincher Creek	17,470	17,814
Ponoka	28,989	30,957
Provost	[1]	10,415
Raymond	14,993	14,644
Red Deer	89,617	103,688
Rocky Mountain House	15,170	15,688
St. Paul	16,777	19,079
Sedgewick	[1]	10,125

[1] Less than $10,000.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1952 and 1953—concluded

Province and Post Office	1952	1953
	$	$
Alberta—concluded		
Stettler	30,177	33,522
Taber	25,029	26,173
Three Hills	33,207	33,595
Vegreville	21,574	22,873
Vermilion	25,227	26,110
Viking	10,143	10,308
Vulcan	13,941	15,483
Wainwright	22,908	27,823
Westlock	17,799	19,499
Wetaskiwin	36,001	39,826
Totals, Alberta	**6,896,147**	**7,530,982**
British Columbia		
Abbotsford	43,416	44,303
Alberni	19,800	21,222
Aldergrove	10,613	12,045
Alert Bay	10,302	[1]
Armstrong	16,405	16,331
Ashcroft	10,227	10,394
Bralorne	10,761	11,429
Burns Lake	17,981	23,140
Campbell River	27,248	32,965
Castlegar	11,028	12, 50
Chemainus	16,913	16,729
Chilliwack	89,540	93,885
Cloverdale	36,455	39,524
Courtenay	46,929	56,831
Cranbrook	47,532	49,708
Creston	26,577	27,141
Cumberland	10,661	10,249
Dawson Creek	39,866	44,464
Duncan	72,131	72,928
Enderby	11,154	11,714
Fernie	23,270	25,330
Fort St. John	14,664	18,022
Ganges	11,403	11,773
Gibsons	10,883	11,794
Golden	[1]	10,978
Grand Forks	18,370	18,839
Haney	32,409	37,371
Hope	16,593	17,716
Kamloops	128,645	136,046
Kelowna	133,874	137,945
Kemano	—	29,613[2]
Kimberley	35,939	39,292
Kitimat	—	13,583[3]
Ladner	24,509	27,224
Ladysmith	19,326	19,540
Lake Cowichan	10,732	11,213
Langley Prairie	39,310	41,428
Merritt	12,220	12,054
Mission City	48,737	50,480
Nanaimo	135,092	139,300
Nelson	107,636	117,736
New Westminster	405,614	443,845
Ocean Falls	20,495	21,646
Oliver	25,391	26,412
Osoyoos	12,066	12,635
Parksville	12,749	13,381
Penticton	97,096	106,934
Port Alberni	67,719	69,530
Port Alice	10,085	11,223
Port Coquitlam	16,169	18,026
Powell River	30,331	33,099
Prince George	87,056	105,898
Prince Rupert	101,578	110,643
Princeton	18,583	19,191
Qualicum Beach	13,303	14,699
Quesnel	32,592	47,493
Revelstoke	28,893	30,816
Rossland	23,173	24,315
Royal Oak	[1]	10,020
Saanichton	12,501	12,012
Salmo	[1]	10,188
Salmon Arm	29,310	30,434
Sardis	13,539	14,410
Sidney	22,619	21,562
Smithers	19,276	20,935
Steveston	13,546	15,488
Terrace	16,825	20,421
Trail	124,696	140,764
Vancouver	6,172,493	6,554,059
Vancouver (AMF)[4]	23,896	21,951
Vanderhoof	12,270	13,097
Vernon	104,172	109,175
Victoria	1,285,306	1,362,365
West Summerland	17,081	17,709
Westview	17,446	19,957
White Rock	24,782	28,758
Williams Lake	20,635	23,739
Totals, British Columbia	**11,295,281**	**12,078,213**
Yukon Territory		
Dawson	15,113	16,007
Whitehorse	48,776	55,307
Totals, Yukon Territory	**80,442**	**92,265**
Northwest Territories		
Yellowknife	36,598	40,511
Totals, N.W.T.	**54,187**	**61,340**
Summary		
Newfoundland	1,109,669	1,263,414
Prince Edward Island	409,447	424,442
Nova Scotia	3,904,511	4,149,099
New Brunswick	3,283,426	3,335,647
Quebec	25,715,448	27,218,926
Ontario	46,518,156	48,823,629
Manitoba	8,355,009	8,483,456
Saskatchewan	5,912,930	6,106,509
Alberta	6,896,147	7,530,982
British Columbia	11,295,281	12,078,213
Yukon and N.W.T.	134,629	153,605
Canada	**113,534,651**	**119,567,922**
P.C. of all Postal Revenue	92·9	92·4

[1] Less than $10,000. [2] Opened Apr. 21, 1952. [3] Opened May 8, 1952. [4] Air mail field.

Postage.—The gross revenue receipts shown in Table 2 are received mainly from postage, either in the form of postage stamps and stamped stationery, or postage meter and postage register machine impressions. Some postage is also paid in cash without stamps, stamped stationery or meter and register impressions. The gross value of the postage stamps and stamped stationery sold during each of the latest five fiscal years was: $56,317,570 in 1948-49, $57,249,306 in 1949-50, $57,178,573 in 1950-51, $65,093,099 in 1951-52 and $67,182,548 in 1952-53. Receipts from postage meter or postage register impressions and postage paid in cash by other means were as follows: $33,315,148 in 1948-49, $36,292,710 in 1949-50, $39,979,297 in 1950-51, $48,945,565 in 1951-52 and $52,733,682 in 1952-53.

Section 2.—Auxiliary Postal Services

Auxiliary postal services include the issuing of money orders and the operation of the Post Office Savings Bank.

Table 4 shows the amount of money-order business conducted by the Postal Service in recent years. A table showing the financial business of the Post Office Savings Bank will be found in the Chapter on Currency and Banking, p. 1144.

4.—Operations of the Money-Order System, Years Ended Mar. 31, 1944-53

NOTE.—Figures for 1868-1943 will be found in the corresponding table of previous Year Books beginning with the 1911 edition.

Year	Money-Order Offices in Canada	Money-Orders Issued in Canada	Value of Orders Issued in Canada	Value Payable in—		Value of Orders Issued in Other Countries, Payable in Canada
				Canada	Other Countries	
	No.	No.	$	$	$	$
1944	7,362	19,554,760	262,297,331	256,630,949	5,666,382	8,440,436
1945	7,406	20,742,643	281,890,291	276,704,712	5,185,579	8,467,849
1946	7,377	22,031,756	290,933,503	285,574,174	5,359,329	8,732,635
1947	7,416	25,184,900	329,557,703	321,728,205	7,829,498	9,150,238
1948	7,546	27,705,523	370,232,987	359,633,658	10,599,329	7,722,585
1949	7,614	28,851,065	415,703,754	409,167,635	6,536,119	7,410,014
1950	11,252	38,567,500	479,520,987	473,364,799	6,156,187	6,697,818
1951	11,387	40,415,207	511,915,621	505,935,524	5,980,096	3,920,218
1952	11,320	41,782,109	576,614,652	567,187,152	9,427,500	3,019,522
1953	11,288	43,067,940	616,933,544	599,955,965	16,977,579	4,982,551

PART X.—THE PRESS

The Canadian Press.—The Canadian Press is the co-operative news-gathering association through which the daily newspapers receive their basic world and Canadian (other than local) news reports.

The Canadian news is essentially an exchange between regions, provided by the papers, edited by CP staffs and transmitted over CP wires. This is supplemented by direct CP staff reporting, particularly at Ottawa where Parliament is covered directly by CP men for the association's 92 members. World news is obtained from Reuters and the Associated Press, supplemented by a bureau at London, England, and by another at New York, U.S.A., where Canadian editors route AP, Reuters and CP copy into Canada.

Two recent developments in connection with CP news reporting are noteworthy:—

(1) *Service in French.*—Since September 1951, CP has been serving French-language members in the French language. A bilingual staff at Montreal translates, minute-by-minute, in-coming world and Canadian news and relays it over teletypes (equipped with accents) to members at Chicoutimi, Quebec, Three Rivers, Granby, Sherbrooke and Montreal, Que., and Ottawa, Ont.—11 in all. A twelfth French-language member, at Moncton, N.B., is to be added in 1954.

(2) *Teletypesetter.*—Early in 1952, CP began transmitting to some of its members by teletypesetter. Under this system, news sent from a central point may be automatically cast into type simultaneously at several points through use of coded tape produced at the receiving end by the sending operation. The copy also appears on the teletypes in typewritten form.

By late 1953, CP's news report was being made available to 69 of its 92 members by transmission methods making possible this automatic type-setting facility. Of these, 51 were setting their type from teletypesetter tape; the others continuing to set manually from the teletype copy.

Press Statistics.—The following tables are based on data obtained from *Canadian Advertising.* One serious difficulty has been encountered in connection with the compilation of circulation figures. In the case of daily newspapers, reliable circulation figures are relatively easy to obtain since, in their own best interest, such papers qualify for and subscribe to the Audit Bureau of Circulation requirements. In such cases, A.B.C. 'net paid' figures were used. However, it is difficult to obtain reliable circulation figures for many weekly newspapers that do not subscribe to the Audit Bureau. In these cases, total circulation (paid and free) was taken where such figures were supported by sworn statements or some other reliable record.

In compiling magazine circulation, total net paid figures, as reported by publishers to the Audit Bureau (including bulk sales), were used. In the relatively few cases where such figures were not available, publishers' minimum claims or sworn statements were accepted.

Daily Newspapers.—Daily newspapers are published in Canada in three main language groups: English, French and foreign. French daily newspapers have, as would be expected, a wide circulation in the Province of Quebec and some of the largest of these papers have been established in that Province for over 60 years. Ten of the 12 French-language newspapers published in 1952 were established in Quebec Province; the other two were in the Provinces of Ontario and New Brunswick.

Many of the daily newspapers extend their influence over the rural areas surrounding the cities where they are published. In this respect, they supplement the weekly newspapers which feature essentially local news and serve the smaller cities, towns and rural areas only.

The larger metropolitan dailies, especially those of Montreal, Que., and Toronto, Ont., have built up considerable circulation in areas outside their own cities. This is especially true since rapid freight transport by highway and latterly by air has become more common. For instance, Montreal and Toronto morning papers (printed late the previous evening) are now transported to Ottawa and delivered in the morning in competition with the local morning papers. Since these large metropolitan dailies command exclusive feature services that the dailies of the smaller cities cannot afford, they are thus placed in an advantageous position in competition with the local dailies.

*Weekly Newspapers.**—Weekly newspapers circulate within relatively restricted areas around their publication centres. These cater to a limited local interest but, within the areas they serve, they exercise an important influence. Canada is well served by foreign-language weekly newspapers; in 1952, they had a stated circulation of 242,382 copies, among which Ukrainian papers had a circulation of 62,743 copies, German 32,484, Yiddish 28,465, and Polish 22,372 copies.

* *Includes a very few semi- and tri-weekly newspapers.*

1.—Estimated Numbers and Circulations[1] of reporting Daily and Weekly[2] English-Language Newspapers, by Province, 1950-52

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Province or Territory	1950				1951				1952			
	Daily		Weekly		Daily		Weekly		Daily		Weekly	
	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation
N'f'ld	2	24,385	6	41,404	2	22,905	8	44,889	3	29,814	5	34,487
P. E. I.	2	18,321	2	6,624	2	18,713	1	3,541	2	19,044	1	3,541
N.S.	6	209,360	28	80,026	6	205,833	28	80,376	5	142,807	28	79,211
N.B.	3	72,277	16	45,457	3	71,913	16	45,398	3	72,829	16	46,849
Que.	5	256,917	27	508,061	5	260,835	27	429,881	5	273,153	28	316,527
Ont.	37	1,519,067	252	1,441,306	37	1,551,490	255	1,416,234	38	1,585,215	252	1,502,168
Man.	5	174,291	66	71,022	6	180,256	64	69,168	6	181,311	63	86,688
Sask.	4	89,360	135	138,194	4	90,839	151	149,238	4	90,826	151	162,177
Alta.	6	174,428	107	109,901	5	169,909	111	115,108	5	177,714	113	117,657
B.C.	11	375,032	74	173,671	11	367,723	75	171,827	11	389,188	76	181,623
Yukon and N.W.T.	—	—	3	2,550	—	—	3	2,850	—	—	3	3,050
Canada	**81**	**2,913,438**	**716**	**2,618,216**	**81**	**2,940,416**	**739**	**2,528,510**	**82**	**2,961,901**	**736**	**2,533,978**

[1] Circulation not reported in all cases. [2] Includes bi-weeklies, tri-weeklies and national week-end papers.

2.—Estimated Numbers and Circulations[1] of reporting Daily and Weekly[2] French-Language Newspapers, by Province, 1950-52

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Province	1950				1951				1952			
	Daily		Weekly		Daily		Weekly		Daily		Weekly	
	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation
N'f'ld	—	—	—	—	—	—	—	—	—	—	—	—
P. E. I.	—	—	—	—	—	—	—	—	—	—	—	—
N.S.	—	—	1	1,401	—	—	1	1,435	—	—	1	1,435
N.B.	1	6,696	1	4,332	1	7,041	1	4,000	1	9,178	1	4,000
Que.	11	582,433	106	1,396,396	11	581,151	110	1,421,417	10	572,729	118	1,487,131
Ont.	1	28,374	3	7,100	1	27,712	3	7,100	1	26,690	4	16,025
Man.	—	—	1	10,372	—	—	1	10,447	—	—	1	9,191
Sask.	—	—	1	914	—	—	1	1,302	—	—	1	1,202
Alta.	—	—	1	3,493	—	—	1	3,612	—	—	1	2,700
B.C.	—	—	—	—	—	—	—	—	—	—	—	—
Totals	**13**	**617,503**	**114**	**1,424,008**	**13**	**615,904**	**118**	**1,449,313**	**12**	**608,597**	**127**	**1,521,684**

[1] Circulation not reported in all cases. [2] Includes national week-end papers.

3.—Estimated Numbers and Net Paid Circulations of reporting Daily and Weekly English-Language Newspapers published in Urban Centres of 30,000 Population or Over, 1951 and 1952.

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Urban Centre	Census 1951	1951				1952			
	Households	Daily		Weekly		Daily		Weekly	
	No.	No.	Net Paid Circulation	No.	Net Paid Circulation	No.	Net Paid Circulation	No.	Net Paid Circulation
Brantford, Ont.	10,375	1	19,058	—	—	1	19,081	—	—
Calgary, Alta.	37,710	2	75,163	—	—	2	78,227	—	—
Edmonton, Alta.	42,925	1	76,296	4	10,050	1	80,207	3	7,425
Fort William, Ont.	9,300	1	13,035	—	—	1	13,322	—	—
Halifax, N.S.	18,710	2	166,229	—	—	1	103,339	—	—
Hamilton, Ont.	55,340	1	78,238	1	18,250	1	81,225	1	18,250
Kingston, Ont.	8,710	1	17,069	—	—	1	17,808	—	—
Kitchener, Ont.	11,570	1	25,842	—	—	1	27,015	—	—
London, Ont.	26,385	1	80,188	—	—	1	84,200	—	—
Montreal, Que.	247,485	3	246,560	7	344,172[1]	3	259,969	7	225,372[1]
Oshawa, Ont.	11,225	1	10,918	—	—	1	10,903	—	—
Ottawa, Ont.	48,965	2	114,142	—	—	2	117,796	—	—
Peterborough, Ont.	10,020	1	15,649	1	6,401	1	15,985	1	6,046
Port Arthur, Ont.	8,425	1	11,412	—	—	1	11,435	—	—
Quebec, Que.	34,970	1	4,959	—	—	1	5,099	—	—
Regina, Sask.	19,160	1	43,156	1	2,487	1	42,647	1	2,487
St. Catharines, Ont.	10,380	1	18,760	—	—	1	19,731	—	—
St. John's, N'f'ld.	10,570	2	22,905	2	29,372[2]	2	24,939	2	28,320[2]
Saint John, N.B.	13,180	1	42,724	1	5,500	1	43,339	1	6,300
Sarnia, Ont.	9,380	1	11,359	—	—	1	12,196	—	—
Saskatoon, Sask.	14,980	1	33,512	—	—	1	33,623	—	—
Sault Ste. Marie, Ont.	7,855	1	11,704	—	—	1	12,205	—	—
Sherbrooke, Que.	11,545	1	9,316	1	3,400	1	8,085	1	3,400
Sudbury, Ont.	9,450	1	18,277	—	—	1	19,963	—	—
Sydney, N.S.	6,325	1	26,677	—	—	1	26,603	—	—
Toronto, Ont.	157,175	4	878,904	5	917,515[3]	4	890,237	5	993,442[3]
Three Rivers, Que.	9,530	—	—	1	3,889	—	—	1	3,889
Vancouver, B.C.	101,330	3	295,543	2	7,750	3	312,983	2	7,750
Verdun, Que.	19,805	—	—	2	32,477[4]	—	—	2	32,063[4]
Victoria, B.C.	15,790	2	45,761	1	30,602[5]	2	47,415	1	31,441[5]
Windsor, Ont.	31,815	1	69,542	—	—	1	71,438	—	—
Winnipeg, Man.	64,630	2	169,358	—	—	2	169,652	—	—

[1] Includes 2 national week-end, 2 bilingual and 1 Saturday editions. [2] Includes 1 national week-end.
[3] Includes 2 national week-end. [4] Includes 1 bilingual. [5] Sunday edition.

4.—Estimated Numbers and Circulations of reporting Daily and Weekly French-Language Newspapers in Urban Centres of 30,000 Population or Over, 1951 and 1952.

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Urban Centre	Census 1951	1951				1952			
	Households	Daily		Weekly		Daily		Weekly	
	No.	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation
Edmonton, Alta.	42,925	—	—	1	3,612	—	—	1	2,700
Hull, Que.	9,325	—	—	2	7,106	—	—	2	7,275
Montreal, Que.	247,485	5	324,680	13	1,049,643[1]	5	329,412	15	1,084,037[2]
Ottawa, Ont.	48,965	1	27,712	—	—	1	26,690	—	—
Quebec, Que.	34,970	3	211,626	—	—	2	192,845	—	—
Sherbrooke, Que.	11,545	1	20,060	1	30,775	1	20,448	1	30,775
Sudbury, Ont.	9,450	—	—	1	1,825	—	—	1	1,825
Three Rivers, Que.	9,530	1	24,785	2	6,223	1	25,454	3	16,223
Winnipeg, Man.	64,630	—	—	1	10,447	—	—	1	9,191

[1] Includes 2 bilingual, 5 national week-end, 2 Saturday and 1 Sunday editions. [2] Includes 5 bilingual, 5 national week-end, 2 Saturday and 1 Sunday editions.

5.—Estimated Numbers and Circulations of Weekly Foreign-Language Newspapers, 1950-52

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Language	1950		1951[r]		1952[1]	
	No.	Circulation	No.	Circulation	No.	Circulation
Bulgarian	1	1,000	1	1,000	1	1,000
Estonian	1	1,500	1	2,500	2	7,991
Finnish	2	8,000	4	17,200	4	14,691
German	4	26,640	4	30,620	4	32,484
Hungarian	1	3,450	1	3,450	1	2,349
Icelandic	3	13,425	3	13,425	3	13,175
Italian	—	—	—	—	2	20,670
Japanese	1	3,400	1	3,400	2	5,453
Latvian	—	—	—	—	1	4,000
Lithuanian	1	..	1	..	2	4,850
Norwegian	1	4,820	1	4,820	1	4,820
Polish	3	18,263	3	23,656	3	22,372
Slovak	1	2,500	1	3,500	1	3,128
Swedish	3	9,571	3	9,871	2	5,103
Ukrainian	6	63,600	7	62,179	7	62,743
Yiddish	3	28,958	3	28,465	3	28,465
Yugoslav	1	3,811	1	4,768	2	9,088

[1] Includes some bi- and tri-weeklies.

Other Publications and Periodicals.—Table 6 shows the number of publications, other than newspapers, published in Canada. Monthly and weekly magazines and periodicals enjoy the largest circulation while those dealing with home, social and welfare, agricultural and rural topics, and religious, trade, industry and related subjects are the most popular types.

6.—Estimated Numbers and Circulations of reporting Magazines and Related Publications, by Broad Classifications, 1950-52

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Classification	1950			1951			1952		
	Listed	Reporting		Listed	Reporting		Listed	Reporting	
	No.	No.	Circulation	No.	No.	Circulation	No	No.	Circulation
Agricultural and rural	56	54	2,445,265	55	52	2,534,970	56	55	2,569,817
Arts, crafts and professions	16	15	113,953	19	18	113,399	19	18	117,281
Construction	17	17	118,224	16	16	121,415	18	17	126,232
Educational	50	45	389,428	54	51	438,899	57	54	464,401
Finance and insurance	14	6	61,815	14	7	67,455	14	8	77,642
Government and government services	27	24	254,782	27	24	268,107	25	23	283,990
Home, social and welfare	46	43	3,683,084	47	44	3,932,209	48	44	4,146,807
Labour	19	14	196,383	20	17	235,924	21	17	247,172
Pharmaceutical and medical	30	26	112,662	32	28	116,582	33	30	119,347
Religious	37	37	694,150	35	35	698,207	36	36	743,280
Services and directories	60	51	293,943	61	52	300,282	63	55	367,475
Sports and entertainment	31	21	279,933	26	19	315,580	30	24	320,218
Trade, industry and other related publications	166	157	745,398	171	158	790,155	174	160	791,390
Transportation and travel	27	25	205,987	29	28	235,223	32	31	302,791
Miscellaneous	40	40	462,403	40	39	443,770	39	39	442,101
Totals	**636**	**575**	**10,057,410**	**646**	**588**	**10,612,177**	**665**	**611**	**11,119,944**

CHAPTER XX.—DOMESTIC TRADE

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book wi l be found facing p. 1 of this volume.*

PART I.—THE MOVEMENT AND MARKETING OF COMMODITIES

Domestic trade is broad and complicated: it encompasses all values added to commodities traded, provincially and interprovincially, by agencies and services connected with the storage, distribution and sale of goods, such as railways, steamships, warehouses, wholesale and retail stores, financial institutions, etc. Taken in a wide sense, it embraces various professional and personal services including those directed to the amusement of the people, such as theatres, sports, etc. However, not all phases of this broad field are covered here though, wherever possible, cross references are given to related material appearing in other Chapters. The arrangement of material in a volume such as the Year Book is governed by the necessity of interpretation from various angles. The Index will be found useful in this respect.

Section 1.—Grain Trade

Subsection 1.—Marketing Problems and Policies, 1952-53

New records in volume of production, farmers' marketings and exports of Canadian grain were established in the crop year ended July 31, 1953. Record wheat and barley crops, estimated at 687,900,000 bu. and 291,400,000 bu., respectively, together with above-average yields of other grains, were the main factors

in establishing a new record volume of production. The harvesting of this unprecedented volume of grain meant the continuation of the tremendous load placed on all grain-handling facilities by the 1951 crop, much of which was out of condition when harvested in the autumn of 1951. In addition, abnormally large quantities of the 1951 crop were harvested and marketed in the spring of 1952, resulting in unseasonably large stocks of grain in country elevators at the beginning of the 1952-53 crop year. Despite the lack of adequate elevator space at a time when new crop deliveries normally commence in volume, the continuation of the high degree of efficiency and co-operation achieved in handling the 1951 crop under unusually adverse conditions enabled farmers in Western Canada to deliver a record volume of grain in 1952-53. Preliminary marketing data indicate that a total of 812,000,000 bu. of all grains was delivered in Western Canada in 1952-53 as against the previous record of 737,000,000 in 1951-52.

Marketing arrangements for wheat, oats and barley in Western Canada continued under the system of compulsory crop-year pools administered by the Canadian Wheat Board while rye and flaxseed in Western Canada and all grains in Eastern Canada continued to be sold on the open market. Combined exports of wheat, oats, barley, rye and flaxseed (including the grain equivalent of wheat flour, rolled oats and oatmeal) reached a record level of 582,800,000 bu., compared with 506,100,000 bu. in 1951-52. Despite this unprecedented volume of exports and a high level of domestic utilization, total carryover stocks of wheat, oats, barley, rye and flaxseed at July 31, 1953, amounted to 625,000,000 bu., an increase of 50 p.c. over the July 31, 1952, level and second only to the record 823,000,000 bu. on hand at July 31, 1943.

Wheat.—*Supply and Disposition.*—Stocks of Canadian wheat on hand at the beginning of the 1952-53 crop year amounted to 217,200,000 bu. These stocks, the largest since 1945, represented the fourth consecutive annual increase from the abnormally low level of 77,700,000 bu. on hand at July 31, 1948. The harvesting in 1952 of a record wheat crop, estimated at 687,900,000 bu., together with carryover stocks thus gave total crop-year supplies of 905,100,000 bu., second only to the record 980,400,000 bu. in 1942-43.

1.—Production, Imports, Exports and Domestic Use of Wheat and Wheat Flour, Crop Years Ended July 31, 1947-53

(Millions of bushels)

Item	1947-48	1948-49	1949-50	1950-51	1951-52	1952-53[p]
Carryover Aug. 1	86·1	77·7	102·4	112·2	189·2	217·2
Production	341·8	386·3	371·4	461·7	552·7	687·9
Imports	0·8	0·3	[1]	[1]	[1]	[1]
Totals, Supply	**428·7**	**464·3**	**473·8**	**573·9**	**741·9**	**905·1**
Exports	195·0	232·3	225·1	241·0	355·8[r]	385·5
Domestic use	156·0	129·6	136·5	143·7	168·9[r]	156·8
Totals, Disposition	**351·0**	**361·9**	**361·6**	**384·7**	**524·7[r]**	**542·4**
Carryover July 31	77·7	102·4	112·2	189·2	217·2[r]	362·7

[1] Less than 50,000 bu.

Exports of wheat continued in very heavy volume in 1952-53, reaching a total of 385,500,000 bu. of which 56,500,000 bu. consisted of wheat flour in terms of grain equivalent. The combined total exports of wheat and flour in 1952-53 were

29,700,000 bu. greater than in 1951-52 and were second only to the record 407,600,000 bu. exported in 1928-29. Domestic utilization also was at a relatively high level and is tentatively estimated at some 156,800,000 bu. Carryover stocks at July 31, 1953, rose sharply to 362,700,000 bu.

Price and Marketing Arrangements.—Marketing of Western Canadian wheat during 1952-53 was again conducted by the Canadian Wheat Board on a one-year pool basis with the initial payment set at $1.40* per bu. Effective Mar. 2, 1953, the initial payment for spring wheat other than Durum was increased to $1.60 per bu. In the case of Durum wheat, the initial payment was increased to $1.65 per bu. as an incentive to induce farmers to grow more of this variety which is currently in short supply. Adjustment payments of 20 cents per bu. for wheat other than Durum and 25 cents per bu. for Durum wheat were made on all wheat delivered to the Board between Aug. 1, 1952, and Feb. 28, 1953. An interim payment of 12 cents per bu. on all grades (amounting in total to some $64,000,000) was announced on Sept. 11, 1953. As in former years, final payments to producers for wheat delivered to the 1952-53 pool will be dependent upon the average price at which the Board has been able to sell the various grades.

The 1952-53 crop year coincided with the fourth and final year of the first International Wheat Agreement. Under its provisions Canada had a guaranteed export quota of 235,000,000 bu. for 1952-53 and, according to the final report of the International Wheat Council on the year's transactions, Canadian sales registered under the Agreement totalled 231,100,000 bu. The United Kingdom purchased 112,500,000 bu. or about 49 p.c. of the Canadian total. All sales against 1952-53 quotas under the Agreement were made at the maximum price of $1.80 (U.S. funds) plus a carrying charge of 6 cents per bu. Since the Canadian dollar remained at a premium over the United States dollar throughout the crop year, the price in terms of Canadian funds remained somewhat below $1.80, varying with daily fluctuations in the exchange rate.

In addition to sales under the Agreement, substantial quantities of Class II wheat† were sold, with the largest amount in this category, some 23,000,000 bu., going to the United States. The combined Canadian exports of 385,500,000 bu. of wheat and flour went to 85 countries, territories and colonies during the crop year.

Sales of wheat for domestic use during 1952-53 continued to be made at the same prices as those under I.W.A. up to Mar. 17, 1953. Effective May 19, 1953, and continuing to the end of the crop year, the domestic price was $2.05 per bu., except when the Board's Class II price fell below $2.05 in which case domestic sales were made at the Class II price. Prices for Class II wheat advanced gradually from about $2.15 per bu. at the beginning of the crop year to a high of $2.31¾ on Nov. 14, 1952. After that date there was a gradual decline to a low of $1.98 on June 30, 1953, followed by somewhat firmer prices in July.

Other Grains.—*Supply and Disposition.*—Preliminary data on supplies and disposition of the major Canadian grains for 1952-53 together with revised and more detailed data for 1951-52 are set out in Table 2. As a result of increased

* All wheat prices quoted are for No. 1 Northern, basis in store Fort William-Port Arthur or Vancouver.
† Wheat exported outside the provisions of the International Wheat Agreement.

carryover stocks for all grains and increased production for all but oats, total supplies of Canadian grain in 1952-53 were substantially above 1951-52 levels despite a slight decrease in supplies of oats.

Exports of both oats and barley continued in heavy volume during 1952-53. Although exports of oats (including rolled oats and oatmeal) at 65,400,000 bu. were somewhat lower than in 1951-52, barley exports (including malt in barley equivalent) set a new record of 122,100,000 bu., surpassing by a wide margin the record of 73,500,000 bu. set only the year before. Substantial increases over the relatively small 1951-52 totals were also registered in exports of both rye and flaxseed. Despite such increased exports and a relatively high level of domestic use, new record stocks were set at July 31, 1953, for barley and rye while oats stocks were second only to the record 149,300,000 bu. on hand at July 31, 1943.

2.—Distribution of Canadian Grain Crops, Crop Years Ended July 31, 1952 and 1953

(Millions of bushels)

Item	Wheat	Oats	Barley	Rye	Flaxseed
Crop Year 1951-52					
Carryover, Aug. 1, 1951	189·2	95·2	53·5	3·3	1·2
Production in 1951	552·7	488·2	245·2	17·6	9·9
Imports[1]	[2]	[2]	[2]	[2]	0·5
Totals, Supply	**741·9**	**583·4**	**298·7**	**20·9**	**11·6**
Exports[1]	355·8	70·6	73·5	6·8	2·9
Domestic Use—					
Human food	52·2	5·1	0·3	0·2	[2]
Seed requirements	36·1	27·2	14·2	1·4	0·7
Industrial use	0·4	—	12·5	0·5	3·6
Loss in handling and drying	3·1	0·1	0·6	0·1	0·1
Animal feed and waste	77·1	372·0	118·2	3·9	1·8
Totals, Disposition	**524·7**	**475·0**	**219·2**	**12·9**	**9·2**
Crop Year 1952-53					
Carryover, July 31, 1952	217·2	108·4	79·5	8·1	2·4
Production in 1952	687·9	466·8	291·4	24·6	13·0
Imports[1]	[2]	[2]	[2]	[2]	[2]
Totals, Supply	**905·1**	**575·2**	**370·9**	**32·7**	**15·4**
Exports[1]	385·5	65·4	122·1	9·0	4·0
Domestic Use[p,3]	156·8	373·3	142·4	7·3	8·4
Totals, Disposition[p]	**542·4**	**438·7**	**264·5**	**16·3**	**12·4**
Carryover, July 31, 1953[p]	362·7	136·5	106·4	16·4	3·0

[1] Import and export data for wheat, oats, barley and rye, respectively, include flour in terms of wheat, rolled oats in terms of oats, malt in terms of barley and rye flour in terms of rye. [2] Less than 50,000 bu.
[3] Details not available until final disposition data are known.

Price and Marketing Arrangements.—Marketing of Western Canadian oats and barley during 1952-53 was again carried on through compulsory crop-year pools administered by the Canadian Wheat Board. Initial payments were made on the basis of 65 cents per bu. for No. 2 C.W. oats and 96 cents per bu. for No. 3 C.W. 6-Row barley, both prices basis in store Fort William-Port Arthur. In the case of barley, initial payments were increased to $1.11 for No. 3 C.W. 6-Row barley, effective Mar. 2, 1953, and adjustment payments of 15 cents per bu. were made on all grades of barley delivered to the Board during the Aug. 1-Feb. 28 period.

Producers in Western Canada delivered 118,967,962 bu. of oats and 164,886,884 bu. of barley to the 1952-53 pools. Total prices (basis in store Fort William-Port Arthur) realized by producers for representative grades, after deducting carrying charges in country and terminal elevators, Board administrative costs, etc., but before deducting the 1-p.c. Prairie Farm Assistance Act levy, were $0·74119 per bu. for No. 2 C.W. oats, $0·68478 per bu. for No. 1 feed oats, $1·24492 per bu. for No. 3 C.W. 6-Row barley and $1·12867 for No. 1 feed barley.

Subsection 2.—Miscellaneous Grain Trade Statistics

Grain Handled at Eastern Elevators.—The amount of grain handled by eastern elevators during the five crop years 1948-52 is shown in Table 3.

3.—Canadian Grain Handled at Eastern Elevators, Crop Years Ended July 31, 1948-52

NOTE.—Figures for the crop years ended 1922-29 are given in the 1931 Year Book, p. 626; for 1930-36 in the 1943-44 edition, p. 512; for 1937-42 in the 1947 edition, p. 816; and for 1943-47 in the 1951 edition, p. 830.

Item and Crop Year	Wheat	Oats	Barley	Rye	Flaxseed	Total Grain
	bu.	bu.	bu.	bu.	bu.	bu.
Receipts—						
1948	196,718,272	38,842,320	27,560,650	17,543,967	6,234,436	286,899,645
1949	255,213,214	30,407,034	34,320,228	8,750,556	14,906,168	343,597,200
1950	262,914,675	34,911,609	17,239,457	747,858	8,711,243	324,524,842
1951	208,590,769	30,631,192	35,781,508	5,763,488	7,522,620	288,289,577
1952	380,847,530	43,117,243	113,942,213	7,803,517	6,913,172	552,623,675
Shipments—						
1948	206,061,315	39,805,551	26,847,608	17,647,367	5,551,788	295,913,629
1949	241,121,950	30,096,475	35,803,699	6,999,851	11,355,838	325,377,813
1950	251,853,362	33,140,216	18,139,086	1,553,094	11,743,926	316,429,684
1951	223,500,208	28,746,032	31,225,701	6,216,681	8,580,204	298,268,826
1952	358,201,436	42,983,657	109,327,850	7,644,936	6,642,468	524,800,347

Grain Inspections.—With the minor exceptions of winter wheat, buckwheat and soybeans, inspections of Canadian grain in the crop year ended July 31, 1952, were well above those of the preceding crop year.

4.—Quantities of Grain Inspected, Crop Years Ended July 31, 1951 and 1952

Grain	1951			1952		
	Western Division	Eastern Division	Total	Western Division	Eastern Division	Total
	bu.	bu.	bu.	bu.	bu.	bu.
Wheat	303,960,073	10,713,905	314,673,978	421,497,737	8,999,819	430,497,556
Spring wheat	*302,793,176*	—	*302,793,176*	*420,866,620*	—	*420,866,620*
Winter wheat	*1,166,897*	*10,713,905*	*11,880,802*	*631,117*	*8,999,819*	*9,630,936*
Oats	85,068,699	228,497	85,297,196	115,602,391	688,461	116,290,852
Barley	70,973,451	20,753	70,994,204	108,830,109	212,018	109,042,127
Rye	7,710,460	181,322	7,891,782	9,216,775	156,510	9,373,285
Flaxseed	3,035,820	112,350	3,148,170	5,539,684	106,700	5,646,384
Buckwheat	25,556	203,526	229,082	48,316	112,397	160,713
Corn	62,622	5,002,963	5,065,585	51,262	6,945,175	6,996,437
Mixed grain	486,889	—	486,889	799,130	6,527	805,657
Soybeans	—	2,944,752	2,944,752	—	2,922,478	2,922,478
Beans	—	220,782	220,782	—	409,083	409,083

Lake Shipments of Grain.—The 1952 navigation season at the Lakehead closed on Dec. 18, three days later than in 1951 but still short of the record late closing of Dec. 24 established in 1923. During the 1952 navigation season, total vessel shipments of wheat, oats, barley, rye and flaxseed from Fort William-Port Arthur amounted to 450,800,000 bu., the highest since 1945 when 483,700,000 bu. were cleared from the Lakehead. Shipments of barley and oats, at 96,900,000 bu. and 92,700,000 bu., respectively, set new records for these grains.

5.—Lake Shipments of Canadian Grain from Fort William-Port Arthur, Season of Navigation, 1951 and 1952

Grain	1951			1952		
	To Canadian Ports	To U.S. Ports	Total Shipments	To Canadian Ports	To U.S. Ports	Total Shipments
Wheat..... bu.	169,353,536	32,684,650[1]	202,100,775[1,2]	209,619,852	36,301,684	246,093,244[3]
Oats..... "	26,801,523	31,523,098	58,324,621	38,512,936	54,191,086	92,704,022
Barley..... "	37,204,389	11,127,791	48,332,180	80,370,705	16,492,644	96,863,349
Rye..... "	4,420,202	2,593,726	7,013,928	3,428,631	5,599,384	9,089,225[4]
Flaxseed..... "	2,193,970	—	2,193,970	6,004,797	—	6,058,074[5]
Totals.....bu.	**239,973,620**	**77,929,265**	**317,965,474**	**337,936,921**	**112,584,798**	**450,807,914**
Mixed grain..... lb.	1,064,690	—	1,064,690	—	—	—
Sample grain..... "	—	—	—	12,391,370	—	12,391,370
Screenings.....tons	5,848	68,219	74,067	13,425	87,033	100,458

[1] Includes 676,963 bu. of U.S.A. wheat. [2] Includes 62,589 bu. to Europe direct. [3] Includes 171,708 bu. to Europe direct. [4] Includes 61,210 bu. to Europe direct. [5] Includes 53,277 bu. to Europe direct.

Wheat Flour.—After reaching a peak of 28,588,000 bbl. in 1946-47, Canadian wheat flour production dropped to a post-war low of 20,259,000 bbl. in 1949-50. Production in both 1950-51 and 1951-52, however, increased to a level slightly above the average of 22,402,000 bbl. for the five crop years ended July 31, 1945. The percentage of milling capacity utilized for the crop year 1951-52 averaged 76·9 p.c. compared with 79·8 p.c. for the previous crop year.

Exports of wheat flour during recent years have followed approximately the same pattern as production, dropping from the 1946-47 peak of 16,896,000 bbl. in 1946-47 to 10,151,000 bbl. in 1949-50. Exports in 1951-52 amounted to 11,356,000 bbl., representing approximately one-half of total production.

6.—Wheat Milled for Flour, and Production and Exports of Wheat Flour, 1936-52

(Barrel = 196 lb.)

Crop Year ended July 31—	Wheat Milled for Flour	Wheat Flour	
		Production	Exports
	'000 bu.	'000 bbl.	'000 bbl.
Av. 1936-40	67,845	15,003	4,900
Av. 1941-45	99,705	22,402	12,092
1946	118,075	26,435	14,470
1947	127,775	28,588	16,896
1948	109,822	24,160	13,662
1949	90,897	20,380	10,688
1950	90,083	20,259	10,151
1951	106,748	23,630	12,427
1952	104,494	22,842	11,356

Section 2.—Live-Stock Marketings*

Cattle marketings through public stockyards, packing plants and direct for export totalled 1,414,268 head in 1952, a decline of 10·5 p.c. from the previous year and the lowest number since 1943. Since marketings of steers were considerably higher than in 1951, the drop in cattle marketings indicates a retention of breeding stock. Exports to the United States were cut off after Feb. 25, owing to the outbreak of foot-and-mouth disease, resulting in an almost negligible export volume of live stock during 1952. Producers were encouraged to finish cattle at home whenever possible and as animals were carried to heavier weights, the average carcass weight of inspected beef was 513·4 lb., 9·3 lb. above the 1951 average. For the same reason a definite improvement took place in the quality of the output as evidenced by the fact that Choice and Good heavy steers accounted for 15·3 p.c. of total marketings as compared with 9·4 p.c. in 1951. Marketing of calves, totalling 631,478 head, was 8·4 p.c. lower than in 1951, the most pronounced drop occurring in the veal-producing province of Quebec. Hog marketings were 36·8 p.c. higher than in 1951, totalling 6,699,056 head. This was 42·0 p.c. above the previous five-year average and the largest annual movement since the record peak of 8,863,830 head in 1944. Grade A hogs accounted for only 28·5 p.c. of the total, a decrease of 2·8 p.c. from 1951, while corresponding increases were noted in the percentages of Grades B2, C and Heavies. Reversing the downward trend of recent years, sheep and lamb marketings showed an increase of 13·7 p.c., Alberta leading the way with a gain of 39·0 p.c.

* For more detailed information, *see* DBS annual, *Live Stock and Animal Products Statistics*, and the Department of Agriculture publication, *Annual Market Review*. Statistics of live stock and poultry are given at pp. 414–416 and 423–424, respectively, of this volume.

7.—Live Stock Marketed at Public Stockyards, Packing Plants and Direct for Export, by Province, 1951 and 1952

(Exclusive of Newfoundland)

Year and Live Stock	Maritime Provinces	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
1951	No.	No.	No.	No.	No.	No.	No.	No.
Cattle—								
Totals to stockyards...	8,671	53,636	321,611	96,435	233,157	283,930	21,804	1,019,244
Direct to packers.....	21,524	50,220	154,765	53,011	56,359	85,314	29,639	450,832
Direct for export.....	2,119	7,947	66,999	285	4,219	16,416	12,561	110,546
Country points in other provinces[1].....	—	—	79	185	10,963	8,210	1,097	20,534
Totals, Cattle.....	**32,314**	**111,803**	**543,454**	**149,916**	**304,698**	**393,870**	**65,101**	**1,601,156**
Calves—								
Totals to stockyards...	14,229	88,200	99,265	32,678	51,179	57,139	3,757	346,447
Direct to packers.....	13,519	151,792	82,677	31,486	13,768	34,906	4,413	332,561
Direct for export.....	404	429	7,858	—	975	604	207	10,477
Country points in other provinces[1].....	—	—	—	50	4,985	2,755	30	7,820
Totals, Calves.....	**28,152**	**240,421**	**189,800**	**64,214**	**70,907**	**95,404**	**8,407**	**697,305**
Hogs—								
Totals to stockyards...	1,663	128,692	176,808	61,549	87,459	159,377	1,020	616,568
Direct to packers.....	190,173	924,967	1,862,741	230,030	240,467	798,396	31,200	4,277,974
Direct for export.....	347	217	953	80	—	370	607	2,574
Totals, Hogs.....	**192,183**	**1,053,876**	**2,040,502**	**291,659**	**327,926**	**958,143**	**32,827**	**4,897,116**

[1] Live stock billed through stockyards to country points outside province of origin.

7.—Live Stock Marketed at Public Stockyards, Packing Plants and Direct for Export, by Province, 1951 and 1952—concluded

Live Stock	Maritime Provinces	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
	No.	No.	No.	No.	No.	No.	No.	No.
Sheep and Lambs—								
Totals to stockyards	5,511	34,853	53,806	9,073	19,689	36,062	2,584	161,578
Direct to packers	35,000	86,184	80,858	17,694	8,523	51,658	16,826	296,743
Direct for export	87	4	3,066	35	—	5,044	1,142	9,378
Country points in other provinces[1]	—	—	—	—	13,338	4,160	1,245	18,743
Totals, Sheep and Lambs	**40,598**	**121,041**	**137,730**	**26,802**	**41,550**	**96,924**	**21,797**	**486,442**
Total Inward Movement—[2]								
Cattle	258	2,357	114,586	11,595	19,689	93,216	2,508	244,209
Calves	9	1,680	26,768	3,292	4,082	20,155	1,035	57,021
Sheep and lambs	2	749	17,595	633	1,471	18,548	2,035	41,033
1952								
Cattle—								
Totals to stockyards	1,764	41,031	332,127	89,371	189,736	265,031	10,305	929,365
Direct to packers	20,059	32,500	164,699	56,396	64,292	111,363	27,196	476,505
Direct for export	378	673	6,568	—	14	638	127	8,398
Country points in other provinces[1]	1	—	2	92	7,725	5,605	300	13,725
Totals, Cattle	**22,202**	**74,204**	**503,396**	**145,859**	**261,767**	**382,637**	**37,928**	**1,427,993**
Calves—								
Totals to stockyards	5,798	89,844	109,215	29,303	39,088	48,858	2,178	324,284
Direct to packers	12,555	117,451	92,864	33,410	12,053	33,363	4,644	306,340
Direct for export	331	13	375	—	—	2	133	854
Country points in other provinces[1]	—	—	—	47	4,229	2,109	—	6,385
Totals, Calves	**18,684**	**207,308**	**202,454**	**62,760**	**55,370**	**84,332**	**6,955**	**637,863**
Hogs—								
Totals to stockyards	479	263,827	273,911	69,354	113,503	228,501	1,057	950,632
Direct to packers	218,122	1,234,872	2,313,616	383,462	421,170	1,133,641	43,127	5,748,010
Direct for export	208	—	204	—	—	2	—	414
Totals, Hogs	**218,809**	**1,498,699**	**2,587,731**	**452,816**	**534,673**	**1,362,144**	**44,184**	**6,699,056**
Sheep and Lambs—								
Totals to stockyards	3,439	45,009	60,692	9,075	21,513	43,749	2,604	186,081
Direct to packers	37,097	78,873	92,308	23,219	10,433	84,862	18,566	345,358
Direct for export	78	—	44	8	—	87	9	226
Country points in other provinces[1]	—	—	27	—	14,260	4,388	—	18,675
Totals, Sheep and Lambs	**40,614**	**123,882**	**153,071**	**32,302**	**46,206**	**133,086**	**21,179**	**550,340**
Total Inward Movement—[2]								
Cattle	60	1,913	76,397	7,483	11,318	67,251	1,372	165,800
Calves	—	1,132	26,836	1,384	3,201	18,994	684	52,231
Sheep and lambs	—	571	18,505	709	908	14,848	1,073	36,614

[1] Live stock billed through stockyards to country points outside province of origin. [2] Movement from stockyards within each province to farms in the same province.

8.—Live Stock Marketed at Stockyards and Packing Plants, by Grade, 1948-52

(Exclusive of Newfoundland)

Live Stock	1948	1949	1950	1951	1952
	No.	No.	No.	No.	No.
Cattle—					
Steers up to 1,000 lb.—					
Choice	33,869[1]	20,741	17,408	17,939	27,012
Good	89,915[1]	74,388	60,215	52,887	66,723
Medium	123,353[1]	129,457	86,186	72,181	86,047
Common	81,030[1]	87,931	53,088	46,016	60,879
Steers over 1,000 lb.—					
Choice	72,816[2]	64,104	43,036	57,754	106,978
Good	64,838[2]	82,971	61,278	79,847	107,913
Medium	31,968[2]	55,173	43,968	50,897	65,871
Common	7,120[2]	14,842	11,426	14,233	18,269
Heifers—					
Choice	23,635	18,430	12,695	13,102	14,757
Good	85,002	73,475	58,955	59,040	60,857
Medium	114,580	112,728	100,877	88,187	79,349
Common	80,256	102,650	87,648	66,563	54,723
Fed Calves—					
Choice	25,791				
Good	31,219	104,520	94,944	77,993	99,389
Medium	43,936				
Cows—					
Good	155,947				
Medium	143,700	542,288	566,075	444,858	339,878
Common	120,764				
Canners and cutters	159,462				
Bulls—					
Good	31,951	93,378	107,388	93,360	73,642
Common	64,639				
Stocker and Feeder Steers—					
Good	92,454	170,167	196,569	182,164	112,273
Common	80,240				
Stock Cows and Heifers—					
Good	26,603	43,777	55,172	49,120	27,164
Common	16,589				
Milkers and Springers	8,028	5,346	4,826	3,935	4,146
Totals, Cattle	**1,809,705**	**1,796,366**	**1,661,754**	**1,470,076**	**1,405,870**
Calves—					
Veal—					
Good and choice	245,127	243,363	239,649	189,607	173,117
Common and medium	506,767	498,897	490,743	370,812	357,857
Grass	73,682	80,087	83,766	54,604	50,448
Stockers	[3]	14,963	58,177	63,985	49,202
Totals, Calves	**825,576**	**837,310**	**872,335**	**679,008**	**630,624**
Hog Carcasses—					
"A"	1,516,728	1,376,911	1,536,531	1,530,808	1,909,691
"B"	2,501,780	2,356,202	2,516,136	2,537,964	3,464,597
"C"	215,519	198,412	202,143	226,954	435,004
"D"	22,049	15,625	19,558	18,644	29,803
Heavies	92,666	85,714	77,992	109,890	158,456
Extra heavies	80,435	81,084	66,142	90,531	133,552
Lights	83,830	63,542	85,364	79,691	163,014
Sows	203,810	206,713	225,001	253,307	345,635
Injured, ridglings and stags	51,043	45,052	46,690	46,753	58,890
Totals, Hog Carcasses	**4,767,860**	**4,429,255**	**4,775,557**	**4,894,542**	**6,698,642**

[1] Steers up to 1,050 lb. [2] Steers over 1,050 lb. [3] Included with other grades.

8.—Live Stock Marketed at Stockyards and Packing Plants, by Grade, 1948-52—concluded

Live Stock	1948	1949	1950	1951	1952
	No.	No.	No.	No.	No.
Lambs and Sheep Graded Alive—					
Lambs—					
Good handyweights	407,926	400,742	289,571	253,050	300,398
Good heavies	24,119				
Common	101,409	76,032	63,901	56,893	75,423
Bucks	51,966	53,688	84,084	56,745	64,375
Feeders	[1]	9,681	9,745	13,381	11,696
Sheep—					
Good heavies	25,941	65,936	44,985	31,898	28,965
Good handyweights	79,312				
Common	41,011	29,971	27,661	24,528	25,021
Totals, Lambs and Sheep	**731,684**	**636,050**	**519,947**	**436,495**	**505,878**
Lamb and Sheep Carcasses—					
Lambs—					
"A"	8,948	9,197	9,843	10,133	9,553
"B"	4,589	5,844	6,540	5,324	6,033
"C"	2,021	2,949	3,917	3,148	4,671
"D"	701	710	1,088	1,041	2,156
"E"	206	167	210	234	617
Sheep	3,053	1,952	2,157	1,946	2,531
Totals, Lamb and Sheep Carcasses	**19,518**	**20,819**	**23,755**	**21,826**	**25,561**

[1] Included with other grades.

Section 3.—Warehousing and Cold Storage*

Warehousing ranks high among the means by which the utilities of 'place', 'time' and 'possession' are added to the products of industry. Its importance has been emphasized in modern times because of the introduction of cold-storage methods to the conservation of perishable foods.

The great difficulty in presenting warehousing statistics lies in the fact that it is not an easy matter to define clearly what are to be regarded as stocks in storage. In these days of complicated business relationships and especially since the rise of the department store and chain store as characteristic institutions in the retail merchandising field, it often happens that warehousing is carried on in close relationship with merchandising. However, if the strict economic definition of warehousing is adopted then this term should be restricted to those facilities that add the utility of 'time' to the 'form' utilities that are the product of the extraction and manufacturing industries. Since the warehouses established in close connection with retail trade are more often than not convenient places for the temporary storage of goods in process of transfer from the manufacturer or wholesaler to the consumer, then they are not, in the strict economic sense, services that add the utility of 'time' to commodities already worked up into 'form'. At least, since some clear line must be drawn and because separate statistics of the latter branch of storage are not available, it is considered practicable to interpret warehousing in this way.

The statistics of warehousing are shown together under one general heading in this Section. Subsection 1 presents statistics of the licensed storage of grain. Subsection 2 deals with cold-storage facilities without which perishable foods

* The material in this Section was supplied by various Divisions of the Departments of Agriculture, Fisheries, Mines and Technical Surveys, National Revenue and of the Dominion Bureau of Statistics.

such as meats, dairy products, fish and fruits could not be exchanged or distributed on a wide scale; it includes also figures of stocks of food on hand. Subsection 3 deals with the storage of petroleum and its products and Subsection 4 with public warehouses and customs warehouses. The facilities that specialize in the storage of tobacco and alcoholic liquors are analysed in Subsection 5. These bonded warehouses, as they are called, are under the strict surveillance of Federal Government excise officers who supervise all movements into and from such places of storage.

Subsection 1.—Licensed Grain Storage

At Dec. 1, 1952, total licensed grain storage capacity amounted to 539,290,000 bu., an increase of 13,055,000 bu. over the level of Dec. 1, 1951. Licensed grain storage capacity reached a peak of 603,000,000 bu. at Dec. 1, 1943, but, following the disposal of heavy wartime stocks, declined to 482,000,000 bu. at Dec. 1, 1947. Since then, licensed grain storage capacity has increased each year.

As a result of unusually large crops in Western Canada in 1951 and 1952, a heavy strain was imposed on grain storage and handling facilities. In addition to the problem thus created, the situation was further aggravated by the large proportion of out-of-condition grain harvested in the autumn of 1951 and the abnormally large amount of grain harvested in the spring of 1952. The out-of-condition grain necessitated considerable special binning which reduced effective storage capacity, while the spring harvest resulted in unseasonably large deliveries to country elevators throughout the spring and summer of 1952 prior to the harvest of record western Canadian wheat and barley crops that autumn. As a result, almost 47 p.c. of licensed elevator capacity was occupied at July 31, 1952, at a time when the proportion occupied by grain is normally considerably less. Despite heavy export movement of wheat and barley, the proportion of capacity occupied increased during the crop year, reaching almost two-thirds of the total licensed capacity on Apr. 1, 1953.

9.—Licensed Grain Storage Capacity and Grain in Store, 1951-52 and 1952-53

NOTE.—These figures, being exclusive of stocks in transit or in eastern mills, are lower than those shown in Table 16, pp. 413-414.

Crop Year and Storage Position	Licensed Storage Capacity	Canadian Grain in Licensed Storage			Proportion of Licensed Storage Capacity Occupied		
	Dec. 1, 1951	July 31, 1951	Nov. 29, 1951	Mar. 27, 1952	July 31, 1951	Nov. 29, 1951	Mar. 27, 1952
	'000 bu.	'000 bu.	'000 bu.	'000 bu.	p.c.	p.c.	p.c.
1951-52							
Western country	290,231	100,614	150,214	142,709	34·7	51·8	49·2
Interior private and mill	20,601	7,283	8,344	9,229	34·7	39·7	43·9
Interior terminals	20,600	12,505	12,833	13,228	59·5	61·1	63·0
Pacific coast	21,756	3,791	8,886	13,036	17·2	40·4	59·3
Fort William-Port Arthur	90,517	55,705	40,608	71,493	61·2	44·6	78·6
Georgian Bay and Upper Lake ports	33,241	9,450	14,442	9,712	28·6	43·8	29·2
Lower Lake and Upper St. Lawrence ports	19,100	6,545	7,458	3,863	34·4	39·3	20·2
Lower St. Lawrence ports	24,912	7,732	10,617	8,607	31·0	42·5	34·4
Maritime ports[1]	5,277	12	216	3,086	0·2	4·3	61·7
Totals, 1951-52	**526,235**	**203,639**	**253,617**	**274,964**	**38·7**	**48·2**	**52·3**

[1] Excludes Newfoundland.

9.—Licensed Grain Storage Capacity and Grain in Store, 1951-52 and 1952-53—concl.

Crop Year and Storage Position	Licensed Storage Capacity	Canadian Grain in Licensed Storage			Proportion of Licensed Storage Capacity Occupied		
	Dec. 1, 1952	July 31, 1952	Nov. 27, 1952	Apr. 1, 1953	July 31, 1952	Nov. 27, 1952	Apr. 1, 1953
1952-53	'000 bu.	'000 bu.	'000 bu.	'000 bu.	p.c.	p.c.	p.c.
Western country	306,834	143,580	204,673	218,203	46·8	66·7	71·1
Interior, private and mill	20,721	7,285	8,480	9,192	35·2	40·9	44·4
Interior, terminals	20,600	7,828	9,403	16,894	38·0	45·6	82·0
Pacific coast	21,756	9,319	10,047	7,609	42·8	46·2	35·0
Fort William-Port Arthur	84,449	33,059	43,998	66,884	39·1	52·1	79·2
Georgian Bay and Upper Lake ports	35,641	25,652	16,102	13,302	72·0	45·2	37·3
Lower Lake and Upper St. Lawrence ports	19,100	13,239	6,843	6,111	69·3	35·8	32·0
Lower St. Lawrence ports	24,912	12,303	11,152	11,800	49·4	44·8	47·4
Maritime ports[1]	5,277	261	1,526	3,169	5·0	28·9	60·1
Totals, 1952-53	**539,290**	**252,527**	**312,224**	**353,166**	**46·8**	**57·9**	**65·5**

[1] Excludes Newfoundland.

Subsection 2.—Cold Storage and Storage of Foods

Cold-Storage Warehouses.—Under the Cold Storage Act (R.S.C. 1952, c. 52), as amended (R.S.C. 1952, c. 313), subsidies are granted by the Federal Government to encourage the construction and equipment of cold-storage warehouses open to the public. The Act is administered by the Department of Agriculture.

There are five classifications of cold storage warehouses in Canada: (1) public warehouses which store foods and food products and of which the entire space is open to the public; (2) semi-public, or those which store foods and food products and which, while retaining part of the space for the products of the owner, allot the remainder to the public; (3) private or those which store foods and food products and allot no space to the public, a classification that includes refrigerated space in connection with abattoirs, creameries, dairies, cheese factories and wholesale and retail distributing warehouses; (4) locker plant, where the total space is occupied by lockers for rental to the public and which may, in addition, cut, process, chill and freeze foods and food products for storage in lockers; and (5) bait depots, having space used solely or principally for freezing and storing bait for use of fishermen.

No hard and fast rule can be laid down for distinguishing between public and private warehouses. In general, those owned and operated by firms trading in the goods stored in the warehouse are considered as private, though most of these places rent space to the public when it is not required for their own purposes.

10.—Cold-Storage Warehouses, by Province, Year Ended Mar. 31, 1953

Province	Subsidized Public Warehouses				All Warehouses	
	Number	Refrigerated Space	Cost	Total Subsidy	Number	Refrigerated Space
		cu. ft.	$	$		cu. ft.
Newfoundland	—	—	—	—	52	1,606,968
Prince Edward Island	7	269,667	154,920	46,020	24	425,200
Nova Scotia	20	4,985,083	4,000,575	1,190,892	77	5,655,109
New Brunswick	8	1,545,429	1,029,759	308,838	47	2,089,402
Quebec	33	3,216,203	2,586,567	792,270	249	16,052,413
Ontario	58	9,122,127	6,082,681	1,818,780	883	30,369,189
Manitoba	8	3,135,101	2,159,761	647,928	164	9,569,016
Saskatchewan	20	630,164	730,674	219,202	247	4,300,273
Alberta	5	624,925	475,876	142,347	201	6,840,758
British Columbia	64	22,599,926	9,384,775	2,815,429	174	29,492,738
Totals	**223**	**46,128,625**	**26,605,587**	**7,981,708**	**2,118**	**106,401,066**

11.—Storage and Refrigerated Space, by Province, as at June 30, 1953

Class of Storage		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
Public—						
Warehouses	No.	—	14	26	12	54
Refrigerated Space—						
Freezer	cu. ft.	—	195,087	1,237,272	994,850	4,173,038
Cooler	"	—	29,342	3,417,447	649,198	6,511,378
Locker	"	—	43,520	15,668	20,706	12,894
Private—						
Warehouses	No.	29	9	47	34	181
Refrigerated Space—						
Freezer	cu. ft.	1,152,555	46,541	711,243	305,711	973,373
Cooler	"	106,008	109,475	229,119	98,798	4,196,488
Locker	"	—	—	4,600	469	—
Locker Plants—						
Warehouses	No.	2	—	2	—	14
Refrigerated Space—						
Freezer	cu. ft.	—	—	8,700	—	66,022
Cooler	"	—	—	3,296	—	35,232
Locker	"	55,050	—	12,020	—	83,988
Bait Depots—						
Warehouses	No.	21	1	2	1	—
Refrigerated Space—						
Freezer	cu. ft.	289,905	965	15,744	15,053	—
Cooler	"	750	270	—	4,617	—
Locker	"	2,700	—	—	—	—
Totals, Warehouses	**No.**	**52**	**24**	**77**	**47**	**249**
Totals, Refrigerated Space	**cu. ft.**	**1,606,968**	**425,200**	**5,655,109**	**2,089,402**	**16,052,413**

Class of Storage		Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Totals
Public—							
Warehouses	No.	137	15	22	13	76	369
Refrigerated Space—							
Freezer	cu. ft.	4,821,224	3,997,173	561,234	469,148	4,992,672	21,441,698
Cooler	"	12,249,547	1,444,055	701,282	323,975	21,892,160	47,218,384
Locker	"	601,632	37,150	96,162	86,759	29,621	944,112
Private—							
Warehouses	No.	378	60	75	48	26	887
Refrigerated Space—							
Freezer	cu. ft.	2,464,747	648,328	607,305	1,816,029	377,678	9,103,510
Cooler	"	6,893,767	2,716,221	1,233,511	3,067,050	1,023,455	19,673,892
Locker	"	63,774	—	20,734	11,985	—	101,562
Locker Plants—							
Warehouses	No.	368	89	150	140	72	837
Refrigerated Space—							
Freezer	cu. ft.	482,890	53,726	28,677	29,385	103,977	773,377
Cooler	"	708,850	138,960	258,163	248,252	157,548	1,550,301
Locker	"	2,082,758	533,403	793,205	788,175	915,627	5,264,226
Bait Depots—							
Warehouses	No.	—	—	—	—	—	25
Refrigerated Space—							
Freezer	cu. ft.	—	—	—	—	—	321,667
Cooler	"	—	—	—	—	—	5,637
Locker	"	—	—	—	—	—	2,700
Totals, Warehouses	**No.**	**883**	**164**	**247**	**201**	**174**	**2,118**
Totals, Refrigerated Space	**cu. ft.**	**30,369,189**	**9,569,016**	**4,300,273**	**6,840,758**	**29,492,738**	**106,401,066**

12.—Stocks of Food Commodities on Hand in Cold-Storage and Other Warehouses and in Dairy Factories, as at Jan. 1, 1952

NOTE.—Total stocks include imported and in-transit stocks.

Item	As at Jan. 1	Minimum during Year	Date at which Minimum Occurred	Maximum during Year	Date at which Maximum Occurred	Twelve-Month Average
Butter, Creamery, Dairy and Whey—						
In storage[1] '000 lb.	44,509	17,042	May 1	77,414	Oct. 1	46,443
Total stock "	44,974	17,217	May 1	77,484	Oct. 1	46,715
Cheese, Factory—						
In storage "	29,620	22,302	Apr. 1	46,107	Nov. 1	33,292
Total stock "	32,084	24,798	Apr. 1	47,128	Oct. 1	35,229
Evaporated Whole Milk—						
Total stock "	43,897	21,450	Apr. 1	103,239	Oct. 1	61,195
Skim-Milk Powder—						
Total stock "	8,475	5,681	Apr. 1	19,010	Nov. 1	11,667
Eggs, Shell—						
In storage '000 cases	67	40	Dec. 1	472	June 1	232
Total stock "	73	42	Dec. 1	477	June 1	236
Eggs, Frozen—						
In storage '000 lb.	3,987	3,987	Jan. 1	10,381	Sept. 1	7,627
Poultry, Dressed—						
In storage "	34,958	12,590	Sept. 1	34,958	Jan. 1	22,214
Total stock "	35,137	12,673	Sept. 1	35,137	Jan. 1	22,367
Pork, Fresh—						
In storage "	4,863	4,863	Jan. 1	7,343	May 1	6,067
Pork, Frozen—						
In storage "	21,020	11,552	Nov. 1	50,792	May 1	31,634
Pork, Cured and in Cure—						
In storage "	13,117	13,117	Jan. 1	17,218	Apr. 1	15,247
Lard—						
In storage "	6,000	3,860	Nov. 1	9,649	May 1	7,227
Beef, Fresh—						
In storage "	4,610	4,610	Jan. 1	11,477	Nov. 1	8,182
Beef, Frozen—						
In storage "	14,297	9,562	May 1	21,353	Dec. 1	14,546
Beef, Cured, etc.—						
In storage "	590	345	Nov. 1	713	Apr. 1	559
Veal—						
In storage "	4,171	1,931	Apr. 1	4,930	Dec. 1	3,518
Mutton and Lamb—						
In storage "	3,584	823	Aug. 1	4,488	Dec. 1	2,256
Fruit—						
Apples, Fresh—						
In storage '000 bu.	3,866	96	June 1	6,191	Nov. 1	2,516
Frozen Fruit—						
In storage '000 lb.	21,825	12,372	June 1	21,825	Jan. 1	18,226
In Preservation—						
In storage "	14,139	9,514	July 1	14,139	Jan. 1	11,933
Potatoes—						
In storage '000 bu.	11,813	727	June 1	20,336	Nov. 1	9,711

[1] Includes imported butter.

Cold Storage of Fish.—Normally, stocks of frozen fish decrease gradually during the first months of the year and reach a low point at about May 1; during subsequent months they increase and reach a peak at the beginning of November. Since the great bulk of the frozen fish production takes place during the summer and early autumn months, stocks pile up in that period to form the main supply of frozen products until the heavy production period of the next season.

Stock figures at the beginning of each month in 1951 and 1952 (including Newfoundland) were as follows:—

Month	1951	1952	Month	1951	1952
	'000,000 lb.			'000,000 lb.	
Jan. 1	46·5	44·5	Aug. 1	43·2	55·4
Feb. 1	39·0	35·5	Sept. 1	49·3	60·1
Mar. 1	31·5	33·1	Oct. 1	51·0	66·3
Apr. 1	25·3	27·4	Nov. 1	57·8	66·6
May 1	25·2	29·7	Dec. 1	50·6	60·5
June 1	35·7	35·0			
July 1	38·0	46·0	AVERAGE	41·1	46·7

The individual item showing the most significant change in 1952 compared with 1951 is that of Atlantic Coast cod fillets. Although the demand for imported groundfish fillets was high in the United States, Canadian exporters were faced by increased competition from other foreign suppliers. The total holdings of British Columbia salmon were also higher in 1952 compared with 1951, and the increase was fairly evenly distributed among the various species; holdings of chum, representing the largest single increase, amounted to 300,000 lb.

Average monthly holdings of the main fish products in 1951 and 1952 (including Newfoundland) were as follows:—

Group and Product	1951	1952
	'000,000 lb.	
FROZEN, FRESH SEAFISH—		
Salmon, Pacific, dressed and filleted	7·6	8·4
Halibut, Pacific, dressed	7·4	7·5
Herring, Atlantic, round	5·4	5·5
Cod, Atlantic, filleted	2·5	4·4
TOTALS, FROZEN, FRESH SEAFISH[1]	34·7	38·9
FROZEN, FRESH INLAND FISH—		
Whitefish, dressed and filleted	1·4	1·4
Tullibee, round or dressed	0·5	0·8
Pickerel (yellow pike), dressed and filleted	0·3	0·6
TOTALS, FROZEN, FRESH INLAND FISH[1]	3·6	5·1
FROZEN, SMOKED FISH—		
Cod, Atlantic, filleted	1·7	1·5
Sea herring, dressed	0·6	0·7
Haddock, dressed	0·2	0·2
TOTALS, FROZEN, SMOKED FISH[1]	2·8	2·7
GRAND TOTALS	41·1	46·7

[1] Totals include other items not listed.

Cold Storage of Dairy Products.—Cold-storage facilities are a necessary adjunct in the manufacture of dairy products since most of them are perishable in varying degrees. All creameries have facilities for the storing of butter, the size and type of storage depending on the size of the creamery. If the butter produced at small country plants is not printed for immediate sale, the butter solids are disposed of or are transported to larger creameries where better refrigeration is available or to private or public cold storages in the larger urban centres.

In the case of cheese, temperature control is important in the curing process as well as in the prevention of deterioration. Most cheese factories are equipped with mechanical refrigeration and are required to have storage capacity for 17 days' produce during the period of maximum manufacture. The cheese is then transferred to central warehouses.

Milk is placed in storage as soon as it is bottled and held until delivery. Dry whole milk and other dried milk products containing fat are usually stored in cool air chambers to prevent rancidity.

Cold Storage of Other Foods.—Before the War, the export of a substantial proportion of the apple crop early in the season, to the United Kingdom and other European countries, limited the necessity of long-term cold storage to that portion of the crop retained for domestic distribution and other export. The curtailment in export outlets in post-war years has necessitated the provision of greater long-term cold-storage capacity in order to extend the marketing period for a much larger proportion of the crop. The degree to which such facilities have increased is illustrated by a comparison of the holdings on Dec. 1, the beginning of the storage season. During the years 1943-47, the Dec. 1 stocks averaged 53 p.c. in cold storage and 47 p.c. in common storage. The average for the two years 1951 and 1952 was 81 p.c. in cold and 19 p.c. in common storage. Additional space under construction will maintain or increase the proportion of cold storage in future years.

Potatoes are generally held at production points and shipped out as needed throughout the season. While warehouse storage is quite common in parts of Prince Edward Island, Nova Scotia and New Brunswick where commercial production is centred, most of the crop is stored in frost-proof cellars and pits.

Subsection 3.—Storage of Petroleum and Petroleum Products

Bulk storage plants for petroleum and petroleum products are established at convenient distributing centres and usually on a water-front so that full advantage can be taken of the lower cost of water-borne traffic. From these centres the goods are transferred by boat, rail or truck to smaller distributing depots or directly to retail outlets. The principal refining and distributing centres are located at or near Halifax, Quebec, Montreal, Ottawa, Toronto, Sarnia, Fort William, Regina, Calgary, Turner Valley, Edmonton and Vancouver.

13.—Inventories of Petroleum and Petroleum Products in Storage at Jan. 1, 1949-53

(Barrels of 35 Imperial gallons)

NOTE.—Figures for 1940-48 are given in the 1950 Year Book, p. 852.

Product	1949	1950	1951	1952	1953
	bbl.	bbl.	bbl.	bbl.	bbl.
Refinery Inventory—					
Crude oil	6,117,447	6,002,321	5,097,114	8,183,535	10,826,281
Naphtha specialties	86,316	114,638	157,366	154,238	120,768
Aviation gasoline	193,390	257,231	277,815	293,181	427,835
Motor gasoline	3,006,822	3,952,265	4,258,825	4,939,681	4,875,881
Tractor distillate	139,541	171,549	78,473	63,190	95,251
Aviation turbine fuel	[1]	[1]	[1]	21,409	51,103
Kerosene	564,083	291,315	120,305	166,497	154,010
Stove oil (No. 1 fuel oil)	1,009,457	964,165	836,879	1,081,484	1,064,116
Furnace oil	2,298,386	1,782,285	1,952,317	2,837,202	3,625,302
Other light fuel oil				285,151	320,950
Heavy fuel oil (Nos. 4, 5 and 6)	2,844,433	1,662,863	2,154,406	2,822,711	3,578,834
Diesel fuel	969,423	704,619	1,140,751	1,254,012	1,499,721
Asphalt	550,074	533,897	444,725	771,135	726,470
Coke (petroleum)	28,154	70,272	33,384	32,011	12,287
Lubricating oil	236,285	253,655	197,805	221,854	226,184
Grease, wax and candles	18,740	13,673	24,818	12,131	16,485
Other products	19,137	6,945	7,026	22,856	29,457
Marketing Inventory—					
Naphtha specialties	74,665	91,081	78,209	101,251	98,874
Aviation gasoline	403,662	439,888	653,727	689,791	648,956
Motor gasoline	4,197,718	4,830,869	5,377,351	5,998,086	5,299,862
Tractor distillate	120,568	99,462	40,376	33,275	20,675
Aviation turbine fuel	[1]	[1]	[1]	64,404	35,654
Kerosene	291,580	218,472	196,389	199,786	146,133
Stove oil (No. 1 fuel oil)	574,249	648,856	908,832	1,108,902	1,092,830
Furnace oil	1,851,732	1,811,680	3,363,424	3,647,111	3,858,910
Other light fuel oil				120,254	136,188
Heavy fuel oil (Nos. 4, 5 and 6)	1,080,503	937,094	1,139,667	1,422,627	2,199,511
Diesel fuel	969,755	882,387	813,369	1,060,171	1,234,550

[1] Not classified separately.

Subsection 4.—General Warehousing

Public Warehouses.—In 1944, the Dominion Bureau of Statistics began an annual census of the principal public warehouses in Canada. Warehousing carried on by co-operatives, packing houses and other firms operating storage facilities in connection with their own businesses are not included. Also, some companies deriving more revenue from a moving, cartage or carrier business than from warehousing are not included but are covered in the DBS report, *Motor Carriers, Freight-Passenger*. In order to show the trend in the industry, Table **14** has been prepared from data supplied by 155 firms that reported for both 1950 and 1951. Complete details are given in the DBS report, *Warehousing, 1951*.

14.—Summary Statistics of 155 Public Warehousing Firms Reporting in 1950 and 1951

Item	1950	1951	Item	1950	1951
Total revenue..... $	20,861,029	23,981,484	Wages, regular..... $	6,172,742	7,217,703
Total operating expenses $	17,944,897	20,683,534	Wages, casual..... $	321,353	330,560
Net operating revenue.. $	2,916,132	3,297,950	Salaried employees..No.	1,060	1,047
Net income..... $	1,667,288	1,916,296	Salaries..... $	2,638,465	2,805,654
Employees, regular....No.	3,017	3,105	Total salaries and wages..... $	9,132,560	10,353,917
Employees, casual..... "	267	312			

Net occupiable space reported in 1951 by 167 firms comprised 37,457,144 cu. feet for merchandise, 17,787,385 cu. feet for household goods and 24,018,082 cu. feet of cold-storage space. Merchandise space increased 2,329,000 cu. feet, household goods space decreased 1,546,000 cu. feet, and cold-storage space was up 165,500 cu. feet over the total for 164 companies reporting in 1950.

Customs Warehouses.—Warehouses for the storage of imported goods are known as customs warehouses. These are divided into nine classes, as follows: (1) those occupied by the Federal Government, some of which are used for examination and appraisal of imported goods while others, known as Queen's Warehouses, are used for the storage of unclaimed, abandoned, seized or forfeited goods; (2) warehouses, consisting of an entire building or part thereof, properly separated from the rest of the building by a partition, which are used exclusively for the storage of imported goods consigned to the proprietor of the building; (3) buildings or parts of buildings properly partitioned off, used for the storage of imported goods consigned to the proprietor or others, or for the storage of unclaimed or seized goods; (4) sufferance warehouses operated by the owners of vessels for the storage of in-bond goods transported by water or air;* (5) yards, sheds and buildings intended for the storage of imported coal and coke; (6) farms, yards, sheds, etc., which an importer of horses or sheep intends to use for the feeding and pasturing of imported animals other than pure-bred mares; (7) warehouses for the storage of animals, including horses for racing, and articles for exhibition or competition for prizes; (8) warehouses for clover seed imported for the purpose of being recleaned and prepared for a foreign market; and (9) yards, sheds, etc., which importers intend to use for the storage of goods too heavy or too bulky to be admitted to an established customs warehouse.

Subsection 5.—Bonded Warehousing and Storage of Wines

Bonded Warehousing.—The Excise Duty Branch of the Department of National Revenue considers any premises licensed under the Excise Act to be a warehouse, whether for storage of raw materials to produce finished tobacco or cigar products or for spirits or malt used for brewing. Practically the total production of spirits is placed in bonded warehouses while only a small part of the output of beer is retained in storage. Wine, unlike spirits and beer, is not secured under bond. All imports of alcoholic beverages must go through bonded warehouses before being released to Provincial Liquor Commissions or Boards, or other agencies authorized by the Commissions or Boards to take alcoholic beverages out of bond. Similarly, tobacco, cigars and cigarettes that are not stamped and duty paid are secured in bond. In addition to these warehouses, there are those in which no manufacturing or production is carried on but which are being used solely for the storage of goods upon which duty has not been paid. Goods are stored in these warehouses usually for the purpose of rapid distribution and for delivery as ships' stores.

Spirits, Tobacco and Malt in Bond.—Table 15 shows the quantities of distilled liquor, tobacco, cigars and cigarettes in bond in recent years. The yearly inventory of breweries showed an increase of total gallonage of beer in stock from 20,756,358 in 1951 to 23,388,779 gal. in 1952.

* Railway and express companies have similar facilities

15.—Distilled Liquor, Tobacco, Cigars and Cigarettes in Bond, Quarterly, 1949-53

Item and Quarter		1949	1950	1951	1952	1953
Distilled Liquor—						
March	'000 pf. gal.	72,363	76,687	81,878	87,973	92,089
June	"	74,166	78,855	84,120	90,007	93,339
September	"	74,063	79,127	84,647	90,241	92,501
December	"	75,542	79,655	85,921	90,658	..
Tobacco, Unmanufactured—						
March	'000 lb.	178,428	201,024	193,353	213,981	223,333
June	"	161,966	181,132	176,028	189,371	194,797
September	"	136,983	155,997	156,832	162,440	165,778
December	"	147,443	154,459	164,949	167,467	..
Tobacco, Manufactured—[1]						
March	'000 lb.	14	18	5	26	1
June	"	1	—	—	—	—
September	"	1	1	—	6	4
December	"	1	—	10	4	..
Cigars—						
March	'000	3,336	2,416	2,072	3,330	2,726
June	"	3,727	2,277	2,007	2,761	2,221
September	"	2,730	1,302	804	1,110	2,060
December	"	1,050	303	857	1,074	..
Cigarettes at 3 lb. or under—[1]						
March	'000	17,527	4,500	5,347	15,253	7,499
June	"	3,108	4,866	3,602	2,780	4,687
September	"	3,519	3,890	2,344	5,131	7,108
December	"	3,809	3,461	4,251	2,761	—

[1] Excludes Newfoundland.

Beverage spirits, as shown in Table 16, refer to spirits released for consumption but not to industrial alcohol; malt beer does not include beer made from duty-free malt; malt used is the total malt used to produce the malt beer; tobacco includes all types of manufactured tobacco products in addition to snuff.

16.—Beverage Spirits, Malt Beer, Malt, Tobacco and Tobacco Products taken out of Bond, Destined for Consumption, 1943-52

NOTE.—The figures in this table are on a different basis from those published in previous editions of the Year Book.

Year	Beverage Spirits	Malt Beer[1]	Malt Used	Cigars	Cigarettes	Tobacco
	pf. gal.	gal.	lb.	'000	'000	'000 lb.
1943	2,353,616	98,602,567	206,676,258	195,903	11,256,544	28,207
1944	2,679,389	106,256,221	218,149,148	197,779	11,666,421	27,304
1945	3,639,460	115,539,227	240,105,314	207,017	14,264,673	29,502
1946	4,477,845	146,119,954	303,172,529	220,994	14,866,931	29,459
1947	4,483,786	162,140,243	332,282,690	215,902	15,143,369	28,553
1948	4,580,932	172,630,562	349,081,232	210,016	15,852,875	29,174
1949	4,715,417	172,963,887	348,786,984	208,208	16,839,654	28,710
1950	4,739,707	171,974,662	340,287,033	198,981	17,167,729	29,187
1951	5,074,217	179,648,482	353,130,285	169,136	15,667,266	30,177
1952	5,288,884	195,780,017	378,764,899	200,263	17,848,325	33,637

[1] Duty has been paid herein on the malt.

Storage of Wines.—The wine industry is confined to a few localities such as the Niagara Peninsula in Ontario and the Okanagan Valley in British Columbia. Firms manufacturing native wines are not bonded, as far as the Federal Government is concerned, nor is wine in storage for maturing placed in bond. The only goods warehoused in bond in connection with wineries are their sugar supplies and supplies of grape spirit distilled by the distilleries and held by the wineries for fortifying their wines. Native wine produced and placed in storage for maturing and blending for the years 1947-51 was reported as follows:—

Year		Ontario	Other Provinces	Total
1947	gal.	5,517,482	570,522	6,088,004
	$	3,871,622	424,567	4,296,189
1948	gal.	4,377,487	661,134	5,038,621
	$	2,786,186	513,639	3,299,825
1949	gal.	3,390,787	608,665	3,999,452
	$	2,240,481	492,678	2,733,159
1950	gal.	5,383,514	501,330	5,884,844
	$	3,198,462	404,574	3,603,036
1951	gal.	4,182,767	494,288	4,677,055
	$	2,729,147	407,849	3,136,996

Section 4.—Merchandising and Service Establishments*

A complete coverage of the distributive trades in Canada is attempted only as part of the Decennial Census. The results of the 1930 and 1941 Censuses of Merchandising and Service Establishments are contained in Vols. X and XI of the Census reports for those years; Vol. XI also contains data on wholesale trade. Certain information from the 1951 Census will be published in subsequent editions of the Year Book and detailed data will appear in Vols. VII and VIII of the 1951 Census reports.

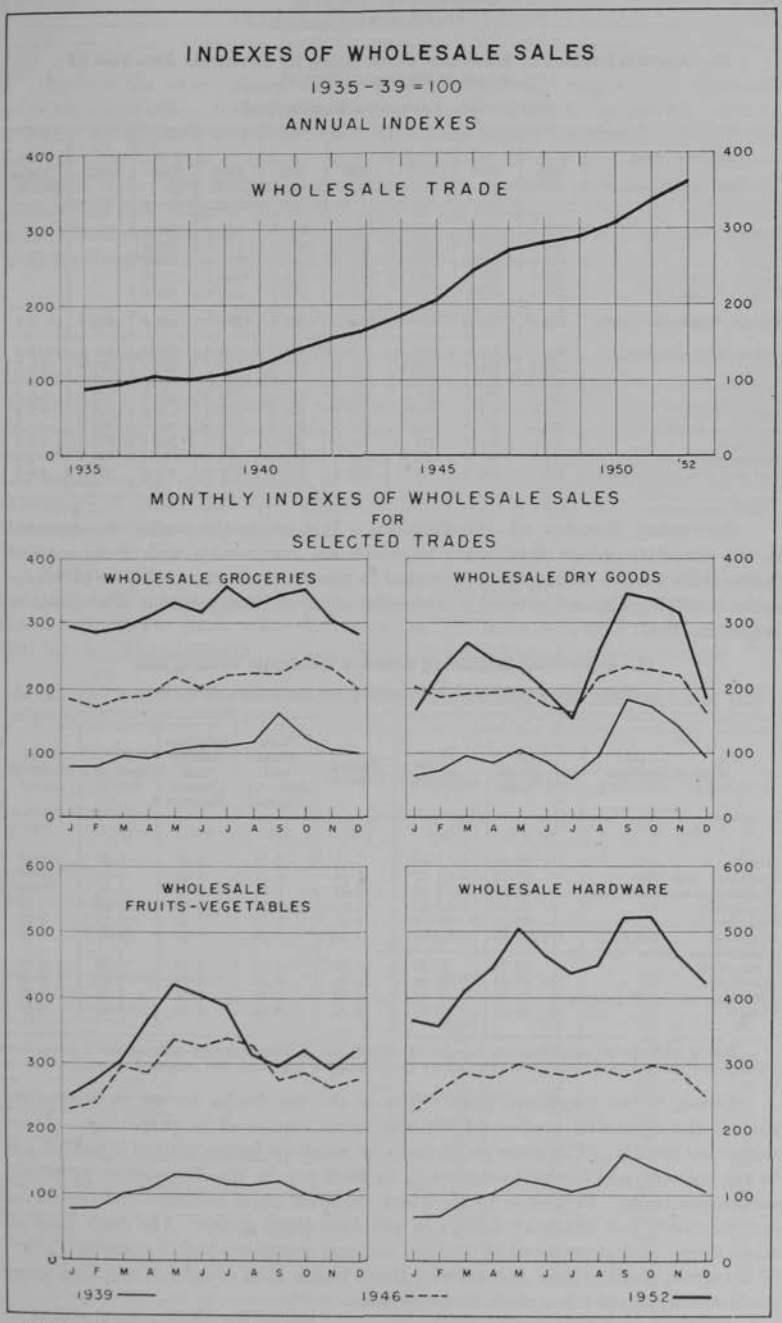
Census results are supplemented by monthly, quarterly and annual surveys on the more important phases of the retail, wholesale and service trades. The 1951 Census will form a new base for these surveys and certain improvements are planned for their continuance during the 1951-61 intercensal period. Current information available on the more important phases of the distributive trades is given in the following subsections.

Subsection 1.—Wholesale Trade Statistics

Sales Indexes.—Indexes of wholesale sales are obtained from a sample of firms in nine principal consumer goods trades. This measurement of sales covers only wholesalers proper, i.e., those establishments that perform the complete functions of wholesalers and jobbers buying merchandise in large quantities on their own account and selling principally to retailers.

Wholesale sales for the nine trades were 7 p.c. higher in 1952 than in 1951, representing an increase of 262 p.c. over the 1935-39 average. The index of sales for 1952 stood at 362·2 compared with 338·6 for 1951 and 307·3 for 1950. These indexes represent dollar volume of sales unadjusted for price changes. Anticipating results from the 1951 Census of Distribution, provincial data were not compiled for Table 17.

* Revised in the Merchandising and Services Section, Industry and Merchandising Division, Dominion Bureau of Statistics.


INDEXES OF WHOLESALE SALES
1935-39=100
ANNUAL INDEXES
WHOLESALE TRADE
400
300
200
100
0
1935
1940
1945
1950
'52
MONTHLY INDEXES OF WHOLESALE SALES
FOR
SELECTED TRADES
WHOLESALE GROCERIES
WHOLESALE DRY GOODS
WHOLESALE FRUITS-VEGETABLES
WHOLESALE HARDWARE
600
500
J F M A M J J A S O N D
1939
1946
1952

74570—59

17.—Annual Indexes of Wholesale Trade Sales, by Economic Area and by Kind of Business, 1945-52

(1935-39=100. Exclusive of Newfoundland)

Economic Area and Kind of Business	1945	1946	1947	1948	1949	1950	1951	1952	P.C. Change 1951-52
Maritime Provinces	235·0	257·6	282·3	290·4	285·2	296·6	320·6	..	..
Quebec	191·5	223·4	255·5	263·1	258·1	274·4	296·4	..	..
Ontario	206·9	245·9	275·8	287·7	299·6	315·8	349·3	..	..
Prairie Provinces	198·2	243·6	261·1	273·5	294·5	307·8	337·0	..	..
British Columbia	226·5	271·9	314·6	333·8	332·1	351·4	404·5	..	..
Totals, Wholesale Trade	**205·4**	**244·0**	**272·0**	**283·2**	**291·3**	**307·3**	**338·6**	**362·2**	**+ 7·0**
Automotive equipment	242·8	334·0	369·8	379·9	397·6	429·4	509·3	561·9	+10·3
Drug	222·1	245·2	254·6	281·8	305·5	312·2	348·4	371·8	+6·7
Clothing	186·3	229·3	255·4	265·1	248·2	248·0	253·0	263·3	+4·1
Footwear	224·0	279·4	300·8	286·8	281·9	283·0	328·8	349·2	+6·2
Dry goods	161·9	197·5	244·5	264·7	240·4	245·9	249·3	243·1	−2·5
Fruit and vegetable	262·4	291·2	274·7	237·2	263·0	271·4	290·9	329·8	+13·4
Grocery	180·2	208·9	244·2	254·0	257·0	275·0	305·0	315·4	+3·4
Hardware	212·0	277·4	325·0	359·7	374·9	404·5	455·5	446·9	−1·9
Tobacco and confectionery	258·1	296·9	317·1	354·8	372·8	381·4	411·9	429·1	+4·2

Operating Results of Wholesalers.—Ten wholesale trades concentrated in the consumer goods field, eight of which are comparable with those covered in the sales indexes series, are represented in the statistics on operations of wholesalers in 1951. This is the third of a biennial series on the operations of wholesalers begun in 1947.

18.—Operating Results of Selected Wholesale Trades, 1951

NOTE.—All figures except stock turnover are percentages of net sales.

Kind of Business	Cost of Goods Sold	Gross Profit	Selling Expense	Warehouse and Delivery Expense	Administrative and General Expense	Net Operating Profit[1]	Stock Turnover Rate[2]
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	No.
Grocery	92·04	7·96	1·41	2·33	3·27	0·95	10·11
Fruit and vegetable	88·73	11·27	1·90	4·35	4·08	0·94	39·09
Tobacco and confectionery	92·45	7·55	2·05	1·53	2·66	1·31	17·24
Dry goods	83·04	16·96	4·94	2·22	6·70	3·10	4·33
Piece goods	84·81	15·19	4·54	1·84	7·43	1·38	3·36
Footwear	85·93	14·07	4·55	2·26	7·01	0·25	4·25
Automotive parts and accessories	74·71	25·29	7·31	3·84	9·32	4·82	4·54
Hardware	79·51	20·49	4·00	2·80	6·96	6·73	3·86
Plumbing and heating supplies	82·22	17·78	2·98	2·43	6·56	5·81	6·77
Drug	86·57	13·43	2·18	2·68	6·09	2·48	5·60

[1] Before addition of miscellaneous income or deductions of miscellaneous expense and income tax. [2] Times per year—cost of goods sold divided by the average of beginning and year-end inventories.

Owing to the respective peculiarities of the ten trades for which results are shown, the operating profit and expense items expressed as percentages of net sales vary greatly. The gross profit ratio, or mark-up factor, ranged from 7·6 p.c. in the tobacco and confectionery trade to 25·3 p.c. in the automotive parts and accessories trade. Reference to the stock turnover rates indicates the reason for comparatively low mark-up factors in the food-trade group. The high rates of stock turnover that occurred in the food industry group are both a cause and effect of low gross profit ratios. Conversely, those trades with comparatively high gross profit ratios showed lower stock turnover rates.

Each of the three expense classifications showed wide ranges when expressed as ratios of net sales. Selling expenses ranged from 1·4 p.c. in the grocery trade to 7·3 p.c. in the automotive parts and accessories trade; warehouse and delivery expense from 1·5 p.c. in tobacco and confectionery to 4·4 p.c. in the fruit and vegetable trade; and general and administrative expenses from 2·7 p.c. in the tobacco and confectionery trades to 9·3 p.c. in the automotive parts and accessories trade. Hardware wholesalers netted the highest operating profit ratio of 6·7 p.c. and footwear wholesalers showed the lowest net operating profit ratio of 0·3 p.c.

Subsection 2.—Retail Trade Statistics

From Canadian fields and farms, forests, mines, stockyards, factories and mills, and from foreign lands through Canadian Atlantic and Pacific seaports, goods travel through innumerable channels to converge finally on the retail outlets before being dispersed again, but this time in small parcels made up to individual tastes for the consumer trade. Thus, the retailer occupies an important place between producer and consumer and, in a real sense, is the keystone of the distribution arch, for it is through retail outlets that every necessary operation of production for consumption is brought to its intended conclusion.

Retail Sales.—Retail sales are available for the census years 1930, 1941 and 1951. Estimated sales for 1952, revised to the 1951 Census results, are also shown in Table **19**. Sales of $10,661,000,000 in 1951 were more than three times the 1941 figure of $3,442,000,000. These figures are not adjusted for price changes.

19.—Retail Trade, by Province and by Kind of Business, 1930, 1941, 1951 and 1952

Province and Kind of Business	1930	1941	1951	1952
	$'000,000	$'000,000	$'000,000	$'000,000
Maritime Provinces[1]	198	283	892	978
Quebec	651	819	2,438	2,663
Ontario	1,100	1,407	4,115	4,388
Manitoba	189	211	608	645
Saskatchewan	189	187	654	762
Alberta	177	221	855	944
British Columbia[2]	252	314	1,099	1,195
Totals	**2,756**	**3,442**	**10,661**	**11,575**
Grocery and combination stores	405	567	1,900	2,039
Meat stores	78	80	176	164
Country general stores	208	215	519	546
Department stores	355	378	915	996
Variety stores	44	85	196	214
Motor-vehicle dealers	251	360	1,889	2,119
Garages and filling stations	114	205	474	504
Men's clothing stores	72	80	202	209
Family clothing stores	42	74	193	203
Women's clothing stores	50	71	193	204
Shoe stores	36	44	111	116
Hardware stores	71	73	227	235
Lumber and building material dealers	66	80	358	380
Furniture stores	41	64	146	178
Appliance and radio stores	52	46	210	254
Restaurants	75	127	433	457
Fuel dealers	86	99	231	235
Drug stores	77	101	248	267
Jewellery stores	27	38	105	116
Tobacco stores	31	43	78	89
Other	575	612	1,856	2,049

[1] Includes Newfoundland in 1951 and 1952.

[2] Includes the Yukon and Northwest Territories.

Retail Chain Stores.—Chain-store sales amounted to $1,726,354,000 in 1951 compared with $639,210,000 in 1941, the immediately preceding complete census of merchandising establishments. The 1951 Census enumeration disclosed some retail chain-store firms not included in previous annual surveys. For this reason a correct comparison with 1950 figures shown here is not possible. When complete 1951 Census results are known, intercensal estimates will be made to adjust the difference between 1951 estimated sales and 1951 actual sales from the Census, over the ten-year interval from the former complete Census of 1941. Until this is done, percentage changes from 1950 will not be shown.

20.—Chain-Store Statistics, 1930 and 1941-51

Year	Average Number of Stores	Net Retail Sales	Salaries and Wages Paid to Store Employees	Stocks on Hand, End of Year		Accounts Outstanding, End of Year
				Stores	Warehouses	
		$'000	$'000	$'000	$'000	$'000
1930	8,097	487,336	50,405	60,457	..	..
1941	7,622	639,210	57,777	68,619	20,976	38,376
1942	7,010	687,447	57,654	66,940	22,633	..
1943	6,780	703,950	58,804	67,628	22,603	15,527
1944	6,560	769,643	63,300	66,944	21,855	15,093
1945	6,580	876,209	68,196	68,247	29,013	16,369
1946	6,559	1,014,847	77,474	85,345	37,436	19,643
1947	6,716	1,177,323	91,266	105,040	43,546	31,492
1948	6,821	1,335,174	107,697	118,452	46,190	40,199
1949	6,839	1,420,081	115,903	123,696	46,755	50,001
1950	7,155	1,559,693	129,334	159,083	60,501	65,001
1951[1]	7,585	1,726,354	144,792	178,799	59,504	53,169

[1] Includes Newfoundland.

21.—Chain-Store Sales, by Province and by Kind of Business, 1948-51

Province or Territory and Kind of Business	1948	1949	1950	1951
	$'000	$'000	$'000	$'000
Newfoundland	..	..	..	9,675
Maritime Provinces	98,500	101,299	105,833	119,260
Quebec	271,307	283,388	318,377	349,467
Ontario	595,546	641,304	722,838	798,860
Manitoba	63,327	68,392	72,578	76,624
Saskatchewan	67,198	71,811	72,633	79,253
Alberta	85,383	96,712	107,181	117,241
British Columbia	149,220	152,334	154,974	170,384
Yukon and Northwest Territories	5,254	4,841	5,279	5,590
Totals	**1,335,735**	**1,420,081**	**1,559,693**	**1,726,354**
Food—				
Grocery, combination and meat market	393,724	440,288	510,500	616,501
Totals, Food[1]	408,557	454,296	524,710	630,182
Country General Stores	15,123	15,060	15,988	24,975
General Merchandise—[2]				
Variety Stores	133,907	142,061	147,732	164,475
Totals, General Merchandise[1]	146,546	154,667	160,410	184,507
Automotive	23,284	22,751	29,626	38,152

For footnotes, *see* end of table.

21.—Chain-Store Sales, by Province and by Kind of Business, 1948-51—concluded

Kind of Business	1948	1949	1950	1951
	$'000	$'000	$'000	$'000
Apparel—				
Men's and boys' clothing	17,919	17,822	19,975	25,059
Family clothing	33,817	33,770	35,759	40,038
Women's apparel	34,834	37,382	38,604	40,701
Shoe stores	31,378	31,926	33,013	38,031
Totals, Apparel	117,948	120,900	127,351	143,829
Building Materials	67,190	71,529	81,795	88,460
Furniture, Household—				
Furniture stores	35,679	34,555	36,423	37,050
Household appliances	27,273	28,940	35,823	41,747
Totals, Furniture, Household	62,952	63,495	72,246	78,797
Restaurant	21,899	21,460	22,783	29,166
Other Retail Stores—				
Drug stores	27,458	27,430	28,958	31,019
Jewellery stores	21,392	27,341	30,788	30,897
Government liquor stores	267,492	276,685	290,102	..
Totals, Other Retail Stores[1]	472,236	495,923	524,784	508,286

[1] Includes other kinds of business not shown separately. [2] Department stores excluded.

Department Stores.—Actual 1951 sales of department stores together with 1952 estimates based on final 1951 sales will be available when the 1951 Census results are known and will appear in subsequent editions of the Year Book.

Operating Results of Retail Stores.—The operating results series is conducted on a biennial basis—retail chain stores and wholesale trade are covered for 1947, 1949 and 1951, and independent retail stores for the alternate years. Latest available results for independent retail stores are given in the 1952-53 Year Book, p. 891.

Operating Results of Retail Chain Stores.—The 1951 study continues the series which, together with wholesalers' operating results studies for the same year and independent-store studies begun some years earlier (latest taken for 1950), have created a balanced body of information on distribution costs. The main profit and loss items of ten selected trades are shown in Table 22.

22.—Operating Results of Retail Chain Stores, for Selected Kinds of Business, 1951

NOTE.—All figures except stock turnover are percentages of net sales.

Kind of Business	Gross Profit	Salaries and Wages	Occupancy	Total Operating Expenses[1]	Net Operating Profit	Net Non-Trading Income	Net Profit before Income Tax Deduction	Stock Turnover[2]
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	No.
Grocery	15·53	8·53	1·19	14·12	1·41	0·14	1·55	10·60
Combination	15·82	7·57	1·01	12·67	3·15	0·19	3·34	18·21
Meat	15·84	9·82	1·34	15·40	0·44	0·06	0·50	44·33
Men's clothing	28·75	14·07	3·41	26·22	2·53	0·26	2·79	2·49
Women's clothing	28·32	12·16	4·75	25·56	2·76	0·31	3·07	5·74
Family clothing	28·78	14·56	3·06	26·77	2·01	0·93	2·94	3·39
Shoe	31·58	14·61	4·57	26·48	5·10	0·06	5·16	2·46
Variety	37·79	17·11	3·02	27·64	10·15	0·44	10·59	4·90
Drug	33·74	18·03	4·27	30·53	3·21	0·89	4·10	3·65
Furniture	30·68	12·62	3·39	27·22	3·46	1·05	4·51	3·09

[1] Includes salaries and wages, and occupancy. [2] Times per year—cost of goods sold divided by the average of beginning and year-end inventories.

These results illustrate distinctly different experiences for food chain stores from other classes of chain store. Food chains operated with lower profit and expense ratios than the others shown and also had a higher stock turnover rate, particularly where meat sales form all or part of total sales.

Retail Consumer Credit.—The current series of retail consumer credit estimates is linked closely with that of retail trade estimates. Like retail trade, the 1951 Census results will reveal where the estimates require revision and, as these Census results were not available at time of assembly of this Section, consumer credit estimates cannot be presented here. These data will be given in subsequent editions of the Year Book.

Subsection 3.—Statistics of Service Establishments

Theatres.—Total receipts in 1951 from motion picture showings amounted to $102,359,739, including $11,373,629 collected as amusement tax. These receipts include all types of theatres but do not include receipts from showings by community organizations.

The comparable figures for several years, given in Table 23 on a provincial classification, do not include drive-in theatres or itinerant operators. Drive-in theatres increased from 62 in number in 1950 with receipts, excluding taxes, of $2,290,679 to 82 in 1951 with receipts of $3,347,670.

23.—Motion Picture Theatres and Receipts, by Province, 1941 and 1948-51

NOTE.—Itinerant operators and drive-in theatres are not included in these figures. Receipts are exclusive of amusement taxes.

Province	1941		1948[1]		1949[1]		1950[1]		1951[1]	
	No.	Receipts	No.	Receipts	No.	Receipts	No.	Receipts	No.	Receipts
		$		$		$		$		$
Newfoundland	...	...	...	...	45	857,982	63	916,634	71	1,202,077
Prince Edward Island	6	141,317	16	281,995	17	288,741	17	293,307	15	319,421
Nova Scotia	61	2,195,599	78	2,738,331	82	3,111,160	85	3,269,653	85	3,460,236
New Brunswick	39	1,102,265	58	1,993,102	64	2,051,791	66	2,064,199	71	2,320,390
Quebec	202	8,047,022	472	16,405,929	506	19,502,992	583	21,644,261	617	23,043,006
Ontario	410	18,757,372	523	29,523,367	562	31,937,717	572	34,164,338	579	38,163,280
Manitoba	111	2,475,949	146	3,709,443	155	4,307,397	162	4,280,796	161	4,697,123
Saskatchewan	145	1,673,313	263	3,220,907	341	3,728,765	385	3,900,454	377	4,169,271
Alberta	144	2,257,115	216	4,245,121	236	5,111,220	257	5,482,890	267	6,245,159
British Columbia[2]	122	4,145,945	178	7,539,053	192	7,662,014	197	7,942,541	197	8,865,707
Canada	**1,240**	**40,795,897**	**1,950**	**69,657,248**	**2,200**	**78,559,779**	**2,387**	**83,959,073**	**2,440**	**92,485,670**

[1] Includes, in addition to regular theatres, establishments in which motion picture entertainment is provided by community organizations such as churches, lodges, Boards of Trade, etc. In 1948 these halls numbered 346 with receipts of $962,927; in 1949, 460 halls had receipts of $1,140,307; in 1950, 586 halls had receipts of $1,251,311; and in 1951, 632 halls had receipts of $1,499,560. [2] Includes the Yukon and Northwest Territories.

24.—Summary Statistics of Motion Picture Theatre Operations, 1951

Item	Regular Theatres	Drive-in Theatres	Community Enterprises	Itinerant Operators	Total
Establishments.....No	1,808	82	632	167	2,689
Receipts (excluding taxes).....$	90,986,110	3,347,670	1,499,560	486,243	96,319,583
Amusement taxes.....$	11,373,629	406,611	72,675	34,311	11,887,226
Paid admissions.....No.	239,132,227	6,554,572	4,860,700	1,611,626	252,159,125

Power Laundries, Cleaning and Dyeing Plants.—The 317 power laundries and 981 dry-cleaning plants operating in Canada during 1951 provided services to the value of $96,851,857. Laundry plants accounted for $44,053,442 of this amount and dry-cleaning plants $52,798,415. The 1951 survey of these related industries was taken as part of the Decennial Census and certain information not consistent with census requirements was not asked. For this reason the item "cost of materials" is not available for 1951.

25.—Summary Statistics of Power Laundries, Dry-Cleaning and Dyeing Plants, 1941 and 1947-51, and by Province, 1951

Year and Province	Plants	Employees[1]	Salaries and Wages	Cost of Materials	Value of Work Performed
	Power Laundries				
	No.	No.	$	$	$
1941	237	11,844	10,120,662	2,348,740	19,816,895
1947	244	13,950	16,357,072	3,560,120	30,459,393
1948	294	13,923	18,737,302	4,138,029	35,360,996
1949[2]	332	14,240	20,408,336	4,485,436	38,659,596
1950	323	14,310	20,976,430	4,811,682	40,586,942
1951					
Newfoundland and P.E. Island	6	124	157,011		351,211
Nova Scotia	15	395	502,973		1,069,620
New Brunswick	13	360	478,174		1,006,198
Quebec	76	4,109	6,338,809	..	12,606,574
Ontario	125	5,211	8,052,510		16,072,050
Manitoba	10	627	938,778		1,745,426
Saskatchewan	9	344	532,563		1,055,591
Alberta	17	798	1,300,392		2,684,040
British Columbia[3]	46	2,111	3,947,307	..	7,462,732
Canada, 1951	**317**	**14,079**	**22,248,517**	..	**44,053,442**
	Dry Cleaning and Dyeing Plants				
1941	363	6,554	6,125,635	1,433,790	12,678,275
1947	530	10,906	14,144,464	3,041,506	28,584,285
1948	787	11,953	17,140,254	4,400,688	36,620,948
1949[2]	905	12,886	20,107,095	4,939,685	42,574,449
1950	919	13,450	21,704,698	5,378,564	46,249,622
1951					
Newfoundland and P.E. Island	14	182	282,638	..	682,234
Nova Scotia	37	496	730,651	..	1,578,349
New Brunswick	31	288	413,286	..	1,062,456
Quebec	184	3,316	5,547,182	..	11,979,120
Ontario	404	5,945	10,355,665	..	23,479,584
Manitoba	43	1,112	1,983,077	..	3,608,155
Saskatchewan	64	528	874,222	..	2,304,250
Alberta	96	939	1,554,832	..	3,634 082
British Columbia[3]	108	1,127	2,108,566	..	4,470,185
Canada, 1951	**981**	**13,933**	**23,850,119**	..	**52,798,415**

[1] Includes salaried employees and wage-earners.
[2] Newfoundland included from 1949.
[3] Includes the Yukon and Northwest Territories.

Hotels.—The 1951 survey of hotels formed part of the Decennial Census of Distribution. This third consecutive survey of hotels saw further minor refinements in classification, noticeable when comparing the number of hotels in operation in the different years.

There were 5,092 hotels in operation during 1951 with total receipts of $357,282,000 of which 4,078 operated on a full-year basis. The sale of beer, wine and liquor was the principal source of revenue amounting to $180,642,000; receipts from room rentals amounted to $83,322,000 and from meal sales $63,440,000. Total operating expenditure amounted to $170,566,000 of which $80,382,000 was accounted for by salaries and wages.

26.—Hotels and Total Receipts, by Province, 1941, 1950 and 1951

Province	1941			1950			1951		
	Hotels	Rooms	Receipts	Hotels	Rooms	Receipts	Hotels	Rooms	Receipts
	No.	No.	$'000	No.	No.	$'000	No.	No.	$'000
Newfoundland	...	...	...	30	814	1,814	27	811	1,989
P.E. Island	38	592	249	26	644	543	24	634	592
Nova Scotia	226	3,663	2,896	163	3,954	5,254	155	4,050	5,539
New Brunswick	171	3,570	1,807	122	3,407	3,501	109	3,265	3,644
Quebec	1,556	30,883	28,647	1,510	37,764	73,651	1,441	37,970	85,293
Ontario	1,762	40,388	66,076	1,451	44,589	107,608	1,495	45,118	116,547
Manitoba	278	7,350	7,953	274	7,694	23,073	276	7,588	25,892
Saskatchewan	595	11,635	9,297	567	12,357	28,049	536	12,001	29,886
Alberta	433	12,918	14,218	444	13,985	40,463	445	14,186	45,038
British Columbia[1]	587	17,981	16,345	582	21,145	38,434	584	20,818	42,862
Canada	**5,646**	**128,980**	**147,488**	**5,169**	**146,353**	**322,390**	**5,092**	**146,441**	**357,282**

[1] Includes the Yukon and Northwest Territories.

Subsection 4.—Miscellaneous Merchandising Statistics

Farm Implement Sales.—Manufacturers' and importers' sales of farm implements and equipment at the wholesale price level amounted to $235,620,345 in 1951, an 8-p.c. increase over the 1950 total. Estimated expenditure by Canadian farmers at the retail level was approximately $287,000,000. Sales of repair parts amounted to $28,772,869 at the wholesale level or approximately $38,000,000 at the retail level.

27.—Farm Implement and Equipment Sales, by Province, 1950 and 1951

NOTE.—Values are mainly at wholesale prices.

Province	1950		1951		P.C. Change 1950-51
	Amount	P.C. of Total	Amount	P.C. of Total	
	$		$		
Atlantic Provinces	5,946,209	2·7	6,889,061	2·9	+15·9
Quebec	19,137,999	8·8	23,816,008	10·1	+24·4
Ontario	51,922,436	23·8	58,736,885	24·9	+13·1
Manitoba	29,308,664	13·4	31,698,984	13·5	+ 8·2
Saskatchewan	62,629,271	28·7	61,147,757	26·0	− 5·4
Alberta	45,117,409	20·7	48,267,092	20·5	+ 7·0
British Columbia	4,125,132	1·9	5,064,558	2·1	+22·8
Totals	**218,187,120**	**100·0**	**235,620,345**	**100·0**	**+ 8·0**

Separate sales figures for different types of equipment are presented in Table 28.

28.—Sales of New Farm Implements and Equipment in Canada and in the Prairie Provinces, by Type, 1950 and 1951

NOTE.—Values are mainly at wholesale prices.

Type	Canada			Prairie Provinces			
	1950	1951	P.C. Change 1950-51	1950	1951	P.C. Change 1950-51	P.C. of Canada Total, 1951
	$	$		$	$		
Planting, seeding and fertilizing machinery	8,805,616	9,516,447	+ 8·1	4,305,889	4,428,452	+ 2·8	46·5
Ploughs	15,228,291	15,454,118	+ 1·5	11,198,096	10,778,226	− 3·7	69·7
Tilling, cultivating and weeding machinery	13,202,326	12,507,988	− 5·3	9,759,427	8,130,469	−16·7	65·0
Haying machinery	10,610,317	14,844,424	+39·9	3,704,367	5,463,840	+47·5	36·8
Harvesting machinery	44,243,044	58,641,340	+32·5	38,113,347	50,478,809	+32·4	86·1
Machines for preparing crops for market or use	8,486,629	11,381,657	+34·1	3,687,892	5,671,628	+53·8	49·8
Tractors and engines	98,000,680	92,661,775	− 5·4	60,392,436	49,811,432	−17·5	53·8
Spraying and dusting equipment	1,416,507	1,986,205	+40·2	699,960	1,169,136	+67·0	58·9
Farm wagons, trucks and sleighs	2,220,870	2,483,968	+11·8	966,445	1,078,922	+11·6	43·4
Water systems and pumps	5,375,319	5,938,424	+10·5	1,212,723	1,390,435	+14·7	23·4
Dairy machinery and equipment	4,033,896	3,397,615	−15·8	585,702	761,554	+30·0	22·4
Barn equipment	2,266,024	2,313,542	+ 2·1	419,203	474,264	+13·1	20·5
Poultry farm equipment	317,694	532,344	+67·6	106,970	122,893	+14·9	23·1
Miscellaneous farm equipment	3,979,907	3,960,498	− 0·5	1,902,887	1,353,773	−28·9	34·2
Totals	**218,187,120**	**235,620,345**	+ 8·0	**137,055,344**	**141,113,833**	+ 3·0	**59·9**

Sales of New Motor-Vehicles.—Sales of new motor-vehicles increased from 385,648 units in 1951 to 400,777 in 1952. These were sold for $1,002,615,841 with increased dollar sales evident for both passenger cars and commercial vehicles. The number of trucks and buses sold, however, decreased slightly from 1951.

29.—Retail Sales of New Motor-Vehicles, 1939-52

Year	Passenger Cars		Trucks and Buses		Totals	
	No.	$	No.	$	No.	$
1939	90,054	97,131,128	24,693	28,836,393	114,747	125,967,521
1940	101,789	114,928,833	28,763	33,916,445	130,552	148,845,278
1941	83,650	108,907,312	34,432	43,008,207	118,082	151,915,519
1942-45	...	...	...	...	...	...
1946	77,742	120,325,496	42,302	73,003,509	120,044	193,329,005
1947	159,205	283,190,390	71,050	133,047,105	230,255	416,237,495
1948	145,655	282,903,958	75,645	156,313,030	221,300	439,216,988
1949	202,318	412,297,863	84,023	176,426,822	286,341	588,724,685
1950	324,903	661,673,944	104,792	223,995,095	429,695	885,669,039
1951	275,686	683,182,846	109,962	266,976,665	385,648	950,159,511
1952	292,095	725,167,630	108,682	277,448,211	400,777	1,002,615,841

Sales Financing.—The financing of retail instalment sales by sales finance and acceptance companies reached a record amount of $819,000,000 in 1952, 75 p.c. higher than the $467,000,000 financed in 1951. The financing of motor-vehicles, new and used, accounted for 78 p.c. of total financing in 1952. The most significant percentage gain occurred in household appliances, the increase being from 4·3 p.c. of total financing in 1951 to 8·7 p.c. in 1952.

Balances outstanding at the end of 1952 amounted to $540,000,000, an increase of 72 p.c. over the previous year. The largest percentage increases occurred in the household goods items.

30.—Retail Instalment Paper Purchased and Balances Outstanding, by Class of Goods and Province, 1941 and 1950-52

(Millions of Dollars)

Item	Paper Purchased				Balances Outstanding Dec. 31—			
	1941	1950	1951	1952	1941	1950	1951	1952
Class of Goods								
Consumer Goods—								
New passenger cars	23	132	114	195	..	94	80	130
Used passenger cars	44	122	141	282	..	74	80	169
Radio and television	2	[1]	5	21	..	[1]	3	15
Household appliances	5	[1]	15	50	..	[1]	9	31
Furniture	[1]	[1]	4	9	..	[1]	3	7
Other	3	51	20	34	..	34	11	21
Totals, Consumer Goods	77	305	299	591	49	202	186	373
Commercial and Industrial—								
New commercial vehicles	11	61	82	98	..	46	64	77
Used commercial vehicles	7	30	46	64	..	20	31	43
Other	5	33	40	66	..	25	32	47
Totals, Commercial and Industrial	23	124	168	228	16	91	127	167
Totals, Retail Financing	**100**	**429**	**467**	**819**	**65**	**293**	**313**	**540**
Province								
Atlantic Provinces	7	34	34	62	4	24	23	40
Quebec	16	87	102	172	10	62	71	113
Ontario	48	175	177	322	30	115	114	210
Manitoba	5	21	24	39	3	15	16	26
Saskatchewan	6	23	29	47	5	16	20	33
Alberta	9	46	55	105	6	32	39	73
British Columbia	9	43	46	71	7	29	30	45

[1] Included in "Other".

The increased amount of financing of motor-vehicles is accounted for by an increase in the number of vehicles sold and also by a higher percentage of vehicles sold on the instalment plan. In 1952, 43 p.c. of the number sold were financed, a greater share than in previous years. The financed value handled by finance companies represented 29 p.c. of total vehicle sales value.

31.—Sales and Financing of New Motor-Vehicles (Passenger and Commercial), Selected Years, 1937-52

Year	Motor-Vehicles Sold	Motor-Vehicles Financed	P.C. of Total Sales Financed		Average Financed Value
			Number	Value	
	No.	No.		$	$
1937	144,441	56,247	38·9	27·3	723
1939	114,747	37,230	32·5	22·1	746
1941	118,082	41,032	34·7	23·0	850
1946	120,044	22,866	19·0	14·5	1,224
1947	230,255	46,700	20·3	15·7	1,401
1948	221,300	51,867	23·4	16·8	1,423
1949[1]	286,341	81,502	28·5	19·6	1,417
1950	429,695	135,304	31·5	21·6	1,415
1951	385,648	126,255	32·7	20·1	1,514
1952	400,777	172,587	43·1	29·2	1,695

[1] Newfoundland included from 1949.

Advertising Agencies.—Advertising agencies handled advertising and provided other services in 1951 to the extent of $108,413,585 compared with $96,220,544 in 1950 and $29,224,400 ten years earlier (1941). Gross revenue in 1951 amounted to $17,015,496 and net revenue $2,328,015.

32.—Financial Statistics of Advertising Agencies, 1947-51

Year	Amount of Billings			Gross Revenue	
	Commissionable Billings	Other	Total	Amount	P.C. of Total Billings
	$	$	$	$	
1947	64,422,777	171,897	64,594,674	10,091,772	15·6
1948	73,543,766	218,447	73,762,213	11,553,459	15·7
1949	86,450,968	291,502	86,742,470	13,526,336	15·6
1950	95,566,600	653,944	96,220,544	15,012,672	15·6
1951	107,461,752	951,833	108,413,585	17,015,496	15·7

33.—Distribution of Advertising Billings, by Media, 1947-51

Year	Total Commissionable Billings	Distribution of Billings					
		Publications	Other Visual	Mechanical	Radio	Other	Total
	$	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
1947	64,422,777	61·8	4·4	16·3	15·8	1·7	100·0
1948	73,543,766	60·4	4·5	16·1	16·7	2·3	100·0
1949	86,450,968	61·2	4·4	16·4	15·7	2·3	100·0
1950	95,566,600	59·6	5·7	18·5	16·1	0·1	100·0
1951	107,461,752	59·3	5·2	18·0	17·3	0·2	100·0

Section 5.—Co-operative Organizations*

During the crop year ended July 31, 1952, reports were received by the Department of Agriculture from 2,616 co-operative associations of all types. Membership reported totalled 1,373,471 and the total volume of business, including other revenue, reached a record high of $1,219,253,850. This volume figure represents an increase of $202,700,000 over that reported in the previous year and is significant because it was reported by 152 associations fewer than in 1950-51. Marketing co-operatives reported a total sales value of farm products handled by them of $927,589,172. Purchasing co-operative business amounted to $248,050,761.

Fishermen's co-operatives numbered 83 with 14,641 members and the total sales value of fish and fish products handled amounted to over $20,000,000. This figure is estimated to be nearly 12 p.c. of the total commercial value of Canadian fish production for 1951. Service co-operatives reporting numbered 339 with a membership of 195,027 and total business of $8,125,000.

Developments in 1951-52.—Perhaps the two most important developments within the co-operative movement in Canada during 1951-52 were the reorganization of the Saskatchewan Co-operative Producers Limited and the beginning of operations on a national scale by the Co-operative Fire and Casualty Company.

* Prepared under the direction of Dr. J. G. Taggart, C.B.E., Deputy Minister of Agriculture, by J. E. O'Meara, Marketing Service, Department of Agriculture, Ottawa.

The reorganization of the Saskatchewan Co-operative took effect at the beginning of August 1952. From that date all the physical assets of the subsidiary companies—the Saskatchewan Pool Elevators Limited, Saskatchewan Pool Terminals Limited, Modern Press Limited, and the Saskatchewan Co-operative Livestock Producers Limited—are leased to the parent company, which will become the sole operating unit; the subsidiaries will become holding companies. Coincident with this internal reorganization, application was made to the provincial legislature of Saskatchewan for an amendment to the special Act of incorporation asking that the name of the organization be changed from Saskatchewan Co-operative Producers Limited to Saskatchewan Wheat Pool.

The Co-operative Fire and Casualty Company was incorporated by special Act of the Federal Government on June 30, 1951, and was licensed for operation on May 5, 1952. The Company began writing fire and automobile insurance on July 1, 1952. While at the outset the Company was mainly engaged in business in Saskatchewan and the Maritime Provinces, it is the eventual intention to extend operations to every province where the insurance services of the Company are desired by co-operatives and co-operators.

Saskatchewan Federated Co-operatives, with headquarters at Saskatoon, authorized plans for an extension and additions to the co-operative oil refinery at Regina at a cost of $5,500,000. Interprovincial Co-operatives Limited, of Winnipeg, Man., leased a cannery at Beamsville, Ont., where they propose to can fruits and vegetables and distribute these products under a "co-op" label to co-operative wholesales throughout Canada.

Marketing.—The sales value of farm products marketed co-operatively in Canada during 1951-52 amounted to $927,589,172. This is the largest volume ever reported and is $158,000,000 higher than the total reported in 1951. All farm products, except eggs and poultry, furs, tobacco and maple products, shared in the increase, the largest gains being reported by the grain, live stock and dairy products co-operatives. The major decrease occurred in eggs and poultry, egg prices declining seriously during the year.

Canada's co-operatives in the grain trade are the largest organizations in co-operative marketing in this country. After a poor year in 1950-51 because of a low-quality crop, the volume of business done by the grain-marketing co-operatives in 1951-52 increased by $95,000,000 to a total of $432,000,000. The 1951 crop of western grain was of relatively low quality but exports were almost of record proportions and there was an increase in domestic sales. Wheat prices remained level throughout the year. Oat and barley prices were high in 1951 and remained steady during 1952.

Cash farm income from the sale of agricultural products handled by co-operatives increased by about 7 p.c. in 1951-52 compared with 1950-51. The percentage increase in the sales volume of marketing co-operatives for the same period was nearly 20 p.c. Co-operatives handled 35·7 p.c. of all agricultural products marketed commercially in Canada in 1951-52. For the various products concerned similar percentages are as follows, with percentages for the previous year shown in parentheses: dairy products, 25·1 (25·8); live stock, 32·4 (21·4); poultry and eggs, 8·3 (12·2); wool, 83·8 (87·5); grain, 54·7 (56·9); fruits and vegetables, 23·4 (27·1); maple products, 23·6 (41·2); tobacco, 65·7 (95·6); and honey, 28·9 (27·5).

Merchandising.—Sales of farm supplies, household and consumer goods by co-operatives in 1951-52 amounted to $248,050,761, an increase of over $38,000,000 above the figure reported for the previous year. Increases were reported in the sales of all commodities handled, the largest increases being reported by co-operatives handling feed and fertilizers and machinery.

Wholesaling.—Eleven co-operative wholesales in Canada did a total volume of business of $167,500,000 in 1951-52, an increase of $26,000,000 over the figure reported for the previous year. There is a co-operative wholesale in every province except Newfoundland. One province has two wholesales and there is one other that operates as an interprovincial wholesale.

Total sales of farm products through the wholesales in 1951-52 amounted to $95,500,000. Total sales of merchandise amounted to $72,000,000. Main items handled by the wholesales were feeds and fertilizers, petroleum products, clothing and hardware.

Retailing.—Sales of food products or groceries in 780 retail outlets in 1951-52 amounted to $51,500,000; clothing and home furnishings to the value of $7,750,000 were handled by 493 outlets; feed and fertilizer sales amounted to $21,200,000 and petroleum products sold through 354 retail stations were valued at $12,800,000.

34.—Summary Statistics of Co-operative Marketing and Purchasing Associations, Crop Years Ended July 31, 1943-52

Year	Associations	Places of Business	Patrons	Sales of Farm Products	Sales of Supplies	Total Business[1]
	No.	No.	No.	$	$	$
1943	1,650	4,406	608,680	295,499,274	55,689,141	352,785,598
1944	1,792	4,534	719,080	459,798,798	65,508,771	527,855,540
1945	1,824	4,441	738,345	500,481,627	81,360,855	585,650,066
1946	1,953	4,488	922,928	454,564,927	95,603,311	554,329,652
1947	2,095	5,084	1,036,498	578,638,214	127,001,488	712,583,246
1948	2,249	5,423	1,195,372	616,347,477	157,874,045	780,084,955
1949	2,378	5,667	1,209,520	783,293,225	191,804,630	982,232,002
1950	2,495	5,761	1,223,582	803,638,962	206,082,408	1,015,264,763
1951	2,348	5,830	1,195,034	769,264,824	209,985,815	988,459,832
1952	2,194	5,470	1,335,567	927,589,172	248,050,761	1,186,532,622

Year	Value of Plant	Total Assets	Liabilities to the Public	Shareholders or Members	Members' Equity
	$	$	$	No.	$
1943	36,866,861	186,634,839	124,264,085	585,826	62,370,754
1944	40,664,827	203,047,911	130,556,373	690,967	72,491,538
1945	43,048,326	171,128,184	87,354,033	739,804	83,774,151
1946	46,775,158	163,467,434	71,012,260	926,863	92,455,174
1947	53,027,212	168,195,387	71,403,750	982,990	96,791,637
1948	75,009,655	201,603,705	89,381,360	1,127,229	112,222,345
1949	89,832,908	236,962,924	106,599,688	1,144,698	130,363,236
1950	98,514,782	254,478,777	111,092,652	1,173,126	143,386,125
1951	99,790,191	306,834,165	159,357,602	1,184,235	147,476,563
1952	129,983,112	410,210,309	214,737,270	1,163,803	195,473,039

[1] Includes other revenue.

35.—Products Marketed, Merchandise and Supplies Handled by Co-operative Marketing and Purchasing Associations, Crop Years Ended July 31, 1951 and 1952

Item	1951		1952	
	Associations[1]	Value of Sales	Associations[1]	Value of Sales
	No.	$	No.	$
Marketing—				
Dairy products	610	117,120,583	588	136,670,962
Fruits and vegetables	187	32,497,354	165	37,191,869
Grain and seed	116	336,260,884	105	431,977,721
Live stock	335	192,884,359	292	242,191,072
Eggs and poultry	240	25,602,756	237	20,721,645
Honey	7	1,216,507	8	1,286,905
Maple products	3	2,380,817	3	2,290,385
Tobacco	5	51,174,252	5	45,390,767
Wool	22	2,248,727	18	3,237,767
Fur	15	933,430	16	389,178
Lumber and wood	41	1,847,750	39	2,269,943
Miscellaneous	46	5,097,405	44	3,970,959
Totals, Marketing	**1,210**	**769,264,824**	**1,125**	**927,589,172**
Merchandising—				
Food products	852	57,837,931	790	58,456,356
Clothing and home furnishings	538	7,641,051	474	7,871,206
Petroleum products and automobile accessories	651	25,466,486	639	25,966,094
Feed, fertilizer and spray material	1,009	76,492,817	907	96,141,898
Machinery and equipment	324	7,488,486	358	16,532,258
Coal, wood and building material	629	14,646,884	574	15,822,040
Miscellaneous	961	20,412,160	964	27,260,909
Totals, Merchandising	**1,872**	**209,985,815**	**1,683**	**248,050,761**
Grand Totals	**2,348**	**979,250,639**	**2,194**	**1,175,639,933**

[1] Duplication exists in this column since some associations market produce and also handle supplies. Some market more than one product and many handle most of the supplies listed.

36.—Summary Statistics of Co-operative Marketing and Purchasing Associations, by Province, Crop Years Ended July 31, 1951 and 1952

Province		Associations	Shareholders or Members	Sales of Products	Sales of Merchandise	Total Business[1]
		No.	No.	$	$	$
Newfoundland	1951	38	5,558	23,889	2,307,707	2,340,101
	1952	49	5,051	9,342	3,010,462	3,027,237
Prince Edward Island	1951	32	9,309	2,750,883	2,341,016	5,129,056
	1952	25	6,036	3,038,243	3,316,385	6,459,366
Nova Scotia	1951	114	22,185	6,548,561	12,117,451	18,791,301
	1952	108	23,304	5,483,490	12,398,917	17,969,841
New Brunswick	1951	60	13,354	5,796,290	4,805,791	10,648,559
	1952	42	9,698	5,533,429	3,522,485	9,317,521
Quebec	1951	716	89,922	70,317,707	54,813,566	125,910,918
	1952	682	90,988	67,745,779	60,233,834	129,155,657
Ontario	1951	342	94,934	116,252,978	42,117,311	159,348,314
	1952	320	90,517	141,201,086	54,501,030	198,150,265
Manitoba	1951	142	174,717	76,986,941	12,971,325	90,439,708
	1952	134	188,166	77,062,408	14,318,773	92,290,469
Saskatchewan	1951	552	393,529	216,467,659	34,756,876	252,920,020
	1952	539	364,417	261,959,695	40,260,979	304,974,010
Alberta	1951	224	218,051	157,971,582	19,186,237	179,812,287
	1952	179	194,839	223,715,671	13,927,971	238,419,897
British Columbia	1951	121	42,255	43,238,489	14,450,609	58,731,057
	1952	109	41,980	49,372,830	15,794,106	65,997,367
Interprovincial	1951	7	120,421	72,909,845	10,117,926	84,388,511
	1952	7	148,807	92,467,199	26,765,819	120,770,992
Totals	**1951**	**2,348**	**1,184,235**	**769,264,824**	**209,985,815**	**988,459,832**
	1952	**2,194**	**1,163,803**	**927,589,172**	**248,050,761**	**1,186,532,622**

[1] Includes other revenue.

Section 6.—Interprovincial Freight Movements*

Statistics on interprovincial trade are difficult to collect since there are no controls or barriers to this trade. The only comprehensive statistics available are the loadings and unloadings of freight carried by the railways. Railway traffic is segregated into 76 classes of freight and the differences between loadings and unloadings are the imports and exports *by rail* for the respective provinces. Freight can, however, be imported by rail and exported by water, as is the case with western grain moved to the Ontario ports of Fort William and Port Arthur. Consequently, the statistics of Table 37 must not be taken as a measure of total interprovincial trade: these figures indicate interprovincial movement of railway freight which is one aspect only of that trade.

* Revised in the Transportation Section, Public Finance and Transportation Division, Dominion Bureau of Statistics.

37.—Railway Revenue Freight Movement, by Province, 1951 and 1952

Province	Loaded		Received from Foreign Connections		Totals Originated[1]	
	1951	1952	1951	1952	1951	1952
	tons	tons	tons	tons	tons	tons
Newfoundland	1,068,291	1,254,435	—	20	1,068,291	1,254,455
Prince Edward Island	417,778	291,917	—	6	417,778	291,923
Nova Scotia	10,289,032	9,640,340	181,406	136,136	10,470,438	9,776,476
New Brunswick	5,012,561	4,165,830	686,421	705,230	5,698,982	4,871,060
Quebec	21,103,335	19,758,883	8,308,306	8,508,728	29,411,641	28,267,611
Ontario	41,667,045	42,504,480	27,315,222	25,168,671	68,982,267	67,673,151
Manitoba	7,967,961	7,999,084	480,974	550,929	8,448,935	8,550,013
Saskatchewan	12,045,777	15,056,856	176,773	229,120	12,222,550	15,285,976
Alberta	11,880,807	13,956,795	50,712	89,389	11,931,519	14,046,184
British Columbia	10,510,464	10,714,787	1,089,773	1,173,901	11,600,237	11,888,688
Totals	**121,963,051**	**125,343,407**	**38,289,587**	**36,562,130**	**160,252,638**	**161,905,537**
	Unloaded		Delivered to Foreign Connections		Totals Terminated[1]	
	1951	1952	1951	1952	1951	1952
	tons	tons	tons	tons	tons	tons
Newfoundland	998,757	1,210,989	175,449	177,793	1,174,206	1,388,782
Prince Edward Island	421,741	474,913	1,976	3,636	423,717	478,549
Nova Scotia	8,399,702	8,177,425	574,930	706,954	8,974,632	8,884,379
New Brunswick	3,600,243	3,466,361	2,345,147	2,410,217	5,945,390	5,876,578
Quebec	23,763,836	22,386,903	9,770,607	10,115,179	33,534,443	32,502,082
Ontario	52,156,726	53,132,159	26,763,532	25,343,482	78,920,258	78,475,641
Manitoba	7,329,550	7,235,126	808,884	938,136	8,138,434	8,173,262
Saskatchewan	4,437,152	4,567,362	924,834	893,018	5,361,986	5,460,380
Alberta	5,086,241	5,553,164	21,780	26,176	5,108,021	5,609,340
British Columbia	8,209,047	8,702,590	4,622,387	6,002,889	12,831,434	14,705,479
Totals	**114,402,995**	**114,936,992**	**46,009,526**	**46,617,480**	**160,412,521**	**161,554,472**

[1] Figures for freight originating and freight terminating do not agree because freight that originates within a certain year does not all terminate within the same year; some that terminated in 1952, for instance, originated within the previous year.

PART II.—GOVERNMENT AIDS TO AND CONTROL OF DOMESTIC TRADE

During the post-war period, the elaborate system of government control of trade that the war effort made necessary was gradually relaxed (*see* the 1948-49 Year Book, pp. 837-841) until, by the beginning of 1949, only those measures to protect domestic requirements and prevent the forcing upward of prices in the Canadian market remained; since then even these have practically disappeared.

Section 1.—Controls Affecting the Handling and Marketing of Grain

The agencies exercising control of the grain trade in Canada include the Board of Grain Commissioners, which since 1912 has administered the provisions of the Canada Grain Act, and the Canadian Wheat Board, which operates under the Canadian Wheat Board Act, 1935. The former is a quasi-judicial and administrative body which, through the powers vested in it in matters of interprovincial transportation and patents and copyrights, gives the Federal Government complete power to control the handling of grain; it has no power or duties in respect of grain prices. The Canadian Wheat Board, which began to function in the autumn of 1935, was a natural outgrowth of government stabilization measures that were taken during the depression years of the 1930's in regard to the marketing of grain crops. During this period, the Government acquired a considerable quantity of wheat and, in the 1935 session of Parliament, legislation was passed to serve the dual purpose of disposing of the holdings so acquired and, at the same time, arranging for the marketing of new crops.

An account of the organization and functions of the Board of Grain Commissioners appears in the 1941 Year Book, pp. 481-482. An article on the operations of the Canadian Wheat Board is commenced in the 1939 Year Book, pp. 569-580, and concluded in the 1947 edition.

Section 2.—Combinations in Restraint of Trade*

Federal legislative measures for aiding and regulating trade include specific prohibitions of operation against the public interest by monopolies and similar commercial combinations. Monopolistic trade arrangements tending to eliminate competition in price, supply or quality of goods, and thereby to restrain trade unduly, are illegal under the Combines Investigation Act and Sect. 498 of the Criminal Code. These laws are designed to promote reasonable competitive opportunities for the expansion of production, distribution and employment.

The first federal legislation in this field was enacted in 1889 and is still effective in amended form as Sect. 498 of the Criminal Code. Legislation providing for investigation of trusts or combines was first enacted in 1897 as part of the Customs Tariff Act. In 1910 a separate Combines Investigation Act was passed and further legislation was enacted in 1919 and 1923.

The Combines Investigation Act.—The Combines Investigation Act (R.S.C. 1952, c. 314), enacted in 1923, provides for the investigation of trade combinations, monopolies, trusts or mergers alleged to have operated to the detriment of the

* Revised by T. D. MacDonald, Q.C., Director of Investigation and Research, Combines Investigation Act, Department of Justice, Ottawa.

public through limiting production, fixing or enhancing prices, limiting competition or otherwise restraining trade. Organizations of this nature are defined by the Act as 'combines' and participation in the formation or operation of a combine is an indictable offence. In line with recommendations contained in a final report by the Committee to Study Combines Legislation, certain amendments effective Nov. 1, 1952, revised the administrative organization by delegating the functions formerly exercised by the Commissioner of the Combines Investigation Act to an agency for investigation and research and a board of three members to appraise the evidence obtained in investigations and report thereon. The former Commissioner of the Combines Investigation Act became the new Director of Investigation and Research, with authority to initiate investigations respecting practices alleged to be offences under the Combines Investigation Act or under Sect. 498 or 498A of the Criminal Code which concern offences related to those covered by the Combines Investigation Act. The board is known as the Restrictive Trade Practices Commission and the following persons have been appointed as members: C. Rhodes Smith, Q.C., Chairman, formerly Attorney-General of Manitoba; Guy Favreau, a member of the Quebec Bar; and A. S. Whiteley, an economist who served as Deputy Commissioner under the Combines Investigation Act. Other amendments removed limitations on possible fines and permitted the courts to prohibit continuation or repetition of an offence. Amendments made to the Combines Investigation Act in 1951 adopted recommendations contained in the interim report of the Committee to Study Combines Legislation which prohibit the practice of resale price maintenance.

The report to the Minister of Justice of an investigation into the manufacture, distribution and sale of matches in Canada, submitted in December 1949, alleged that a combine by way of merger, trust or monopoly existed in the wooden match industry in Canada. Four formal charges were preferred under the Combines Investigation Act. The trial of the first charge concluded at Montreal in May 1951 with the five corporation defendants being convicted and fined a total of $85,000 and costs. The accused appealed the conviction and sentence to the Quebec Court of Queen's Bench (Appeal Side), the appeal to be heard in January 1953, and decision is now (December 1953) pending. The other three charges are in abeyance pending the appeal.

In a report of a special commissioner made in November 1948, a combine was alleged to exist in the bread-baking industry in the Provinces of Saskatchewan, Alberta and British Columbia. Prosecution was instituted and on Oct. 2, 1951, six bakery corporations charged were found guilty, as charged under Sect. 498 of the Criminal Code, with total penalties of $30,000 and costs being imposed. The case was concluded in January 1953 when the costs and expenses which the convicted parties had been ordered to pay in addition to the fines were determined by the court in the amount of $19,402, and the appeals which the parties had asserted against their conviction and sentence were dismissed for want of prosecution.

A report was submitted to the Minister of Justice on May 21, 1952, alleging the existence of combines in six divisions of the rubber industry. Prosecution was instituted and on Apr. 8, 1953, five companies pleaded guilty, at which time an application was made on behalf of the Crown for an order prohibiting the continuation or repetition of the offence or the doing of specified acts or things directed towards the continuation or repetition of the offence. Judgment in regard to

sentence and the application for the prohibition order was reserved. Charges in respect of certain other divisions of the rubber industry dealt with in the report are expected to be proceeded with in the autumn of 1953.

A report, comprising the results of an investigation into the fine paper industry, was submitted to the Minister of Justice on Oct 23, 1952. The report named seven manufacturers and 37 fine paper merchants as having been parties or privy to or knowingly assisted in the operation of a combine or combines within the meaning of the Combines Investigation Act. Decision to prosecute some or all of the manufacturers and some or all of the merchants mentioned in the report was announced by the Minister on Apr. 7, 1953.

On Jan. 22, 1953, a report was submitted to the Minister alleging that, at the time of commencement of the inquiry in 1949, a combine existed in connection with the distribution and sale of coarse papers in and around Vancouver. The report named six wholesale coarse-paper distributors as being the principal parties to the alleged combine together with three other wholesale firms and three manufacturers which from time to time had knowingly assisted in the operation of the alleged combine. On Feb. 4, 1953, the report was made public by the Minister, who stated that as soon as he had examined it carefully and received the opinion of counsel he would make a further announcement as to whether proceedings would be instituted with respect to the operations of the alleged combine.

A report of an investigation into an alleged combine in the purchase of maple syrup and maple sugar in the Province of Quebec was submitted to the Minister of Justice on Mar. 20, 1953, and made public by him on Apr. 1, 1953. The report stated that, out of ten firms engaged in the purchase of maple products in Quebec, six made an arrangement to buy their supplies of these products through a common agency at a common price. The Commission, however, was of the opinion that the evidence did not go so far as to prove the existence of a combine, since the parties who entered into the arrangement had not been shown to account for a sufficiently large portion of the market or to have such control over it as to make it appear conclusively that their arrangements were detrimental to the public, that is, in this case, the producers. This was the last report made by the Commissioner of the Combines Investigation Act and subsequent reports will be made by the Restrictive Trade Practices Commission.

During 1952 and 1953 a variety of matters were disposed of on preliminary inquiry while in a number of other cases investigations were proceeding. Numerous consultations and interviews were held with individuals and representatives of business groups interested in discussing the possible application of the Act to conditions encountered or to arrangements being considered. During 1953, the Combines Branch represented Canada at meetings of the Ad Hoc Committee on Restrictive Business Practices, established under resolution of the United Nations Economic and Social Council to formulate proposals for an international convention to be considered by the Economic and Social Council.

Section 3.—Trade Standards*

The Standards Division of the Department of Trade and Commerce consolidates, under one Director, the administration of the Electricity Inspection Act, the Gas Inspection Act, the Electricity and Fluid Exportation Act, the Precious Metals Marking Act and the Weights and Measures Act.

Commodity Standards.—On Nov. 26, 1949, Parliament passed the National Trade Mark and True Labelling Act which provides a framework for the development of the National Standard and true labelling in order to circumvent public deception in advertising.

In brief, the use of the National Standard is voluntary and compliance with commodity standards affects only those manufacturers who desire to use the national trade mark. In addition, where manufacturers label descriptively any commodity or container, it must be labelled accurately to avoid public deception. One such regulation of interest applies to the labelling of fur garments and has been established as a code of fair practice throughout the merchandising field.

Under the terms of the Precious Metals Marking Act, 1946 (R.S.C. 1952, c. 215), commodities composed of gold, silver or platinum may be marked with a quality mark which describes accurately the quality of the metal. Where such mark is used, a trade mark registered in Canada, or for which application for registration has been made, must also be applied. Gold-plated, silver-plated or platinum-plated articles may also be marked under certain conditions outlined in the Act. The inspection staff of the Standards Division is engaged in the examination of advertising matter, in verifying the quality of articles offered for sale and in checking the marks applied.

Weights and Measures.—The Weights and Measures Act prescribes the legal standards of weight and measure for use in Canada. Responsibilities under the Act require control of the type of all weighing and measuring devices used for commercial purposes, their periodic verification and surveillance directed towards the elimination of sales by short weight or short measure.

The number of inspections made in the year ended Mar. 31, 1953, was 437,644, compared with 435,333 in 1951-52. The more important inspections comprised the following: weighing machines, including scales of all kinds, 225,452; measuring machines for liquids, 67,174; weights, 122,966; other measures, 22,052. Total expenditure was $659,975 in 1952-53 compared with $621,449 in 1951-52, and total revenue $600,641 compared with $508,963.

Electricity and Gas Inspection.—Responsibilities of the Standards Division under the Electricity Inspection Act and the Gas Inspection Act comprise the testing and stamping of every electricity and gas meter used throughout Canada for billing purposes, the object being to ensure the correct measurement of all electricity and gas sold. Canada is divided into 21 districts for administration of the two Acts, and staff numbers 158. During the year ended Mar. 31, 1953, 928,827 electricity and gas meters were tested as compared with 910,069 in the preceding year. Revenue derived from the testing amounted to $631,389 and expenditure to $574,597.

* Prepared by R. W. MacLean, Director, Standards Division, Department of Trade and Commerce, Ottawa.

1.—Electricity and Gas Meters in Use, Years Ended Mar. 31, 1944-53

Year	Electricity Meters	Gas Meters				
		Manufactured Gas	Natural Gas	Acetylene Gas	Petroleum Gas	Total
	No.	No.	No.	No.	No.	No.
1944	2,268,500	540,240	201,522	4	1,392	743,158
1945	2,348,150	552,411	208,046	4	1,529	761,990
1946	2,459,672	550,949	215,330	4	1,651	767,934
1947	2,647,040	560,046	225,952	4	1,725	787,727
1948	2,746,685	587,629	217,068	3	1,046	805,746
1949	2,972,725	600,923	227,393	3	4,006	832,325
1950	3,188,013	606,395	239,448	4	3,841	849,688
1951[1]	3,405,432	610,096	252,468	5	33	862,602
1952[1]	3,590,422	609,262	263,130	5	68	872,465
1953[1]	3,779,739	599,140	277,248	5	1,270	877,663

[1] Includes Newfoundland.

The Electricity and Fluid Exportation Act came into force in 1907. Under its provisions no electric energy or fluid, whether liquid or gaseous, may be exported from Canada without a licence. Total exports of electric energy during the year ended Mar. 31, 1953, amounted to 2,463,059,301 kwh. There was also a small export of natural gas and crude oil.

Section 4.—Patents, Copyrights and Trade Marks*

Letters patent are issued subject to the provisions of the Patent Act, 1935 (R.S.C. 1952, c. 203). Applications for protection relating to patents should be addressed to the Commissioner of Patents, Ottawa.

2.—Patents Applied for, Granted, etc., Years Ended Mar. 31, 1948-53

Item		1948	1949	1950	1951	1952	1953
Applications for patents	No.	16,585	12,751	13,172	14,324	15,448	16,405
Patents granted	"	7,175	7,959	8,513	8,461	9,516	9,700
Granted to Canadians	"	*580*	*570*	*655*	*687*	*708*	*742*
Caveats granted	"	313	326	356	391	253	243
Assignments	"	13,656	13,325	12,811	11,437	11,621	12,525
Fees received, net	$	631,929	625,451	636,772	661,069	728,241	756,714

The number of Canadian patents granted increased fairly steadily each year from 4,522 at the beginning of the century to a peak of 12,542 in 1923 and has remained between 6,500 and 10,000 for the past ten years. Of the 9,700 patents granted in 1952-53, 6,966 or 72 p.c. were to inventors resident in the United States, 742 to Canadian residents and 1,095 to residents of the United Kingdom or other Commonwealth countries. Residents of France obtained 226, of Switzerland 144, of Holland 219, and of other countries 308.

Printed copies of patents issued from Jan. 1, 1949, to date are available at a nominal fee. The Canadian *Patent Office Record* gives a brief digest of each patent.

* The material relating to patents and copyrights was revised by J. W. T. Michel, Commissioner of Patents, and that relating to trade marks by J. P. McCaffrey, Registrar of Trade Marks, Department of the Secretary of State, Ottawa.

Canadian and foreign patents may be consulted at the Patent Office Library. The Library has records of British patents and abridged specifications thereof from 1617 to date, and of United States patents from 1872 to date, as well as many patents, indexes, journals and reports from Australia, New Zealand, South Africa, India, Pakistan, France, Belgium, Austria, Norway, Hungary and Mexico.

Copyrights, Industrial Designs and Timber Marks.—Registration of copyright is governed by the Copyright Act, 1921 (R.S.C. 1952, c. 55). Applications for protection relating to copyrights should be addressed to the Commissioner of Patents, Ottawa.

The Act sets out the qualifications for a copyright and its duration: "Copyrights shall subsist in Canada...in every original literary, dramatic, musical and artistic work, if the author was, at the date of the making of the work, a British subject, a citizen or subject of a foreign country which has adhered to the Berne Convention and the additional Protocol...or resident within Her Majesty's Dominions. The term for which the copyright shall subsist shall, except as otherwise expressly provided by this Act, be the life of the author and a period of fifty years after his death".

Copyright protection is extended to records, perforated rolls, cinematographic films, and other contrivances by means of which a work may be mechanically performed. The intention of the Act is to enable Canadian authors to obtain full copyright protection in Canada, in all parts of the Commonwealth, in foreign countries of the Copyright Union and in the United States of America.

Protection of industrial designs and of timber marks is afforded under the Trade Mark and Design Act and the Timber Marking Act. Registers of such designs and marks are kept by the Copyright Branch of the Patent Office and information regarding them is published in the Canadian *Patent Office Record.*

3.—Copyrights, Industrial Designs and Timber Marks Registered, Years Ended Mar. 31, 1948-53

Item		1948	1949	1950	1951	1952	1953
Copyrights registered	No.	4,002	4,219	4,488	4,700	4,676	4,976
Industrial designs registered	"	730	795	653	628	480	431
Timber marks registered	"	7	20	7	4	10	1
Assignments registered	"	385	338	426	512	497	523
Fees received, net	$	17,880	17,784	19,325	19,848	19,382	20,681

Trade Marks and Shop Cards.—The Trade Marks Office, a Branch of the Department of the Secretary of State, is charged with the administration of the Unfair Competition Act, 1932, which repealed all previous Acts governing trade marks, and the Shop Cards Registration Act, which came into force on Sept. 1, 1938. Applications for registration of trade marks and shop cards should be addressed to the Registrar, Trade Marks Office, Ottawa.

A register of Trade Marks is kept, in which, subject to the provisions of the Act, any person may cause to be recorded any trade mark he has adopted and notification of any assignments, transmissions, disclaimers and judgments relating to such trade mark. In order that the public may be kept informed in the matter of trade-mark registration, a list of registered trade marks appears in the Canadian *Patent Office Record* which is issued weekly.

The Shop Cards Registration Act is designed to afford a measure of protection to organizations, such as trade unions, that were able formerly to register their particular designations as Union Labels under the Trade Mark and Design Act. Registrations under the Act may be renewed every 15 years.

4.—Trade Marks and Shop Cards Registered, Years Ended Mar. 31, 1947-52

Item	1947	1948	1949	1950	1951	1952
Trade marks registered.....No.	2,703	2,992	3,936	3,408	3,309	2,806
Trade-mark registrations assigned... "	1,241	1,473	1,719	1,485	1,665	1,535
Trade-mark registrations renewed... "	1,206	2,302	2,033	2,064	2,085	2,266
Certified copies prepared..... "	555	570	529	642	699	619
Shop cards registered..... "	—	4	—	1	1	—
Fees received, net..... $	127,037	133,707	122,147	132,228	132,744	127,053

Section 5.—Subventions and Bounties on Coal*

Subventions have been regulated during past years by Orders in Council authorizing the payment of certain rates of assistance, in respect of the various movements of coal specified therein, from moneys voted annually by Parliament for that purpose. It has not been considered practicable to fix subvention aid by statute owing to the frequent changes in the competitive situation.

5.—Expenditure for Subventions, by Province, 1947-52

Province	1947	1948	1949	1950	1951	1952
Nova Scotia.....ton	296,599	1,403,306	1,853,604	1,165,719	2,286,537	1,897,451
$	141,156	954,846	2,435,111	1,005,438	3,074,466	5,194,288
New Brunswick.....ton	2,528	724	3,025	2,314	2,709	2,851
$	1,698	724	3,838	1,939	2,634	3,780
Saskatchewan.....ton	12,559	31,787	94,957	173,694	165,086	139,555
$	11,923	25,366	64,933	125,767	126,042	113,645
Alberta and eastern British Columbia.....ton	252,076	282,608	441,938	785,148	589,581	613,651
$	532,139	635,253	897,970	1,482,202	1,163,937	1,161,810
British Columbia bunker and export.....ton	9,294	5,728	36,170	6,092	91,611	59,254
$	6,971	4,296	29,893	4,569	88,551	56,580
Totals.....ton	**573,056**	**1,724,154**	**2,429,692**	**2,132,970**	**3,135,523**	**2,712,762**
$	**693,887**	**1,620,487**	**3,431,745**	**2,619,915**	**4,455,629**	**6,530,103**

The Coke Bounty Act, 1930 (20-21 Geo. V, c. 6), implemented one of the recommendations of the Royal Commission on Maritime Claims and was approved by Parliament on May 30, 1930. The bounty is paid on Canadian coal converted to coke and used in the manufacture of Canadian iron and steel and places the coal on a basis of equality with imported coal.

* Prepared by H. H. Harris, Administrative Officer, Dominion Coal Board, Ottawa. Additional information on subventions and bounties summarized from the *Report of the Royal Commission on Coal, 1946*, is given in the 1947 Year Book, pp 770-771.

Bounties paid under this authority for the years 1947-52 were as follows:—

	1947	1948	1949	1950	1951	1952
Quantity.....ton	555,386	712,150	740,288	830,752	810,608	698,449
Amount.....$	275,139	352,514	366,443	411,222	401,251	345,732

Section 6.—Control and Sale of Alcoholic Beverages

The provincial liquor control Acts have been constituted to establish provincial monopolies of the retail sale of alcoholic beverages, with the practical elimination therefrom of private profit. Partial exception is made in the retail sale of beer by brewers, or others which certain provinces permit, while reserving regulative rights and taxing such sales heavily. The provincial monopoly extends to the retail sale and not to the manufacture of alcoholic beverages. The original liquor control Acts have been modified from time to time as deemed advisable.

The distilled liquor industry produces not only beverage spirits but also industrial alcohol such as (1) unmatured, denatured by distillers, used in anti-freeze and numerous other items, and (2) unmatured, non-denatured, used in chemical compounds, pharmaceutical preparations and vinegar. Production of industrial alcohol (denatured and non-denatured) totalled 7,252,410 pf. gal. in 1951, an increase of 778,354 pf. gal. over 1950. Beverage spirits produced in 1951 and placed in bond for maturing totalled 17,613,470 pf. gal. as compared with 15,147,458 pf. gal. the previous year. Sales in 1951 of denatured alcohol for anti-freeze, solvents, cleaning fluids, perfume manufacturing, etc., amounted to 3,208,546 standard gal. as compared with sales of 3,835,517 standard gal. in 1950. Sales of 4,331,500 pf. gal. of non-denatured alcohol in 1951 were 782,542 pf. gal. higher than in 1950. Beverage spirits sold (domestic and export sales) amounted to 18,270,522 pf. gal. in 1951 and 18,209,143 pf. gal. in 1950.

Materials used show important changes. Wheat was the major item during World War II but in 1951, owing to restrictions resulting from world food problems, consumption declined to only 25,434,992 lb. from a peak of 402,535,232 lb. in 1944. Corn replaced wheat, increasing from 15,833,741 lb. in 1944 and 45,191,740 lb. in 1945 to 207,576,420 lb. in 1951. Wheat flour (alcomeal), introduced during the War and consumed to the extent of 77,268,410 lb. in 1944, ceased to be of importance in the later years.

Net Revenue from Liquor Control.—The provincial figures of net revenue shown in Table 6 include not only the net profit made by Liquor Control Boards or Commissions but also additional amounts of revenue received from permits, licences, etc., sometimes paid direct to the provincial governments.

The Federal Government, for the year ended Mar. 31, 1952, also collected in excise duties, customs duties, excise taxes, licence fees, etc., $82,096,567 on spirits, $77,670,484 on malt and malt products and $2,939,000 on wines.* Corresponding collections for the year ended Mar. 31, 1951, were $92,217,597 on spirits, $68,234,475 on malt and malt products and $2,921,321 on wines.

* Excludes sales tax, details of which are not available for separate commodities.

6.—Total Provincial Revenue from Liquor Operations, Provincial Fiscal Years 1943-52

NOTE.—Provincial fiscal years ended on the following dates, N'f'ld. and P.E.I., Mar. 31; N.S., Nov. 30, 1943-50, Mar. 31, 1951-52; N.B., Oct. 31, 1943-50, Mar. 31, 1951-52; Que. and Ont., Mar. 31; Man., Apr. 30, 1943-46, Mar. 31, 1947-52; Sask., Alta. and B.C., Mar. 31.

Year	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
	$	$	$	$	$
1943	...	...	5,740,000	3,055,000	13,357,000
1944	...	274,000[1]	6,869,000	3,497,000	15,095,000
1945	...	240,000	7,569,000	4,247,000	18,334,000
1946	...	456,000	9,175,000	6,930,000	24,373,000
1947	...	750,000	8,415,000	6,903,000	31,334,000
1948	...	707,000	8,334,000	6,625,000	29,578,000
1949	...	741,000	8,341,000	6,508,000	28,574,000
1950[5]	1,769,000	887,000	7,727,000	5,500,000	29,135,000
1951[5]	2,188,000	971,000	2,662,000[2]	2,488,000[3]	32,835,000
1952[5]	2,475,000	789,000	8,549,000	5,441,000	31,306,000

Year	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	$	$	$	$	$
1943	18,530,000	3,743,000	3,031,000	5,050,000	8,171,000
1944	20,990,000	3,845,000	3,660,000	5,356,000	6,971,000
1945	19,020,000	4,382,000	4,162,000	6,026,000	7,906,000
1946	31,053,000	5,914,000	6,605,000	8,223,000	11,219,000
1947	35,908,000	6,527,000[4]	8,104,000	9,684,000	14,800,000
1948	36,808,000	7,030,000	7,984,000	9,966,000	16,710,000
1949	39,524,000	7,333,000	8,598,000	11,316,000	18,161,000
1950[5]	41,391,000	7,714,000	8,946,000	12,133,000	18,148,000
1951[5]	41,395,000	8,057,000	8,765,000	12,195,000	18,994,000
1952[5]	44,156,000	8,108,000	9,599,000	13,086,000	20,135,000

[1] Fifteen months ended Mar. 31. [2] Four months ended Mar. 31. [3] Five months ended Mar. 31. [4] Eleven months ended Mar. 31. [5] The figures for 1950, 1951 and 1952 are not entirely comparable with those for previous years owing to a change in the basis of compilation. In the earlier years, licences and permit fees as well as certain provincial taxes which may have been administered by the liquor authority were included in net profits, such being included in the amounts reported by the respective Boards. In those provinces, however, where these types of revenue were collected through the Provincial Treasurer's office they did not appear as part of net profits although they were included in the total revenue figures. Also the total revenue figures for 1950-52 include fines and penalties for infractions of liquor control operations.

Apparent Consumption of Alcoholic Beverages.—An accurate measurement of the consumption of alcoholic beverages by Canadians is not possible since no separate record is kept of sales to non-residents of Canada. Temporary additions to the resident population through tourist travel are, at certain seasons, extremely large. In 1952, for example, about 26,000,000 visitors crossed the International Boundary into Canada and sales of alcoholic beverages to certain of these visitors undoubtedly reached considerable proportions.

In Tables **7**, **8** and **9** an attempt is made to indicate the apparent consumption in Canada of spirits, beer and wine, respectively, on the basis of the quantities produced, imported, exported, etc. It should be noted, however, that these figures take no account of increases or decreases in the quantities held in stock by the liquor control boards or by licensees. For instance, the boards may, in certain years, buy heavily to replenish stocks or create reserves; such purchases would unduly weight the consumption figures for those years.

Practically the total production of spirits is placed in bonded warehouses whence it is released for various purposes. The quantities shown in Table 7 as entered for consumption are released from warehouses, duty paid, presumably for consumption for beverage purposes in Canada. Only a small part of the output of beer is placed in warehouses. The available supply as shown in Table 8 is, therefore, made up of production, changes in warehouse stock and imports. The apparent consumption of native wines as shown in Table 9 is obtained by dividing the total tax collections by the rates of excise tax.

7.—Apparent Consumption of Beverage Spirits, Years Ended Mar. 31, 1943-52

NOTE.—Figures for the years 1924-40 are given in the 1941 Year Book, p. 532, and for 1941-42 in the 1950 edition, p. 891. After 1942, a change was made in the method of computing apparent consumption of beverage spirits.

Year	Entered for Consumption	Add Imports	Deduct Re-Exports of Imported Spirits	Apparent Consumption
	pf. gal.	pf. gal.	pf. gal.	pf. gal.
1943	3,445,872	1,284,116	69	4,729,919
1944	2,620,297	823,422	3	3,443,716
1945	2,676,482	1,043,709	273	3,719,918
1946	4,087,690	1,775,935	113	5,863,512
1947	4,446,128	2,097,427	382	6,543,173
1948	4,632,506	2,691,302	3,420	7,320,388
1949	4,360,914	2,474,076	1,735	6,833,255
1950	4,608,926	2,361,141	169	6,969,898
1951	5,468,908	2,561,696	552	8,030,052
1952	4,552,336	3,075,018	13,169	7,614,185

8.—Apparent Consumption of Beer, Years Ended Mar. 31, 1943-52

NOTE.—Figures for the years 1924-40 are given in the 1941 Year Book, p. 533, and for 1941-42 in the 1951 edition, p. 872.

Year	Production	Add Quantities Entered for Consumption from Warehouses	Add Imports	Deduct Quantities Placed in Warehouses	Deduct Domestic Exports	Apparent Consumption
	gal.	gal.	gal.	gal.	gal.	gal.
1943	108,980,613	1,197,658	85,211	6,813,251	5,839,905	97,610,326
1944	104,062,427	726,817	61,634	7,536,054	6,604,977	90,709,847
1945	122,530,269	6,177,745	76,225	12,591,822	5,968,602	110,223,815
1946	138,941,170	2,596,574	26,550	6,910,528	4,567,667	130,086,099
1947	155,800,830	1,035,203	17,015	5,763,200	4,108,944	146,980,904
1948	173,201,842	3,368,130	36,662	6,839,460	4,024,332	165,742,842
1949	178,552,891	3,619,293	97,368	3,718,515[r]	1,611,071	176,939,966[r]
1950	182,718,905[r]	4,093,562	111,181	4,151,391	1,329,747	181,442,510[r]
1951	179,625,127	1,513,990	147,678	1,277,694	1,738,377	178,270,724
1952	190,594,270	20,184	192,058	22,900	2,033,617	188,749,995

9.—Apparent Consumption of Wine, Years Ended Mar. 31, 1943-52

NOTE.—Figures for the years 1924-40 are given in the 1941 Year Book, p. 533, and for 1941-42 in the 1951 edition, p. 872.

Year	Domestic	Imported			Apparent Consumption, Domestic and Imported
	Apparent Consumption	Imports	Less Re-exports	Apparent Consumption	
	gal.	gal.	gal.	gal.	gal.
1943	4,192,903	434,699	35	434,664	4,627,567
1944	3,314,260	290,691	11,005	279,686	3,593,946
1945	3,409,303	303,153	—	303,153	3,712,456
1946	3,979,857	595,732	12	595,720	4,575,577
1947	4,655,734	928,664	—	928,664	5,584,398
1948	4,594,361	619,249	2	619,247	5,213,608
1949	4,020,542	690,679	235	690,444	4,710,986
1950	4,149,863	744,884	98	744,786	4,894,649
1951	4,348,733	851,591	24	851,567	5,200,300
1952	4,211,705	952,080	66	952,014	5,163,719

PART III.—BANKRUPTCIES AND COMMERCIAL FAILURES

The three Sections of this Part, although closely related as far as subject matter is concerned, cover different aspects of the field of bankruptcies and commercial failures and the statistics presented in each Section are not comparable with those given in the other Sections.

Section 1 is limited to the administration of bankrupt estates by the Superintendent of Bankruptcy under the Bankruptcy Act (including the Farmers' Creditors Arrangement Act). This Section, however, gives definite information on the amounts realized from the assets as established by debtors and indicates that values actually paid to creditors are invariably very much lower than such estimates alone would imply. It can, therefore, be assumed that this applies in even greater degree to the more extended fields covered in Sections 2 and 3.

Section 2, on the other hand, is limited to bankruptcies and insolvencies made under federal legislation (the Bankruptcy Act and the Winding-Up Act) but not failures, sales or seizures carried out apart from such federal legislation. The Dominion Bureau of Statistics figures include failures of individuals such as wage-earners. For recent years, separate data are shown for insolvencies by wage-earners as distinct from industrial and commercial mortalities. The figures of assets and liabilities are estimates made by the debtor and, unfortunately, are not made uniformly. The human element enters into them to a considerable degree and they should, therefore, be accepted with reservations.

The statistics given in Section 3 are compiled by Dun and Bradstreet, Incorporated This mercantile agency is interested primarily in credit information and their statistics include bankruptcies in general, insolvencies under provincial companies' Acts and such proceedings as bulk sales, bailiffs' sales, landlord's seizures, etc., when loss to creditors results. On the other hand, the statistics do not include assignments of individuals, so that, as a rule, the totals run lower than those in Section 2. Since between the years 1875 and 1919 this agency was the only source of figures of commercial failures, their statistics have an added value because they present a historical series back to 1915 though the basis of classification was changed after 1933 (*see* text preceding Table 8, p. 959).

Section 1.—Administration of Bankrupt Estates*

Federal insolvency legislation now comprises the Bankruptcy Act, 1949, the Farmers' Creditors Arrangement Act, 1943, the Companies' Creditors Arrangement Act and, to some extent, the Winding-Up Act. The two Arrangement Acts are designed to avert failure and the statistics in this Section and in Section 2, therefore, do not include proposals or arrangements under these Acts. When such proposals or arrangements are rejected by the creditors or fail in their purpose the proceedings may then come under the Bankruptcy Act, the bankruptcy provisions of the Farmers' Creditors Arrangement Act and, in certain circumstances, the Winding-Up Act. There are no provisions in the Companies' Creditors Arrangement Act for the liquidation or winding-up of insolvent companies.

The Bankruptcy Act, 1949, under which the Bankruptcy Act, 1919, and amendments thereto is repealed, restores to all insolvent persons the right to make a proposal prior to bankruptcy. The summary administration provisions of the Act enable insolvent persons, other than corporations, having limited assets to obtain the benefit of the Act. A new principle has also been established in regard to the discharge of bankrupts and the Act provides that "the making of a receiving order against, or an assignment by, any person except a corporation operates as an application for discharge" unless a waiver is filed in court and served upon the trustee within the prescribed delays.

The administration of bankrupt estates is supervised by the Superintendent of Bankruptcy, first appointed in 1932, with the object of conserving as far as possible the assets of bankrupt estates for the benefit of the creditors.

The series of statistics collected on estates closed under the Bankruptcy Act, 1919, covering the years 1933-50 are given in the 1947 Year Book, p. 846, and the 1952-53 edition, p. 915. The figures given in Table 1 are those of estates closed under the new Bankruptcy Act, 1949, and begin with the year 1951.

* Prepared by the Superintendent of Bankruptcy, Ottawa. Early bankruptcy and insolvency legislation is reviewed in the 1952-53 Year Book, pp. 914-915.

1.—Assets, Liabilities, Assets Realized and Cost of Administration under the Bankruptcy Act 1949, by Province, 1952, with Totals for 1951

Province and Year	Estates Closed	Assets Estimated by Debtor	Liabilities Estimated by Debtor	Total Realization	Cost of Administration	Paid to Creditors
	Bankruptcies Under General Provisions of the Act[1]					
	No.	$	$	$	$	$
Newfoundland	6	93,263	113,603	36,438	9,620	26,818
Prince Edward Island	8	144,214	171,955	94,670	14,570	80,100
Nova Scotia	15	181,173	269,771	34,434	12,360	22,074
New Brunswick	4	94,846	110,012	48,093	5,640	42,453
Quebec	867	9,648,597	14,927,443	2,976,823	972,902	2,003,921
Ontario	186	3,358,999	5,177,981	998,993	280,306	718,687
Manitoba	18	498,659	803,794	143,125	28,830	114,295
Saskatchewan	15	130,048	211,024	50,763	23,577	27,186
Alberta	7	100,091	135,237	50,301	15,652	34,649
British Columbia	69	1,061,889	1,727,327	439,211	137,001	302,210
Totals, 1952	**1,195**	**15,311,779**	**23,648,147**	**4,872,851**	**1,500,458**	**3,372,393**[2]
Totals, 1951	**903**	**14,197,297**	**23,832,816**	**5,274,191**	**1,443,470**	**3,830,721**[2]

[1] Includes Summary Administration Provisions of the Act of 1949. [2] In addition to the amount paid to creditors by the trustee, secured creditors valued their security or realized on it themselves without the intervention of a trustee an amount of approximately $5,230,106 in 1952 and $4,108,276 in 1951.

1.—Assets, Liabilities, Assets Realized and Cost of Administration under the Bankruptcy Act 1949, by Province, 1952, with Totals for 1951—concluded

Province and Year	Estates Closed	Assets Estimated by Debtor	Liabilities Estimated by Debtor	Total Realization	Cost of Administration	Paid to Creditors
	PROPOSALS UNDER SECT. 27 (1) (a) OF THE ACT					
	No.	$	$	$	$	$
Quebec	31	—	578,789	—	—	160,157
Ontario	2	—	28,039	—	—	5,276
Totals, 1952	**33**	**—**	**606,828**	**—**	**—**	**165,433**
Totals, 1951	**19**	**—**	**1,148,237**	**—**	**—**	**661,760**

Summary statistics of estates closed under the Farmers' Creditors Arrangement Act are available in previous editions of the Year Book beginning with the 1947 edition. From the time the Act first came into effect on Sept. 1, 1934, to the end of 1949 there were 885 assignments and 39 receiving orders, or a total of 924 estates closed. No assignments or receiving orders were reported under the Act in 1950, 1951 or 1952 but one case was completed during 1952.

Section 2.—Returns under the Bankruptcy and Winding-Up Acts as Compiled by the Dominion Bureau of Statistics

As stated on p. 954, the figures in this Section cover only the bankruptcies and insolvencies under federal legislation—the Bankruptcy Act and the Winding-Up Act—and include assignments of individuals such as wage-earners.

Under the Bankruptcy and Winding-Up Acts (R.S.C. 1952, cc. 14 and 296), certain documents relating to estates administered under these Acts have, since July 1920, been forwarded to the Dominion Statistician for statistical analysis. A statistical series began with 1923, except for the analysis by branches of business which began in 1924. However, changes in the administration of bankruptcies introduced by the Bankruptcy Act of 1949 (*see* p. 955) affected the comparability of the series. In that Act, provision was made for proposals from insolvent persons and, since July 1950, agreements made under this method are not included with the statistics of bankruptcies. In Table 2 the number of proposals are shown so as to give a general impression of the trend.

2.—Bankruptcies and Insolvencies under Federal Legislation, by Province, 1943-52

NOTE.—Figures for 1923-42 are given in the corresponding table of previous Year Books beginning with the 1941 edition.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943	...	—	3	3	343	50	3	7	2	10	421
1944	...	—	3	—	222	33	1	3	4	11	277
1945	...	1	3	1	225	27	3	—	4	8	272
1946	...	1	3	2	236	20	—	—	4	12	278
1947	...	2	6	7	422	72	4	2	6	24	545
1948	...	1	9	13	613	116	8	4	8	41	813
1949	..	3	4	12	827	131	16	5	13	55	1,066
1950	3	8	17	20	967	186	16	9	16	61	1,303
1951	5	3	12	24	1,022	227	15	13	14	64	1,399
1952	9	—	17	14	1,167	220	13	8	13	48	1,509
Proposals—[1]											
1950	—	—	—	2	66	7	1	—	—	3	79
1951	—	—	1	3	160	8	—	—	—	4	176
1952	—	—	—	1	172	15	—	—	—	3	191

[1] *See* text above.

Wage-earner failures have been shown separately since 1949 and are given, by area, in Table 3.

3.—Wage-Earner Failures, by Area, 1949-52

Year	Atlantic Provinces	Quebec	Ontario	Prairie Provinces	British Columbia	Total
	No.	No.	No.	No.	No.	No.
1949	2	118	2	—	2	124
1950	—	121	9	—	2	132
1951	2	148	11	—	2	163
1952	—	155	8	—	2	165

4.—Bankruptcies and Insolvencies under Federal Legislation, by Branch of Business, 1943-52

NOTE.—Figures for 1924-42 are given in the corresponding table of previous Year Books beginning with the 1942 edition.

Year	Trade	Manufacturing	Agriculture	Logging and Fishing	Mining	Construction	Transportation and Public Utilities	Finance	Service	Not Classified	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943	166	61	13	1	7	38	14	11	78	32	421
1944	83	47	4	2	3	27	11	7	62	31	277
1945	58	54	2	—	3	39	12	6	70	28	272
1946	77	57	2	4	3	32	14	7	64	18	278
1947	153	152	6	7	—	57	20	5	92	53	545
1948	289	188	9	4	3	77	30	4	144	65	813
1949	374	232	8	10	10	94	46	19	203	70	1,066
1950[1]	502	257	24	7	5	97	40	20	273	78	1,303
1951	570	269	20	8	8	126	42	27	255	74	1,399
1952	569	305	42	2	7	114	45	32	279	114	1,509

[1] Newfoundland included from 1950.

5.—Estimated Assets and Liabilities of Bankruptcies and Insolvencies, 1943-52

NOTE.—Figures for 1923-42 are given in the corresponding table of previous Year Books beginning with the 1942 edition.

Year	Estimated Total Assets	Estimated Total Liabilities	Year	Estimated Total Assets	Estimated Total Liabilities
	$	$		$	$
1943	3,197,839	5,339,523	1948	9,855,789	15,723,615
1944	2,020,302	4,043,864	1949	15,548,598	21,355,669
1945	1,864,359	3,995,109	1950[1]	17,168,883	24,872,927
1946	4,039,339	5,966,153	1951	18,237,768	25,912,004
1947	5,933,211	10,077,557	1952	20,381,304	29,658,281

[1] Newfoundland included from 1950.

6.—Bankruptcies and Insolvencies, by Industries and Economic Areas, 1951 and 1952

Industry	1951						1952					
	Atlantic Provinces	Que.	Ont.	Prairie Provinces	B.C.	Total	Atlantic Provinces	Que.	Ont.	Prairie Provinces	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Trade—												
General stores	5	39	8	2	2	56	6	40	5	1	1	53
Grocery	4	45	11	3	2	65	4	38	13	1	—	56
Confectionery	—	21	3	1	2	27	—	27	1	—	—	28
Drink and tobacco	—	7	3	—	—	10	—	18	2	—	—	20
Fish and meat	2	37	2	2	1	44	2	31	5	—	—	38
Boots and shoes	—	15	1	—	—	16	—	19	2	1	—	22
Dry goods	—	22	2	—	—	24	—	25	2	—	—	27
Clothing	—	54	13	4	4	75	3	47	11	4	1	66
Furniture	—	20	3	1	4	28	1	20	2	1	—	24
Books and stationery	—	17	2	1	—	20	—	16	1	—	—	17
Automobile	1	11	3	1	—	16	1	17	5	1	2	26
Hardware	3	11	6	2	1	23	—	12	5	—	—	17
Electrical apparatus	4	20	2	—	1	27	—	27	3	1	—	31
Jewellery	—	18	7	2	—	27	1	14	8	—	1	24
Coal and wood	1	18	2	—	—	21	—	13	2	—	—	15
Drugs and chemicals	—	6	—	—	2	8	—	11	1	—	2	14
Miscellaneous	5	42	28	5	3	83	4	54	25	3	5	91
Totals, Trade	**25**	**403**	**96**	**24**	**22**	**570**	**22**	**429**	**93**	**13**	**12**	**569**
Manufacturing—												
Vegetable foods	—	26	7	1	1	35	1	27	1	2	—	31
Drink and tobacco	—	2	—	—	—	2	—	2	—	—	—	2
Animal foods	1	13	2	—	2	18	—	16	2	—	—	18
Fur and leather	—	25	4	2	—	31	—	21	1	2	—	24
Pulp and paper	—	13	3	—	—	16	1	18	5	—	—	24
Textiles	—	25	—	—	1	26	—	29	1	—	—	30
Clothing	—	33	6	—	—	39	—	39	7	2	1	49
Lumber and manufactures	3	28	7	—	3	41	1	31	5	—	—	37
Iron and steel	1	12	2	1	—	16	—	14	2	—	1	17
Non-ferrous metals	—	4	—	1	—	5	—	7	3	1	—	11
Non-metallic minerals	—	4	1	2	—	7	—	8	1	—	—	9
Drugs and chemicals	—	2	—	—	—	2	—	8	1	—	—	9
Miscellaneous	—	26	5	—	—	31	—	36	8	—	—	44
Totals, Manufacturing	**5**	**213**	**37**	**7**	**7**	**269**	**3**	**256**	**37**	**7**	**2**	**305**
Service—												
Garages	2	31	5	1	1	40	2	36	5	5	4	52
Other custom and repairs	1	34	7	—	1	43	—	41	6	—	1	48
Personal service	1	40	2	1	2	46	—	48	7	—	3	58
Restaurants	—	46	7	1	6	60	1	43	7	2	2	55
Professional service	—	25	2	—	1	28	—	23	—	—	—	23
Recreational	—	8	1	—	1	10	1	14	3	—	—	18
Business service	—	24	3	—	1	28	—	23	2	—	—	25
Totals, Service	**4**	**208**	**27**	**3**	**13**	**255**	**4**	**228**	**30**	**7**	**10**	**279**
Other—												
Agriculture	2	13	4	1	—	20	—	40	2	—	—	42
Mining	—	5	1	1	1	8	1	4	1	—	1	7
Logging, fishing and trapping	—	7	—	—	1	8	—	1	—	—	1	2
Construction	3	79	33	4	7	126	5	70	29	5	5	114
Transportation and public utilities	2	28	7	—	5	42	—	29	10	2	4	45
Finance	—	19	4	—	4	27	—	26	3	—	3	32
Totals, Other	**7**	**151**	**49**	**6**	**18**	**231**	**6**	**170**	**45**	**7**	**14**	**242**
Not classified	3	47	18	2	4	74	5	84	15	—	10	114
Grand Totals	**44**	**1,022**	**227**	**42**	**64**	**1,399**	**40**	**1,167**	**220**	**34**	**48**	**1,509**

Section 3.—Statistics of Industrial and Commercial Failures from Private Source

A table on commercial failures for Canada, by class, for the years 1915 to 1935 (and for Newfoundland for the years 1915-32), is given in the 1936 Year Book, p. 969. In 1936, Dun and Bradstreet, Incorporated, from whose reports these figures were taken, adopted a new method of classification. The principal changes consisted of setting up a new group of construction enterprises, previously included in manufacturing, and a new class for commercial service. Real estate companies, holding and other financial companies, and agents of various kinds were omitted. These changes had the effect of confining the failure records more to industrial and commercial lines of activity, and liabilities were reduced more in proportion to the number of failures, since the companies eliminated usually ran high in indebtedness. This series extends back to 1934.

7.—Industrial and Commercial Failures, by Class, 1947-51, and by Province, 1952

(Source: Dun and Bradstreet, Incorporated)

NOTE.—Figures for 1934-51 are given in the corresponding table of previous Year Books beginning with the 1946 edition.

Year and Province	Manufacturing		Wholesale Trade		Retail Trade		Construction		Commercial Service		Totals	
	No.	Liabilities	No.	Liabilities	No.	Liabilities	No.	Liabilities	No.	Liabilities	No.	Liabilities
		$'000		$'000		$'000		$'000		$'000		$'000
Totals, 1947	**126**	**3,815**	**42**	**1,225**	**84**	**882**	**36**	**941**	**16**	**365**	**304**	**7,228**
Totals, 1948	**158**	**6,734**	**62**	**1,395**	**198**	**2,278**	**48**	**899**	**27**	**449**	**493**	**11,755**
Totals, 1949[1]	**177**	**8,406**	**69**	**3,516**	**247**	**3,252**	**63**	**1,329**	**40**	**776**	**596**	**17,279**
Totals, 1950	**159**	**6,479**	**70**	**1,746**	**349**	**4,347**	**89**	**1,415**	**50**	**1,405**	**717**	**15,392**
Totals, 1951	**174**	**6,409**	**72**	**2,892**	**387**	**5,693**	**116**	**2,560**	**48**	**1,494**	**797**	**19,048**
1952												
Newfoundland	2	128	—	—	7	110	1	14	—	—	10	252
P. E. Island	—	—	—	—	—	—	—	—	—	—	—	—
Nova Scotia	3	165	1	45	6	76	—	—	—	—	10	286
New Brunswick	—	—	3	39	13	332	1	20	1	1	18	392
Quebec	132	4,454	50	1,587	262	4,402	63	1,113	30	533	537	12,089
Ontario	45	2,035	11	281	68	1,149	32	738	6	55	162	4,258
Manitoba	18	905	5	245	21	271	3	174	—	—	47	1,595
Saskatchewan	—	—	—	—	3	28	1	6	—	—	4	34
Alberta	1	11	1	6	12	127	1	87	2	37	17	268
British Columbia	4	89	2	82	26	390	4	44	2	44	38	649
Totals, 1952	**205**	**7,787**	**73**	**2,285**	**418**	**6,885**	**106**	**2,196**	**41**	**670**	**843**	**19,823**

[1] Newfoundland included from Apr. 1, 1949.

In 1952, Quebec accounted for 64 p.c. of the total failures and 61 p.c. of the liabilities; Ontario had 19 p.c. of the failures and 21 p.c. of the liabilities.

According to Dun and Bradstreet, Incorporated, commercial failures during World War II decreased steadily year by year and failures in the retail trade group, in which the majority of failures took place before the War, also decreased. After the end of the War, however, the total number of failures increased again each year and failures in the retail trade group in 1952 accounted for almost one-half of the total.

8.—Industrial and Commercial Failures, by Industrial Group, 1950-52

(Source: Dun and Bradstreet, Incorporated)

NOTE.—Comparable figures back to 1934 are given in the corresponding table of previous Year Books.

Industrial Group	Failures			Liabilities		
	1950	1951	1952	1950	1951	1952
	No.	No.	No.	$'000	$'000	$'000
Manufacturing—						
Foods	15	15	21	988	317	863
Textiles	45	60	60	1,579	1,338	2,459
Forest products	40	41	40	1,606	2,324	1,728
Paper, printing and publishing	12	11	12	153	350	484
Chemicals and drugs	4	4	6	216	54	185
Fuels	4	—	—	243	—	—
Leather and leather products	9	5	12	639	230	436
Stone, clay, glass and products	2	5	7	33	41	304
Iron and steel	4	7	4	248	279	92
Machinery	7	7	13	398	631	299
Transportation equipment	1	1	2	3	329	100
All other	16	18	28	373	516	837
Totals, Manufacturing	**159**	**174**	**205**	**6,479**	**6,409**	**7,787**
Wholesale Trade—						
Farm products, foods, groceries	15	19	22	674	366	477
Clothing and furnishings	3	6	3	25	60	253
Dry goods and textiles	3	—	8	63	—	139
Lumber, building materials, hardware	13	6	7	221	201	286
Chemicals and drugs	4	3	3	96	101	15
Fuels	1	1	—	7	129	—
Automotive products	—	3	2	—	75	17
All other	31	34	28	660	1,960	1,098
Totals, Wholesale Trade	**70**	**72**	**73**	**1,746**	**2,892**	**2,285**
Retail Trade—						
Foods	94	98	102	999	1,155	1,233
Farm supplies, general stores	17	17	16	264	404	200
General merchandise	18	17	23	417	470	212
Apparel	60	54	60	869	653	880
Furniture, household furniture	20	39	36	169	745	854
Lumber, building materials, hardware	16	27	24	242	529	558
Automotive products	38	40	58	423	815	1,720
Restaurants	48	53	55	525	440	534
Drugs	5	3	8	65	59	172
All other	33	39	36	374	423	522
Totals, Retail Trade	**349**	**387**	**418**	**4,347**	**5,693**	**6,885**
Construction—						
General contractors	39	44	49	781	1,039	1,267
Carpenters and builders	3	9	9	22	147	56
Building sub-contractors	47	59	46	612	1,267	841
Other contractors	—	4	2	—	107	32
Totals, Construction	**89**	**116**	**106**	**1,415**	**2,560**	**2,196**
Commercial Service—						
Cleaners and dyers, tailors	7	7	5	37	40	60
Haulage, buses, taxis, etc	8	15	14	147	428	213
Hotels	9	9	7	429	563	146
Laundries	1	3	2	7	113	146
Undertakers	1	2	—	4	18	—
All other	24	12	13	781	332	105
Totals, Commercial Service	**50**	**48**	**41**	**1,405**	**1,494**	**670**
Grand Totals	**717**	**797**	**843**	**15,392**	**19,048**	**19,823**

CHAPTER XXI.—FOREIGN TRADE

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

The subject of foreign trade covers more than the treatment of imports and exports of commodities, important though this is. In its broader sense, foreign trade is made up of the total international exchanges of goods, services, securities and other financial exchanges, all of which are presented in their proper relationship in this Chapter. Following Part I, which is a review of Canada's trade during 1951 and 1952, Part II gives detailed statistics of external commodity trade. Part III summarizes external transactions from the standpoint of the balance of international payments. Part IV outlines the various ways in which the Federal Government promotes and encourages trade relationships, and contains a brief review of the Canadian tariff structure.

PART I.—REVIEW OF FOREIGN TRADE*

The value of world trade in 1951 reached a record post-war total in terms of United States dollars, the quantity of goods traded and the prices at which transactions were conducted being higher than in any other post-war year. In 1952, there was a slight decline in the value of world trade, accounted for by both lower prices and smaller quantities of goods exchanged. However, trade remained greater than in any post-war year except 1951.

Canada's exports and imports both increased appreciably in volume in 1952 in marked contrast to the decline in total world trade. The gain in export volume was about 11 p.c. and that in import volume almost 13 p.c. Average import prices fell sharply, while those of exports showed little change. As a result, the value of exports increased to a record $4,356,000,000, while imports declined slightly to $4,030,000,000.

* Prepared in the External Trade Section, International Trade Division, Dominion Bureau of Statistics.

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The increase in the value of Canada's trade in 1952 restored this country to third place among the leading trading nations of the world. Canada has ranked third in world trade in every post-war year except 1951, when the trade of France surpassed that of Canada. In pre-war years, Canada usually held fifth or sixth rank among the trading nations but during and after the War this country's productive capacity expanded greatly. Of the other countries shown in Table 1, only the Federal Republic of Germany managed to increase the United States dollar value of its trade in 1952.

1.—World Trade, by Leading Countries, 1951 and 1952

SOURCES: International Monetary Fund, *International Financial Statistics*, September 1953, and United Nations Statistical Office, *Population and Vital Statistics Reports*, Vol. V, Nos. 2, 3.

Country	1951 Total Trade	1952			Estimated Population, 1952	Trade per Capita	
		Exports f.o.b.	Imports c.i.f.	Total Trade		1951	1952
	U.S. $'000,000	U.S. $'000,000	U.S. $'000,000	U.S. $'000,000	'000	U.S. $	U.S. $
United States	26,987	15,170	11,633	26,803	159,861	172	168
United Kingdom	18,538	7,630	9,747	17,377	50,828	366	342
Canada	**8,237**	**4,760**	**4,479**	**9,239**	**14,430**	**588**	**640**
France	8,732	3,896	4,431	8,327	43,486	202	191
Germany, Federal Republic of	6,955	3,990	3,818	7,808	50,642	138	154
Belgium and Luxembourg	5,184	2,426	2,424	4,850	9,008	577	538
Netherlands, The	4,545	2,130	2,251	4,381	10,377	443	422
Italy	3,814	1,383	2,314	3,697	46,889	82	79
Australia	4,466	1,690	1,979	3,669	8,649	530	425
Brazil	3,768	1,409	2,010	3,419	54,477	71	63
Japan	3,350	1,273	2,028	3,301	85,500	40	39
Sweden	3,558	1,562	1,730	3,292	7,126	503	462
World Total[1]	**158,391**	**74,137**	**79,825**	**153,962**	**1,690,000**	**95**	**91**

[1] Excluding China, the U.S.S.R., and the communist countries of Eastern Europe.

Canada's per capita trade is considerably higher normally than that of the other leading trading countries. However, the per capita trade of New Zealand continues to be greater than that of Canada.

The record value and volume of world trade in 1951 was influenced especially by the stimulus to defence production in many countries provided by the Korean war and by small grain crops in several European and Asian countries. In 1952, especially in the first half of the year, inventory readjustments affected trade and there was also a marked lull in demand for textiles and some other consumer goods. Grains and newsprint remained in short supply, however, and these commodities together with base metals played an especially important role in the continued increase of Canada's exports. Sustained defence spending and investment were among the principal factors influencing Canada's increased import requirements in 1952.

Direction of Trade.—Changes in the direction of Canada's trade in 1951 and 1952 reflected these forces. Exports of grains increased more sharply than those of other major commodities and the chief markets for grains are the United Kingdom and Western Europe. That area also increased its purchases of Canadian metals during the period. Exports to Latin America were influenced by poor grain crops in Argentina, by heavy investment programs in some countries, and by large sales of motor-vehicles, especially in the period when the Canadian market

was restricted by credit controls. Greater sales to Japan, again especially of grains, were largely responsible for the increase in exports to "other" countries. Sales to the United States, on the other hand, were relatively stable in the period 1950-52, while those to Commonwealth countries were restricted by exchange shortages.

The major share of Canada's import requirements for defence and investment goods is provided by the United States, and that country's share of Canada's imports rose steadily in 1951 and 1952. The shares of most overseas countries, except those of Latin America, declined, especially in 1952 when the slump in Canadian demand for textiles and the collapse of the prices of many Commonwealth goods was a restricting influence. In 1950, the year of most even balance in Canada's trade in the post-war period, the sum of export and import balances with all countries equalled only 11 p.c. of Canada's total trade. By 1952, as a result of these differing changes in the direction of exports and imports, the sum of individual export and import balances reached 24 p.c. of total trade.

2.—Percentage Distribution of Trade, by Leading Countries and Trading Areas, 1950-52

Item and Year	United States	United Kingdom	Europe	Commonwealth and Ireland	Latin America	Others
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Total Exports—						
1950	65·0	15·0	6·1	6·3	4·6	3·0
1951	58·9	16·0	8·7	6·7	5·3	4·4
1952	53·9	17·3	10·9	6·6	6·3	5·0
Imports—						
1950	67·1	12·7	3·3	7·6	6·7	2·6
1951	68·9	10·3	4·3	7·5	6·7	2·3
1952	73·9	8·9	3·8	4·6	7·0	1·8
Total Trade—						
1950	66·0	13·8	4·7	7·0	5·7	2·8
1951	64·0	13·1	6·5	7·1	6·0	3·3
1952	63·5	13·2	7·5	5·6	6·7	3·5

While trade controls have hampered Canadian exporters in varying measure ever since the War, the influence of one particular control was especially evident in 1952. When foot-and-mouth disease was discovered in Western Canada early in the year the United States and several other countries imposed bans on the importation of live stock, fresh meat and fodders from all or parts of Canada. Part of the trade lost thereby was compensated for by an intergovernmental arrangement with the United Kingdom and New Zealand, whereby Canadian beef replaced New Zealand beef in the British market and some New Zealand beef was sold in the United States. The disease was brought under control by mid-year and, by March 1953, normal trade in these commodities was again possible. However, the value of exports of cattle and beef totalled only $34,600,000 in 1952 as compared with $114,000,000 in the preceding year. This factor had a noticeable effect on the share of Canada's exports taken by the United States in 1952.

Changing Trade Trends.—During 1952, there was a marked change in the trend of Canada's trade and the new situation continued into 1953. In the latter half of 1951, the volume of Canada's imports had declined. Falling prices were responsible for some of this decline, as purchases were postponed in expectation

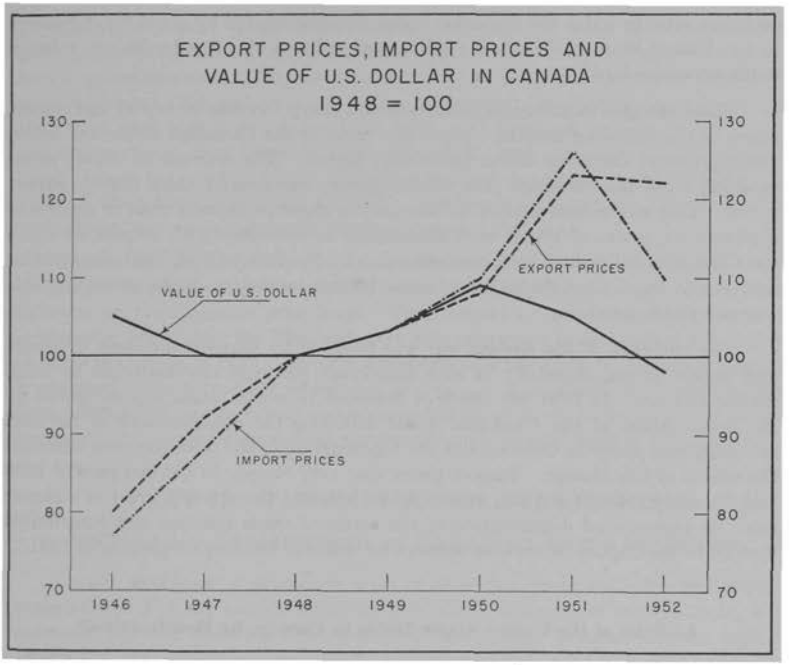
of still lower prices to come. Other important influences included the desire to reduce high-priced inventories and the restriction of the Canadian market for some goods by credit controls. As these influences declined in importance, the volume of imports turned upward in the first half of 1952 but was not significantly greater than in the corresponding period of 1951. The rise in import volume continued throughout the second half of 1952 and into 1953, with only a slight pause in the first quarter of 1953. Heavy domestic investment, high consumer incomes and large defence purchases were the basic influences in this renewed increase of imports, as in that of 1950-51.

While imports continued to rise, export volume fell off in the second half of 1952. This reflected, in part, the slackening of world demand for some products, particularly forest products, and, in part, the intensification of exchange controls in some countries in the latter half of 1952, notably in certain Commonwealth members and Brazil. Another influence was the lack of further exportable surpluses of many Canadian products still in good demand abroad. A period of heavy domestic investment, such as 1950-53, creates a strong immediate demand for goods for use in the investment program, but only as investment projects are completed do increased supplies of goods for export become available. The import balances on commodity trade in most of the period since 1950 reflected this situation, as did the slower rise in export volume than in import volume in this period. The large export balances of late 1951 and much of 1952 resulted rather from an unusual relation between export and import prices than from any reversal of these basic conditions.

Trade Prices in the Post-War Period.—Except for a short period in 1949, the trend of Canada's export and import prices was steadily upwards from the close of World War II until the latter half of 1951. At this point the trend was halted and, especially in the case of imports, reversed. The accompanying chart depicts the movement of export and import prices since the War together with the price of the United States dollar in Canada. An important influence on the high and rising level of trade prices in the post-war period has been the strong demand for foods and materials resulting from the high level of employment and production in many countries. Most changes in these prices have been influenced by several other factors as well.

Canada's export and import price indexes show movements in terms of Canadian dollars. The prices of most goods exported and imported by Canada are not set in the Canadian market but rather in world markets in which the bulk of transactions are conducted by non-Canadians. Although Canada ranks third in world trade, its share of the total is only about 5 p.c. and its share in the consumption of many important commodities entering international trade is even smaller. The value of the Canadian dollar in relation to other important currencies is, therefore, important in determining the level of export and import prices expressed in Canadian dollars.

For this purpose the most important currency is the United States dollar, since that currency is fully convertible and generally acceptable, and since the United States conducts by far the largest single share of world trade. The contract prices of many Canadian exports, including wheat and newsprint, are actually expressed in United States dollars, and that country has provided more than 70 p.c. of Canada's post-war imports. The line on the chart giving the value of the United States dollar in Canada can be taken as roughly representing the relation between the currency in which Canada's price indexes are expressed and those in terms of which world prices are set.



The immediate post-war period was a time of strong emergency demands and of shortages of many important commodities. Production in Europe and Asia had been disrupted during the War. Supplies of many commodities were reduced as a result but, at the same time, the urgent need to restore wartime damage inflated the demand for most goods. These factors caused a sharp upward pressure on prices which was accentuated by the existence of unsatisfied demand in North and South America. This had been built up during the wartime period of high incomes and commodity scarcities. The abolition of wartime price controls in the United States in 1946 and their more gradual abandonment in Canada accentuated the upward pressure on prices. From January 1946 to January 1949, Canada's export prices increased by 38 p.c. and import prices by 39 p.c. These increases would have been even sharper except for the appreciation of the Canadian dollar in July 1946, which had the effect of offsetting the increase in export and import prices by about 10 p.c. in the last half of that year.

The rate of increase in export and import prices slackened towards the end of 1948 and in the early part of 1949 they showed some decline. The chief cause of this recession was a lowered level of business activity in the United States in this period. The diminishing strength of reconstruction needs was also influential. These factors reduced the demand for goods and permitted prices to decline for a time. The drop in United States imports which accompanied that country's business readjustments also aggravated the severe dollar shortage that was handicapping world trade. In September 1949, there was a general readjustment of

exchange rates in which the Canadian dollar was depreciated by about 9 p.c. relative to the United States dollar, and sterling was reduced in value by 30 p.c. relative to the same standard.

These changes in exchange rates caused a sharp increase in export and import prices in the following months. Since the value of the Canadian dollar was lower, world prices in Canadian dollar terms were higher. The increase in import prices resulting from the exchange rate readjustments was greater than that in export prices. This was caused mainly by the greater share in imports than in exports of commodities, prices of which were determined in currencies with respect to which the Canadian dollar had been depreciated. In the first half of 1950, the business recovery in the United States led to some further increase in trade prices but this was not pronounced.

The outbreak of the Korean war was followed by renewed increases in export and import prices, especially of such important strategic raw materials as wool, rubber and tin. In 1950, the effect of increases in world prices was mitigated by the appreciation of the Canadian dollar following the abandonment of the fixed exchange rate policy in October, but the continuation of the price rise soon absorbed the effects of this change. Import prices rose very steeply in the last part of 1950 and the early months of 1951; export prices followed the upward trend at a slower rate. A pronounced deterioration in the terms of trade resulted and contributed heavily to the import balance on commodity trade in the first six months of 1951.

3.—Price of the United States Dollar in Canada, by Month, 1946-52

NOTE.—Rates published by Bank of Canada. To Oct. 1, 1950, average, for business days in period, of mid-rate between official buying and selling rates; from Oct. 2, 1950, noon average market rate for business days in period.

(Canadian cents per U.S. dollar)

Month	1946	1947	1948	1949	1950	1951	1952
January	110·25	100·25	100·25	100·25	110·25	105·17	100·48
February	110·25	100·25	100·25	100·25	110·25	104·92	100·10
March	110·25	100·25	100·25	100·25	110·25	104·73	99·59
April	110·25	100·25	100·25	100·25	110·25	105·99	98·09
May	110·25	100·25	100·25	100·25	110·25	106·37	98·38
June	110·25	100·25	100·25	100·25	110·25	106·94	97·92
July	101·61	100·25	100·25	100·25	110·25	106·05	96·91
August	100·25	100·25	100·25	100·25	110·25	105·56	96·11
September	100·25	100·25	100·25	104·75	110·25	105·56	95·98
October	100·25	100·25	100·25	110·25	105·34	105·08	96·43
November	100·25	100·25	100·25	110·25	104·03	104·35	97·66
December	100·25	100·25	100·25	110·25	105·31	102·56	97·06
Annual Average	**105·75**	**100·25**	**100·25**	**103·08**	**108·92**	**105·28**	**97·89**

The terms-of-trade ratio is calculated by expressing an export price index as a percentage of an import price index. It expresses the import purchasing power of a unit of Canadian exports. When import prices rise more rapidly than export prices, then the quantity of imports obtained in return for any given quantity of Canadian exports falls, and either exports must be increased to pay for imports or other means of payment must be found (unless the volume of imports is artificially restricted). This was the situation late in 1950 and in the first half of 1951.

Canada's import price index reached its peak in June 1951 and declined steadily thereafter until, in August 1952, import prices were 18 p.c. below their peak. Export prices rose more slowly and less extremely. They did not reach their peak until November 1951 and proved to be less vulnerable to readjustment. In December 1952 they were only 6 p.c. below their peak. Contrasting movements in export and import prices from June to November 1951, and the more rapid decline of import prices than export prices thereafter, resulted in a steady improvement in the terms of trade throughout most of 1952. This made the chief contribution to the large export balance on commodity trade achieved in that year.

Besides tending to inflate the value of external trade from 1946 to 1951 and to reduce it thereafter, these movements in export and import prices had an important influence on the domestic price level. They helped to cause the steady increase in domestic prices after the War and were also important in facilitating the decline of prices in Canada in 1952. So large a proportion of the goods consumed in Canada is obtained from abroad, or is saleable abroad, or is produced by resources that have alternative uses in export industries, that movements in world prices have a strong tendency to produce similar movements in domestic prices in this country.

PART II.—FOREIGN TRADE STATISTICS*

Section 1.—Explanations *re* Canadian Trade Statistics

Certain problems of procedure arise in recording trade statistics and require explanation. For the correct interpretation of the statistics of foreign trade, it is necessary that the following definitions and explanations of terms used be kept in mind:—

Quantities and Values.—In all tables of imports and exports, the quantities and values are based upon the declarations of importers (import entries) and exporters (export entries), as subsequently checked by customs officials.

Imports: Valuation.—"Imports" means imports entered for consumption. "Entered for consumption" does not necessarily imply that the goods have been actually consumed in Canada, but that they have passed into the possession of the importer and that duty has been paid on that portion liable for duty.

Under the main provisions of the law, the value of merchandise imported into Canada is the fair market value or price thereof when sold for home consumption in the principal markets of the country from which said merchandise was exported. (*See* Sects. 35 to 45 and 55 of the Customs Act.)

Canadian Exports: Valuation.—"Canadian produce" exported includes Canadian products or manufactures, also exports of commodities of foreign origin that have been changed in form or enhanced in value by further manufacture in Canada, such as sugar refined in Canada from imported raw sugar, aluminum extracted from imported ore, and articles constructed or manufactured from imported materials. The value of exports of Canadian merchandise is the actual amount received in Canadian dollars exclusive of freight, insurance and other handling charges.

Foreign Exports: Valuation.—"Foreign produce" exported consists of foreign merchandise that has previously been imported (entered for home consumption). The value of such commodities is the actual amount received in Canadian dollars exclusive of freight, insurance and other handling charges.

Countries to which Trade is Credited.—Imports are classified as received from the countries whence they were consigned to Canada. These countries are not necessarily the countries of actual origin of the goods, since goods produced in one country may be imported by a firm in another country and later re-sold to Canada. In such cases the second country would be the country of consignment to which the goods would be credited.

* Based on statistics taken from reports published by the External Trade Section, International Trade Division, Dominion Bureau of Statistics.

There is one exception to this rule. An attempt is made to classify by country of actual origin all imports produced in Central and South America. The effect of this procedure, which has been in force since 1946, is to reduce slightly imports credited to the United States and to increase those credited to Central and South American countries.

Exports are always credited to the country to which they are consigned.

Discrepancies in Trade Statistics between Canada and Other Countries.—Canadian statistics of exports are rarely in exact agreement with the import statistics of its customers and parallel differences occur with Canadian imports. Among the chief factors contributing to these discrepancies are:—

(1) Differences in the system of valuation used by Canada and those of other countries, especially with respect to the treatment of transportation charges.

(2) Differences in the statistical treatment of special categories of trade, such as armaments and military supplies, government-financed gift or mutual-aid shipments, postal and express shipments, or warehouse trade.

(3) Differing definitions of territorial areas.

(4) Differing systems of geographical classification of trade, notably the consignment system used by Canada and the actual origin or ultimate destination system in use by some other countries.

(5) Differences in the time at which trade is recorded in the statistics of partner countries caused by the time required for goods to move from one country to another.

Treatment of Gold in Trade Statistics.—The general use of gold as a money metal gives it peculiar attributes that distinguish it from other commodities in trade. In particular, international movements of gold are determined largely by monetary factors rather than by ordinary trade or commercial considerations. Gold is generally acceptable; it does not have to surmount tariff barriers and is normally assured a market at a fixed minimum price. Also, gold may be bought or sold internationally without any physical movements of the metal, such transactions being recognized by simply setting aside or "earmarking" the metal in the vaults of some central bank.

For these reasons, movements of gold in a primary or semi-fabricated state are excluded from the statistics of Canada's commodity trade. However, as gold is produced in Canada primarily as an export commodity, a series showing new gold production available for export is published as a supplement to the trade statistics. Because this series is calculated on a production basis, a breakdown of the figures into transactions with individual countries is not possible.

The following statement gives the total of new gold production available for export. This series continues the series previously published under the title "Net Exports of Non-monetary Gold"

NEW GOLD PRODUCTION AVAILABLE FOR EXPORT (NET EXPORTS OF NON-MONETARY GOLD), BY MONTH, 1945-52

(Millions of dollars)

Month	1945	1946	1947	1948	1949	1950	1951	1952
January	8·7	9·3	9·0	9·6	9·7	15·8	17·3	13·3
February	8·4	9·5	6·9	8·9	9·6	11·7	11·7	13·0
March	10·2	10·0	6·8	8·7	12·1	13·5	8·4	15·0
April	6·8	7·2	6·4	9·5	9·8	11·4	16·2	11·2
May	10·2	10·0	8·2	8·8	12·4	15·8	13·0	8·5
June	4·7	7·7	8·6	9·6	9·8	15·0	13·8	14·6
July	8·0	6·6	10·1	10·8	9·4	14·8	13·4	14·9
August	8·5	7·5	7·5	9·7	13·8	13·8	11·0	9·6
September	6·8	6·8	8·4	11·9	11·2	10·8	10·8	12·8
October	7·7	8·5	9·2	9·6	13·2	16·4	8·2	10·1
November	9·8	6·0	7·2	9·1	15·4	12·3	7·7	13·6
December	6·2	6·7	11·0	12·8	12·5	11·3	18·3	13·5
TOTALS	96·0	95·8	99·3	119·0	138·9	162·6	149·8	150·1

Section 2.—Total Foreign Trade

In considering the figures in Sections 2 to 6, reference should be made to the explanatory notes on trade in Section 1. It must be emphasized that gold imports and exports are excluded from all tables.

1.—Value of Total Foreign Trade of Canada (Excluding Gold), 1935-52

NOTE.—These figures are available on a calendar-year basis only since 1919; figures for 1919-34 are given in the 1950 Year Book, p. 905. Figures for the years ended Mar. 31, 1868-1939, are given in the 1940 Year Book, p. 526.

Year	Imports			Exports			Balance of Trade: Excess of Exports (+) Imports (−)
	Dutiable	Free	Total	Domestic Produce	Foreign Produce	Total	
	$	$	$	$	$	$	$
1935....	306,913,652	243,400,899	550,314,551	724,977,459	12,958,420	737,935,879	+187,621,328
1936....	350,903,936	284,286,908	635,190,844	937,824,933	12,684,319	950,509,252	+315,318,408
1937....	436,327,558	372,568,767	808,896,325	997,366,918	14,754,862	1,012,121,780	+203,225,455
1938....	379,095,355	298,355,999	677,451,354	837,583,917	11,100,216	848,684,133	+171,232,779
1939....	427,470,633	323,584,901	751,055,534	924,926,104	10,995,609	935,921,713	+184,866,179
1940....	582,934,898	499,015,821	1,081,950,719	1,178,954,420	14,263,172	1,193,217,592	+111,266,873
1941....	732,791,033	716,000,617	1,448,791,650	1,621,003,175	19,451,366	1,640,454,541	+191,662,891
1942....	715,018,745	929,223,188	1,644,241,933	2,363,773,296	21,692,750	2,385,466,046	+741,224,113
1943....	836,548,673	898,528,217	1,735,076,890	2,971,475,277	29,877,002	3,001,352,279	+1,266,275,389
1944....	884,751,584	874,146,613	1,758,898,197	3,439,953,165	43,145,447	3,483,098,612	+1,724,200,415
1945....	798,795,201	786,979,941	1,585,775,142	3,218,330,353	49,093,935	3,267,424,288	+1,681,649,146
1946....	1,078,943,972	848,335,430	1,927,279,402	2,312,215,301	26,950,546	2,339,165,847	+411,886,445
1947....	1,562,690,081	1,011,254,044	2,573,944,125	2,774,902,355	36,888,055	2,811,790,410	+237,846,285
1948....	1,382,202,722	1,254,742,630	2,636,945,352	3,075,438,085	34,590,583	3,110,028,668	+473,083,316
1949....	1,444,123,667	1,317,083,574	2,761,207,241	2,992,960,978	29,491,856	3,022,452,834	+261,245,593
1950....	1,617,948,425	1,556,304,713	3,174,253,138	3,118,386,551	38,686,122	3,157,072,673	−17,180,465
1951....	2,174,304,400	1,910,552,078	4,084,856,478	3,914,460,376	48,923,939	3,963,384,315	−121,472,163
1952....	2,162,882,381	1,867,585,272	4,030,467,653	4,301,080,679	54,878,985	4,355,959,664	+325,492,011

Section 3.—Trade by Geographic Areas

The tables in this Section provide information about Canada's total foreign trade by continent and by country, with special reference in Tables 4 to 8 to the distribution of trade among the principal geographic areas.

2.—Trade of Canada, by Continent, 1950-52

Continent	1950		1951		1952	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
Imports	$'000		$'000		$'000	
Europe—						
United Kingdom	404,213	12·7	420,984	10·3	359,757	8·9
Other Europe	103,293	3·3	177,944	4·4	151,797	3·8
North America—						
United States	2,130,476	67·0	2,812,927	68·8	2,976,962	73·9
Other North America	126,576	4·0	115,326	2·8	114,813	2·8
South America	174,009	5·5	246,666	6·0	237,073	5·9
Asia	144,889	4·6	195,355	4·8	120,800	3·0
Oceania	55,938	1·8	84,102	2·1	43,114	1·0
Africa	34,859	1·1	31,552	0·8	26,152	0·7
Totals, Imports	**3,174,253**	**100·0**	**4,084,856**	**100·0**	**4,030,468**	**100·0**

2.—Trade of Canada, by Continent, 1950-52—concluded

Continent	1950		1951		1952	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
	$'000		$'000		$'000	
Exports (Domestic)						
Europe—						
United Kingdom	469,910	15·1	631,461	16·1	745,845	17·3
Other Europe	208,758	6·7	369,696	9·4	500,345	11·6
North America—						
United States	2,020,987	64·8	2,297,674	58·7	2,306,955	53·6
Other North America	98,698	3·2	123,336	3·2	140,519	3·3
South America	90,683	2·9	140,145	3·6	186,984	4·3
Asia	115,104	3·7	190,374	4·9	254,140	5·9
Oceania	54,450	1·7	78,955	2·0	76,033	1·8
Africa	59,796	1·9	82,819	2·1	90,259	2·2
Totals, Exports (Domestic)	**3,118,387**	**100·0**	**3,914,460**	**100·0**	**4,301,080**	**100·0**

3.—Trade of Canada, by Leading Country, 1950-52

Rank			Country	1950	1951	1952
1950	1951	1952				
				$'000	$'000	$'000
			Imports			
1	1	1	United States	2,130,476	2,812,927	2,976,962
2	2	2	United Kingdom	404,213	420,985	359,757
3	3	3	Venezuela	87,264	136,718	135,758
8	6	4	Brazil	28,178	40,627	35,103
10	8	5	Belgium and Luxembourg	22,795	39,095	33,216
4	7	6	India	37,262	40,217	26,822
7	4	7	Malaya and Singapore	28,852	57,980	25,473
5	15	8	Mexico	32,974	18,013	23,937
11	11	9	British Guiana	21,735	25,025	23,660
22[1]	9[1]	10	Germany, Federal Republic of	11,026[1]	30,936[1]	22,629
17	12	11	France	14,669	23,974	19,117
6	5	12	Australia	32,803	46,228	18,712
37	31	13	Cuba	4,134	8,333	18,615
19	24	14	Colombia	13,342	13,063	18,004
28	21	15	Netherlands, The	8,896	14,010	16,495
18	16	16	Switzerland	14,464	16,398	16,396
2, 3	18[3]	17	Lebanon	62[3]	16,381[3]	15,171
21	10	18	New Zealand	11,855	30,107	14,231
20	25	19	Japan	12,087	12,577	13,162
13	17	20	Ceylon	17,604	16,396	12,492
14	28	21	Netherlands Antilles	17,336	10,809	11,747
26	20	22	Italy	9,373	14,217	11,735
15	19	23	Trinidad and Tobago	15,205	15,082	9,660
16	27	24	British East Indies	15,067	10,864	9,593
12	14	25	Jamaica	19,080	18,041	9,204
40	30	26	Costa Rica	3,378	8,785	8,740
25	23	27	Barbados	10,057	13,409	8,666
35	26	28	Sweden	5,145	11,808	8,611
38	35	29	Peru	3,961	5,588	8,050
9	13	30	Arabia	28,115	22,659	7,559
			Totals, 30 Leading Countries	**3,061,408**	**3,951,252**	**3,919,277**
			Grand Totals, Imports	**3,174,253**	**4,084,856**	**4,030,468**

[1] Includes Eastern Germany. [2] Lower than 50th. [3] Includes Syria.

3.—Trade of Canada, by Leading Country, 1950-52—concluded

Rank 1950	Rank 1951	Rank 1952	Country	1950	1951	1952
				$'000	$'000	$'000
			Exports (Domestic)			
1	1	1	United States	2,020,988	2,297,675	2,306,955
2	2	2	United Kingdom	469,910	631,461	745,845
3	3	3	Belgium and Luxembourg	66,351	94,457	104,376
9	4	4	Japan	20,533	72,976	102,603
23[1]	10[1]	5	Germany, Federal Republic of	8,873[1]	37,028[1]	94,863
14	5	6	Brazil	15,806	53,684	81,367
6	11	7	India	31,520	35,737	55,423
15	8	8	Italy	15,476	48,763	52,645
5	7	9	Australia	35,446	49,079	49,697
11	9	10	France	18,403	46,538	48,264
4	6	11	Union of South Africa	42,561	52,736	47,852
25	15	12	Netherlands, The	8,617	26,191	41,508
13	13	13	Mexico	17,624	29,880	39,641
10	12	14	Norway	18,924	32,198	39,002
8	14	15	Venezuela	25,457	26,982	35,683
7	16	16	Switzerland	26,435	25,345	26,918
12	19	17	Cuba	18,005	20,424	24,181
18	18	18	Ireland	13,321	20,921	23,058
[2]	[2]	19	Yugoslavia	818	2,739	22,613
42	[2]	20	Egypt	3,716	2,466	19,363
20	17	21	New Zealand	10,983	21,757	18,844
40	39	22	Peru	3,744	5,054	16,405
21	20	23	Philippines	10,829	15,598	16,045
24	42	24	Pakistan	8,681	4,486	16,016
16	22	25	Colombia	14,806	12,311	13,756
37	23	26	Sweden	4,250	12,125	12,198
19	25	27	Israel	12,126	11,816	11,940
22	35	28	Panama	9,019	5,961	11,359
29	28	29	Trinidad and Tobago	7,476	9,950	11,034
28	27	30	Jamaica	7,495	10,213	10,591
			Totals, 30 Leading Countries	**2,968,193**	**3,716,551**	**4,100,045**
			Grand Totals, Exports, Domestic	**3,118,387**	**3,914,460**	**4,301,081**

[1] Includes Eastern Germany. [2] Lower than 50th.

4.—Values and Percentages[1] of Trade with Selected Overseas Countries via the United States, 1951 and 1952

Country	Imports via the United States				Domestic Exports via the United States			
	1951		1952		1951		1952	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
Totals, North America	—	—	—	—	**1,500**	**41·0**	**538**	**19·0**
Central America and Antilles								
British West Indies	404	0·8	108	0·4	1,170	3·8	1,306	4·1
Costa Rica	247	2·8	347	4·0	601	27·6	982	37·6
Cuba	191	2·3	107	0·6	5,148	25·2	6,263	25·9
Dominican Republic	95	8·4	15	0·3	1,317	32·4	1,464	31·5
Mexico	1,848	10·3	681	2·8	17,515	58·6	23,126	58·3
Netherlands Antilles	482	4·5	365	3·1	793	43·2	915	59·4
Panama	9	0·3	40	1·0	1,254	21·0	1,011	8·9
Totals, Central America and Antilles[2]	**3,930**	**3·5**	**2,064**	**1·8**	**32,942**	**27·5**	**40,459**	**29·4**

For footnotes, *see* end of table, p. 972.

4.—Values and Percentages[1] of Trade with Selected Overseas Countries via the United States, 1951 and 1952—concluded

Country	Imports via the United States				Domestic Exports via the United States			
	1951		1952		1951		1952	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
South America								
British Guiana	98	0·4	206	0·9	31	0·6	73	1·1
Argentina	629	4·5	90	2·1	4,613	51·9	7,062	85·8
Bolivia	—	—	—	—	1,359	39·0	795	12·4
Brazil	2,602	6·4	1,799	5·1	23,417	43·6	41,280	50·7
Chile	379	17·6	27	0·8	5,158	37·5	4,939	48·9
Colombia	1,368	10·5	2,053	11·4	5,110	41·5	5,856	42·6
Peru	131	2·3	104	1·3	3,166	62·6	3,421	20·9
Venezuela	52,216	38·2	57,014	42·0	11,620	43·1	17,829	50·0
Totals, South America[2]	**57,567**	**23·3**	**61,438**	**25·9**	**59,349**	**42·3**	**85,712**	**45·8**
Northwestern Europe								
United Kingdom	76	0·02	62	--	26,177	4·1	24,406	3·3
Belgium and Luxembourg	220	0·6	18	0·1	6,579	7·0	14,132	13·5
France	193	0·8	194	1·0	9,256	19·9	8,932	18·5
Germany, Federal Republic of	310[3]	1·0	256	1·1	5,742[3]	15·5	8,011	8·4
Ireland	61	7·8	71	15·4	1,139	5·4	152	0·7
Netherlands, The	61	0·4	52	0·3	5,281	20·2	2,454	5·9
Norway	9	0·3	4	0·1	850	2·6	1,151	3·0
Sweden	99	0·8	14	0·2	1,244	10·3	2,256	18·5
Switzerland	160	1·0	153	0·9	4,305	17·0	3,005	11·2
Totals, Northwestern Europe[2]	**1,646**	**0·3**	**841**	**0·2**	**62,150**	**6·6**	**66,220**	**5·7**
Southern Europe								
Italy	428	3·0	272	2·3	2,884	5·9	4,481	8·5
Portugal	121	6·1	302	16·8	1,160	24·9	529	13·1
Spain	1,668	23·4	115	2·7	398	53·6	1,060	29·6
Totals, Southern Europe[2]	**2,259**	**9·4**	**726**	**4·0**	**5,572**	**9·3**	**9,071**	**13·3**
Totals, Eastern Europe	**40**	**0·6**	**166**	**2·2**	**2,566**	**39·4**	**2,278**	**8·8**
Middle East								
Arabia	9,131	40·3	2,649	35·0	1,194	84·4	1,987	92·5
Egypt	8	1·1	96	20·8	686	27·8	1,434	7·4
Israel	77	8·3	36	3·1	2,140	18·1	1,615	13·5
Lebanon and Syria	5,054	30·9	7,662	50·4	2,901	41·2	2,659	24·6
Totals, Middle East[2]	**15,045**	**33·4**	**11,419**	**38·9**	**11,448**	**36·8**	**12,361**	**24·6**
Other Asia								
Ceylon	30	0·2	1	--	676	19·5	516	8·9
India	1,314	3·3	442	1·6	888	2·5	1,582	2·9
Malaya and Singapore	244	0·4	370	1·5	5,622	52·1	4,239	60·0
Pakistan	16	0·7	2	1·0	729	16·3	1,343	8·4
Japan	945	7·5	479	3·6	9,529	13·1	3,574	3·5
Philippines	[4]	--	170	3·1	1,227	7·9	1,340	8·4
Totals, Other Asia[2]	**2,794**	**1·9**	**1,600**	**1·7**	**24,756**	**15·1**	**20,075**	**9·0**
Other Africa								
British East Africa	110	1·0	425	4·4	1,070	74·1	533	51·7
British West Africa	1,782	22·1	1,865	25·6	1,808	90·3	1,141	88·7
Southern Rhodesia	—	—	432	29·6	945	35·4	807	36·8
Union of South Africa	10	0·2	66	1·6	18,395	34·9	16,605	34·7
Belgian Congo	1,263	41·4	568	57·4	3,573	82·7	4,860	82·4
Totals, Other Africa[2]	**3,394**	**11·0**	**3,583**	**14·0**	**30,858**	**39·5**	**29,292**	**41·9**
Oceania								
Australia	—	—	13	0·1	20,203	41·2	21,629	43·5
New Zealand	79	0·3	—	—	4,889	22·5	3,672	19·5
Totals, Oceania[2]	**548**	**0·7**	**110**	**0·3**	**26,449**	**33·5**	**26,780**	**35·2**
Grand Totals[2]	**87,225**	**6·9**	**81,948**	**7·8**	**257,591**	**15·9**	**292,785**	**14·7**

[1] Percentage of total imports or exports credited to country or area (less trade with United States).
[2] Includes other countries not specified. [3] Includes all Germany. [4] Less than $500.

5.—Total Value of Imports, by Country, 1946-52, with Averages, 1935-39

Country	Averages 1935-39	1946	1947	1948	1949	1950	1951	1952
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
North America								
Newfoundland	2,188	9,268	9,427	11,091	918[1]	...	...	...
Alaska	93	389	744	1,323	1,218	976	1,483	2,333
Greenland	311	271	—	—	—	—	—	1
St. Pierre and Miquelon	26	7	15	11	12	18	25	48
United States	418,738	1,405,297	1,974,679	1,805,763	1,951,860	2,130,476	2,812,927	2,976,962
Totals, North America	**421,356**	**1,415,232**	**1,984,864**	**1,818,188**	**1,954,008**	**2,131,470**	**2,814,436**	**2,979,344**
Central America and Antilles								
Bahamas	[2]	[2]	615	648	818	532	346	406
Barbados	3,261	5,548	7,776	6,387	7,080	10,057	13,409	8,666
Bermuda	102	122	57	139	144	87	82	317
British Honduras	87	1,221	584	834	295	445	458	26
Jamaica	5,160	10,484	6,371	9,557	16,577	19,080	18,041	9,204
Leeward and Windward Islands	1,816	788	199	308	297	395	956	216
Trinidad and Tobago	2,387	4,137	5,654	9,027	14,575	15,205	15,082	9,660
American Virgin Islands	[3]	32	16	46	14	12	166	—
Costa Rica	77	1,546	727	3,109	2,119	3,378	8,785	8,740
Cuba	615	13,228	23,751	22,606	6,562	4,134	8,333	18,615
Dominican Republic	4	7,127	8,186	17,270	3,822	1,180	1,126	6,000
El Salvador	19	2,428	1,342	1,166	1,054	848	1,183	771
French West Indies	1	3	19	57	123	[3]	[3]	2
Guatemala	67	2,928	9,488	8,209	5,743	5,781	4,618	2,080
Haiti	63	778	227	176	1,026	1,769	3,020	1,928
Honduras	49	15,573	6,999	6,182	6,986	5,621	4,027	4,643
Mexico	667	14,610	16,980	27,258	25,494	32,974	18,013	23,937
Netherlands Antilles	150	3,186	8,648	7,286	3,713	17,336	10,809	11,747
Nicaragua	[3]	29	87	172	179	339	596	501
Panama	32	38	2,107	1,226	2,572	5,478	3,492	4,125
Puerto Rico	13	198	270	1,583	523	931	1,276	846
Totals, Central America and Antilles	**14,570**	**84,001**	**100,103**	**123,246**	**99,717**	**125,582**	**113,818**	**112,431**
South America								
British Guiana	5,846	12,187	12,358	15,380	22,355	21,735	25,025	23,660
Falkland Islands	[3]	—	—	—	—	—	—	—
Argentina	5,374	14,372	17,961	5,746	3,324	10,913	13,955	4,374
Bolivia	26	32	8	—	2,049	2,442	1,848	3,351
Brazil	920	14,018	13,888	20,559	21,163	28,178	40,627	35,103
Chile	125	424	339	332	598	1,353	2,153	3,282
Colombia	5,139	9,708	9,197	8,668	12,588	13,342	13,063	18,004
Ecuador	41	157	207	889	1,137	1,473	2,438	2,751
French Guiana	1	[3]	[3]	—	—	—	—	—
Paraguay	62	264	232	230	374	350	343	346
Peru	3,554	847	407	1,989	2,465	3,961	5,588	8,050
Surinam	[3]	59	519	873	326	228	1,141	528
Uruguay	180	618	321	714	1,069	2,770	3,768	1,863
Venezuela	1,662	26,886	46,688	94,758	91,697	87,264	136,718	135,758
Totals, South America	**22,930**	**79,573**	**102,123**	**150,138**	**159,145**	**174,010**	**246,666**	**237,073**
Northwestern Europe								
United Kingdom	124,047	201,433	189,370	299,502	307,450	404,213	420,985	359,757
Austria	245	—	89	281	382	964	3,191	2,917
Belgium and Luxembourg	6,330	4,429	10,120	13,661	19,022	22,795	39,095	33,216

[1] January to March only. [2] Included with Leeward and Windward Islands. [3] Less than $500.

5.—Total Value of Imports, by Country, 1946-52, with Averages, 1935-39—continued

Country	Averages 1935-39	1946	1947	1948	1949	1950	1951	1952
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Northwestern Europe —concluded								
Denmark	165	157	1,455	9,585	1,893	1,406	3,730	2,167
France	6,382	4,610	8,755	12,648	13,309	14,669	23,974	19,117
Germany, Federal Republic of	10,364[1]	11[1]	498[1]	1,729[1]	7,134[1]	11,026[1]	30,936[1]	22,629
Iceland	3	9	30	76	52	233	26	50
Ireland	69	53	76	85	71	148	785	462
Netherlands, The	3,984	2,497	3,530	5,831	6,688	8,896	14,010	16,495
Norway	742	836	4,999	1,103	1,212	1,405	2,977	3,857
Sweden	2,044	3,681	3,184	2,763	3,474	5,145	11,808	8,611
Switzerland	3,110	11,149	11,941	7,444	10,902	14,464	16,398	16,396
Totals, Northwestern Europe	**157,485**	**228,865**	**234,047**	**354,708**	**371,589**	**485,362**	**567,916**	**485,675**
Southern Europe								
Gibraltar	—	—	—	—	—	2	—	—
Malta	2	56	12	5	22	20	47	51
Azores and Madeira	157	241	655	364	554	387	410	285
Greece	47	63	95	144	135	203	174	197
Italy	2,403	2,704	3,872	6,981	9,048	9,373	14,217	11,735
Portugal	265	2,188	1,409	1,177	1,351	1,698	1,980	1,798
Spain	989	4,484	3,002	2,586	2,427	3,558	7,114	4,260
Totals, Southern Europe	**3,863**	**9,738**	**9,047**	**11,257**	**13,537**	**15,240**	**23,943**	**18,326**
Eastern Europe								
Albania	1	—	—	—	—	—	—	—
Bulgaria	4	—	—	2	1	4	4	2
Czechoslovakia	1,979	964	3,645	4,809	6,401	6,036	4,668	3,559
Estonia	23	—	—	4	11	30	116	31
Finland	70	23	30	39	45	217	158	234
Germany, Eastern	[3]	[3]	[3]	[3]	[3]	[3]	[3]	492
Hungary	130	—	50	103	76	36	121	279
Latvia	11	—	—	1	4	3	33	36
Lithuania	4	—	—	2	2	—	12	16
Poland	185	1	3	22	183	357	1,430	556
Roumania	96	1	1	19	3	19	22	13
U.S.S.R. (Russia)	341	1,519	181	4	11	80	358	2,234
Yugoslavia	99	2	22	5	45	122	149	101
Totals, Eastern Europe	**2,943**	**2,509**	**3,932**	**5,008**	**6,781**	**6,903**	**7,070**	**7,553**
Middle East								
Aden	4	—	—	5,531	884	12	22	7
Anglo-Egyptian Sudan	25	53	26	36	25	53	58	76
Arabia	[3]	[3]	[3]	[3]	12,127	28,115	22,659	7,559
Egypt	728	252	205	1,490	155	659	711	462
Ethiopia	5	1	9	38	49	31	31	21
Iran	126	274	299	959	288	192	521	1,168
Iraq	357	1,489	1,502	799	1,418	1,201	2,132	924
Israel	68	500	31	49	504	490	929	1,161
Italian Africa	[2]	4	3	—	—	2	3	—
Jordan	[3]	[3]	[3]	[3]	—	—	—	—
Libya	—	—	—	—	—	—	—	—
Lebanon	6	71	30	28	429	62	16,381	15,171
Syria								72
Turkey	293	1,880	2,672	1,064	1,207	1,280	1,757	2,719
Totals, Middle East	**1,612**	**4,524**	**4,777**	**9,994**	**17,086**	**32,098**	**45,204**	**29,338**

[1] Includes all Germany. [2] Less than $500. [3] Not listed separately.

5.—Total Value of Imports, by Country, 1946-52, with Averages, 1935-39—concluded

Country	Averages 1935-39	1946	1947	1948	1949	1950	1951	1952
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Other Asia								
Ceylon	4,015	3,745	11,653	11,182	11,635	17,604	16,396	12,492
India	8,315	27,877	42,250	33,400	26,233	37,262	40,217	26,822
Pakistan				1,306	1,193	1,706	2,233	191
Hong Kong	842	163	982	1,866	2,989	2,203	3,001	3,711
Malaya and Singapore	11,154	5,871	16,908	21,878	16,187	28,852	57,980	25,473
Other British East Indies	79	—	30	52	21	47	4,623	1,772
Afghanistan	1	1,587	—	—	3	109	51	19
Burma	381	1	3	6	32	—	4	4
China	3,344	2,321	2,304	3,912	3,347	5,299	1,929	1,286
French East Indies	126	—	1	9	—	—	[1]	—
Indonesia	800	57	200	2,261	1,454	728	1,052	893
Japan	4,649	3	350	3,144	5,551	12,087	12,577	13,162
Korea	1	—	—	—	1	35	[1]	8
Philippines	563	2,058	8,063	6,442	4,203	6,425	8,954	5,423
Portuguese Asia	1	—	—	—	—	—	—	—
Thailand	84	12	28	79	72	1,181	1,938	764
Totals, Other Asia	**34,355**	**43,697**	**82,772**	**85,537**	**72,924**	**113,537**	**150,954**	**92,019**
Other Africa								
British East Africa	2,683	3,603	7,683	9,543	6,094	15,067	10,864	9,593
Northern Rhodesia	[2]	[2]	29	19	59	51	9	15
Southern Rhodesia	316	93	181	484	798	401	1,496	1,459
Union of South Africa	4,210	7,892	4,228	3,816	3,862	4,964	5,372	4,165
Other British South Africa			[1]	[1]	—	—	—	—
Gambia	—	—	—	—	—	—	[1]	—
Gold Coast	701	5,381	6,493	9,751	6,709	8,999	7,112	5,523
Nigeria	370	4,772	2,149	4,939	2,593	1,486	898	1,764
Sierra Leone	7	—	18	5	10	294	49	6
Other British West Africa	[1]	—	—	—	—	[1]	—	—
Belgian Congo	5	664	815	1,644	703	1,481	3,052	990
Canary Islands	10	—	2	7	11	6	16	22
French Africa	61	353	252	112	17	543	398	404
Liberia	14	60	25	7	7	—	183	29
Madagascar	31	123	18	28	9	8	29	[1]
Morocco	32	18	36	346	142	704	1,071	1,049
Portuguese Africa	15	510	392	77	212	109	198	576
Spanish Africa	—	[1]	—	—	—	—	—	—
Totals, Other Africa	**8,455**	**23,470**	**22,320**	**30,779**	**21,224**	**34,113**	**30,748**	**25,595**
Oceania								
Australia	9,728	19,754	14,222	27,415	27,429	32,803	46,228	18,712
Fiji	2,341	3,123	4,178	8,275	7,997	10,194	5,993	6,487
New Zealand	4,754	11,956	10,831	11,603	8,910	11,855	30,107	14,231
Other British Oceania	3	420	—	—	—	—	—	—
French Oceania	3	22	18	—	417	476	360	1
Hawaii	186	346	709	796	361	495	1,414	3,473
United States Oceania	[1]	50	—	—	85	115	—	210
Totals, Oceania	**17,015**	**35,670**	**29,959**	**48,089**	**45,199**	**55,938**	**84,102**	**43,114**
Grand Totals	**684,582**	**1,927,279**	**2,573,944**	**2,636,945**	**2,761,207**	**3,174,253**	**4,084,856**	**4,030,468**
Totals, Commonwealth Countries	**194,442**	**339,947**	**354,284**	**503,980**	**494,158**	**645,624**	**727,089**	**544,462**
Totals, United States and Dependencies	**419,030**	**1,406,311**	**1,976,417**	**1,809,511**	**1,954,061**	**2,133,005**	**2,817,265**	**2,983,824**

[1] Less than $500. [2] Included with Other British South Africa.

6.—Value of Domestic Exports, by Country, 1946-52, with Averages, 1935-39

Country	Averages 1935-39	1946	1947	1948	1949	1950	1951	1952
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
North America								
Newfoundland	8,048	38,229	55,085	55,055	9,229[1]	...	...	...
Alaska	154	276	300	865	1,008	959	2,264	1,249
Greenland	—	234	128	88	27	134	206	303
St. Pierre and Miquelon	309	784	1,158	1,432	1,208	1,061	1,186	1,279
United States	321,294	887,941	1,034,226	1,500,987	1,503,459	2,020,988	2,297,675	2,306,955
Totals, North America	**329,805**	**927,463**	**1,090,897**	**1,558,426**	**1,514,931**	**2,023,142**	**2,301,330**	**2,309,787**
Central America and Antilles								
Bahamas	[2]	[2]	3,688	3,636	2,268	1,937	2,136	2,353
Barbados	1,218	6,205	9,063	5,654	5,013	2,974	4,584	3,912
Bermuda	1,381	3,805	5,108	4,102	3,616	2,991	3,693	3,158
British Honduras	255	1,110	1,375	1,151	600	491	572	381
Jamaica	3,887	15,500	18,214	12,350	9,033	7,495	10,213	10,591
Leeward and Windward Islands	1,600	8,341	7,592	6,177	4,515	3,213	4,229	4,276
Trinidad and Tobago	3,372	19,140	26,354	17,105	12,325	7,476	9,950	11,034
American Virgin Islands	42	110	160	116	126	156	181	167
Costa Rica	103	873	1,780	1,216	1,859	2,312	2,175	2,612
Cuba	1,418	5,270	7,502	10,987	14,391	18,005	20,424	24,181
Dominican Republic	171	1,541	1,914	2,386	2,194	2,954	4,060	4,643
El Salvador	69	454	665	1,103	927	1,467	2,002	2,230
French West Indies	157	1,278	1,743	538	70	39	40	47
Guatemala	117	928	1,630	1,548	1,697	2,401	2,365	1,896
Haiti	131	1,121	1,366	1,393	1,602	2,513	2,588	3,417
Honduras	159	624	641	677	678	613	3,575	1,736
Mexico	2,630	10,536	11,701	15,045	15,411	17,624	29,380	39,641
Netherlands Antilles	176	1,399	1,844	2,175	2,003	4,464	1,834	1,541
Nicaragua	72	366	590	701	638	756	1,097	1,185
Panama	316	1,502	1,882	4,123	13,632	9,019	5,961	11,359
Puerto Rico	425	2,926	2,605	2,300	5,962	7,643	8,120	7,328
Totals, Central America and Antilles	**17,699**	**83,030**	**107,416**	**94,485**	**98,560**	**96,544**	**119,680**	**137,688**
South America								
British Guiana	1,344	7,109	10,273	8,229	5,676	4,052	5,308	6,356
Falkland Islands	[3]	2	39	[3]	7	1	2	31
Argentina	4,696	14,039	31,697	16,680	2,902	13,360	8,883	8,227
Bolivia	113	529	567	1,046	1,908	2,267	3,484	6,398
Brazil	4,012	24,602	31,660	28,601	17,259	15,806	53,684	81,367
Chile	848	3,565	4,392	4,495	3,633	6,864	13,751	10,090
Colombia	1,296	8,930	9,950	8,406	8,012	14,806	12,311	13,756
Ecuador	93	801	1,626	1,308	1,727	1,432	2,713	2,030
French Guiana	36	180	264	129	129	5	4	3
Paraguay	8	85	153	369	133	110	167	112
Peru	1,072	3,080	3,695	2,529	7,050	3,744	5,054	16,405
Surinam	49	476	826	695	960	863	934	1,097
Uruguay	310	2,671	3,371	4,201	2,282	1,918	6,868	5,429
Venezuela	1,139	11,086	12,989	16,935	27,689	25,457	26,982	35,683
Totals, South America	**15,016**	**77,153**	**111,501**	**93,622**	**79,367**	**90,684**	**140,145**	**186,984**
Northwestern Europe								
United Kingdom	353,741	597,506	751,198	686,914	704,956	469,910	631,461	745,845
Austria	27	3,679	3,070	3,110	3,706	2,369	2,166	5,216
Belgium and Luxembourg	13,204	63,626	52,749	33,035	56,525	66,351	94,457	104,376
Denmark	1,438	1,527	4,328	7,748	3,109	923	5,587	9,881
France	8,566	74,380	81,058	92,963	36,004	18,403	46,538	48,264

[1] January to March only. [2] Included with Leeward and Windward Islands. [3] Less than $500.

6.—Value of Domestic Exports, by Country, 1946-52, with Averages, 1935-39—con.

Country	Averages 1935-39	1946	1947	1948	1949	1950	1951	1952
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Northwestern Europe—concluded								
Germany, Federal Republic of	9,639[1]	6,867[1]	6,690[1]	13,214[1]	23,451[1]	8,873[1]	37,028[1]	94,863
Iceland	28	3,123	2,485	1,845	743	847	700	833
Ireland	3,861	7,956	17,598	9,257	9,052	13,321	20,921	23,058
Netherlands, The	10,062	33,883	55,939	43,684	13,759	8,617	26,191	41,508
Norway	7,247	19,267	20,320	23,429	21,736	18,924	32,198	39,002
Sweden	3,593	9,133	17,461	7,207	5,516	4,250	12,125	12,198
Switzerland	948	8,636	14,196	19,389	32,281	26,435	25,345	26,918
Totals, Northwestern Europe	**412,354**	**829,584**	**1,027,093**	**941,795**	**910,839**	**639,223**	**934,716**	**1,151,964**
Southern Europe								
Gibraltar	9	334	252	15	336	329	648	353
Malta	377	4,671	6,705	3,250	3,905	4,680	2,150	3,111
Greece	1,142	9,738	5,440	9,663	2,615	1,833	2,703	4,415
Italy	2,785	20,387	35,688	32,379	12,567	15,476	48,763	52,645
Portugal	170	2,662	3,502	5,181	8,405	5,641	4,665	4,026
Azores and Madeira	8	71	392	77	101	210	259	224
Spain	495	695	941	596	387	5,642	742	3,579
Totals, Southern Europe	**4,986**	**38,558**	**52,920**	**51,160**	**28,316**	**33,811**	**59,930**	**68,352**
Eastern Europe								
Albania	3	122	505	90	—	[2]	1	1
Bulgaria	10	9	14	123	279	215	8	2
Czechoslovakia	881	9,871	13,779	11,395	3,030	2,179	492	367
Estonia	5	—	[2]	—	[2]	—	—	—
Finland	539	507	1,212	2,280	607	600	3,129	2,694
Germany, Eastern	[3]	[3]	[3]	[3]	[3]	[3]	[3]	—
Hungary	4	1,063	946	820	75	86	30	81
Latvia	242	—	—	—	—	—	—	—
Lithuania	196	[2]	—	[2]	[2]	1	—	—
Poland	805	22,501	15,380	5,804	1,945	1,432	94	69
Roumania	52	1	103	440	338	122	11	45
U.S.S.R. (Russia)	336	17,705	4,866	112	93	182	7	[2]
Yugoslavia	18	12,030	6,729	2,250	734	818	2,739	22,613
Totals, Eastern Europe	**3,091**	**63,809**	**43,534**	**23,313**	**7,102**	**5,635**	**6,510**	**25,873**
Middle East								
Aden	109	256	1,602	2,653	57	31	25	127
Anglo-Egyptian Sudan	109	510	1,028	42	37	75	34	104
Arabia	[3]	[3]	[3]	[3]	3,142	875	1,414	2,149
Egypt	399	15,086	10,922	10,205	4,762	3,716	2,466	19,363
Ethiopia	[2]	30	94	74	42	54	198	54
Iran	118	431	946	684	11,987	993	1,000	585
Iraq	55	3,231	2,160	831	472	70	1,062	313
Israel	251	3,562	8,473	5,036	12,709	12,126	11,816	11,940
Italian Africa	2	3	7	[2]	92	184	3	6
Jordan	[3]	[3]	[3]	[3]	211	46	1,071	105
Libya	[2]	—	5	5	11	374	2,029	854
Lebanon	80	228	2,546	6,094	3,278	1,462	7,036	9,355
Syria								580
Turkey	388	1,618	2,229	2,012	14,121	3,744	2,962	4,791
Totals, Middle East	**1,511**	**24,955**	**30,012**	**27,636**	**50,921**	**23,749**	**31,117**	**50,326**

[1] Includes all Germany. [2] Less than $500. [3] Not listed separately.

6.—Value of Domestic Exports, by Country, 1946-52, with Averages, 1935-39—concl.

Country	Averages 1935-39	1946	1947	1948	1949	1950	1951	1952
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Other Asia								
Ceylon	246	2,140	4,079	1,710	2,159	4,353	3,470	5,825
India	3,732	49,046	42,947	33,698	72,551	31,520	35,737	55,423
Pakistan				7,775	18,097	8,681	4,486	16,016
Hong Kong	1,651	4,362	6,398	8,256	10,099	8,004	12,033	9,582
Malaya and Singapore	2,173	3,224	7,464	9,288	5,437	4,097	10,796	7,067
Other British East Indies	5	51	9	16	2	32	[1]	13
Afghanistan	[1]	1	36	43	14	52	97	272
Burma	71	442	823	173	54	30	279	1,023
China	3,808	42,915	34,984	29,128	13,801	2,057	367	1,156
French East Indies	85	269	858	498	177	69	223	327
Indonesia	801	6,833	5,807	7,959	4,640	3,052	5,227	6,250
Japan	21,880	1,027	559	8,001	5,860	20,533	72,976	102,603
Korea	3	126	30	23	233	1,143	213	335
Philippines	1,523	8,901	10,448	9,810	13,983	10,829	15,598	16,045
Portuguese Asia	1	76	147	104	162	103	107	282
Thailand	22	58	415	609	752	1,200	2,378	1,976
Totals, Other Asia	**36,001**	**119,471**	**115,003**	**117,092**	**148,023**	**95,757**	**163,986**	**224,196**
Other Africa								
British East Africa	789	2,220	4,682	3,473	1,730	849	1,444	1,031
Northern Rhodesia	[2]	[2]	450	606	553	395	281	467
Southern Rhodesia	970	3,284	7,369	2,711	2,665	1,202	2,669	2,195
Union of South Africa	15,457	68,633	66,674	83,248	77,713	42,561	52,736	47,852
Other British South Africa			15	6	15	5	27	12
Gambia	35	63	66	26	8	12	26	9
Gold Coast	270	871	1,652	2,072	1,489	581	980	254
Nigeria	145	1,021	2,285	876	1,068	247	796	865
Sierra Leone	203	410	811	717	303	219	200	159
Other British West Africa	[1]	—	2	6	[1]	[1]	1	—
Belgian Congo	89	1,201	1,292	2,241	2,459	2,471	4,318	5,900
Canary Islands	17	333	46	12	49	237	107	825
French Africa	248	8,945	4,598	2,747	2,243	1,927	6,748	3,226
Liberia	17	67	144	129	119	109	1,373	203
Madagascar	13	263	176	408	227	117	102	97
Morocco	711	1,169	1,447	1,700	1,268	1,700	3,381	4,630
Portuguese Africa	1,675	2,128	1,898	3,258	3,604	2,702	2,827	2,088
Spanish Africa	9	—	62	54	95	62	75	64
Totals, Other Africa	**20,648**	**90,609**	**93,668**	**104,291**	**95,607**	**55,393**	**78,090**	**69,878**
Oceania								
Australia	28,924	38,194	60,294	38,257	35,363	35,446	49,079	49,697
Fiji	387	375	1,386	492	598	234	802	519
New Zealand	12,799	16,110	37,386	18,375	14,489	10,983	21,757	18,844
Other British Oceania	25	20	63	156	61	15	82	71
French Oceania	80	121	230	153	295	737	626	424
Hawaii	1,207	2,758	3,299	5,867	8,311	6,830	6,418	6,280
United States Oceania	2	5	199	318	182	205	191	198
Totals, Oceania	**43,424**	**57,583**	**102,857**	**63,619**	**59,299**	**54,449**	**78,955**	**76,033**
Grand Totals	**884,536**	**2,312,215**	**2,774,902**	**3,075,438**	**2,992,961**	**3,118,387**	**3,914,460**	**4,301,081**
Totals, Commonwealth Countries	**443,261**	**892,740**	**1,141,608**	**1,018,099**	**1,005,972**	**655,089**	**872,407**	**1,007,533**
Totals, United States and Dependencies	**323,124**	**894,015**	**1,040,789**	**1,510,453**	**1,519,048**	**2,036,780**	**2,314,848**	**2,322,177**

[1] Less than $500.

[2] Included with Other British South Africa.

7.—Value of Trade with Commonwealth and Foreign Countries, Significant Years, 1886-1952

Item and Year	Canadian Trade with—							
	United Kingdom		United States		Other Commonwealth Countries		Other Foreign Countries	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
	$'000		$'000		$'000		$'000	
Imports								
Ended Mar. 31—								
1886	39,033	40·7	42,819	44·6	2,384	2·5	11,757	12·2
1891	42,019	37·7	52,033	46·7	2,318	2·1	15,163	13·5
1896	32,825	31·2	53,529	50·8	2,389	2·2	16,619	15·8
1901	42,820	24·1	107,378	60·3	3,833	2·2	23,900	13·4
1906	69,184	24·4	169,256	59·6	14,606	5·1	30,694	10·9
1911	109,935	24·3	275,824	60·8	19,533	4·4	47,433	10·5
1916	77,404	15·2	370,881	73·0	27,826	5·5	32,091	6·3
1921	213,974	17·3	856,177	69·0	52,029	4·2	117,979	9·5
Ended Dec. 31—								
1926	164,707	16·3	668,747	66·3	49,907	5·0	124,980	12·4
1929	194,778	15·0	893,585	68·8	62,287	4·8	148,343	11·4
1937	147,292	18·2	490,505	60·7	89,304	11·0	81,796	10·1
1939	114,007	15·2	496,898	66·1	74,893	10·0	65,257	8·7
1943	134,965	7·7	1,423,672	82·1	103,666	6·0	72,773	4·2
1946	201,433	10·4	1,405,297	72·0	139,067	7·2	181,482	9·4
1947	189,370	7·4	1,974,679	76·7	165,024	6·4	244,871	9·5
1948	299,502	11·4	1,805,763	68·5	204,612	7·7	327,069	12·4
1949	307,450	11·1	1,951,860	70·7	186,779	6·8	315,118	11·4
1950	404,213	12·7	2,130,476	67·1	241,411	7·6	398,153	12·5
1951	420,985	10·3	2,812,927	68·9	306,104	7·5	544,840	13·3
1952	359,757	8·9	2,976,962	73·9	184,704	4·6	509,044	12·6
Exports (Domestic)								
Ended Mar. 31—								
1886	36,694	47·2	34,284	44·1	3,263	4·2	3,515	4·5
1891	43,244	48·8	37,743	42·6	3,893	4·4	3,791	4·2
1896	62,718	57·2	37,789	34·4	4,048	3·7	5,152	4·7
1901	92,858	52·3	67,984	38·3	7,891	4·5	8,700	4·9
1906	127,456	54·2	83,546	35·5	10,965	4·6	13,516	5·7
1911	132,157	48·2	104,116	38·0	16,811	6·1	21,233	7·7
1916	451,852	60·9	201,106	27·1	30,677	4·2	57,974	7·8
1921	312,845	26·3	542,323	45·6	90,607	7·6	243,389	20·5
Ended Dec. 31—								
1926	459,223	36·4	457,878	36·3	95,701	7·6	248,439	19·7
1929	290,295	25·2	492,686	42·8	105,006	9·1	264,430	22·9
1937	402,062	40·3	360,012	36·1	104,159	10·4	131,134	13·2
1939	328,099	35·5	380,392	41·1	102,707	11·1	113,728	12·3
1943	1,032,647	34·8	1,149,232	38·7	369,015	12·4	420,581	14·2
1946	597,506	25·8	887,941	38·4	307,195	13·3	519,574	22·4
1947	751,198	27·1	1,034,226	37·3	417,303	15·0	572,175	20·6
1948	686,914	22·3	1,500,987	48·8	345,477	11·3	542,060	17·6
1949	704,956	23·6	1,503,459	50·2	310,067	10·4	474,480	15·9
1950	469,910	15·1	2,020,988	64·8	185,179	5·9	442,310	14·2
1951	631,461	16·1	2,297,675	58·7	240,946	6·2	744,379	19·0
1952	745,845	17·3	2,306,955	53·7	261,687	6·1	986,593	22·9

8.—Values of Dutiable and Free Imports, by Leading Countries, 1950-52

Country	1950			1951			1952		
	Dutiable	Free	Total	Dutiable	Free	Total	Dutiable	Free	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
North America									
United States	1,177,677	952,799	2,130,476	1,624,802	1,188,125	2,812,927	1,694,823	1,282,139	2,976,962
Totals, North America[1]	**1,178,549**	**952,920**	**2,131,469**	**1,626,245**	**1,188,191**	**2,814,436**	**1,697,078**	**1,282,264**	**2,979,343**
Central America and Antilles									
Barbados	7,513	2,544	10,057	10,562	2,846	13,409	6,976	1,690	8,666
Jamaica	17,472	1,608	19,080	16,705	1,336	18,041	8,453	751	9,204
Trinidad and Tobago	8,061	7,144	15,205	8,371	6,711	15,082	3,972	5,687	9,659
Costa Rica	3,346	32	3,378	8,785	—	8,785	8,736	4	8,740
Cuba	3,037	1,097	4,134	6,848	1,485	8,333	16,785	1,831	18,615
Dominican Republic	1,174	6	1,180	1,107	19	1,126	5,870	130	6,000
Honduras	5,565	56	5,621	4,013	14	4,027	4,636	7	4,643
Mexico	5,549	27,425	32,974	7,841	10,171	18,012	6,027	17,911	23,937
Netherlands Antilles	17,089	247	17,336	10,657	152	10,809	11,530	217	11,747
Panama	5,478	—	5,478	3,487	5	3,492	4,123	2	4,125
Totals, Central America and Antilles[1]	**81,913**	**43,669**	**125,582**	**86,617**	**27,199**	**113,817**	**81,717**	**30,713**	**112,429**
South America									
British Guiana	14,455	7,280	21,735	15,534	9,491	25,025	13,891	9,769	23,660
Argentina	7,177	3,736	10,913	10,539	3,416	13,955	2,365	2,010	4,374
Brazil	22,078	6,100	28,178	27,617	13,009	40,627	23,804	11,299	35,103
Colombia	13,301	41	13,342	13,032	30	13,063	17,145	860	18,005
Peru	121	3,840	3,961	278	5,310	5,588	384	7,666	8,050
Venezuela	6,860	80,404	87,264	11,001	125,716	136,718	8,631	127,127	135,758
Totals, South America[1]	**67,887**	**106,123**	**174,010**	**83,174**	**163,490**	**246,667**	**70,522**	**166,550**	**237,071**
Northwestern Europe									
United Kingdom	151,142	253,071	404,213	173,624	247,361	420,985	156,819	202,938	359,757
Belgium and Luxembourg	14,758	8,037	22,795	29,522	9,573	39,095	26,697	6,519	33,216
France	10,543	4,126	14,669	18,968	5,005	23,974	14,864	4,252	19,117
Germany, Federal Republic of	6,833	4,192	11,025	25,394	5,542	30,936	16,196	6,433	22,629
Netherlands, The	5,055	3,841	8,896	7,508	6,503	14,011	8,075	8,419	16,495
Norway	1,121	284	1,405	2,074	903	2,977	1,253	2,604	3,857
Sweden	3,993	1,152	5,145	9,827	1,981	11,808	6,981	1,630	8,611
Switzerland	12,708	1,756	14,464	13,712	2,686	16,398	13,733	2,663	16,396
Totals, Northwestern Europe[1]	**208,227**	**277,136**	**485,363**	**286,925**	**280,989**	**567,916**	**248,910**	**236,762**	**485,674**
Southern Europe									
Italy	7,619	1,754	9,373	11,471	2,746	14,217	8,555	3,181	11,735
Spain	2,785	773	3,558	5,463	1,651	7,114	1,886	2,374	4,260
Totals, Southern Europe[1]	**11,829**	**3,411**	**15,240**	**18,508**	**5,435**	**23,942**	**12,143**	**6,183**	**18,325**
Totals, Eastern Europe	**6,328**	**573**	**6,901**	**5,306**	**1,763**	**7,069**	**4,564**	**2,989**	**7,553**

[1]Includes other countries not specified.

8.—Values of Dutiable and Free Imports, by Leading Countries, 1950-52—concluded

Country	1950			1951			1952		
	Dutiable	Free	Total	Dutiable	Free	Total	Dutiable	Free	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Middle East									
Arabia	—	28,115	28,115	—	22,659	22,659	10	7,549	7,559
Lebanon and Syria	53	9	62	68	16,313	16,381	44	15,199	15,243
Totals, Middle East[1]	**2,299**	**29,798**	**32,097**	**3,333**	**41,874**	**45,205**	**1,605**	**27,733**	**29,339**
Other Asia									
Ceylon	567	17,037	17,604	467	15,929	16,396	723	11,769	12,492
India	2,573	34,688	37,261	6,264	33,952	40,217	3,026	23,795	26,822
Malaya and Singapore	389	28,463	28,852	305	57,675	57,980	239	25,234	25,473
Japan	11,512	575	12,087	11,490	1,087	12,577	11,418	1,744	13,162
Philippines	760	5,665	6,425	244	8,710	8,954	225	5,198	5,423
Totals, Other Asia[1]	**20,748**	**92,789**	**113,537**	**24,101**	**126,853**	**150,957**	**18,964**	**73,054**	**92,019**
Other Africa									
British East Africa	9,590	5,476	15,066	2,789	8,075	10,864	2,128	7,465	9,593
Gold Coast	5,519	3,480	8,999	3,302	3,810	7,112	2,653	2,870	5,523
Union of South Africa	720	4,244	4,964	698	4,673	5,372	627	3,538	4,165
Totals, Other Africa[1]	**19,008**	**15,104**	**34,112**	**10,606**	**20,140**	**30,747**	**8,340**	**17,253**	**25,594**
Oceania									
Australia	12,457	20,346	32,803	16,559	29,669	46,227	4,708	14,004	18,712
Fiji	10,194	—	10,194	5,986	7	5,993	6,487	—	6,487
New Zealand	1,601	10,254	11,855	5,543	24,564	30,107	4,395	9,836	14,231
Totals, Oceania[1]	**24,741**	**31,197**	**55,938**	**29,485**	**54,617**	**84,101**	**19,036**	**24,078**	**43,114**
Grand Totals	**1,621,533**	**1,552,720**	**3,174,253**	**2,174,304**	**1,910,552**	**4,084,856**	**2,162,882**	**1,867,585**	**4,030,468**
Totals, Commonwealth Countries	**245,842**	**399,782**	**645,624**	**270,576**	**456,513**	**727,089**	**219,547**	**324,915**	**544,462**
Totals, Other Countries	**1,375,692**	**1,152,937**	**2,528,629**	**1,903,728**	**1,454,040**	**3,357,768**	**1,943,335**	**1,542,671**	**3,486,006**

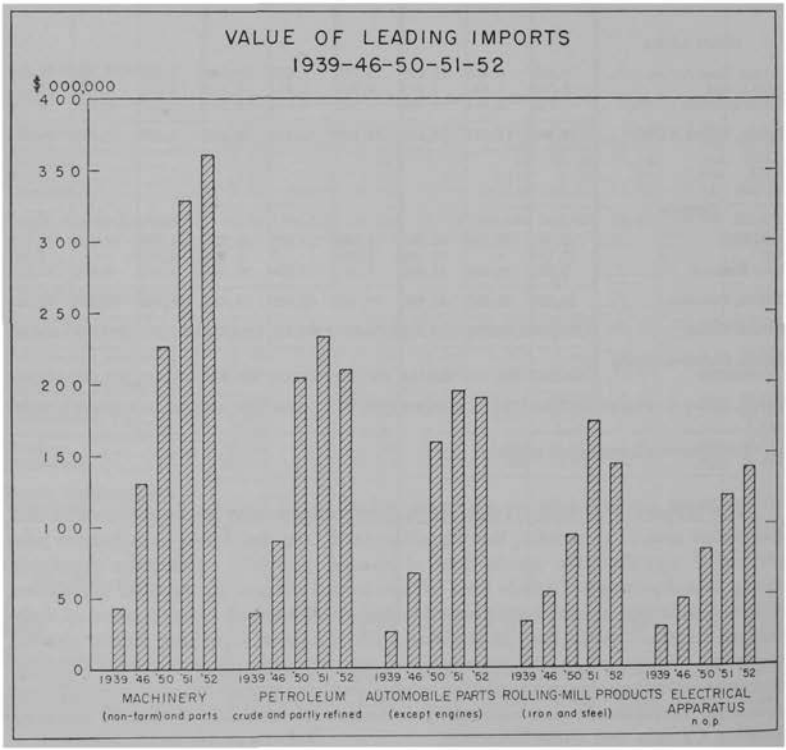
[1] Includes other countries not specified.

The proportion of imports subject to duty varies widely between countries and geographic areas. Generally, the Canadian tariff imposes duties on a greater proportion of manufactured goods than of natural products. Countries supplying chiefly manufactures to Canada tend to have duties charged on a greater proportion of their goods and also to have relatively higher average ad valorem rates of duty charged on their goods than is the case with countries supplying chiefly natural products. Variations in the proportion of imports dutiable as between different countries, or in the average ad valorem rates of duty charged on imports from different countries, therefore do not necessarily indicate differences in the tariff relations between Canada and these countries.

9.—Average Ad Valorem Rates of Duty Collected and Percentage Proportions of Imports from the United Kingdom and from the United States to Totals of Dutiable and Free Imports, 1939-52.

NOTE.—Figures for the years ended Mar. 31, 1868-1938, are given in the 1940 Year Book, p. 532.

Year	United Kingdom					United States				
	Average Ad Valorem Rates of Duty on—		Dutiable to Total Dutiable	Free to Total Free	Percentage of All Imports	Average Ad Valorem Rates of Duty on—		Dutiable to Total Dutiable	Free to Total Free	Percentage of All Imports
	Dutiable Imports	Total Imports				Dutiable Imports	Total Imports			
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
1939...	27·0	12·4	12·3	19·0	15·2	21·3	13·0	70·7	60·1	66·2
1940...	24·8	8·4	9·3	21·4	14·9	20·3	12·4	78·0	58·0	68·8
1941...	23·4	4·7	6·0	24·5	15·1	18·8	11·6	84·7	53·6	69·3
1942...	24·2	5·8	5·4	13·2	9·8	19·0	9·2	88·2	72·5	79·3
1943...	18·7	5·2	4·5	10·8	7·8	18·9	10·0	90·2	74·0	82·1
1944...	16·3	6·1	4·7	7·9	6·3	18·7	10·2	89·0	75·5	82·3
1945...	17·6	4·7	4·7	13·1	8·9	19·3	11·1	86·6	64·8	75·8
1946...	17·5	4·5	4·8	17·7	10·5	19·4	12·7	85·4	57·0	72·9
1947...	15·9	6·4	4·9	11·3	7·4	19·5	13·1	84·9	64·0	76·7
1948...	17·1	7·7	9·8	13·1	11·4	15·7	9·1	76·2	60·0	68·5
1949...	16·2	6·9	9·1	13·4	11·1	16·0	9·0	75·6	65·3	70·7
1950...	16·6	6·2	9·3	16·3	12·7	16·3	9·0	72·6	61·4	67·1
1951...	15·8	6·5	8·0	12·9	10·3	16·5	9·5	74·7	62·2	68·9
1952...	16·5	7·2	7·3	10·9	8·9	16·8	9·6	78·4	68·7	73·9



Section 4.—Trade by Commodities

The tables in this Section provide detailed information on the composition of Canada's imports and exports, with commodities shown by group and individually.

10.—Imports and Exports, by Main Groups, 1950-52

Group	Imports			Domestic Exports			Total Trade[1]		
	1950	1951	1952	1950	1951	1952	1950	1951	1952
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
United Kingdom									
Agricultural and vegetable products	27,960	21,316	23,725	228,795	231,585	256,458	256,788	253,040	280,562
Animals and animal products	9,722	12,778	10,175	53,346	29,860	35,948	63,132	42,695	46,631
Fibres, textiles and textile products	112,913	139,094	86,432	1,139	1,265	1,013	114,707	140,878	88,333
Wood, wood products and paper	3,682	4,345	4,338	40,687	141,181	165,045	44,457	145,568	169,411
Iron and its products	148,850	126,553	122,539	10,100	19,914	37,951	159,604	148,344	162,475
Non-ferrous metals and their products	38,321	42,621	43,203	117,401	181,635	222,860	155,793	225,097	266,224
Non-metallic minerals and their products	30,202	32,864	27,318	9,527	13,073	13,770	39,789	46,124	41,393
Chemicals and allied products	14,047	16,188	12,225	5,993	10,370	9,712	20,104	26,806	22,054
Miscellaneous commodities	18,517	25,225	29,803	2,923	2,579	3,087	22,376	28,153	33,722
Totals, United Kingdom	**404,213**	**420,985**	**359,757**	**469,910**	**631,461**	**745,845**	**876,750**	**1,056,705**	**1,110,806**
United States									
Agricultural and vegetable products	180,072	208,451	220,647	176,937	263,443	301,307	358,095	472,857	524,162
Animals and animal products	57,240	73,546	49,696	253,333	265,528	147,966	312,521	341,327	201,587
Fibres, textiles and textile products	151,776	220,966	197,369	18,343	19,588	17,442	172,893	244,841	217,939
Wood, wood products and paper	92,330	125,630	123,517	1,016,396	1,114,581	1,081,016	1,109,244	1,240,943	1,205,155
Iron and its products	811,008	1,146,844	1,230,801	136,445	169,188	172,701	957,992	1,330,364	1,418,089
Non-ferrous metals and their products	135,686	192,827	198,039	267,043	278,009	349,650	405,866	473,655	551,376
Non-metallic minerals and their products	430,859	435,856	419,453	73,983	89,926	96,640	510,372	530,719	522,370
Chemicals and allied products	134,603	165,061	166,249	58,499	67,253	75,107	194,118	233,607	242,556
Miscellaneous commodities	136,904	243,748	371,191	20,009	30,159	65,125	159,835	278,527	442,773
Totals, United States	**2,130,476**	**2,812,927**	**2,976,962**	**2,020,988**	**2,297,675**	**2,306,955**	**4,180,936**	**5,146,839**	**5,326,007**
All Countries									
Agricultural and vegetable products	484,475	542,641	489,192	636,898	894,210	1,183,496	1,123,010	1,438,395	1,675,662
Animals and animal products	86,968	125,562	85,540	365,775	348,033	237,942	454,844	476,207	328,163
Fibres, textiles and textile products	364,509	483,520	359,440	29,573	36,858	27,697	398,124	528,754	392,109
Wood, wood products and paper	100,366	137,047	134,554	1,112,945	1,399,076	1,366,787	1,213,988	1,536,973	1,502,025
Iron and its products	980,229	1,332,251	1,406,627	251,109	342,299	406,946	1,244,307	1,692,766	1,834,318
Non-ferrous metals and their products	215,527	290,848	296,875	457,262	569,870	706,732	676,123	865,139	1,007,810
Non-metallic minerals and their products	611,741	684,535	641,885	103,655	131,529	143,474	721,427	821,392	792,066
Chemicals and allied products	158,221	191,813	187,713	100,525	131,690	124,565	259,957	325,596	314,048
Miscellaneous commodities	172,218	296,638	428,642	60,644	60,895	103,441	239,545	363,018	540,227
Totals, All Countries	**3,174,253**	**4,084,856**	**4,030,468**	**3,118,387**	**3,914,460**	**4,301,081**	**6,331,326**	**8,048,241**	**8,386,427**

[1] Includes exports of foreign produce.

11.—Leading Imports, 1926, 1930, 1939, 1946 and 1950-52

NOTE.—Commodities are arranged in order of value in 1952.

Commodity	1926	1930	1939	1946	1950	1951	1952
	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Machinery (non-farm) and parts	38,684	50,435	42,831	130,287	226,249	328,741	360,969
Petroleum, crude and partly refined	35,351	41,787	39,650	89,483	203,996	233,148	210,036
Automobile parts (except engines)	27,265	23,359	25,308	66,453	158,405	195,177	190,337
Rolling-mill products (iron and steel)	47,710	46,509	32,336	53,376	93,639	173,127	143,133
Electrical apparatus, *n.o.p.*	16,697	30,281	27,891	47,788	82,585	120,101	139,567
Engines, internal combustion, and parts	12,426	9,345	7,096	19,650	47,068	80,314	126,332
Tractors and parts	7,709	10,763	15,003	45,620	108,320	125,562	119,253
Coal, bituminous	25,512	25,858	19,640	77,052	118,788	115,275	99,571
Aircraft and parts (except engines)	67	1,346	5,550	9,448	10,942	41,438	95,212
Farm implements and machinery (except tractors) and parts	9,922	11,181	5,915	22,732	53,322	69,529	78,044
Tourist purchases	[1]	[1]	9,487	9,125	33,090	47,071	66,682
Cotton, raw	23,017	14,216	17,176	42,812	88,461	94,315	65,956
Fuel oils	4,006	3,228	1,650	33,066	45,909	58,389	64,908
Sugar, unrefined	1,515	3,638	9,983	32,416	77,208	77,100	59,546
Pipes, tubes and *fittings* (iron and steel)	3,835	4,103	2,340	8,411	35,394	43,183	57,261
Cotton fabrics	21,992	13,443	10,935	54,163	45,901	54,984	53,248
Coffee, green	5,629	4,505	4,110	15,473	41,664	48,438	50,775
Principal chemicals (except acids), *n.o.p.*	7,437	8,845	12,321	16,734	37,161	43,940	49,824
Automobiles, passenger	21,563	15,898	13,725	25,209	75,329	56,632	49,484
Coal, anthracite	34,202	30,099	21,938	41,987	54,265	51,238	49,430
Non-commercial items	7,697	12,259	5,430	14,173	15,575	32,544	47,095
Refrigerators and parts	411	2,101	1,189	5,201	15,353	30,620	43,891
Gasoline	11,959	16,330	7,998	14,912	39,783	33,444	39,148
Vegetables, fresh	4,600	7,192	6,150	25,748	23,259	26,295	37,969
Parcels of small value	4,694	5,642	4,185	14,460	9,359	22,025	33,691
Wool fabrics	22,524	19,503	10,408	20,115	31,719	38,567	32,213
Paperboard, paper and products	10,978	12,908	8,654	18,834	23,434	34,831	29,921
Rubber, crude and semi-fabricated	26,793	9,987	12,860	10,013	34,361	64,973	29,287
Newspapers, magazines and advertising matter	5,644	5,055	8,436	13,434	19,441	25,133	28,385
Citrus fruits, fresh	9,943	13,020	8,860	34,632	24,532	26,699	26,712
Iron ore	2,854	3,324	4,179	6,467	16,802	22,671	26,519
Apparel (except hats) of all textiles	15,694	16,614	6,941	12,222	19,667	25,000	26,091
Goods free by Order in Council, *n.o.p.*	225	208	31	1,149	2,334	13,079	23,691
Synthetic plastics, primary forms	[1]	[1]	2,506	15,386	17,553	22,413	23,020
Tools	2,337	2,351	2,377	10,135	13,484	19,117	22,566
Cooking and heating apparatus and parts	497	1,561	2,332	10,462	14,941	18,911	22,444
Drugs and medicines	3,101	3,652	3,992	9,440	18,901	22,981	22,111
Nuts	4,621	4,158	3,508	19,140	22,373	22,780	21,077
Bananas, fresh	4,895	2,540	2,398	20,119	19,442	19,598	20,939
Logs, timber and lumber	10,035	7,523	3,767	6,035	14,415	23,210	20,798

[1] Not listed separately.

12.—Leading Domestic Exports, 1926, 1930, 1939, 1946 and 1950-52

NOTE.—Commodities are arranged in order of value in 1952.

Commodity	1926	1930	1939	1946	1950	1951	1952
	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Wheat	362,978	185,786	109,051	250,306	325,614	441,043	621,292
Newsprint	114,091	133,371	115,687	265,865	485,746	536,372	591,790
Planks and boards	61,943	36,743	48,829	125,391	290,847	312,198	295,949
Wood-pulp	52,077	39,060	31,000	114,021	208,556	365,133	291,863
Aluminum, primary and semi-fabricated	5,951	8,110	25,950	51,390	103,206	120,853	155,106
Nickel, primary and semi-fabricated	12,461	20,505	57,934	55,205	105,300	136,689	150,982
Barley	22,516	987	7,882	9,688	23,442	58,822	145,684
Wheat flour	71,994	37,540	16,378	126,733	93,839	113,854	116,055
Copper, primary and semi-fabricated	14,571	31,233	52,396	34,940	82,990	81,691	100,806
Zinc, primary and semi-fabricated	8,615	6,254	9,922	27,659	58,710	83,669	96,283
Farm implements and machinery (except tractors) and parts	16,935	10,302	6,975	28,662	78,512	96,873	95,692
Asbestos, unmanufactured	10,662	8,453	2,902	23,839	62,752	80,333	86,510
Oats	9,894	1,061	4,142	23,108	16,571	53,899	68,240
Pulpwood	14,067	13,612	11,901	28,731	34,768	68,103	64,820
Whisky	18,434	21,747	7,914	29,650	41,682	54,039	54,254
Fish, fresh and frozen	9,302	8,475	10,212	31,110	49,711	53,363	52,852
Lead, primary and semi-fabricated	13,780	8,274	9,850	16,715	38,105	45,290	49,676
Automobiles, freight	6,957	6,061	8,157	43,201	8,827	24,873	48,832
Machinery (non-farm) and parts	4,451	6,109	10,873	15,535	25,644	40,271	47,378
Automobiles, passenger	11,376	4,750	4,206	11,340	19,365	38,490	43,634
Fertilizers, chemical	4,664	5,606	9,179	32,108	38,874	35,734	42,293
Aircraft and parts (except engines)	[1]	113	347	9,507	4,383	7,524	37,503
Electrical apparatus, *n.o.p.*	1,695	2,291	3,229	20,939	11,089	17,729	33,892
Platinum metals and scrap	95	1,627	6,178	15,450	21,215	30,359	30,627
Ferro-alloys	3,413	2,694	2,477	9,485	17,075	31,347	30,380
Beef and veal, fresh	2,602	1,227	518	27,224	34,219	50,965	30,323
Fodders, *n.o.p.*	7,321	2,782	6,729	13,288	14,034	25,319	29,483
Fish, cured	10,567	8,583	3,884	13,808	28,616	27,588	25,538
Pigs, ingots, blooms and billets (iron and steel)	108	67	2,691	3,328	21,331	14,433	25,032
Fur skins, undressed	19,150	15,202	14,130	30,928	23,792	28,316	23,507
Iron ore	7	3	43	4,353	13,310	18,576	22,333
Tobacco, unmanufactured	1,883	1,261	10,183	5,892	10,552	16,413	22,221
Brass, primary and semi-fabricated	550	499	723	2,466	2,465	4,059	21,136
Posts, poles and piling	3,678	4,012	1,377	12,466	3,988	6,017	20,846
Shingles	8,752	4,132	8,225	11,211	32,401	27,483	20,002
Rolling-mill products (iron and steel)	2,686	1,535	3,864	7,528	7,121	11,806	18,844
Non-commercial items	7,354	6,213	2,402	39,951	14,371	17,378	18,720
Copper wire and copper manufactures	438	122	832	2,065	4,597	5,497	18,685
Plywoods and veneers	243	145	1,608	12,026	12,315	18,046	18,655
Automobile parts (except engines)	5,485	1,588	2,992	21,110	12,036	15,763	18,549

[1] Less than $500.

Detailed Imports and Exports.—Detailed statistics of all commodities of any importance imported into Canada from all countries, from the United Kingdom and from the United States, during the calendar years 1949-52, are given in Table 13 while corresponding statistics for domestic exports appear in Table 14.

13.—Principal Imports into Canada for Consumption from All Countries,

No.	Item		All Countries			
			1949	1950	1951	1952
	I. Agricultural and Vegetable Products					
	A. Mainly Food					
	Fruits—					
1	Fruits, fresh	$	46,376,684	57,883,759	59,687,372	63,460,360
2	Fruits, dried	lb.	84,561,795	91,754,819	90,770,584	99,007,788
		$	9,639,734	11,878,275	12,752,567	12,952,208
3	Fruits, canned or preserved	$	7,686,072	10,832,511	13,541,824	13,276,921
4	Fruit juices and fruit syrups	gal.	10,727,647	9,900,719	10,686,943	13,811,557
		$	8,920,845	10,391,102	8,753,428	10,071,300
	Totals, Fruits	$	72,623,335	90,985,647	94,735,191	99,760,789
5	Nuts	$	23,187,420	22,372,557	22,780,324	21,077,298
	Vegetables—					
6	Vegetables, fresh	$	18,459,891	23,258,901	26,295,324	37,968,933
7	Vegetables, dried	$	252,922	453,176	1,598,925	1,353,918
8	Vegetables, canned	lb.	292,338	1,613,446	14,558,732	33,546,967
		$	77,920	336,625	1,848,116	3,477,283
9	Pickles, sauces and catsups	gal.	348,841	451,245	1,830,485	3,313,928
		$	393,820	454,810	1,647,830	2,960,110
	Totals, Vegetables	$	19,184,553	24,503,512	31,390,195	45,760,244
	Grains and Farinaceous Products—					
10	Grains	$	23,179,116	36,041,202	40,799,292	32,106,932
11	Milled products	$	824,037	649,222	1,060,661	1,476,553
12	Prepared foods and bakery products	$	1,581,098	2,401,701	3,911,085	3,849,491
13	Other farinaceous products	$	273,088	314,868	315,013	330,027
	Totals, Grains and Farinaceous Products.	$	25,857,339	39,406,993	46,086,051	37,763,003
14	Oils, vegetable, for food	$	3,261,471	3,085,866	4,020,548	2,134,033
15	Sugar and its products	$	71,084,197	86,944,954	85,862,388	71,299,307
16	Cocoa and chocolate	$	13,997,722	16,018,701	11,733,095	15,022,057
17	Coffee and chicory	lb.	98,740,143	83,913,500	89,765,806	99,739,245
		$	28,909,886	42,545,733	49,597,626	52,873,922
18	Spices	lb.	4,595,908	5,660,407	5,390,009	4,556,424
		$	2,233,041	4,388,938	3,755,983	3,095,958
19	Tea	lb.	43,193,575	55,198,271	42,456,287	45,908,126
		$	21,347,150	28,610,731	21,017,954	18,825,750
20	Other vegetable products mainly food	$	2,269,123	2,975,921	2,690,506	2,905,380
	Totals, A. Mainly Food	$	283,955,237	361,839,553	373,669,861	370,517,741
	B. Other Than Food					
	Beverages, Alcoholic—					
21	Brewed	$	210,267	163,697	245,634	253,753
22	Distilled	pf. gal	2,631,654	2,257,276	3,098,723	3,995,406
		$	19,574,536	14,525,215	15,589,620	17,457,092
23	Wines	$	2,235,405	2,171,163	2,545,267	2,998,745
	Totals, Beverages, Alcoholic	$	22,020,208	16,860,075	18,380,521	20,709,590
24	Gums and resins	$	5,302,253	5,998,974	6,450,067	5,052,344
25	Oil cake and oil cake meal	cwt.	627,592	401,352	921,977	442,715
		$	2,327,950	1,626,823	3,781,402	2,088,690
26	Oils, vegetable, not food	$	20,550,327	31,162,293	34,929,198	20,343,128
27	Plants, shrubs, trees and vines	$	1,894,386	2,265,085	2,932,625	3,393,741
28	Rubber and manufactures of	$	29,019,563	48,679,690	84,529,303	52,134,919
29	Seeds	$	4,069,841	7,132,545	8,453,292	4,716,096
30	Tobacco and manufactures of	$	3,941,677	3,998,898	3,668,036	4,623,941
31	Other vegetable products, not food	$	4,311,401	4,911,395	5,846,864	5,612,188
	Totals, B. Other Than Food	$	93,437,606	122,635,778	168,971,308	118,674,637
	Totals, Agricultural and Vegetable Products	$	**377,392,843**	**484,475,331**	**542,641,169**	**489,192,378**

the United Kingdom and the United States, 1949-52

United Kingdom				United States				No.
1949	1950	1951	1952	1949	1950	1951	1952	
—	—	—	114	25,283,575	34,791,540	37,890,484	40,062,655	1
—	332,473	48	770	34,944,112	32,552,198	38,040,220	43,679,875	2
—	40,331	22	65	4,355,456	5,015,566	6,194,660	6,077,580	
416,986	448,478	599,566	687,490	1,452,394	2,224,675	5,789,100	5,893,862	3
1,047,892	130,444	11,675	21,391	8,372,419	6,993,565	9,327,771	11,833,425	4
834,744	111,083	18,981	31,085	6,959,850	7,985,420	7,710,801	8,798,197	
1,251,730	599,892	618,569	718,754	38,051,275	50,017,201	57,585,045	60,832,294	
43,476	92,356	59,870	92,425	9,862,971	4,404,703	3,979,964	3,637,487	5
227	2,299	1,186	34,657	14,578,659	20,918,172	22,677,187	34,053,975	6
104,677	224,879	1,042,882	497,476	73,506	118,236	474,356	780,724	7
900	1,170	9,169	3,295	132,680	530,225	9,448,669	27,030,120	8
462	110	920	612	14,999	93,553	1,038,858	2,544,524	
5,247	14,845	9,161	16,607	46,379	176,512	1,436,783	2,988,797	9
15,891	33,842	23,016	46,698	42,854	126,488	1,264,765	2,549,428	
121,257	261,130	1,068,004	579,443	14,710,018	21,256,449	25,455,166	39,928,651	
—	1,093	—	11	23,122,919	32,950,231	37,612,833	31,383,375	10
1,162	949	2,223	1,171	802,932	621,686	1,047,205	1,458,150	11
942,843	1,758,430	2,360,576	2,189,811	535,601	536,605	1,423,660	1,494,433	12
—	28	601	385	179,461	193,914	220,303	249,206	13
944,005	1,760,500	2,363,400	2,191,378	24,640,913	34,302,436	40,304,001	34,585,164	
298,555	61,982	—	3,174	2,654,680	2,550,912	3,752,334	1,663,387	14
1,304,896	4,579,000	3,121,993	4,631,470	950,874	737,877	1,440,132	2,493,035	15
1,495,418	2,761,086	275,339	974,847	51,451	1,603,983	3,313,542	6,149,396	16
129,518	2,521,093	371,117	251,382	528,873	1,455,273	1,903,475	2,850,982	17
40,844	1,379,052	213,059	140,444	328,983	1,087,302	1,574,840	2,550,403	
605,632	842,695	603,472	695,058	1,067,426	888,564	832,399	554,788	18
425,256	448,320	311,369	320,598	586,380	552,865	543,922	397,663	
502,363	458,752	513,491	1,836,029	49,546	71,937	48,808	138,464	19
235,834	251,510	290,363	673,941	19,240	44,508	24,539	81,379	
57,952	271,248	239,359	388,058	2,047,631	2,467,421	2,326,257	2,288,009	20
6,219,223	12,466,076	8,561,325	10,714,532	93,904,416	119,025,657	140,299,742	154,606,868	
197,714	161,749	236,890	246,417	9,903	98	20	—	21
1,041,392	1,118,136	1,312,207	1,363,027	757,192	276,974	636,425	1,416,293	22
11,996,130	8,834,495	9,195,573	9,364,340	3,991,727	2,336,247	2,186,655	3,563,214	
227,804	150,547	191,175	323,926	36,092	47,732	34,085	14,549	23
12,421,648	9,146,791	9,623,638	9,934,683	4,037,722	2,384,077	2,220,760	3,577,763	
107,379	168,235	90,289	60,262	4,266,722	4,808,204	5,306,051	4,408,481	24
—	—	—	—	627,592	390,038	921,977	442,715	25
—	—	—	—	2,327,950	1,594,895	3,781,402	2,088,690	
279,244	2,511,429	426,505	562,823	17,317,090	20,116,756	15,436,530	16,302,665	26
32,793	36,247	65,169	40,663	581,336	779,016	1,256,569	1,471,479	27
758,531	1,394,979	1,775,640	1,520,531	15,304,731	20,379,298	26,146,489	27,759,569	28
823,451	2,006,890	444,208	461,576	2,648,519	4,171,261	6,881,649	3,105,611	29
118,225	119,224	131,272	141,266	2,324,751	2,583,017	2,320,362	3,147,777	30
46,445	110,539	197,544	288,385	3,659,175	4,229,538	4,801,067	4,178,227	31
14,587,716	15,494,334	12,754,265	13,010,189	52,467,996	61,046,062	68,150,879	66,040,262	
20,806,939	**27,960,410**	**21,315,590**	**23,724,721**	**146,372,412**	**180,071,719**	**208,450,621**	**220,647,130**	

13.—Principal Imports into Canada for Consumption from All Countries,

No.	Item		All Countries			
			1949	1950	1951	1952
	II. Animals and Animal Products					
1	Animals, living	$	2,946,894	2,249,817	3,166,889	3,552,968
2	Bone, ivory and shell products	$	925,642	922,376	1,100,573	960,455
3	Feathers and quills and manufactures of	$	612,253	622,781	802,038	602,364
	Fishery Products, *n.o.p.*—					
4	Fish, fresh or frozen	$	1,958,952	1,325,872	2,309,562	1,833,027
5	Fish, salted, dried, smoked or pickled	lb.	3,230,163	2,362,425	2,576,317	3,317,003
		$	452,458	357,757	380,037	472,259
6	Fish, canned or preserved, *n.o.p.*	$	2,194,379	1,864,470	2,833,849	2,919,177
7	Other fishery products, *n.o.p.*	$	694,649	780,613	901,660	1,040,631
	Totals, Fishery Products, *n.o.p.*	$	5,300,438	4,328,712	6,425,108	6,265,094
8	Furs and manufactures of	$	19,575,733	21,998,958	21,586,369	23,513,823
9	Hairs and bristles and manufactures of	$	2,325,414	2,414,154	3,296,611	1,735,243
10	Hides and skins, raw (except fur skins)	No.	3,691,232	3,334,534	2,715,160	2,138,115
		$	12,388,278	13,250,251	14,211,736	6,151,353
11	Leather, unmanufactured	$	6,644,934	8,396,187	9,413,621	7,618,838
12	Leather, manufactured	$	5,480,774	6,389,230	7,618,333	7,330,476
13	Meats	$	5,652,220	8,392,475	23,509,614	9,723,487
14	Milk and its products	$	2,492,726	3,875,263	13,858,047	7,701,597
15	Oils, fats, greases and waxes	$	5,326,361	8,249,468	9,846,662	2,731,791
16	Other animal products	$	4,424,779	5,877,970	10,726,422	7,652,380
	Totals, Animals and Animal Products	$	**74,096,446**	**86,967,642**	**125,562,023**	**85,539,869**
	III. Fibres and Textiles					
	Cotton and Its Products—					
17	Cotton, raw and unmanufactured	lb.	221,245,187	246,208,448	214,707,322	180,609,739
		$	67,288,820	90,927,016	96,569,667	67,609,703
18	Yarn, thread and cordage	lb.	7,556,836	5,751,452	8,620,429	7,346,219
		$	9,319,464	7,963,543	15,304,761	9,724,564
19	Piece goods (fabrics)	lb.	44,076,096	36,742,289	41,394,177	43,853,849
		$	52,665,702	45,901,357	54,984,071	53,247,824
20	Other cotton products	$	11,156,741	12,652,561	16,290,789	18,613,967
	Totals, Cotton and Its Products	$	140,430,727	157,444,477	183,149,288	149,196,058
21	Flax, hemp, jute and manufactures of	$	20,129,682	25,589,198	31,091,992	23,634,618
22	Silk and manufactures of	$	5,566,265	7,712,259	7,631,573	6,737,895
	Wool and Its Products—					
23	Wool, raw and unmanufactured	lb.	45,315,224	51,302,972	44,586,013	32,449,179
		$	37,403,644	55,305,983	94,809,397	28,919,148
24	Piece goods (fabrics)	lb.	11,777,948	10,496,962	9,647,393	10,061,631
		$	41,747,340	31,719,026	38,566,565	32,212,824
25	Other woollen products	$	20,908,809	20,663,762	29,156,198	20,614,606
	Totals, Wool and Its Products	$	100,059,793	107,688,771	162,532,160	81,746,578
26	Synthetic textile fibre and manufactures of	$	30,129,156	21,299,101	35,452,640	40,128,726
27	Other textile products	$	36,716,213	44,775,025	63,662,729	57,996,142
	Totals, Fibres and Textiles	$	**333,031,836**	**364,508,831**	**483,520,382**	**359,440,017**
	IV. Wood, Wood Products and Paper					
28	Lumber and timber	M ft.	80,627	86,174	132,538	151,778
		$	9,524,659	11,629,216	17,776,625	17,237,513
29	Other wood, unmanufactured	$	5,382,926	6,267,037	10,440,991	10,490,659
30	Wood, manufactured	$	15,272,640	16,546,431	23,084,326	20,396,153
31	Paper and manufactures of	$	20,068,438	23,433,530	34,831,145	29,920,960
32	Books and printed matter	$	36,077,921	42,489,410	50,913,423	56,508,336
	Totals, Wood, Wood Products and Paper	$	**86,326,584**	**100,365,624**	**137,046,510**	**134,553,621**

the United Kingdom and the United States, 1949-52—continued

United Kingdom				United States				No.
1949	1950	1951	1952	1949	1950	1951	1952	
222,268	259,514	327,277	248,035	2,706,763	1,963,128	2,803,224	3,280,507	1
315,828	274,192	340,788	328,739	471,421	539,916	622,223	527,795	2
26,687	23,254	48,784	7,865	397,670	413,048	346,518	305,068	3
539	512	849	4,797	1,279,629	1,055,339	1,399,541	1,131,297	4
164,757	504,157	586,782	679,832	231,733	223,057	140,342	168,538	5
25,193	69,442	83,577	84,563	49,766	44,771	28,108	33,096	
15,798	36,078	29,763	76,899	1,124,364	709,317	1,005,629	1,210,054	6
3,637	6,989	3,209	2,541	562,728	659,876	691,282	905,949	7
45,167	113,021	117,398	168,800	3,016,487	2,469,303	3,124,560	3,280,396	
536,072	755,857	1,914,672	2,033,476	17,476,858	18,946,672	16,794,008	17,408,708	8
17,293	18,716	14,547	143,863	2,159,479	2,259,109	2,873,133	860,756	9
5,132	1,620	30,696	55,711	2,243,119	2,188,829	1,789,499	1,807,382	10
5,086	2,684	77,455	52,299	9,937,486	9,153,083	9,878,810	5,414,370	
3,152,201	4,787,955	5,372,166	3,536,594	3,275,652	3,341,831	3,417,541	3,915,157	11
1,347,222	2,606,567	3,182,012	2,808,103	3,523,683	2,967,965	3,683,764	3,808,906	12
51,433	66,180	545,646	164,745	2,656,775	4,846,857	15,424,396	4,982,732	13
4,100	12,290	13,180	14,702	311,078	377,386	721,330	467,561	14
367,729	258,326	126,971	90,684	4,848,034	7,826,576	9,508,522	2,395,300	15
110,381	543,475	697,187	577,334	2,379,985	2,134,833	4,347,679	3,048,934	16
6,281,467	**9,722,031**	**12,778,983**	**10,175,239**	**53,161,371**	**57,239,707**	**73,545,708**	**49,696,190**	
198	74,883	54,862	291,212	168,195,930	193,939,465	211,276,537	149,134,322	17
162	19,396	21,470	17,650	51,114,828	70,774,966	95,178,118	57,737,777	
2,658,777	2,992,754	3,741,346	2,252,327	4,887,024	2,693,678	4,492,970	5,031,139	18
3,993,462	4,057,318	7,676,557	3,557,918	5,281,048	3,804,871	7,062,689	6,047,502	
5,679,933	3,802,758	3,030,389	2,500,994	33,424,002	25,558,436	28,843,776	38,654,984	19
11,487,568	7,616,811	7,203,247	5,203,138	34,593,391	31,056,358	39,418,797	44,897,663	
5,237,900	4,916,544	5,364,333	3,798,144	3,308,746	3,731,146	6,939,534	11,782,875	20
20,719,092	16,610,069	20,265,607	12,576,850	94,298,013	109,367,341	148,599,138	120,465,817	
4,238,751	5,531,431	6,790,943	4,933,563	2,666,748	2,837,657	4,926,107	4,590,662	21
433,763	584,131	682,259	460,574	3,578,833	4,834,055	4,350,497	4,416,215	22
13,687,986	19,651,329	16,304,644	10,016,731	1,323,960	1,740,828	3,736,617	1,882,679	23
17,666,991	29,889,284	43,147,632	12,447,219	1,132,034	2,183,323	6,848,112	1,806,300	
10,517,408	9,585,410	8,305,733	9,257,474	272,394	164,712	182,739	275,031	24
36,913,471	28,320,135	32,699,043	29,417,301	734,820	462,672	547,103	694,566	
15,221,311	14,060,639	20,400,441	14,226,025	1,321,656	1,088,655	1,472,902	1,540,260	25
69,801,773	72,270,058	96,247,116	56,090,545	3,188,510	3,734,650	8,868,117	4,041,126	
12,986,463	5,338,572	5,993,749	5,033,431	14,261,831	11,733,536	20,402,147	29,851,157	26
11,047,846	12,578,894	9,114,459	7,336,671	16,382,561	19,268,675	33,819,535	34,004,486	27
119,227,688	**112,913,155**	**139,094,133**	**86,431,634**	**134,376,496**	**151,775,914**	**220,965,541**	**197,369,463**	
..	..	..	..	79,366	82,490	125,688	147,036	28
634	2,769	11,684	260	9,213,224	11,008,024	16,506,994	16,401,435	
1,899	2,255	12,925	41,427	5,184,718	5,990,637	9,689,455	10,105,361	29
350,797	408,259	422,694	445,781	13,429,493	14,253,000	19,664,596	16,672,267	30
943,085	1,158,815	1,580,458	1,411,918	19,035,779	22,013,853	32,758,186	28,060,689	31
1,804,853	2,109,667	2,317,197	2,438,747	33,118,948	39,064,032	47,010,383	52,276,802	32
3,101,268	**3,681,765**	**4,344,958**	**4,338,133**	**79,982,162**	**92,329,546**	**125,629,614**	**123,516,554**	

13.—Principal Imports into Canada for Consumption from All Countries,

No.	Item		All Countries			
			1949	1950	1951	1952
	V. Iron and Its Products					
1	Iron ore	ton	2,517,235	3,070,557	3,831,418	4,267,658
		$	12,057,415	16,801,727	22,671,265	26,519,451
2	Ferro-alloys	$	1,063,087	1,352,604	4,259,507	4,318,859
3	Pigs, ingots, blooms and billets	$	5,419,791	3,375,898	11,387,617	12,265,573
4	Scrap iron or steel	$	7,916,619	5,398,014	3,854,606	6,840,473
5	Castings and forgings	$	12,587,835	9,580,131	13,739,383	12,812,225
6	Rolling-mill products	$	98,092,891	93,639,001	173,127,013	143,132,810
7	Tubes, pipes and fittings	$	28,144,786	35,393,818	43,182,776	57,260,868
8	Wire	$	8,506,175	7,127,473	12,303,865	12,217,796
9	Chains	$	3,501,410	3,064,506	4,470,801	4,899,907
10	Engines and boilers	$	58,697,740	54,639,927	88,421,897	136,068,401
11	Farm implements and machinery	$	177,210,372	161,642,021	195,081,777	197,266,261
12	Hardware and cutlery	$	11,650,136	11,782,673	16,899,982	14,345,061
13	Machinery (except agricultural)	$	216,315,663	226,248,681	328,741,288	360,969,466
14	Springs	$	104,382	110,698	119,148	242,430
15	Stamped and coated products	$	5,748,392	8,287,010	10,128,840	9,677,168
16	Tools and hand implements	$	11,361,189	13,483,504	19,117,292	22,565,650
	Vehicles and Parts—					
17	Automobiles, freight	No.	3,270	6,770	5,642	4,087
		$	5,179,164	10,587,697	13,991,589	11,742,706
18	Automobiles, passenger	No.	35,427	81,758	42,692	34,906
		$	38,970,483	75,329,592	56,632,484	49,483,641
19	Automobile parts	$	117,748,417	158,404,838	195,177,254	190,337,126
20	Other vehicles	$	13,724,425	16,779,182	17,309,597	22,362,198
	Totals, Vehicles and Parts	$	175,622,489	261,101,309	283,110,924	273,925,671
21	Other iron and steel products	$	57,551,080	67,200,073	101,633,382	111,298,828
	Totals, Iron and Its Products	$	**891,551,452**	**980,229,068**	**1,332,251,363**	**1,406,626,898**
	VI. Non-ferrous Metals					
	Aluminum—					
22	Bauxite	cwt.	35,852,808	37,232,540	48,035,179	49,097,381
		$	10,063,336	9,890,125	15,373,013	12,915,009
23	Aluminum and manufactures of, *n.o.p.*	$	8,159,206	8,825,665	12,698,393	9,725,059
	Totals, Aluminum	$	18,222,542	18,715,790	28,071,406	22,640,068
24	Brass and manufactures of	$	12,708,260	14,491,830	16,422,410	13,429,998
25	Copper and manufactures of	$	2,012,480	2,371,098	4,052,877	10,925,982
26	Lead and manufactures of	$	944,248	594,835	786,269	532,388
27	Nickel and manufactures of	$	6,637,548	6,880,228	6,098,654	5,481,997
28	Precious metals and manufactures of	$	17,661,332	31,398,398	30,208,153	27,645,543
29	Tin and its products	$	7,910,326	10,399,050	19,626,067	10,672,578
30	Zinc and manufactures of	$	3,079,384	3,356,966	4,261,378	2,840,328
31	Alloys, *n.o.p.*	$	933,931	1,346,988	2,092,860	1,785,599
32	Clocks and watches	$	9,071,712	12,011,801	10,213,573	9,631,178
33	Electrical apparatus, *n.o.p.*	$	69,802,480	82,564,937	120,101,053	139,567,267
34	Gas apparatus	$	583,034	491,349	775,929	552,747
35	Printing materials	$	2,015,171	2,380,033	2,184,479	1,899,059
36	Other non-ferrous metals	$	23,109,275	28,523,263	45,953,375	49,270,512
	Totals, Non-Ferrous Metals	$	**174,691,723**	**215,526,566**	**290,848,483**	**296,875,244**
	VII. Non-metallic Minerals					
37	Asbestos and manufactures of	$	2,596,360	2,631,352	3,428,453	3,398,361
38	Clay and manufactures of	$	32,965,203	33,699,110	43,403,839	37,483,324
	Coal and Its Products—					
39	Coal, anthracite	ton	3,945,135	4,286,383	3,853,431	3,894,863
		$	45,656,328	54,285,320	51,244,639	49,433,409
40	Coal, bituminous and coal, *n.o.p.*	ton	18,250,075	22,668,440	22,947,974	21,037,990
		$	95,492,735	120,478,811	116,844,809	101,236,846
41	Coke	ton	716,361	642,254	956,755	825,259
		$	12,305,245	11,029,927	16,911,483	13,464,933
42	Other coal products	$	3,428,972	4,552,299	5,367,309	4,068,257
	Totals, Coal and Its Products	$	156,883,280	190,346,357	190,368,240	168,203,445

the United Kingdom and the United States, 1949-52—continued

United Kingdom				United States				No.
1949	1950	1951	1952	1949	1950	1951	1952	
11	11	—	11	2,350,149	2,975,659	3,690,269	4,106,737	1
638	643	—	586	10,769,569	15,971,317	21,329,066	24,196,991	
190,210	53,651	16,097	233,007	848,022	706,657	2,935,699	2,929,219	2
19,004	224,533	2,343	273	5,396,533	2,714,998	10,493,226	12,253,425	3
107	88	23,925	561	4,368,632	2,257,089	3,221,800	6,463,791	4
2,873,350	3,065,590	5,214,799	4,583,922	9,705,372	6,491,038	8,486,671	7,779,767	5
5,247,106	13,956,804	19,926,906	13,679,216	88,996,593	73,930,035	120,308,700	105,660,277	6
2,411,222	5,737,243	9,712,871	10,434,660	25,529,370	29,388,650	31,470,258	44,666,910	7
461,067	2,436,907	2,933,122	2,605,180	8,039,414	4,664,157	8,900,762	9,244,241	8
364,339	384,881	613,034	720,188	3,116,285	2,665,384	3,819,233	4,131,453	9
9,859,906	6,711,083	8,692,858	10,965,873	48,253,775	47,833,732	79,566,355	124,839,820	10
3,604,154	8,694,520	6,877,118	6,400,701	173,088,398	152,576,162	187,581,155	190,122,002	11
1,792,686	2,261,610	2,317,343	1,879,922	9,094,093	8,404,167	12,271,447	10,666,683	12
12,720,403	17,277,251	21,373,473	33,533,249	201,573,012	204,984,479	296,978,195	314,085,222	13
1,762	3,144	19,248	5,446	102,620	107,554	99,900	235,941	14
176,943	389,189	517,107	342,838	5,555,160	7,801,886	9,278,468	9,119,524	15
1,062,959	1,641,727	2,664,520	2,983,767	9,670,571	10,897,049	14,900,400	17,313,990	16
2,232	5,173	2,267	1,057	1,034	1,587	3,375	2,996	17
2,085,348	4,824,792	2,405,202	1,114,046	3,090,487	5,756,886	11,586,387	10,591,121	
31,231	77,666	28,518	20,748	3,685	3,183	14,105	14,053	18
31,499,868	68,366,135	26,506,824	19,637,203	7,044,887	6,337,796	30,077,048	29,734,701	
1,485,165	4,232,470	5,760,199	3,693,936	116,223,622	154,107,515	189,341,446	186,556,394	19
2,749,982	3,186,381	2,899,296	1,970,276	10,718,239	13,276,687	13,985,787	20,142,949	20
37,820,363	80,609,778	37,571,521	26,415,461	137,077,235	179,478,884	244,990,668	247,025,165	
2,903,528	5,401,273	8,077,071	7,753,815	53,025,450	60,134,549	90,212,316	100,066,764	21
81,509,747	**148,849,915**	**126,553,356**	**122,538,665**	**794,210,104**	**811,007,787**	**1,146,844,319**	**1,230,801,185**	
—	—	—	—	867,564	1,819,401	2,792,244	1,758,157	22
—	—	—	—	775,567	2,239,082	3,149,235	1,485,043	
1,346,408	1,053,418	1,948,806	1,158,941	6,562,869	7,351,214	10,109,553	8,156,809	23
1,346,408	1,053,418	1,948,806	1,158,941	7,338,436	9,590,296	13,258,788	9,641,852	
592,285	818,572	843,496	731,671	12,034,333	13,522,765	15,352,644	12,367,644	24
104,427	219,828	436,778	283,556	1,901,604	2,092,066	2,938,860	10,630,311	25
79,011	47,605	211,476	275,478	631,104	273,630	245,229	206,227	26
371,833	435,890	496,528	399,425	6,120,885	6,093,227	5,236,512	4,526,170	27
11,392,053	22,324,474	18,284,492	18,191,385	5,848,040	8,324,307	10,512,169	9,038,780	28
158,615	1,923,106	2,515,464	646,139	568,638	1,091,922	5,113,020	906,091	29
12,030	41,244	48,741	15,022	3,032,352	3,257,369	4,123,946	2,744,457	30
220,399	389,117	545,040	429,283	712,997	928,566	1,541,081	1,308,404	31
184,897	183,399	331,395	374,806	3,354,197	4,691,385	3,987,431	3,094,797	32
5,817,400	9,284,924	14,669,101	18,050,315	63,202,651	71,644,630	103,560,737	118,822,867	33
31,340	9,458	8,525	13,522	546,581	453,864	707,473	534,719	34
24,051	75,009	89,044	40,788	1,970,241	2,297,961	2,083,692	1,851,636	35
1,035,716	1,514,753	2,192,032	2,592,521	14,555,937	11,423,590	24,165,026	22,365,276	36
21,370,465	**38,320,797**	**42,620,918**	**43,202,852**	**121,817,996**	**135,685,578**	**192,826,608**	**198,039,231**	
466,796	386,941	635,049	534,648	2,074,753	2,226,629	2,706,742	2,795,749	37
13,571,012	13,576,865	16,933,548	13,490,607	18,461,644	18,887,335	24,418,877	22,482,782	38
326,645	395,867	291,656	344,743	3,618,490	3,890,254	3,561,775	3,550,120	39
3,950,220	4,702,739	3,397,935	4,382,614	41,706,108	49,580,505	47,846,704	45,050,795	
4,812	28,007	—	11,289	18,245,246	22,640,395	22,947,920	21,026,701	40
54,127	272,370	—	105,351	95,438,508	120,205,703	116,843,834	101,131,495	
201	201	1	24	716,160	642,053	956,737	825,235	41
3,794	3,103	44	588	12,301,451	11,026,824	16,910,494	13,464,345	
341,925	758,685	662,421	367,697	3,086,481	3,688,377	4,362,340	3,696,434	42
4,350,066	5,736,947	4,060,400	4,856,250	152,532,548	184,501,409	185,963,372	163,343,069	

13.—Principal Imports into Canada for Consumption from All Countries,

No.	Item		All Countries			
			1949	1950	1951	1952
	VII. Non-metallic Minerals—concluded					
1	Glass and manufactures of	$	25,402,867	28,150,003	31,768,775	27,049,456
2	Graphite and its products	$	505,264	566,024	788,533	745,737
3	Mica and manufactures of	$	567,469	757,825	976,467	728,889
	Petroleum, Asphalt and Products—					
4	Petroleum, crude	M gal.	2,648,986	2,804,519	2,948,512	2,896,508
		$	193,146,495	204,135,857	233,363,537	210,265,558
5	Fuel oil for ships' stores	gal.	13,327,449	10,695,294	14,258,112	15,598,798
		$	669,887	442,869	679,982	692,812
6	Coal oil and kerosene	gal.	36,618,392	15,722,711	18,971,434	33,814,292
		$	3,687,650	1,855,875	2,321,563	4,013,338
7	Gasoline	gal.	308,005,168	246,462,585	202,565,570	250,206,488
		$	45,256,493	39,759,478	33,395,830	39,123,900
8	Lubricating oils	gal.	16,464,087	17,710,328	28,898,979	31,301,602
		$	4,669,755	5,315,068	9,946,077	9,068,545
9	Other petroleum and asphalt products	$	27,233,324	56,453,374	74,186,674	78,798,296
	Totals, Petroleum, Asphalt and Products	$	274,663,604	307,962,521	353,893,663	341,962,449
10	Stone and its products	$	23,848,651	24,620,481	33,965,946	36,147,439
11	Other non-metallic minerals	$	17,895,815	23,007,754	25,941,420	26,165,595
	Totals, Non-metallic Minerals	$	**535,328,513**	**611,741,427**	**684,535,336**	**641,884,695**
	VIII. Chemicals and Allied Products					
12	Acids	$	4,134,227	5,613,559	7,541,211	5,938,509
13	Alcohols, industrial	$	602,390	880,171	1,227,877	1,109,316
14	Cellulose products	$	5,653,761	6,233,519	7,226,520	2,555,137
15	Drugs, medicinal and pharmaceutical products	$	14,828,906	18,629,297	22,427,117	21,780,213
16	Dyeing and tanning materials	$	10,293,926	12,907,549	13,759,164	10,023,151
17	Explosives	$	1,909,771	1,385,735	1,652,679	2,247,146
18	Fertilizers	cwt.	7,108,471	7,446,737	8,223,278	9,273,758
		$	7,768,394	8,792,439	10,234,838	10,465,092
19	Paints, pigments and varnishes	$	13,866,352	18,211,825	20,861,237	17,213,669
20	Perfumery, cosmetics and toilet preparations	$	288,975	357,674	646,619	904,186
21	Soap, common laundry	lb.	1,492,293	2,376,681	2,232,190	1,870,190
		$	176,311	286,664	316,397	224,947
22	Soap, other	$	453,673	569,185	571,216	575,955
	Inorganic Chemicals, *n.o.p.*—					
23	Alum and compounds of aluminum and iron	cwt.	104,994	107,653	213,747	233,455
		$	230,827	291,149	535,929	535,363
24	Ammonia and its compounds	lb.	6,774,178	20,944,861	15,768,181	26,226,535
		$	260,123	817,977	647,273	1,042,442
25	Compounds of antimony, arsenic, copper, tin and zinc	lb.	3,129,026	3,867,857	2,914,051	9,508,205
		$	265,059	284,446	293,347	1,084,824
26	Potash and potassium compounds, *n.o.p.*	lb.	6,885,797	8,311,341	9,504,604	7,864,429
		$	693,402	815,015	1,028,463	783,239
27	Soda and sodium compounds, *n.o.p.*	lb.	160,342,729	234,391,731	365,832,915	316,686,013
		$	8,396,192	9,154,542	11,497,777	9,443,862
28	Other inorganic chemicals	$	8,687,926	11,673,211	12,790,185	12,826,243
	Totals, Inorganic Chemicals, *n.o.p.*	$	18,533,529	23,036,340	26,792,974	25,715,973
29	Other chemicals and allied products	$	52,149,863	61,317,098	78,555,098	88,959,783
	Totals, Chemicals and Allied Products	$	**130,660,078**	**158,221,055**	**191,812,947**	**187,713,077**
	IX. Miscellaneous Products					
30	Amusement and sporting goods, *n.o.p.*	$	9,418,117	11,507,730	15,881,079	17,642,564
31	Brushes	$	928,970	993,686	1,280,870	1,135,464
32	Containers, *n.o.p.*	$	4,743,862	5,821,110	7,628,265	7,672,760
33	Household and personal equipment	$	16,106,344	26,852,160	44,908,354	60,340,934
34	Mineral and aerated waters	$	61,757	86,611	103,049	138,710
35	Musical instruments	$	3,800,411	3,861,103	4,738,636	4,986,268
36	Scientific and educational equipment	$	21,721,476	23,161,004	27,010,665	26,434,209
37	Ships and vessels	$	1,108,941	1,658,036	2,729,617	3,620,012
38	Vehicles (except iron)	$	15,206,525	13,140,045	44,454,932	101,552,426
39	Works of art	$	2,516,138	2,471,515	3,262,143	2,527,969
40	Miscellaneous imports under special conditions	$	44,589,192	48,528,968	81,969,796	121,655,529
41	Other miscellaneous commodities	$	37,926,033	34,135,626	62,670,859	80,935,009
	Totals, Miscellaneous Products	$	**158,127,766**	**172,217,594**	**296,638,265**	**428,641,854**
	Grand Totals, Imports for Consumption	$	**2,761,207,241**	**3,174,253,138**	**4,084,856,478**	**4,030,467,653**

the United Kingdom and the United States, 1949-52—concluded

United Kingdom				United States				No.
1949	1950	1951	1952	1949	1950	1951	1952	
5,644,314	6,065,878	6,321,195	3,776,478	16,902,618	18,375,666	20,449,504	19,640,089	1
68,684	90,905	102,867	135,678	366,667	422,864	608,711	535,721	2
11,618	37,741	32,487	20,342	351,872	474,724	544,948	438,697	3
—	—	—	—	1,053,802	1,094,514	760,522	711,995	4
—	—	—	—	*82,714,313*	*90,278,634*	*59,811,632*	*54,635,919*	
—	—	—	—	13,327,449	10,695,294	14,258,112	15,598,798	5
—	—	—	—	669,887	442,869	679,982	692,812	
—	—	226	—	33,157,266	11,388,660	15,631,880	27,970,000	6
—	—	556	—	3,382,452	1,389,949	1,952,184	3,242,686	
—	—	—	—	303,050,782	204,115,317	182,233,536	210,402,995	7
—	—	—	—	44,135,208	32,827,557	30,271,192	32,777,759	
7,990	29,794	26,570	32,499	16,417,278	17,655,339	28,822,084	31,211,612	8
8,101	21,722	21,181	48,606	4,628,880	5,268,208	9,877,788	8,966,675	
2,743	64,121	10,662	30,414	24,522,047	39,436,646	55,433,578	64,313,862	9
10,844	85,843	32,399	79,020	160,052,787	169,643,863	158,026,356	164,629,713	
1,553,660	2,734,153	3,472,013	3,200,523	20,939,817	19,946,539	24,398,739	26,009,135	10
962,079	1,486,543	1,274,082	1,224,661	11,950,508	16,379,875	18,738,703	19,577,962	11
26,639,073	**30,201,816**	**32,864,040**	**27,318,207**	**383,633,214**	**430,858,904**	**435,855,952**	**419,452,917**	
637,589	959,517	1,361,730	635,840	3,374,243	4,332,341	5,473,182	4,960,413	12
—	1,147	1,672	—	591,451	872,802	1,216,530	1,100,333	13
642,562	818,013	912,857	162,921	4,975,425	5,363,21	6,094,769	2,276,155	14
1,143,204	1,664,666	1,681,080	1,781,054	12,908,164	16,178,810	19,619,856	18,605,060	15
1,248,097	1,721,531	1,853,528	1,308,467	7,106,474	8,370,078	8,380,411	6,150,837	16
633,259	376,679	88,266	103,950	1,049,540	920,590	1,464,984	2,036,834	17
340	4,558	8,783	7,504	6,041,051	6,251,275	7,537,072	8,041,436	18
3,402	4,321	18,561	25,263	5,998,785	6,846,050	9,002,585	8,676,074	
1,213,678	2,526,380	2,922,200	2,251,514	12,607,197	15,582,991	17,703,783	14,868,688	19
60,280	107,930	67,106	54,764	98,988	95,722	406,153	650,760	20
142,353	86,362	21,320	864	1,346,972	2,215,513	2,209,770	1,869,326	21
24,556	14,334	2,700	130	151,135	260,041	313,433	224,817	
100,353	124,422	110,648	77,241	343,675	429,498	433,011	473,908	22
47,864	59,726	154,558	90,857	57,130	47,705	58,529	140,130	23
66,711	100,557	260,699	171,250	164,116	189,953	272,730	357,970	
883,445	929,073	2,021,396	872,627	5,890,733	19,999,112	13,701,523	25,329,015	24
49,433	57,754	109,556	49,858	210,690	757,505	531,885	990,265	
1,052,447	2,614,975	628,220	810,994	1,848,002	912,242	1,544,895	4,171,065	25
62,023	145,782	56,013	53,552	191,185	111,439	174,519	401,077	
322,159	967,649	1,068,416	662,513	6,191,600	6,001,219	7,301,965	128,876	26
84,382	148,868	175,420	128,876	558,093	528,046	698,416	524,944	
15,759,415	78,559,769	134,301,269	32,929,312	142,489,084	151,302,152	226,754,416	279,888,987	27
962,707	2,092,723	2,992,526	1,538,742	7,331,384	6,557,852	7,971,541	7,429,119	
221,168	390,665	351,132	268,107	8,411,654	11,100,983	12,238,955	12,481,946	28
1,446,424	2,936,349	3,945,346	2,210,385	16,867,152	19,245,778	21,888,046	22,185,321	
1,294,416	2,791,754	3,222,445	3,613,485	48,960,796	56,105,095	73,064,114	84,039,628	29
8,447,820	**14,047,043**	**16,188,139**	**12,225,014**	**115,033,025**	**134,603,008**	**165,060,857**	**166,248,828**	
1,992,537	2,465,298	2,700,209	2,857,753	5,475,519	7,084,026	11,146,526	12,716,955	30
322,817	362,517	613,471	340,385	595,115	598,409	587,742	717,152	31
1,610,767	2,018,007	2,574,429	2,580,607	2,091,880	2,551,669	3,086,074	3,256,762	32
2,736,070	3,672,222	3,436,383	2,678,858	12,181,521	21,446,243	39,435,901	55,586,357	33
4,522	5,931	3,233	6,196	4,486	12,241	18,837	19,123	34
337,895	458,590	516,043	643,220	2,575,801	2,532,414	3,263,130	3,194,431	35
1,087,728	1,285,188	1,336,808	2,081,476	19,601,404	20,284,738	23,370,006	21,731,337	36
42,209	157,581	268,844	283,055	1,059,467	1,232,710	2,101,916	3,265,887	37
2,522,593	1,885,123	3,078,854	4,489,922	12,666,843	11,245,627	41,067,444	96,832,517	38
1,008,957	866,620	1,030,126	992,178	944,245	737,152	838,508	731,507	39
3,082,090	2,209,224	3,010,066	6,011,930	40,093,556	44,888,485	77,456,279	113,993,599	40
5,397,148	3,130,216	6,656,832	6,837,078	25,983,448	24,290,052	41,375,715	59,145,207	41
20,145,333	**18,516,517**	**25,225,298**	**29,802,658**	**123,273,285**	**136,903,766**	**243,748,078**	**371,190,834**	
307,449,800	**404,213,449**	**420,984,515**	**359,757,123**	**1,951,860,065**	**2,130,475,929**	**2,812,927,298**	**2,976,962,332**	

14.—Principal Exports of Canadian Produce from Canada to All Countries,

No.	Item		All Countries			
			1949	1950	1951	1952
	I. Agricultural and Vegetable Products					
	A. Mainly Food					
	Fruits—					
1	Fruits, fresh	$	11,023,585	14,456,267	12,690,751	12,738,033
2	Fruits, dried	lb.	589,929	677,406	35,864	125,152
		$	80,204	116,686	7,905	3,251
3	Fruits, canned or preserved	lb.	13,972,905	3,890,845	3,413,137	3,146,997
		$	1,606,169	586,489	574,189	554,101
4	Fruit juices and fruit syrups	gal.	555,047	213,328	219,201	212,153
		$	475,827	176,275	220,851	252,926
	Totals, Fruits	$	13,185,785	15,335,717	13,493,696	13,548,311
5	Nuts	$	8,973	7,027	20,668	9,547
	Vegetables—					
6	Vegetables, fresh	$	5,397,523	6,131,526	6,658,029	6,036,661
7	Vegetables, dried	lb.	547	29	494	614
		$	309	38	449	517
8	Vegetables, canned	lb.	10,829,950	22,652,053	33,762,337	10,987,663
		$	1,106,819	2,116,079	3,706,456	1,364,468
9	Pickles, sauces and catsups	$	96,991	140,530	185,185	89,118
	Totals, Vegetables	$	6,601,633	8,388,173	10,550,119	7,490,764
	Grains and Farinaceous Products—					
10	Wheat	bu.	210,384,483	162,993,750	237,060,505	336,023,883
		$	435,158,365	325,613,570	441,042,753	621,292,402
11	Flour of wheat	bbl.	9,698,024	10,095,002	12,078,671	13,246,269
		$	97,693,325	93,838,590	113,854,397	116,054,531
12	Prepared foods and bakery products	$	730,653	641,550	1,230,371	907,759
13	Other farinaceous products	$	76,341,240	69,267,348	154,064,803	260,639,226
	Totals, Grains and Farinaceous Products	$	609,923,583	489,361,058	710,192,324	998,893,918
14	Oils, vegetable, for food	cwt.	13,475	7,572	768	816
		$	251,383	92,319	22,988	20,121
	Sugar and Its Products—					
15	Confectionery, including candy	$	450,823	123,688	234,762	196,410
16	Maple sugar	lb.	7,110,330	6,648,661	5,825,723	8,635,730
		$	3,090,383	2,914,133	2,435,438	3,320,180
17	Other sugar and products	$	1,628,629	3,184,198	1,833,729	2,369,131
	Totals, Sugar and Its Products	$	5,169,835	6,222,019	4,503,929	5,885,721
18	Cocoa and chocolate	$	87,066	145,989	294,604	24,436
19	Coffee and chicory	$	62,060	14,008	93,228	33,351
20	Spices	$	21,314	18,487	12,191	9,429
21	Tea	$	376,934	219,034	132,377	185,659
22	Other vegetable products	$	723,548	703,110	972,084	1,005,974
	Totals, A. Mainly Food	$	636,412,114	520,506,941	740,288,208	1,027,107,431
	B. Other Than Food					
	Beverages, Alcoholic—					
23	Ale, beer and porter	gal.	1,405,199	1,554,726	2,023,974	1,805,010
		$	1,607,952	1,669,153	2,222,475	2,134,700
24	Whisky and other distilled beverages	pf. gal.	4,279,600	4,762,280	6,198,627	6,345,247
		$	32,958,928	41,829,005	54,236,588	54,457,453
25	Wines	gal.	11,158	6,320	2,154	3,051
		$	21,944	8,479	3,681	5,258
	Totals, Beverages, Alcoholic	$	34,588,824	43,506,637	56,462,744	56,597,411
26	Gums and resins	$	50,036	39,644	72,073	71,107
27	Oil cake and oil cake meal	cwt.	453,122	765,247	1,122,000	1,077,694
		$	1,349,397	2,568,123	3,916,418	4,822,439
28	Oils, vegetable, not food	$	12,116,296	3,709,649	3,625,867	4,033,372
29	Plants, shrubs, trees and vines	$	148,759	113,239	120,542	124,624
30	Rubber and manufactures of	$	25,780,382	12,153,417	29,067,215	17,690,727

the United Kingdom and the United States, 1949-52

United Kingdom				United States				No.
1949	1950	1951	1952	1949	1950	1951	1952	
2,238,308	3,680,760	1,900,464	1,581,436	8,209,491	10,532,247	10,351,424	10,628,969	1
—	—	—	—	571,306	630,544	31,280	122,987	2
—	—	—	—	76,164	108,404	6,347	2,750	
5,230,877	16,651	29,847	26,918	6,104,695	3,458,731	2,927,905	2,667,573	3
480,941	5,696	12,123	6,867	750,350	505,671	466,975	464,750	
—	—	—	—	484,720	210,356	167,520	100,856	4
—	—	—	—	379,084	168,553	148,587	99,321	
2,719,249	3,686,456	1,912,587	1,588,303	9,415,089	11,314,875	10,973,333	11,195,790	
—	—	—	—	—	—	577	508	5
—	—	—	—	3,866,440	4,688,193	4,981,505	5,286,176	6
—	—	—	—	—	13	27	302	7
—	—	—	—	—	16	26	273	
4,671,398	4,644,276	8,357,948	5,984,765	1,452,703	13,695,570	20,994,355	497,981	8
427,203	416,691	872,103	638,967	102,989	1,122,056	2,190,798	60,528	
17,487	9,576	19,106	13,712	—	12,033	26,462	3,032	9
444,690	426,267	891,209	652,679	3,969,429	5,822,298	7,198,791	5,350,009	
139,281,181	86,967,949	85,742,135	103,529,484	8,071,960	14,951,226	37,916,746	44,082,487	10
280,732,019	173,650,751	159,179,214	189,575,022	16,997,060	28,485,785	65,036,229	72,533,242	
4,768,739	4,349,704	4,792,478	4,870,147	77,925	91,668	200,188	15,268	11
46,734,103	40,962,695	43,005,246	39,265,294	552,661	669,813	1,586,558	127,235	
2,209	1,588	3,922	2,348	218,707	311,302	813,852	444,407	12
542,966	481,643	8,987,088	2,766,622	60,423,775	55,603,035	88,389,954	119,601,424	13
328,011,297	215,096,677	211,175,470	231,609,286	78,192,203	85,069,935	155,826,593	192,706,308	
—	—	—	—	11,181	652	376	39	14
—	—	—	—	186,999	7,369	10,559	673	
16,481	15,182	30,733	21,451	38,883	33,687	43,292	42,577	15
—	—	—	—	7,110,330	6,576,136	5,824,539	8,633,823	16
—	—	—	—	3,090,383	2,880,651	2,434,882	3,319,385	
230	—	—	—	1,423,679	1,842,161	1,717,675	1,878,719	17
16,711	15,182	30,733	21,451	4,552,945	4,756,499	4,195,849	5,240,681	
—	—	—	—	42,003	76,234	10,086	20,941	18
—	—	—	—	38,572	103	75,969	967	19
—	—	—	—	6,056	3,904	2,676	1,190	20
—	—	—	—	103,247	167,124	127,947	182,488	21
11,481	6,608	5,712	10,531	375,219	259,156	278,121	218,785	22
331,203,428	219,231,190	214,015,711	233,882,250	96,881,762	107,477,497	178,700,501	214,918,340	
—	—	—	—	1,162,288	1,528,618	1,776,864	1,620,120	23
—	—	—	—	1,314,597	1,638,142	1,951,738	1,923,866	
138,782	55,190	102,764	129,456	3,591,882	3,708,215	4,891,567	4,968,425	24
418,489	377,611	639,527	782,359	28,412,037	33,521,556	44,207,395	44,276,091	
—	—	—	—	1,239	2,852	2	20	25
—	—	—	—	3,389	3,564	52	96	
418,489	377,611	639,527	782,359	29,730,023	35,163,262	46,159,185	46,200,053	
26,985	17,078	43,504	21,272	19,457	18,502	15,400	37,586	26
—	—	228,480	—	180,273	498,769	576,547	964,528	27
—	—	861,079	—	573,789	1,669,839	1,860,357	4,303,649	
—	—	—	460,456	320,894	461,317	493,884	394,083	28
33,604	22,423	14,624	13,156	106,199	89,174	104,156	110,219	29
882,655	418,271	1,884,770	414,793	11,919,810	4,376,316	6,646,934	5,521,065	30

14.—Principal Exports of Canadian Produce from Canada to All Countries,

No.	Item		All Countries			
			1949	1950	1951	1952
	I. Agricultural and Vegetable Products—concluded					
	B. Other Than Food—concluded					
1	Seed potatoes	bu.	8,119,881	4,894,177	3,837,545	2,256,189
		$	9,516,915	5,237,405	4,086,204	6,364,126
2	Seeds, *n.o.p.*	$	34,251,982	25,474,285	23,829,089	26,780,975
3	Tobacco, unmanufactured	lb.	15,724,207	22,508,262	29,180,473	38,315,173
		$	8,616,833	10,551,660	16,413,373	22,221,125
4	Tobacco, manufactured	$	268,442	90,959	206,746	389,151
5	Other vegetable products, not food	$	9,906,908	12,945,864	16,121,251	17,293,930
	Totals, B. Other Than Food	$	136,594,774	116,390,882	153,921,522	156,388,987
	Totals, Agricultural and Vegetable Products	$	**773,006,888**	**636,897,823**	**894,209,730**	**1,183,496,418**
	II. Animals and Animal Products					
	Animals, Living—					
6	Cattle, swine, sheep and poultry, pure bred for improvement of stock	$	6,661,879	7,834,215	8,345,138	1,157,852
7	Cattle, *n.o.p.*	No.	398,992	435,239	219,563	12,537
		$	55,051,146	71,651,067	55,027,616	3,139,181
8	Horses	No.	12,989	26,858	11,072	6,996
		$	614,539	1,002,325	557,329	358,167
9	Other animals, living	$	6,551,527	4,084,523	1,348,166	1,163,968
	Totals, Animals, Living	$	68,879,091	84,572,130	65,278,249	5,819,168
10	Bones, horns, etc.	$	473,145	352,989	367,154	122,027
	Fishery Products, *n.o.p.*—					
11	Fish, fresh or frozen	cwt.	2,302,588	2,947,048	2,815,073	3,083,326
		$	45,771,989	62,411,981	66,274,959	67,924,242
12	Fish, salted, dried, pickled and smoked	cwt.	1,615,729	2,083,745	2,100,536	1,844,168
		$	23,712,039	28,628,118	27,607,811	25,543,823
13	Fish, canned or preserved, *n.o.p.*	cwt.	638,296	477,168	478,504	490,173
		$	17,397,489	15,248,687	16,192,679	13,986,347
14	Other fishery products, *n.o.p.*	$	6,867,813	6,429,049	7,388,996	5,870,355
	Totals, Fishery Products, *n.o.p.*	$	93,749,330	112,717,835	117,464,445	113,324,767
15	Furs and manufactures of	$	23,326,656	25,298,256	29,864,201	24,405,531
16	Hair and bristles and manufactures of	$	1,395,555	1,318,813	2,424,048	1,312,381
17	Hides and skins, raw (except fur skins)	No.	2,204,089	2,149,127	1,609,314	1,631,268
		$	14,357,607	14,409,710	13,791,138	5,534,442
18	Leather, unmanufactured	$	4,717,631	6,035,152	7,014,585	4,455,148
19	Leather, manufactured	$	2,511,962	1,912,636	2,151,633	2,177,394
20	Bacon and hams, shoulders and sides	cwt.	670,866	785,267	61,325	35,393
		$	24,175,917	28,306,976	3,649,744	2,602,016
21	Other meats and preparations of	$	43,943,952	46,211,060	68,812,411	46,061,361
	Milk and Its Products—					
22	Butter	cwt.	10,688	16,291	5,437	8,656
		$	613,751	943,042	387,404	568,833
23	Cheese	cwt.	526,948	631,096	306,532	20,949
		$	16,256,818	16,551,508	10,231,725	879,546
24	Milk, processed	cwt.	719,686	557,644	410,406	686,782
		$	11,208,638	9,171,452	9,011,843	13,237,392
25	Other milk products	$	2,022,070	915,808	1,867,632	1,004,519
	Totals, Milk and Its Products	$	30,101,277	27,581,810	21,498,604	15,690,290
26	Oils, fats, greases and waxes	$	6,043,967	5,455,367	6,522,462	5,256,159
27	Other animal products	$	24,745,391	11,602,304	9,194,796	11,280,843
	Totals, Animals and Animal Products	$	**338,421,481**	**365,775,038**	**348,033,470**	**237,941,527**

the United Kingdom and the United States, 1949-52—continued

United Kingdom				United States				No.
1949	1950	1951	1952	1949	1950	1951	1952	
—	—	—	—	7,095,530	3,881,329	3,061,810	1,284,301	1
—	—	—	—	7,833,277	3,966,402	3,003,288	3,486,728	
978,676	254,470	320,124	2,165,008	14,969,169	11,961,110	11,734,055	10,233,359	2
13,042,764	15,766,400	23,223,062	31,927,373	66,424	122	135	10	3
7,346,911	8,320,337	13,491,339	18,601,170	11,064	196	113	12	
751	17	308	55,538	9,451	49,691	43,896	34,437	4
88,559	153,827	313,788	62,383	8,262,564	11,703,607	14,680,791	16,067,331	5
9,776,630	9,564,034	17,569,063	22,576,135	73,755,697	69,459,416	84,742,059	86,388,522	
340,980,058	**228,795,224**	**231,584,774**	**256,458,385**	**170,637,459**	**176,936,913**	**263,442,560**	**301,306,862**	
—	145	250	—	6,198,637	7,322,754	7,975,275	920,439	6
—	—	—	—	396,764	433,992	218,607	11,763	7
—	—	—	—	54,738,442	71,516,369	54,873,719	3,060,420	
9	4	—	—	12,420	26,788	10,964	6,927	8
7,480	2,800	—	—	561,660	990,873	544,408	349,570	
18,907	3,640	2,726	11,974	6,479,710	4,036,778	1,300,593	1,069,144	9
26,387	6,585	2,976	11,974	67,978,449	83,866,774	64,693,995	5,399,573	
—	—	15,400	—	463,316	350,880	351,502	121,845	10
—	—	—	—	2,287,563	2,941,058	2,804,321	3,064,849	11
—	—	—	—	45,535,116	62,217,984	65,969,421	67,446,622	
—	—	—	—	434,456	481,782	476,334	467,300	12
—	—	—	—	6,709,394	6,884,616	6,700,901	6,669,971	
232,109	127,794	169,643	14,782	57,404	39,650	32,573	143,363	13
7,321,057	4,891,776	7,043,534	761,539	2,841,466	2,944,225	2,126,404	5,513,058	
85,907	86,325	128,290	1,850	6,486,973	6,152,805	7,066,840	5,655,509	14
7,406,964	4,978,101	7,171,824	763,389	61,572,949	78,199,630	81,863,566	85,285,160	
4,875,557	4,009,635	7,325,579	4,052,900	18,078,008	20,807,744	21,834,659	19,742,138	15
422,086	338,409	1,018,317	492,342	758,848	794,887	1,291,866	700,697	16
125,481	156,150	188,062	84,388	1,281,007	1,659,415	1,354,170	1,460,490	17
1,061,280	1,109,158	1,291,814	214,937	5,117,778	9,231,712	11,820,419	4,702,112	
738,281	858,331	1,254,006	1,191,049	1,650,977	3,134,683	3,819,979	2,213,447	18
378,153	91,460	117,711	54,770	1,345,740	1,631,947	1,606,386	1,788,558	19
655,771	723,403	18,915	—	49	52,817	34,997	25,595	20
23,380,987	24,400,029	629,559	—	2,238	3,406,398	2,567,150	1,978,978	
17,182	904	447,349	28,244,712	33,564,673	40,686,259	63,900,286	13,138,843	21
10	—	—	—	426	417	1,465	2,234	22
635	—	—	—	32,198	27,494	112,706	174,226	
501,224	592,398	271,517	1,483	18,685	30,231	27,257	15,462	23
15,230,308	15,072,739	8,718,302	47,641	765,206	1,187,400	1,188,436	673,871	
29	—	54,639	—	62,537	31,070	3,366	130,835	24
446	—	712,552	—	763,594	330,625	44,451	1,640,021	
—	—	—	—	467,719	344,058	493,864	156,309	25
15,231,389	15,072,739	9,430,854	47,641	2,028,717	1,889,577	1,839,457	2,644,427	
675,547	59,968	939,462	322,302	3,314,233	2,328,663	2,759,893	2,344,298	26
18,207,791	2,420,866	215,112	552,279	4,690,552	7,003,717	7,178,538	7,905,889	27
72,421,604	**53,346,185**	**29,859,963**	**35,948,295**	**200,566,478**	**253,332,871**	**265,527,696**	**147,965,965**	

14.—Principal Exports of Canadian Produce from Canada to All Countries,

No.	Item		All Countries			
			1949	1950	1951	1952
	III. Fibres and Textiles					
1	Cotton and manufactures of	$	5,168,937	7,151,961	10,960,752	7,041,833
2	Flax, hemp, jute and manufactures of	$	1,795,673	2,004,574	1,234,434	1,386,542
3	Silk and manufactures of	$	3,631	6,763	763	1,385
4	Wool, raw (includes noils and tops)	lb.	3,425,603	3,756,947	2,326,790	3,170,992
		$	1,654,635	2,480,077	2,201,134	1,937,985
5	Other wool and manufactures of	$	3,740,157	3,817,812	5,295,801	2,525,060
6	Synthetic fibre and manufactures of	$	2,223,357	5,118,279	4,267,695	3,227,236
7	Other textile products	$	10,630,932	8,993,984	12,897,765	11,576,770
	Totals, Fibres and Textiles	$	**25,217,322**	**29,573,450**	**36,858,344**	**27,696,811**
	IV. Wood, Wood Products and Paper					
8	Logs	M ft.	66,864	57,029	43,063	52,228
		$	3,921,015	4,308,117	4,707,423	4,796,034
9	Railroad ties	No.	1,548,149	451,139	168,478	899,632
		$	3,812,020	1,322,244	480,609	3,345,857
10	Planks and boards	M ft.	2,180,697	3,575,322	3,435,510	3,328,563
		$	160,420,017	290,846,700	312,198,092	295,948,736
11	Timber, square	M ft.	8,772	3,330	3,868	11,095
		$	623,052	274,390	424,919	1,256,318
12	Shingles	squares	2,151,906	2,923,892	2,588,360	2,112,826
		$	16,802,733	32,400,879	27,482,820	20,002,127
13	Pulpwood	$	31,316,592	34,767,878	68,102,942	64,819,755
14	Spoolwood	M ft.	14,733	17,640	12,017	16,999
		$	1,805,071	2,132,878	1,604,071	2,748,213
15	Wood-pulp	cwt.	30,974,122	36,922,864	44,866,161	38,811,599
		$	170,675,310	208,555,549	365,132,884	291,863,498
16	Pulp board, wall board and paper board	cwt.	1,832,859	1,640,549	2,281,317	1,837,327
		$	8,978,691	7,955,430	14,062,016	11,252,536
17	Book paper	cwt.	269,292	345,223	548,769	575,442
		$	2,173,880	2,755,746	5,283,533	5,343,040
18	Newsprint	cwt.	94,093,031	98,761,380	102,241,224	106,548,605
		$	433,881,585	485,746,314	536,372,498	591,790,209
19	Wrapping paper	cwt.	269,499	194,605	333,011	278,707
		$	2,326,193	1,515,159	3,728,972	3,177,136
20	Newsprint, mutilated, or beater stock, and waste paper	cwt.	666,949	1,282,991	1,423,477	972,320
		$	1,525,429	3,529,075	6,278,987	2,887,880
21	Other wood products and paper	$	37,056,092	36,834,702	53,216,365	67,555,704
	Totals, Wood, Wood Products and Paper	$	**875,317,680**	**1,112,945,061**	**1,399,076,131**	**1,366,787,043**
	V. Iron and Its Products					
22	Iron ore	ton	2,550,299	2,227,475	3,225,767	3,846,998
		$	14,117,171	13,309,782	18,596,137	22,333,472
23	Ferro-alloys	ton	127,308	122,479	190,454	159,095
		$	19,182,460	17,075,226	31,347,284	30,379,519
24	Pigs, ingots, blooms and billets	ton	80,661	364,988	262,673	432,314
		$	4,956,710	21,330,625	14,433,432	25,031,837
25	Scrap iron or steel	ton	39,975	62,618	39,804	87,788
		$	1,009,203	2,034,221	1,615,678	4,187,183
26	Castings and forgings	cwt.	173,216	310,911	504,868	483,667
		$	2,167,486	3,413,917	6,291,097	6,173,570
27	Rolling-mill products	ton	142,441	59,363	45,739	1,282,158
		$	15,547,856	7,120,615	11,805,614	18,844,126
28	Tubes, pipes and fittings	$	5,384,926	2,016,177	1,978,360	2,250,818
29	Wire	$	649,812	845,611	764,006	752,936
30	Chains	$	159,480	122,821	298,991	217,017
31	Engines, boilers and parts	$	31,393,884	14,986,267	9,844,185	10,222,284
32	Farm implements and machinery	$	92,527,276	87,811,385	106,438,161	105,408,256
33	Hardware and cutlery	$	4,511,557	4,500,031	5,160,128	3,600,951
34	Machinery (except agricultural)	$	31,840,388	25,644,253	40,270,782	47,377,520
35	Stamped and coated products	$	146,653	128,586	1,007,879	203,040
36	Tools	$	1,589,430	972,298	1,255,073	1,396,834
	Vehicles and Parts—					
37	Automobiles, freight	No.	12,147	10,249	23,308	38,268
		$	12,167,742	8,827,198	24,872,620	48,831,551
38	Automobiles, passenger	No.	17,469	24,085	37,181	41,666
		$	15,887,688	19,364,912	38,490,266	43,634,467
39	Automobile parts	$	10,752,295	12,036,038	15,763,431	18,548,647
40	Vehicles, *n.o.p.*	$	23,263,970	5,213,115	3,136,382	4,059,250
	Totals, Vehicles and Parts	$	62,071,695	45,441,263	82,262,699	115,073,915
41	Other iron and steel products	$	5,608,236	4,355,460	8,929,197	13,492,761
	Totals, Iron and Its Products	$	**292,864,223**	**251,108,538**	**342,298,703**	**406,946,039**

the United Kingdom and the United States, 1949-52—continued

United Kingdom				United States				No.
1949	1950	1951	1952	1949	1950	1951	1952	
225,618	144,257	572,153	223,735	596,754	1,421,958	1,708,304	1,700,383	1
310,837	277,763	87,247	387,036	1,400,281	1,623,122	1,054,114	991,885	2
—	—	—	—	3,631	5,990	138	1,238	3
1,261,821	794,716	271,621	584,364	1,997,046	2,880,314	2,036,751	2,586,628	4
580,897	453,681	267,127	338,736	927,379	1,940,525	1,924,194	1,599,249	
28,891	4,315	5,527	1,602	2,448,710	3,133,140	3,090,668	2,063,130	5
113,249	58,676	131,771	16,783	636,090	3,391,448	2,233,100	1,533,563	6
147,041	200,034	201,034	45,295	5,167,529	6,826,803	9,577,955	9,552,083	7
1,406,533	**1,138,726**	**1,264,859**	**1,013,187**	**11,180,374**	**18,342,986**	**19,588,473**	**17,441,531**	
10,457	5,245	4,932	12,490	51,956	49,120	35,030	32,380	8
869,093	433,277	585,238	1,541,182	2,648,049	3,639,353	3,815,306	2,863,469	
1,203,361	27,987	61,345	757,359	59,247	38,477	25,415	8,273	9
2,907,442	59,480	168,520	2,493,517	87,695	54,335	35,754	10,519	
475,220	275,425	895,238	850,460	1,399,277	3,022,169	2,167,358	2,251,166	10
37,400,400	20,353,111	78,964,272	81,958,339	100,146,138	249,599,076	196,780,626	190,983,006	
2,048	693	1,001	6,821	4,742	1,747	653	659	11
229,860	78,984	141,464	826,647	243,845	114,172	49,662	49,239	
..	28,704	38,050	18,997	2,079,151	2,842,467	2,477,396	2,056,913	12
..	235,316	457,582	178,917	16,214,456	31,619,357	26,231,355	19,518,305	
712,860	767,503	3,229,904	5,030,867	30,592,706	33,963,132	59,330,714	55,050,639	13
10,438	12,875	7,085	12,596	2,969	4,166	3,875	4,150	14
1,270,872	1,581,248	931,012	2,168,600	337,607	461,570	464,942	533,216	
3,474,901	2,358,402	4,345,017	4,213,695	26,095,488	33,888,883	36,628,212	31,779,570	15
19,337,925	13,128,894	37,770,627	35,208,295	141,612,317	191,005,507	276,760,578	225,082,376	
232,797	28,689	285,032	289,097	1,295,621	1,389,975	1,623,995	1,355,094	16
1,578,568	203,849	2,406,975	2,625,884	5,602,918	6,357,938	8,633,986	6,896,202	
52	—	154	513	164,232	298,451	430,739	452,976	17
841	—	1,826	2,692	1,046,498	2,162,123	3,427,448	3,599,627	
1,948,408	381,903	1,444,094	2,620,101	85,723,058	94,498,732	95,498,938	97,019,236	18
8,850,012	1,861,980	7,488,187	14,575,722	391,305,728	463,155,927	496,852,197	534,372,859	
18,001	24,801	76,817	45,366	26,643	43,452	82,528	46,065	19
167,749	195,362	864,501	514,116	127,528	289,450	831,600	381,139	
9,914	—	68,417	56,418	656,792	1,282,959	1,333,531	915,625	20
40,154	...	319,388	179,491	1,484,556	3,528,977	5,825,120	2,707,834	
11,404,531	1,787,604	7,851,267	17,741,178	18,390,541	30,444,835	35,542,151	38,967,581	21
84,770,307	**40,686,608**	**141,180,763**	**165,045,447**	**709,840,582**	**1,016,395,752**	**1,114,581,439**	**1,081,016,011**	
779,092	142,589	775,832	705,004	1,771,207	2,031,646	2,184,708	2,010,526	22
3,658,101	707,013	3,796,025	3,680,527	10,459,070	12,329,032	13,121,180	11,395,824	
67,405	44,894	52,057	78,093	52,573	72,935	132,569	75,585	23
10,182,762	5,236,921	8,772,649	16,814,031	7,104,030	11,073,470	21,659,692	12,520,008	
3,115	—	52	108,271	77,434	364,476	262,215	323,591	24
389,688	—	134,160	6,470,946	4,543,034	21,303,200	14,267,405	18,490,995	
—	—	—	48,517	39,975	62,618	39,804	27,308	25
—	—	—	2,419,844	1,009,203	2,034,221	1,615,678	1,206,607	
..	—	—	108	172,065	309,986	502,644	479,694	26
..	—	—	4,700	2,139,951	3,393,165	6,223,703	6,117,305	
1,135	147	1,158	125,125	38,747	27,833	16,518	466,963	27
519,047	81,799	2,331,424	3,867,298	3,839,287	2,836,621	2,582,323	3,845,851	
1,200	1,340	27,474	245,680	34,327	89,870	579,210	446,883	28
5,331	32,468	32,658	17,187	246,970	647,208	284,287	391,409	29
7,223	29,465	1,607	—	32,219	70,312	279,715	185,702	30
753,148	662,995	678,150	301,261	329,804	646,035	3,095,375	1,659,246	31
4,074,095	852,613	571,611	435,477	70,213,783	70,660,697	83,495,253	83,724,597	32
1,350,219	1,581,564	1,523,514	893,914	417,137	293,164	676,547	723,978	33
851,387	536,751	987,173	1,193,645	5,798,165	7,350,089	12,445,398	16,005,212	34
...	46	—	30	5,302	31,994	77,059	52,615	35
137,853	3,306	53,674	162,678	245,396	175,909	263,294	276,965	36
—	—	—	—	3	—	4	126	37
—	—	—	—	5,863	—	9,734	234,144	
24	124	228	214	4	10	9	41	38
36,998	180,490	332,603	311,284	6,637	18,368	16,278	84,114	
39,281	34,487	26,791	183,531	925,218	854,276	2,793,824	4,323,215	39
721	3,789	7,169	15,934	930,111	1,883,383	1,751,478	2,356,126	40
77,000	218,766	366,563	510,749	1,867,829	2,756,027	4,571,314	6,997,599	
99,283	154,458	637,213	932,997	449,669	754,436	3,950,345	8,660,622	41
22,106,337	**10,099,505**	**19,913,895**	**37,950,964**	**108,735,176**	**136,445,450**	**169,187,778**	**172,701,418**	

14.—Principal Exports of Canadian Produce from Canada to All Countries,

No.	Item		All Countries			
			1949	1950	1951	1952
	VI. Non-ferrous Metals					
1	Aluminum and manufactures of	$	93,997,544	106,867,384	124,779,435	162,337,931
2	Brass and manufactures of	$	4,279,330	3,361,514	5,660,419	22,872,165
3	Copper and manufactures of	$	86,623,361	87,587,076	87,188,071	119,490,527
4	Lead and manufactures of	$	42,187,036	38,198,933	45,392,480	49,742,671
5	Nickel	cwt.	2,542,835	2,433,023	2,623,656	2,840,445
		$	92,323,686	105,299,743	136,689,457	150,981,762
6	Precious metals and manufactures of (except gold)	$	27,917,946	33,567,611	48,523,961	47,377,657
7	Zinc and manufactures of	$	55,861,872	58,893,117	84,450,009	96,703,447
8	Clocks and watches and parts	$	723,709	352,877	1,064,249	1,184,108
9	Electrical apparatus, *n.o.p.*	$	12,293,101	11,088,618	17,729,307	33,891,933
10	Printing materials	$	51,848	33,975	39,279	67,531
11	Other non-ferrous metals, including "Alloys, *n.o.p.*"	$	10,348,177	12,011,458	18,353,526	22,082,589
	Totals, Non-ferrous Metals	$	**426,607,610**	**457,262,306**	**569,870,193**	**706,732,321**
	VII. Non-metallic Minerals					
12	Asbestos and manufactures of	$	37,298,349	63,474,897	81,830,822	87,774,683
13	Clay and manufactures of	$	1,729,272	2,201,272	2,537,880	2,482,784
	Coal and Its Products—					
14	Coal	ton	432,043	394,961	435,083	388,960
		$	3,563,892	3,198,040	3,495,664	3,203,522
15	Coke	ton	294,753	413,343	219,340	359,456
		$	4,733,745	6,321,205	3,962,267	5,937,349
16	Creosote and coal-tar oils, *n.o.p.*	gal.	4,169,318	3,145,898	2,369,760	4,605,408
		$	1,049,701	778,182	858,933	1,327,279
17	Other coal products	$	1,328	1,363	71,883	80,412
	Totals, Coal and Its Products	$	9,348,666	10,298,790	8,388,747	10,548,562
18	Glass and manufactures of	$	821,373	932,269	970,031	521,837
19	Graphite, crude or refined	cwt.	33,010	60,870	23,032	33,716
		$	166,224	313,457	156,536	191,563
20	Mica and manufactures of	$	63,592	166,641	484,768	156,859
21	Petroleum and products	$	2,588,255	299,173	2,038,384	8,893,192
22	Stone and its products	$	17,251,922	21,612,350	29,097,164	24,201,111
23	Other non-metallic minerals	$	4,442,556	4,355,911	6,025,114	8,703,176
	Totals, Non-metallic Minerals	$	**73,710,209**	**103,654,760**	**131,529,446**	**143,473,767**
	VIII. Chemicals and Allied Products					
24	Acids	cwt.	651,078	1,347,042	1,871,420	1,033,192
		$	2,738,609	3,523,635	5,823,003	2,999,424
25	Alcohols, industrial	$	337,059	119,126	31,341	88,433
26	Cellulose products	$	84,587	183,232	1,437,804	513,848
27	Drugs, medicinal and pharmaceutical preparations	$	3,885,464	4,297,654	6,036,553	5,087,949
28	Explosives	$	13,378	769,125	1,249,183	—
29	Fertilizers	cwt.	14,113,469	14,831,896	12,452,669	14,914,870
		$	39,385,031	38,873,834	35,733,727	42,292,804
30	Paints, pigments and varnishes	$	3,604,058	4,025,051	7,998,501	3,773,183
31	Perfumery, cosmetics and toilet preparations	$	103,823	76,499	115,196	123,268
32	Soap	lb.	1,802,059	168,566	219,421	245,915
		$	327,962	19,558	44,745	39,203
33	Inorganic chemicals, *n.o.p.*	$	7,171,321	7,726,038	13,862,104	12,394,055
34	Other chemicals and allied products	$	13,046,645	40,911,730	59,357,572	57,253,097
	Totals, Chemicals and Allied Products	$	**70,697,937**	**100,525,482**	**131,689,729**	**124,565,264**
	IX. Miscellaneous Commodities					
35	Amusement and sporting goods, *n.o.p.*	$	576,996	469,087	611,361	555,597
36	Brushes	$	275,270	219,280	231,870	216,663
37	Containers, *n.o.p.*	$	2,072,749	1,873,876	3,188,209	4,688,446
38	Household and personal equipment, *n.o.p.*	$	3,966,492	2,717,691	4,531,937	3,016,805
39	Mineral and aerated waters	$	4,625	20,745	8,081	300
40	Musical instruments	$	377,587	373,526	697,672	565,894
41	Scientific and educational equipment	$	3,209,690	2,645,730	5,520,440	5,569,151
42	Ships and vessels and materials for ships	$	42,458,261	22,847,268	8,773,962	11,629,593
43	Vehicles (except iron)	$	25,384,837	4,846,058	7,928,199	37,783,410
44	Works of art	$	46,043	38,963	66,149	54,033
45	Other miscellaneous commodities	$	38,745,078	24,591,869	29,336,750	39,361,597
	Totals, Miscellaneous Commodities	$	**117,117,628**	**60,644,093**	**60,894,630**	**103,441,489**
	Grand Totals, Exports	$	**2,992,960,978**	**3,118,386,551**	**3,914,460,376**	**4,301,080,679**

the United Kingdom and the United States, 1949-52—concluded

United Kingdom				United States				No.
1949	1950	1951	1952	1949	1950	1951	1952	
48,731,490	39,224,584	57,230,082	90,555,027	21,632,877	49,532,763	40,976,605	44,720,237	1
298,050	263,662	945,878	1,018,550	598,854	2,285,647	2,183,592	12,039,921	2
32,274,543	29,275,343	28,588,864	24,793,572	37,347,965	41,940,025	31,116,178	56,468,840	3
14,458,125	2,157,474	12,246,268	8,788,073	20,974,490	30,699,705	24,012,520	35,792,727	4
565,309	432,887	626,842	619,034	1,730,508	1,770,850	1,767,873	1,905,837	5
20,545,673	18,997,379	32,323,665	33,744,999	62,693,150	76,184,024	92,415,560	99,849,500	
12,280,400	11,841,426	15,488,835	17,524,949	15,201,213	20,946,111	31,965,425	29,433,560	6
15,403,634	12,537,326	27,830,564	36,507,644	35,187,175	39,039,988	45,586,330	52,052,257	7
16,611	24,515	51,587	36,048	18,720	15,228	125,669	242,733	8
229,800	32,770	195,013	2,563,932	1,210,362	2,683,428	3,497,388	8,633,971	9
434	8,051	3,368	849	48,797	22,984	34,358	61,063	10
3,653,473	3,038,148	6,730,651	7,326,611	1,978,217	3,693,283	6,095,036	10,355,551	11
147,892,233	**117,400,678**	**181,634,775**	**222,860,254**	**196,891,820**	**267,043,186**	**278,008,661**	**349,650,360**	
2,765,524	4,761,368	6,371,968	8,009,965	28,220,201	44,571,911	54,800,442	54,182,008	12
233	—	2,700	1,008	380,681	526,850	1,003,595	1,120,988	13
—	—	11,297	—	319,360	347,849	292,497	276,225	14
—	—	108,451	—	2,507,402	2,722,308	2,158,906	2,024,528	
4,292	8,883	11,315	9,448	290,399	395,665	197,661	339,023	15
190,448	397,550	449,329	382,645	4,542,429	5,535,752	3,120,931	5,117,173	
—	—	—	—	4,168,818	3,145,493	2,369,760	4,605,408	16
—	—	—	—	1,049,441	777,919	858,933	1,327,279	
—	—	—	—	200	1,232	71,638	80,412	17
190,448	397,550	557,780	382,645	8,099,472	9,037,211	6,210,408	8,549,392	
1,450	42	383	1,288	49,950	320,898	270,444	183,833	18
—	—	—	—	32,607	60,637	22,966	33,695	19
—	—	—	—	162,655	311,508	155,769	191,344	
—	—	—	—	61,913	165,592	435,041	128,151	20
4,777	193	907,267	176,700	976,575	73,519	851,357	8,490,970	21
3,006,018	3,504,469	4,428,128	3,730,335	12,807,392	16,714,275	23,263,608	19,384,793	22
1,602,293	863,214	804,332	1,467,745	1,489,932	2,261,190	2,935,012	4,408,883	23
7,570,743	**9,526,836**	**13,072,558**	**13,769,686**	**52,248,771**	**73,982,954**	**89,925,676**	**96,640,362**	
138,573	90,112	106,194	29,032	480,459	1,234,094	1,715,990	988,903	24
1,393,207	890,441	1,182,695	360,790	907,705	2,378,180	4,032,478	2,430,693	
323,655	14,263	6,969	8,707	778	70,953	18,016	74,770	25
—	7,443	43,951	69,449	7,853	48,896	213,430	60,162	26
29,433	32,554	39,082	65,210	245,846	209,523	220,134	572,375	27
—	—	235,295	—	2,180	354,643	36,856	—	28
—	—	—	20	8,741,503	10,943,891	10,724,633	13,041,573	29
—	—	—	55	23,416,056	28,595,218	30,800,905	37,468,621	
354,365	329,798	785,791	387,305	1,316,012	2,813,316	3,737,026	2,003,980	30
4,356	942	7,735	71	4,378	36,912	10,013	32,522	31
...	—	—	—	8,126	10,942	7,350	3,960	32
...	—	—	—	2,214	1,066	1,318	906	
751,530	569,075	1,174,420	1,590,044	3,430,996	4,920,977	8,336,226	6,994,331	33
2,689,923	4,148,579	6,894,513	7,230,798	4,024,797	19,069,140	19,846,714	25,468,677	34
5,546,469	**5,993,095**	**10,370,451**	**9,712,429**	**33,358,815**	**58,498,824**	**67,253,116**	**75,107,037**	
72,676	67,503	117,146	76,919	205,927	189,322	192,611	284,417	35
...	32	46	46	10,381	14,225	10,701	4,487	36
87,984	85,290	100,101	110,006	378,156	464,008	463,304	466,918	37
155,415	109,894	229,465	135,961	135,549	152,801	250,092	463,684	38
—	—	—	—	468	1,544	102	91	39
—	—	—	145	307,164	283,183	645,095	500,109	40
341,422	306,501	619,982	535,687	1,025,776	697,464	2,126,443	2,188,777	41
14,124	30,986	3,565	7,574	549,906	485,738	656,242	975,273	42
18,683,188	296,041	161,670	828,803	3,219,973	2,527,437	5,943,677	34,071,288	43
1,868	110	—	3,645	44,142	38,523	65,422	47,068	44
2,904,765	2,026,797	1,346,941	1,387,960	14,121,794	15,154,449	19,805,506	26,123,280	45
22,261,442	**2,923,154**	**2,578,916**	**3,086,746**	**19,999,236**	**20,008,694**	**30,159,195**	**65,125,392**	
704,955,726	**469,910,011**	**631,460,954**	**745,845,393**	**1,503,458,711**	**2,020,987,630**	**2,297,674,594**	**2,306,954,938**	

Section 5.—Imports and Exports by Degree of Manufacture, by Origin and by Purpose

Analyses of Canada's trade from the angle of degree of manufacture of imports and exports with leading countries are of value to the student of economic relationships because they present, in summary form, details with significant meaning in the complementary relationship of manufacturing and commerce between geographical areas and countries.

15.—Imports according to Degree of Manufacture, by Leading Country, 1951 and 1952

Country	1951			1952		
	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured
	$'000	$'000	$'000	$'000	$'000	$'000
North America						
United States	556,776	114,517	2,141,634	483,726	111,705	2,381,531
Totals, North America[1]	**556,981**	**114,517**	**2,142,937**	**483,751**	**111,726**	**2,383,866**
Central America and Antilles						
Barbados	—	10,254	3,155	—	6,542	2,123
Jamaica	947	14,590	2,504	394	7,366	1,445
Trinidad and Tobago	6,380	8,159	543	5,434	3,709	517
Costa Rica	8,785	—	—	8,736	—	4
Cuba	2,264	3,543	2,526	2,607	11,659	4,349
Dominican Republic	550	552	24	950	4,982	68
Honduras	4,014	13	1	4,638	5	1
Mexico	15,108	1,868	1,036	22,040	274	1,623
Netherlands Antilles	131	—	10,678	211	—	11,537
Panama	3,310	13	169	4,123	—	2
Totals, Central America and Antilles[1]	**51,416**	**40,001**	**22,400**	**54,616**	**35,136**	**22,679**
South America						
British Guiana	9,420	14,833	772	9,718	13,035	908
Argentina	2,108	1,777	10,069	991	391	2,992
Brazil	34,481	1,548	4,598	30,337	479	4,287
Columbia	13,023	—	40	17,993	—	11
Peru	5,455	16	117	7,692	3	355
Venezuela	126,229	1	10,488	127,798	1	7,959
Totals, South America[1]	**199,007**	**19,336**	**28,325**	**204,924**	**14,125**	**18,021**
Northwestern Europe						
United Kingdom	13,993	63,969	343,022	11,378	33,880	314,499
Belgium and Luxembourg	567	3,426	35,102	677	2,431	30,108
France	1,160	802	22,012	831	387	17,899
Germany, Federal Republic of	211	1,158	29,567	246	199	22,184
Netherlands, The	2,814	939	10,257	2,995	1,730	11,770
Norway	86	743	2,148	23	1,997	1,837
Sweden	310	108	11,389	248	179	8,185
Switzerland	90	27	16,281	30	16	16,350
Totals, Northwestern Europe[1]	**20,796**	**71,393**	**475,725**	**17,294**	**40,874**	**427,508**
Southern Europe						
Italy	1,117	699	12,401	866	869	10,000
Spain	441	1,454	5,219	596	1,269	2,396
Totals, Southern Europe[1]	**1,801**	**2,358**	**19,784**	**1,579**	**2,490**	**14,258**
Eastern Europe	**1,177**	**36**	**5,857**	**2,463**	**11**	**5,079**

[1] Includes other countries not specified.

15.—Imports according to Degree of Manufacture, by Leading Country, 1951 and 1952—concluded

Country	1951			1952		
	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured
Middle East	$'000	$'000	$'000	$'000	$'000	$'000
Arabia	22,651	—	8	7,558	—	1
Lebanon and Syria	16,335	—	46	15,234	—	8
Totals, Middle East[1]	**40,517**	**71**	**4,618**	**25,584**	**75**	**3,678**
Other Asia						
Ceylon	6,025	1,726	8,646	2,714	314	9,464
India	5,107	4,561	30,549	4,415	247	22,159
Malaya and Singapore	48,448	9,159	374	19,342	5,878	253
Japan	2,168	653	9,756	2,014	110	11,037
Philippines	1,886	6,815	253	785	4,397	242
Totals, Other Asia[1]	**72,156**	**24,687**	**54,114**	**33,409**	**11,124**	**47,486**
Other Africa						
British East Africa	6,724	2,789	1,351	6,672	2,128	793
Union of South Africa	2,291	1,288	1,792	1,330	1,762	1,074
Gold Coast	6,960	151	1	5,370	47	106
Totals, Other Africa[1]	**20,055**	**6,292**	**4,402**	**18,658**	**4,666**	**2,272**
Oceania						
Australia	20,310	16,012	9,906	6,834	3,547	8,332
Fiji	1	5,944	47	—	6,467	20
New Zealand	21,424	3,361	5,322	7,301	2,724	4,206
Totals, Oceania[1]	**42,149**	**25,345**	**16,606**	**14,139**	**12,958**	**16,018**
Grand Totals	**1,006,053**	**304,037**	**2,774,766**	**856,418**	**233,185**	**2,940,864**

[1] Includes other countries not specified.

16.—Exports of Canadian Produce according to Degree of Manufacture, by Leading Country, 1951 and 1952

Country	1951			1952		
	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured
North America	$'000	$'000	$'000	$'000	$'000	$'000
United States	578,812	809,049	909,813	516,344	764,192	1,026,419
Totals, North America[1]	**580,014**	**809,248**	**912,068**	**517,420**	**764,336**	**1,028,031**
Central America and Antilles						
Jamaica	881	157	9,175	1,027	222	9,342
Trinidad and Tobago	1,093	358	8,499	1,654	313	9,068
Cuba	1,185	1,880	17,359	4,783	2,182	17,217
Mexico	383	5,564	23,932	226	5,637	33,778
Panama	70	150	5,741	74	41	11,244
Puerto Rico	695	664	6,761	263	1,068	5,997
Totals, Central America and Antilles[1]	**6,265**	**11,328**	**102,086**	**10,013**	**11,602**	**116,088**

[1] Includes other countries not specified.

16.—Exports of Canadian Produce according to Degree of Manufacture, by Leading Country, 1951 and 1952—concluded

Country	1951			1952		
	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured
	$'000	$'000	$'000	$'000	$'000	$'000
South America						
British Guiana	534	79	4,695	484	95	5,777
Argentina	139	2,737	6,008	39	1,097	7,091
Bolivia	1,651	150	1,683	5,195	53	1,150
Brazil	6,858	13,220	33,606	14,631	8,981	57,755
Chile	6,653	2,077	5,021	3,904	1,877	4,308
Colombia	2,114	1,506	8,690	1,070	1,788	10,898
Peru	390	942	3,722	10,359	926	5,120
Venezuela	1,820	1,066	24,096	2,810	1,488	31,385
Totals, South America[1]	**20,687**	**23,135**	**96,324**	**40,017**	**16,850**	**130,117**
Northwestern Europe						
United Kingdom	244,337	284,095	103,028	308,994	345,514	91,337
Belgium and Luxembourg	73,093	8,834	12,530	83,517	5,380	15,479
Denmark	3,478	625	1,485	7,474	334	2,073
France	12,864	19,887	13,788	18,060	17,596	12,608
Germany, Federal Republic of	18,506	10,389	8,133	81,636	7,269	5,957
Ireland	13,283	3,826	3,812	14,010	5,873	3,176
Netherlands, The	19,275	3,766	3,150	33,617	3,992	3,900
Norway	26,698	222	5,278	34,055	262	4,685
Sweden	3,188	5,027	3,910	3,239	5,577	3,382
Switzerland	14,303	3,798	7,244	18,214	2,702	6,002
Totals, Northwestern Europe[1]	**429,375**	**341,138**	**164,205**	**606,283**	**395,410**	**150,271**
Southern Europe						
Italy	23,809	7,576	17,379	32,512	5,834	14,298
Totals, Southern Europe[1]	**25,845**	**9,526**	**24,559**	**40,847**	**8,228**	**19,276**
Eastern Europe						
Yugoslavia	933	—	1,805	21,562	108	944
Totals, Eastern Europe[1]	**1,953**	**123**	**4,435**	**22,944**	**398**	**2,531**
Middle East						
Egypt	925	257	1,284	7,272	231	11,860
Israel	3,292	2,308	6,216	5,003	830	6,107
Lebanon and Syria	2,963	247	3,826	3,385	231	6,318
Totals, Middle East[1]	**11,206**	**3,167**	**16,744**	**17,087**	**1,387**	**31,850**
Other Asia						
India	18,677	5,028	12,031	38,582	4,803	12,038
Malaya and Singapore	172	110	10,513	196	147	6,724
Hong Kong	593	1,691	9,749	609	842	8,131
Pakistan	—	269	4,217	4,621	1,862	9,533
Japan	44,475	20,203	8,298	84,062	9,674	8,868
Philippines	48	761	14,789	51	872	15,121
Totals, Other Asia[1]	**64,027**	**28,192**	**71,765**	**128,308**	**18,431**	**77,457**
Other Africa						
Union of South Africa	11,112	8,486	33,138	10,552	5,648	31,652
Totals, Other Africa[1]	**16,217**	**12,146**	**49,723**	**14,224**	**8,360**	**47,293**
Oceania						
Australia	1,260	16,484	31,336	1,828	12,089	35,779
New Zealand	19	2,927	18,810	35	2,581	16,228
Hawaii	530	1,286	4,602	367	893	5,020
Totals, Oceania[1]	**1,843**	**21,791**	**55,323**	**2,232**	**16,198**	**57,601**
Grand Totals	**1,157,431**	**1,259,795**	**1,497,235**	**1,399,361**	**1,241,201**	**1,660,519**

[1] Includes other countries not specified.

17.—Imports of Certain Raw Materials Used in Canadian Manufactures, 1943-52

NOTE.—Figures for the years ended Mar. 31, 1902-10, are given in the 1926 Year Book, p. 463; those for the years ended Mar. 31, 1911-39, are given in the 1940 edition, p. 533. Calendar-year figures are available only for 1926 and subsequent years; those for 1926-42 are given in the 1948-49 edition, pp. 927-928.

Year	Sugar for Refining	Vegetable Oil for Soap	Cotton-seed Oil, Crude	Rubber, Raw (including Balata) and Latex	Tobacco, Raw	Hides and Skins	Cotton, Raw (including Linters)	Hemp, Dressed or Undressed	Silk, etc., Raw
	tons	gal.	cwt.	cwt.	lb.	cwt.	cwt.	cwt.	lb.
1943....	412,699	3,089,133	187,036	459,085	1,323,847	347,652	1,509,916	—	—
1944....	445,829	1,902,400	306,224	164,536	1,380,157	230,597	1,816,530	—	—
1945....	418,838	3,293,622	244,814	186,609	1,581,290	121,689	2,023,135	—	—
1946....	430,849	2,661,722	82,555	300,523	1,745,604	95,687	1,916,390	448	22,893
1947....	498,118	1,862,044	49,321	774,559	1,589,359	350,083	2,039,139	—	342,850
1948....	*613,879*	*562,644*	*120,758*	*957,147*	*1,617,341*	*325,669*	*1,824,746*	—	*124,504*
1949....	622,278	516,730	593,353	897,114	1,577,395	3,691,232[1]	2,206,595	1,661	128,501
1950....	639,095	2,106,880	842,854	1,036,433	1,321,546	3,334,534[1]	2,455,101	2,154	137,664
1951....	546,276	1,410,260	290,157	1,075,486	1,151,574	2,715,160[1]	2,140,281	2,501	70,187
1952....	593,215	1,339,850	642,421	789,594	1,677,403	2,138,115[1]	1,799,866	4,838	40,053

Year	Wool, Raw[2]	Noils, Waste and Tops, Wool	Artificial Silk Rovings, Yarns, etc.	Manila, Sisal, Istle, Tampico	Rags, Waste Paper, and Other Waste	Iron Ore	Alumina, Bauxite, Cryolite	Tin in Blocks, Ingots, etc.	Petroleum, Crude for Refining
	cwt.	cwt.	lb.	cwt.	cwt.	tons	cwt.	cwt.	'000 gal.
1943....	795,033	80,884	3,317,187	740,955	944,393	3,906,425	60,661,690	26,311	1,739,505
1944....	281,475	62,492	10,161,758	810,906	1,098,846	3,126,649	26,613,324	26,823	1,996,445
1945....	304,923	72,849	13,954,822	730,086	1,125,341	3,739,867	18,880,295	71,950	1,987,943
1946....	532,407	118,787	7,874,871	967,970	1,767,857	2,281,677	25,723,852	84,020	2,218,963
1947....	395,439	121,067	21,975,689	937,017	2,042,162	3,944,550	28,002,714	88,723	2,395,283
1948....	425,248	181,038	21,107,587	792,391	2,294,396	4,300,163	40,306,649	80,588	2,643,758
1949....	321,443	127,971	22,646,972	440,487	1,583,833	2,517,235	35,887,446	82,332	2,587,709
1950....	344,383	168,647	17,424,956	628,945	2,020,442	3,070,557	37,312,022	107,909	2,752,700
1951....	301,300	144,560	27,819,536	923,737	2,610,367	3,831,418	48,170,988	137,430	2,914,911
1952....	245,422	79,071	19,677,988	905,353	1,716,001	4,267,658	49,148,729	88,466	2,841,968

[1] Quantity given in number instead of by hundred-weight. [2] Includes hair of the camel, alpaca, goat, etc.

18.—Imports according to Origin, by Group and Degree of Manufacture, 1951 and 1952

Origin	1951			1952		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Farm Origin						
CANADIAN FARM PRODUCTS—[1]						
Field Crops—						
Raw materials	742	80,551	89,561	848	84,118	94,242
Partly manufactured	2	3,257	4,020	4	2,299	2,918
Fully or chiefly manufactured	19,363	25,030	54,172	19,095	31,748	57,900
Totals, Field Crops	20,107	108,838	147,753	19,947	118,165	155,060
Animal Husbandry—						
Raw materials	6,489	32,886	90,008	2,694	13,950	34,179
Partly manufactured	42,049	12,482	62,222	13,552	7,330	25,142
Fully or chiefly manufactured	58,150	19,073	111,277	47,851	13,041	80,802
Totals, Animal Husbandry	106,688	64,441	263,507	64,097	34,321	140,123

For footnote, *see* end of table, p. 1007.

18.—Imports according to Origin, by Group and Degree of Manufacture, 1951 and 1952—continued

Origin	1951			1952		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
Farm Origin—concluded	$'000	$'000	$'000	$'000	$'000	$'000
All Canadian Farm Products—						
Raw materials	7,231	113,438	179,568	3,542	98,068	128,422
Partly manufactured	42,050	15,739	66,243	13,556	9,629	28,060
Fully or chiefly manufactured	77,513	44,102	165,449	66,946	44,790	138,701
TOTALS, CANADIAN FARM PRODUCTS	126,795	173,279	411,260	84,044	152,486	295,183
FOREIGN FARM PRODUCTS—[1]						
Field Crops—						
Raw materials	1,058	143,065	307,534	870	106,937	241,824
Partly manufactured	92	13,314	109,730	96	14,827	81,512
Fully or chiefly manufactured	35,645	108,847	230,974	26,874	121,830	220,644
Totals, Field Crops	36,795	265,227	648,237	27,841	243,594	543,980
Animal Husbandry—						
Raw materials	895	5,580	7,114	1,271	7,123	10,193
Partly manufactured	1	10	11	3	25	34
Fully or chiefly manufactured	897	4,807	8,351	490	6,357	8,859
Totals, Animal Husbandry	1,792	10,397	15,476	1,764	13,505	19,085
All Foreign Farm Products—						
Raw materials	1,953	148,646	314,648	2,142	114,060	252,017
Partly manufactured	93	13,325	109,741	99	14,852	81,546
Fully or chiefly manufactured	36,542	113,653	239,325	27,365	128,187	229,503
TOTALS, FOREIGN FARM PRODUCTS	38,588	275,624	663,713	29,606	257,099	563,065
ALL FARM PRODUCTS—						
All Field Crops—						
Raw materials	1,801	223,617	397,094	1,719	191,055	336,066
Partly manufactured	94	16,572	113,750	100	17,126	84,430
Fully or chiefly manufactured	55,008	133,876	285,145	45,970	153,578	278,544
Totals, All Field Crops	56,902	374,065	795,990	47,788	361,759	699,040
All Animal Husbandry—						
Raw materials	7,383	38,467	97,122	3,965	21,073	44,372
Partly manufactured	42,049	12,492	62,233	13,555	7,355	25,176
Fully or chiefly manufactured	59,048	23,880	119,629	48,341	19,398	89,660
Totals, All Animal Husbandry	108,480	74,839	278,983	65,861	47,826	159,208
All Farm Products—						
Raw materials	**9,184**	**262,083**	**494,216**	**5,684**	**212,127**	**380,438**
Partly manufactured	**42,143**	**29,064**	**175,984**	**13,655**	**24,481**	**109,606**
Fully or chiefly manufactured	**114,055**	**157,756**	**404,774**	**94,311**	**172,977**	**368,204**
Totals, Farm Origin	**165,382**	**448,903**	**1,074,974**	**113,650**	**409,585**	**858,248**
Wildlife Origin						
Raw materials	536	7,821	9,254	378	7,328	8,739
Partly manufactured	268	1,076	1,368	52	1,110	1,217
Fully or chiefly manufactured	381	702	1,141	328	851	1,205
Totals, Wildlife Origin	**1,185**	**9,599**	**11,763**	**758**	**9,289**	**11,161**
Marine Origin						
Raw materials	4	2,119	3,163	7	2,072	2,888
Partly manufactured	—	—	—	—	—	—
Fully or chiefly manufactured	266	3,772	6,342	317	3,771	6,314
Totals, Marine Origin	**270**	**5,891**	**9,504**	**324**	**5,843**	**9,202**
Forest Origin						
Raw materials	1	6,981	7,227	2	5,256	5,339
Partly manufactured	46	29,386	31,287	42	27,384	29,322
Fully or chiefly manufactured	4,325	90,782	101,493	4,305	93,765	103,794
Totals, Forest Origin	**4,371**	**127,148**	**140,007**	**4,349**	**126,405**	**138,455**

For footnote, *see* end of table.

18.—Imports according to Origin, by Group and Degree of Manufacture, 1951 and 1952—concluded

Origin	1951			1952		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Mineral Origin						
Raw materials	4,268	277,716	492,137	5,307	256,857	458,929
Partly manufactured	20,952	40,116	79,371	19,558	49,753	82,666
Fully or chiefly manufactured	185,106	1,518,880	1,811,664	173,756	1,606,973	1,880,115
Totals, Mineral Origin	**210,326**	**1,836,712**	**2,383,173**	**198,622**	**1,913,583**	**2,421,710**
Mixed Origin						
Raw materials	—	56	56	—	85	85
Partly manufactured	561	14,874	16,027	572	8,977	10,374
Fully or chiefly manufactured	38,889	369,743	449,352	41,482	503,195	581,231
Totals, Mixed Origin	**39,450**	**384,673**	**465,435**	**42,054**	**512,257**	**591,690**
Recapitulation						
Raw materials	**13,993**	**556,776**	**1,006,053**	**11,378**	**483,726**	**856,418**
Partly manufactured	**63,969**	**114,517**	**304,037**	**33,880**	**111,705**	**233,185**
Fully or chiefly manufactured	**343,022**	**2,141,634**	**2,774,766**	**314,499**	**2,381,531**	**2,940,864**
Grand Totals	**420,985**	**2,812,927**	**4,084,856**	**359,757**	**2,976,962**	**4,030,468**

[1] In this classification the expression "Canadian Farm Products" refers to all commodities of which the basic raw materials are such as Canadian farms produce. "Foreign Farm Products" covers materials or commodities such as Canada does not produce in their original forms, e.g., cane sugar, tea, rubber, cotton, silk, etc.

19.—Exports according to Origin, by Group and Degree of Manufacture, 1951 and 1952

Origin	1951			1952		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Farm Origin						
CANADIAN FARM PRODUCTS—[1]						
Field Crops—						
Raw materials	183,289	176,752	647,310	214,750	218,130	947,226
Partly manufactured	87	4,269	8,661	387	3,168	8,225
Fully or chiefly manufactured	46,284	72,393	205,085	41,207	72,852	207,938
Totals, Field Crops	229,659	253,414	861,056	256,343	294,150	1,163,388
Animal Husbandry—						
Raw materials	3,230	143,294	151,908	29,838	21,066	57,152
Partly manufactured	1,256	6,314	10,638	1,191	4,212	6,683
Fully or chiefly manufactured	10,333	14,669	40,488	197	19,486	38,166
Totals, Animal Husbandry	14,819	164,277	203,034	31,226	44,763	102,002
All Canadian Farm Products—						
Raw materials	186,518	320,046	799,218	244,588	239,196	1,004,377
Partly manufactured	1,344	10,583	19,299	1,578	7,379	14,908
Fully or chiefly manufactured	56,617	87,062	245,572	41,404	92,338	246,104
TOTALS, CANADIAN FARM PRODUCTS	244,479	417,691	1,064,090	287,569	338,913	1,265,390
FOREIGN FARM PRODUCTS—[1]						
Field Crops—						
Raw materials	—	1,731	1,731	—	448	646
Partly manufactured	202	2,911	3,368	—	1,779	1,869
Fully or chiefly manufactured	2,381	15,510	48,768	639	15,535	34,409
Totals, Field Crops	2,583	20,152	53,867	639	17,762	36,924
Animal Husbandry—						
Raw materials	—	—	—	—	—	—
Partly manufactured	—	—	—	—	—	—
Fully or chiefly manufactured	—	—	1	—	1	1
Totals, Animal Husbandry	—	—	1	—	1	1

For footnote, *see* end of table, p. 1008.

19.—Exports according to Origin, by Group and Degree of Manufacture, 1951 and 1952—concluded

Origin	1951			1952		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Farm Origin—concluded						
FOREIGN FARM PRODUCTS—concluded[1]						
All Foreign Farm Products—						
Raw materials	—	1,731	1,731	—	448	646
Partly manufactured	202	2,911	3,368	—	1,779	1,869
Fully or chiefly manufactured	2,381	15,510	48,769	639	15,537	34,410
TOTALS, FOREIGN FARM PRODUCTS	2,583	20,153	53,868	639	17,764	36,925
ALL FARM PRODUCTS—						
All Field Crops—						
Raw materials	183,289	178,483	649,041	214,750	218,578	947,872
Partly manufactured	290	7,180	12,029	387	4,947	10,094
Fully or chiefly manufactured	48,665	87,903	253,853	41,845	88,388	242,346
Totals, All Field Crops	232,243	273,567	914,923	256,982	311,913	1,200,312
All Animal Husbandry—						
Raw materials	3,230	143,294	151,908	29,838	21,066	57,152
Partly manufactured	1,256	6,314	10,638	1,191	4,211	6,683
Fully or chiefly manufactured	10,333	14,669	40,488	197	19,487	38,168
Totals, All Animal Husbandry	14,819	164,277	203,035	31,226	44,764	102,003
All Farm Products—						
Raw materials	**186,518**	**321,777**	**800,949**	**244,587**	**239,644**	**1,005,023**
Partly manufactured	**1,546**	**13,494**	**22,667**	**1,578**	**9,158**	**16,778**
Fully or chiefly manufactured	**58,998**	**102,572**	**294,341**	**42,043**	**107,875**	**280,514**
Totals, Farm Origin	**247,062**	**437,844**	**1,117,958**	**288,208**	**356,677**	**1,302,315**
Wildlife Origin						
Raw materials	7,314	20,461	28,364	4,057	19,009	23,602
Partly manufactured	10	809	918	—	282	377
Fully or chiefly manufactured	2	608	631	4	483	521
Totals, Wildlife Origin	**7,326**	**21,877**	**29,912**	**4,061**	**19,775**	**24,500**
Marine Origin						
Raw materials	128	68,003	68,496	2	69,545	70,102
Partly manufactured	41	752	804	81	368	449
Fully or chiefly manufactured	7,908	16,041	54,082	989	17,597	46,213
Totals, Marine Origin	**8,077**	**84,796**	**123,382**	**1,072**	**87,510**	**116,765**
Forest Origin						
Raw materials	6,425	70,335	82,706	20,134	68,098	95,280
Partly manufactured	122,499	491,634	703,049	123,843	435,234	614,669
Fully or chiefly manufactured	12,302	552,630	613,411	21,095	577,722	656,928
Totals, Forest Origin	**141,226**	**1,114,600**	**1,399,167**	**165,071**	**1,081,054**	**1,366,877**
Mineral Origin						
Raw materials	43,953	98,237	176,915	40,214	120,048	205,353
Partly manufactured	159,998	301,886	531,836	220,012	318,801	608,537
Fully or chiefly manufactured	13,546	161,251	379,456	16,379	204,838	482,367
Totals, Mineral Origin	**217,496**	**561,374**	**1,088,207**	**276,604**	**643,687**	**1,296,257**
Mixed Origin						
Raw materials	—	—	—	—	—	—
Partly manufactured	1	474	521	—	349	391
Fully or chiefly manufactured	10,273	76,711	155,314	10,829	117,904	193,975
Totals, Mixed Origin	**10,274**	**77,185**	**155,835**	**10,829**	**118,253**	**194,366**
Recapitulation						
Raw materials	**244,338**	**578,812**	**1,157,431**	**308,994**	**516,344**	**1,399,361**
Partly manufactured	**284,095**	**809,049**	**1,259,795**	**345,514**	**764,192**	**1,241,201**
Fully or chiefly manufactured	**103,028**	**909,813**	**1,497,235**	**91,337**	**1,026,419**	**1,660,519**
Grand Totals	**631,461**	**2,297,675**	**3,914,460**	**745,845**	**2,306,955**	**4,301,081**

[1] In this classification the expression "Canadian Farm Products" refers to commodities actually produced, in their original state, on Canadian farms. "Foreign Farm Products" covers materials or commodities such as Canada does not produce in their original forms, e.g., cane sugar, tea, rubber, cotton, silk, etc.

20.—Imports according to Purpose, by Group, 1951 and 1952

Group and Purpose	1951			1952		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Producers' Materials						
FARM MATERIALS						
Fodders	4	20,008	20,530	5	14,610	14,638
Fertilizers	119	9,167	10,576	136	8,865	10,778
Seeds	441	6,815	8,270	461	3,057	4,579
Other	*650*	*7,760*	*9,101*	*1,011*	*8,207*	*9,779*
TOTALS, FARM MATERIALS	1,215	43,750	48,476	1,612	34,739	39,775
MANUFACTURERS' MATERIALS						
Foodstuffs and beverages	433	6,311	12,646	447	5,781	10,397
Tobacco, smokers' supplies	—	1,161	2,306	—	1,555	2,798
Textiles, clothing, cordage	106,380	192,041	410,759	61,670	157,130	283,241
Fur and leather goods	7,295	30,111	46,306	5,441	26,579	37,706
Sawmills	—	—	—	—	—	—
Rubber industries	1,039	11,317	68,440	798	9,122	32,235
Other manufactures	65,022	526,700	875,083	52,705	494,608	785,306
TOTALS, MANUFACTURERS' MATERIALS	180,169	767,640	1,415,540	121,061	694,775	1,151,683
BUILDING AND CONSTRUCTION MATERIALS	22,080	101,753	143,714	16,486	112,719	148,383
OTHER PRODUCERS' MATERIALS	96	1,733	1,850	51	1,823	1,887
Totals, Producers' Materials	**203,561**	**914,876**	**1,609,580**	**139,211**	**844,056**	**1,341,728**
Producers' Equipment						
Farm	7,456	191,601	201,382	6,756	193,250	202,673
Commerce and industry	48,834	488,386	554,693	64,527	525,472	612,388
Totals, Producers' Equipment	**56,291**	**679,987**	**756,074**	**71,283**	**718,723**	**815,061**
Fuel, Electricity and Lubricants						
Fuel	3,402	247,703	273,237	4,493	241,069	267,102
Electricity	—	156	156	—	102	102
Lubricants	26	11,285	11,370	53	10,443	10,570
Totals, Fuel, etc.	**3,428**	**259,144**	**284,763**	**4,546**	**251,614**	**277,773**
Transport						
Road	38,005	264,027	303,055	26,719	267,066	294,795
Rail	9	3,726	3,736	3	8,141	8,149
Water	544	5,916	6,821	655	7,119	7,851
Aircraft	8,254	52,430	61,044	11,653	150,723	162,607
Totals, Transport	**46,813**	**326,098**	**374,656**	**39,030**	**433,048**	**473,402**
Auxiliary Materials for Commerce and Industry						
Advertising material	304	4,308	4,663	355	4,722	5,143
Containers	3,425	19,285	25,351	3,337	19,401	25,384
Other	141	6,807	6,969	122	7,077	7,236
Totals, Auxiliary Materials	**3,870**	**30,400**	**36,983**	**3,813**	**31,200**	**37,763**
Consumer Goods						
Foods	8,758	117,173	304,625	10,262	121,926	282,676
Beverages	*10,149*	*11,435*	*97,738*	*10,786*	*14,889*	*102,460*
Smokers' supplies	347	1,787	2,582	326	2,661	3,331
Clothing	17,971	38,799	61,235	14,684	54,863	73,597

20.—Imports according to Purpose, by Group, 1951 and 1952—concluded

Group and Purpose	1951			1952		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Consumer Goods—concluded						
Household goods	33,352	96,122	142,041	25,303	122,464	159,188
Jewellery, time pieces, etc.	1,922	9,337	23,282	1,820	8,715	22,931
Books, educational supplies, etc.	3,255	39,781	46,054	3,345	44,020	50,083
Recreational equipment, etc.	3,845	19,065	26,208	4,227	23,691	31,546
Medical supplies, etc.	2,247	36,184	41,843	2,719	31,004	36,617
Other	1,490	4,398	6,837	1,300	5,028	7,405
Totals, Consumer Goods	**83,336**	**374,082**	**752,444**	**74,774**	**429,261**	**769,835**
Totals, Munitions and War Stores	**4,606**	**12,517**	**17,827**	**4,806**	**26,721**	**31,949**
Totals, Live Animals for Food	**—**	**25**	**25**	**—**	**890**	**891**
Totals, Unclassified	**19,080**	**215,798**	**252,504**	**22,293**	**241,449**	**282,065**
Grand Totals	**420,985**	**2,812,927**	**4,084,856**	**359,757**	**2,976,962**	**4,030,468**

21.—Exports according to Purpose, by Group, 1951 and 1952

Group and Purpose	1951			1952		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Producers' Materials						
FARM MATERIALS						
Fodders	8,914	100,633	162,796	2,688	136,672	271,729
Fertilizers	143	31,706	36,783	—	38,406	43,231
Seeds	320	14,737	16,888	15	13,720	17,107
Other	—	5,713	6,139	—	3,921	4,139
TOTALS, FARM MATERIALS	9,378	152,790	222,606	2,704	192,720	336,205
MANUFACTURERS' MATERIALS						
Foodstuffs and beverages	159,179	65,074	441,106	189,575	72,570	621,337
Tobacco, smokers' supplies	13,491	20	16,439	18,601	10	22,238
Textile, clothing, cordage	700	6,427	18,215	883	4,383	11,038
Fur and leather goods	9,922	36,983	50,224	5,474	26,206	33,936
Sawmills	727	3,865	5,132	2,368	2,913	6,052
Rubber industries	—	751	757	—	278	281
Other manufactures	265,922	1,283,257	1,796,814	330,955	1,313,248	1,898,416
TOTALS, MANUFACTURERS' MATERIALS	449,942	1,396,378	2,328,687	547,856	1,419,609	2,593,299
BUILDING AND CONSTRUCTION MATERIALS	83,547	233,388	362,298	99,122	219,107	350,764
OTHER PRODUCERS' MATERIALS	—	1,019	2,030	—	1,737	2,030
Totals, Producers' Materials	**542,867**	**1,783,575**	**2,915,620**	**649,683**	**1,833,173**	**3,282,298**
Producers' Equipment						
Farm	596	109,154	133,956	473	91,621	114,842
Commerce and industry	6,795	40,300	98,012	9,366	49,141	128,261
Totals, Producers' Equipment	**7,391**	**149,454**	**231,968**	**9,839**	**140,761**	**243,103**

21.—Exports according to Purpose, by Group, 1951 and 1952—concluded

Group and Purpose	1951			1952		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Fuel, Electricity and Lubricants						
Fuel	1,329	8,767	13,483	1,023	14,388	18,842
Electricity	—	7,938	7,938	—	9,174	9,176
Lubricants	1	14	197	—	8	203
Totals, Fuel, etc.	**1,330**	**16,718**	**21,618**	**1,023**	**23,571**	**28,221**
Transport						
Road	369	4,785	98,569	501	8,009	124,969
Rail	1	504	4,345	1	706	6,199
Water	—	628	8,638	—	905	11,506
Aircraft	162	5,814	7,524	829	33,943	37,503
Totals, Transport	**532**	**11,731**	**119,076**	**1,330**	**43,564**	**180,178**
Auxiliary Materials for Commerce and Industry						
Containers	1,247	5,614	14,171	762	5,944	14,689
Other	—	7	237	—	7	196
Totals, Auxiliary Materials	**1,247**	**5,621**	**14,408**	**762**	**5,951**	**14,885**
Consumer Goods						
Foods	64,534	173,215	358,145	71,220	126,009	329,404
Beverages	640	46,514	56,929	782	46,484	57,079
Smokers' supplies	—	24	181	56	24	373
Clothing	2,090	5,037	9,636	526	4,207	6,496
Household goods	467	3,048	12,681	128	3,286	9,424
Jewellery, timepieces, etc.	75	158	1,216	56	270	1,318
Books, educational supplies, etc.	244	3,325	9,456	209	4,142	10,505
Recreational equipment, etc.	733	6,483	10,161	608	7,217	10,645
Medical supplies, etc.	403	1,180	7,470	129	1,873	6,664
Other	18	134	924	9	365	784
Totals, Consumer Goods	**69,203**	**239,118**	**466,800**	**73,723**	**193,877**	**432,692**
Totals, Munitions and War Stores	**235**	**347**	**3,189**	**1**	**8,434**	**15,765**
Totals, Live Animals for Food	**—**	**45,626**	**45,773**	**—**	**2,709**	**2,814**
Totals, Unclassified	**8,656**	**45,484**	**96,009**	**9,485**	**54,915**	**101,125**
Grand Totals	**631,461**	**2,297,675**	**3,914,460**	**745,845**	**2,306,955**	**4,301,081**

Section 6.—Comparison of Value, Price and Volume of Foreign Trade

Since the end of World War II, the value of Canada's exports and imports has increased steadily. At the same time, the level of prices at which exports are sold and imports purchased has risen consistently. Changes in the value of exports and imports are the joint product of changes in the volume of goods traded and the prices at which transactions are conducted. To obtain a clear picture of the fluctuations in the merchandise trade of Canada it is desirable to isolate the contributions made to these fluctuations by the price and volume factors.

Special indexes of export and import prices have been developed to give this information. These indexes are based chiefly on average prices calculated from the trade statistics (supplemented in some cases by wholesale and other price

information) and combined according to the relative importance of the commodities in the trade of 1948. By dividing these price indexes into the trade values, the effects of price change can be removed from the values; or, by dividing the price index into an index of values, an index is obtained showing changes in the volume of trade from year to year. Table 22 gives the declared value of trade (adjusted for pricing purposes), the index of values based on 1948, the price index used to deflate the value index, and the resulting volume index.

The grouping of commodities used in this calculation differs slightly from that of the trade statistics, changes being necessary to simplify the pricing problem. The chief difference is that the two trade statistics groups "agricultural and vegetable products" and "animals and animal products" have been combined as "agricultural and animal products". Rubber and rubber products have been transferred from this group to the "miscellaneous" group, and a few other transfers have been made to improve the component material classification. The totals differ from those usually published by the exclusion of certain imports that are for the use of the United Kingdom Government or the governments of NATO countries.

Movements in price, value and volume have not always been the same. Export prices increased steadily from the end of the War until late in 1951, although the volume of exports fell off in 1949 and 1950. In 1952, export prices declined but the volume of goods shipped increased substantially. Import prices also rose steadily until 1951, but their decline in 1952 was sharper than in the case of exports. The volume of imports has also increased considerably since the War, the only halt in its growth coming in the period when the emergency exchange conservation controls were in force.

22.—Declared Values and Value, Price and Physical Volume Indexes of Foreign Trade, by Commodity Group, 1949-52

Commodity Group[1]	1949	1950	1951	1952
	Declared Values			
	$'000	$'000	$'000	$'000
Imports for Consumption—				
Agricultural and animal products	422,469	522,763	583,674	522,597
Fibres and textiles	333,032	364,509	483,520	359,440
Wood products and paper	82,461	95,859	132,383	129,411
Iron and steel and products	889,398	977,582	1,328,055	1,402,232
Non-ferrous metals and products	177,861	219,730	297,353	304,218
Non-metallic minerals and products	531,449	608,445	681,356	638,754
Chemicals and fertilizers	134,540	161,517	194,992	190,843
Miscellaneous	188,061	222,819	375,749	464,059
Totals, Adjusted Imports[2]	2,759,271	3,173,224	4,077,083	4,011,555
Imports for use of U.K. and NATO Governments	1,936	1,029	7,773	18,913
Totals, Declared Values of Imports	**2,761,207**	**3,174,253**	**4,084,856**	**4,030,468**
Exports of Domestic Products—				
Agricultural and animal products	1,085,648	990,520	1,213,176	1,403,747
Fibres and textiles	25,217	29,573	36,858	27,697
Wood products and paper	875,318	1,112,945	1,399,076	1,366,787
Iron and steel and products	334,023	273,242	350,369	417,538
Non-ferrous metals and products	426,608	457,262	569,870	706,732
Non-metallic minerals and products	73,710	103,655	131,529	143,474
Chemicals and fertilizers	70,698	100,525	131,690	124,565
Miscellaneous	101,739	50,665	81,892	110,540
Totals, Declared Values of Exports[3]	**2,992,961**	**3,118,387**	**3,914,460**	**4,301,080**

For footnotes, *see* end of table, p. 1014.

22.—Declared Values and Value, Price and Physical Volume Indexes of Foreign Trade, by Commodity Group, 1949-52—continued

Commodity Group[1]	1949	1950	1951	1952
	VALUE INDEXES (1948=100)			
Imports for Consumption—				
Agricultural and animal products	104·8	129·7	144·8	129·7
Fibres and textiles	95·0	104·0	137·9	102·5
Wood products and paper	116·9	135·9	187·6	183·4
Iron and steel and products	113·5	124·8	169·5	179·0
Non-ferrous metals and products	113·7	140·5	190·1	194·5
Non-metallic minerals and products	88·1	100·9	112·9	105·9
Chemicals and fertilizers	110·9	133·2	160·8	157·3
Miscellaneous	128·8	152·6	257·4	317·8
Totals, Imports[2]	**104·7**	**120·4**	**154·8**	**152·3**
Exports of Domestic Products—				
Agricultural and animal products	103·8	94·7	116·0	134·3
Fibres and textiles	55·4	64·9	80·9	60·8
Wood products and paper	91·8	116·7	146·7	143·3
Iron and steel and products	92·0	75·3	96·5	115·1
Non-ferrous metals and products	107·7	115·5	143·9	178·5
Non-metallic minerals and products	77·7	109·2	138·6	151·2
Chemicals and fertilizers	88·5	125·9	164·9	156·0
Miscellaneous	104·8	52·2	84·3	113·8
Totals, Exports[2]	**97·3**	**101·4**	**127·3**	**139·9**
	PRICE INDEXES (1948=100)			
Imports for Consumption—				
Agricultural and animal products	98·7	108·2	122·4	102·1
Fibres and textiles	100·3	109·3	158·6	108·5
Wood products and paper	105·7	111·6	118·4	115·3
Iron and steel and products	107·0	116·1	122·5	117·3
Non-ferrous metals and products	105·4	106·9	121·2	120·5
Non-metallic minerals and products	101·6	104·4	108·8	101·7
Chemicals and fertilizers	100·0	102·8	117·2	109·2
Miscellaneous	97·6	121·5	166·6	123·5
Totals, Imports[2]	**102·6**	**110·3**	**126·2**	**110·2**
Exports of Domestic Products—				
Agricultural and animal products	103·4	105·6	114·8	107·6
Fibres and textiles	103·4	112·8	139·8	120·0
Wood products and paper	97·9	105·0	122·4	122·4
Iron and steel and products	111·4	113·7	126·2	131·4
Non-ferrous metals and products	105·8	115·1	137·9	142·5
Non-metallic minerals and products	112·4	120·4	131·7	143·1
Chemicals and fertilizers	104·9	104·2	116·7	119·3
Miscellaneous	103·7	112·0	132·3	129·7
Totals, Exports[3]	**103·3**	**108·3**	**123·0**	**121·8**
	VOLUME INDEXES (1948=100)			
Imports for Consumption—				
Agricultural and animal products	106·2	119·9	118·3	127·0
Fibres and textiles	94·7	85·2	86·9	94·5
Wood products and paper	110·6	121·8	158·4	159·1
Iron and steel and products	106·1	107·5	138·4	152·6
Non-ferrous metals and products	107·9	131·4	156·8	161·4
Non-metallic minerals and products	86·7	96·6	103·8	104·1
Chemicals and fertilizers	110·9	129·6	137·2	144·0
Miscellaneous	132·0	125·6	154·5	257·4
Totals, Imports[2]	**102·0**	**109·2**	**122·7**	**138·1**

For footnote, *see* end of table, p. 1014.

22.—Declared Values and Value, Price and Physical Volume Indexes of Foreign Trade, by Commodity Group, 1949-52—concluded

Commodity Group[1]	1949	1950	1951	1952
	Volume Indexes—concluded (1948 = 100)			
Exports of Domestic Products—				
Agricultural and animal products	100·4	89·7	101·0	124·8
Fibres and textiles	53·6	57·5	57·9	50·7
Wood products and paper	93·8	111·1	119·9	117·1
Iron and steel and products	82·6	66·2	76·5	87·6
Non-ferrous metals and products	101·8	100·3	104·4	125·3
Non-metallic minerals and products	69·1	90·7	105·2	105·7
Chemicals and fertilizers	84·4	120·8	141·3	130·8
Miscellaneous	101·1	46·6	63·7	87·7
Totals, Exports[2]	**94·2**	**93·6**	**103·5**	**114·9**

[1] Groups, though classified by component material, differ slightly from conventional groups (*see* text, p. 1012). [2] Excludes imports for the use of the United Kingdom and NATO Governments. [3] Excludes exports of foreign produce.

PART III.—EXTERNAL TRANSACTIONS*

Section 1.—Canadian Balance of International Payments

Wide fluctuations have been characteristic of both the current and capital accounts of the balance of payments in recent years. Following current account deficits of $334,000,000 in 1950 and $517,000,000 in 1951, the first since 1933, Canada had a modest current account surplus of $151,000,000 in 1952. But these balances were small in relation to gross international exchanges of goods and services by Canada which totalled well over $11,000,000,000 in 1952. The periods of deficit were influenced by the growth in the volume of goods and services imported in response to high levels of economic activity in Canada.

In 1952, a number of special factors contributed to the abrupt change, most of which occurred in the commodity balance. Owing to a substantial drop in import prices, the terms of trade moved in Canada's favour by 13 p.c. over 1951; this price change overshadowed the effects of changes in the volume of commodity exports and imports, both of which, however, reached new peaks. Particularly important in the increase in exports was the marketing of large crops of wheat and other grains at a time of strong world demand. Another dominating factor in the balance of payments was the continued large inflow of funds for direct investment and from the sale of new security issues. While the change in the current account was the main factor in strengthening the exchange rate from a premium on the U.S. dollar averaging about 5¼ p.c. in 1951 to a discount of 2⅛ p.c. for 1952, the heavy capital inflows of the past few years have been a sustained underlying force. The movement in the exchange rate during 1952 led, however, to heavy equilibrating outflows of capital through liquidations by non-residents of holdings of outstanding Canadian securities and through short-term movements. As indicated by the current account surplus, capital outflows on balance exceeded the heavy inflows by $151,000,000.

An important development in 1952 was the increase from $434,000,000 to $1,004,000,000 in the surplus with overseas countries. It was this change rather than the decrease of $98,000,000 in the deficit with the United States that mainly

* Prepared in the International Payments Section, International Trade Division, Dominion Bureau of Statistics. More detailed information is given in the publication, *The Canadian Balance of International Payments in the Post-War Years, 1946-52.*

accounted for the improvement of $668,000,000 in the current account balance. Considering the post-war period only, the surplus of $1,004,000,000 with overseas countries was exceeded only by the surplus of $1,183,000,000 in 1947. In that year, however, a substantial part of the balance was financed by credits extended by Canada. Reflecting increased bilateral disequilibrium in Canada's international transactions, exchange transfers in settlement of overseas balances reached a post-war record of $1,008,000,000 in 1952, compared with $436,000,000 in 1951.

Current Account Transactions.—The level of merchandise trade was very high in 1952. Unadjusted trade returns show an increase of 9·9 p.c. in the value of exports. This was attributable solely to a volume increase as export prices showed a slight decline for the year as a whole, having fallen steadily through 1952. The value of imports as shown in the trade returns was 1·3 p.c. lower than in 1951, reflecting an increase in volume of 12·6 p.c. offset by a price decrease of similar magnitude.

The marked improvement of 13·2 p.c. in the terms of trade was clearly the main factor in reversing the trade deficit of 1951. Declines in export prices were concentrated mainly in agricultural and animal products and fibres and textiles, with most of the other groups of exports showing relative stability of prices for the year as a whole. The volume of exports also showed a mixed picture, with particularly large increases in agricultural products, non-ferrous metals and miscellaneous products contrasting with stability or decreases in most of the other groups. Because of the two large crops of wheat and other grains and strong demand for them, the increase in exports of grains amounted to about three-quarters of the total increase in the value of exports. There were also large increases in exports of newsprint, base metals, automobiles and aircraft. These increases more than offset some important decreases, chief among which was the fall in exports of animals and products associated with the outbreak of foot-and-mouth disease and the imposition of an embargo by the United States. Exports of wood-pulp and of planks and boards were also lower. Most of the increase in the value of exports in 1952 was in sales to overseas countries and the aggregate value of exports to the United States showed little change from the high levels of 1951, although larger exports of newsprint, aircraft, grains and base metals offset decreases in beef, cattle and wood-pulp.

All groups of imports showed price declines for 1952 compared to 1951, with the largest decline occuring in agricultural and animal products, fibres and textiles, and miscellaneous products. The effect of these price declines was largely offset by increases in volume which reached a record level in 1952. The most striking volume increases were in imports of a number of miscellaneous products, including aircraft and machinery, engines and other products in the iron and products group. A number of important imports fell in value terms; some of the larger decreases were in imports of sugar, rubber, raw cotton, rolling-mill products, petroleum and coal. In some cases, increases in volume more than offset price declines. The major increases in value were in imports of non-farm machinery and parts, engines, electrical apparatus, and aircraft and parts. Imports of these items from the United States increased as investment in Canadian industry and defence activity grew. With the exception of raw cotton imports which fell in response to the world slump in demand for textiles, most of the other imports from the United States were maintained at a high level. Imports from Latin America rose during the year reflecting, in part, a diversion of sugar and cotton imports from other sources.

Imports from the United Kingdom reflected the decline in demand for textiles and associated sharp price decreases, as well as reduced imports of automobiles, although imports of machinery increased. Sharp drops in the prices of rubber, wool and other imports were mainly responsible for decreased imports from other sterling area countries. Imports from countries in Western Europe were affected by the fall in the demand for textiles and also by a decrease in imports of rolling-mill products.

When adjusted for balance-of-payments purposes, the decrease in the value of imports in 1952 was larger than that shown in the trade returns. Apart from the usual adjustments for non-commercial items and duplication with other parts of the current account, adjustments in 1951 and 1952 take account of the re-appearance of abnormal movements of commodities on government account. Payments on defence contracts have been substituted for the actual movements of the defence commodities. Since payments in 1951 exceeded actual imports, this adjustment increased the deficit on trade. On the other hand, in 1952 actual defence imports exceeded payments and the net effect of all adjustments was to raise by one-half the trade surplus as shown by the customs returns.

The deficit on non-merchandise items in 1952 was $339,000,000, a decrease of $31,000,000 from 1951. While the balance on travel account and inheritances and migrants' account deteriorated, improvements in other items, particularly on interest and dividend account, more than offset the deterioration. The deficit from all these transactions continued to be high because of large payments on income and travel account and for business services.

Capital Movements.—Inflows of long-term capital to finance Canadian development continued to be the dominant factor in the capital account in 1952. But, in contrast to earlier years, the coincidence of a current account surplus with these inflows led to a dramatic rise in the exchange value of the Canadian dollar and to equilibrating outflows of capital through the repatriation of Canadian bonds and debentures held abroad and through short-term capital movements.

Inflows for direct investment in foreign-controlled companies and branches have risen year by year since the end of the War and reached $332,000,000 in 1952, about nine-tenths being from the United States. Investment in various phases of the petroleum industry accounted for more than one-half of the total and investment in mining and petroleum together represented nearly four-fifths.

There was a very substantial increase in outflows of capital from Canada for direct investment abroad, totalling $64,000,000 in 1952 compared with $20,000,000 in the preceding year. Most of the movement was to the United States where investment in beverage and other manufacturing industries, petroleum and other mining enterprises, and real estate were all important factors. Other outflows included the provision of additional capital for Canadian enterprises in Latin America and elsewhere. Retention of profits also contributed substantially to the growth of international direct investment between Canada and other countries.

Because of the flotation of new Canadian issues in the United States, there continued in 1952 to be a net capital inflow from transactions in Canadian securities, but trading in outstanding issues led on balance, for the first time since 1947, to an outflow. Net repurchases of bonds and debentures of governments and municipalities totalled $184,000,000 but were offset to the extent of $89,000,000 by sales

of corporate securities. In this respect trading followed the mixed pattern that developed in mid-1951. The long climb of the Canadian dollar on the exchange markets had a strong influence on transactions in government bonds and over this period more than offset, for non-resident investors, the effect of declining bond prices. Proceeds from new issues of Canadian securities sold to non-residents, mainly corporate and provincial issues, aggregated $319,000,000, while retirements totalled $89,000,000. Transactions in foreign securities led to a small outflow of capital as a result of financing of the International Bank for Reconstruction and Development but, on the whole, Canadians showed little interest in foreign issues during 1952.

Among other capital movements in 1952 were repayments of $56,000,000 on Canadian loans to the United Kingdom and other governments, a reduction of $66,000,000 in Canadian dollar holdings of foreigners, an increase of $80,000,000 in official holdings of gold and U.S. dollars and a decrease of $43,000,000 in official holdings of sterling. But the most spectacular change in the capital account in 1952 occurred in the category of "other capital movements" which showed an outflow of $497,000,000 compared with an inflow of $128,000,000 in 1951. The dominant inflows of capital for long-term investment in Canada coinciding with a surplus in the current account forced the exchange value of the Canadian dollar to a high of 104·3 cents in U.S. funds in August and September 1952. This high value influenced the equilibrating outflows through which Canada's international accounts were brought into balance. In addition to the heavy repatriation of government bonds and of Canadian dollar balances of non-residents already mentioned, there were very substantial increases in private and chartered bank balances and other short-term funds abroad, and decreases in accounts payable from the high levels established during 1950 and increased through the period of credit stringency in 1951.

1.—Current Account between Canada and All Countries, 1928-52

(Net Credits +; Net Debits −)
(Millions of Canadian Dollars)

Year	Current Receipts	Current Expenditure	Net Balance on Current Account	Year	Current Receipts[1]	Current Expenditure[2]	Net Balance	Mutual Aid and Other Official Contributions in Current Account	Net Balance on Current Account
1928....	1,788	1,820	−32	1942.....	3,376	2,275	+1,101	−1,002	+99
1929....	1,646	1,957	−311	1943.....	4,064	2,858	+1,206	−518	+688
1930....	1,297	1,634	−337	1944.....	4,557	3,539	+1,018	−960	+58
1931....	972	1,146	−174	1945.....	4,456	2,910	+1,546	−858	+688
1932....	808	904	−96	1946.....	3,365	2,905	+460	−97	+363
1933....	829	831	−2	1947.....	3,748	3,661	+87	−38	+49
1934....	1,020	952	+68	1948.....	4,147	3,673	+474	−23	+451
1935....	1,145	1,020	+125	1949.....	4,089	3,906	+183	−6	+177
1936....	1,430	1,186	+244	1950.....	4,297	4,569	−272	−62	−334
1937....	1,593	1,413	+180	1951.....	5,311	5,674	−363	−154	−517
1938....	1,361	1,261	+100	1952.....	5,859	5,495	+364	−213	+151
1939....	1,457	1,331	+126						
1940....	1,776	1,627	+149						
1941....	2,458	1,967	+491						

[1] Includes Mutual Aid exports. [2] Excludes Mutual Aid offsets.

2.—Geographical Distribution of the Balance on Current Account between Canada and Other Countries, 1928-52

NOTE.—In the years 1942-48 balances include exports of currently produced goods provided as Mutual Aid or Official Contributions. (*See* also Table 1.)

(Net Credits +; Net Debits −)
(Millions of Canadian Dollars)

Year	United States[1]	United Kingdom[2]	Other Overseas Countries[3]	All Countries	Year	United States[1]	United Kingdom[2]	Other Overseas Countries[3]	All Countries
1928.....	−349	−21	+338	−32	1941....	−318	+734	+75	+491
1929.....	−437	−99	+225	−311	1942....	−180	+1,223	+58	+1,101
1930.....	−344	−106	+113	−337	1943....	−19	+1,149	+76	+1,206
1931.....	−205	−54	+85	−174	1944....	+31	+746	+241	+1,018
1932.....	−168	−14	+86	−96	1945....	+36	+747	+763	+1,546
1933.....	−113	+26	+85	−2	1946....	−607	+500	+567	+460
1934.....	−80	+46	+102	+68	1947....	−1,134	+633	+588	+87
1935.....	−29	+62	+92	+125	1948....	−393	+486	+381	+474
1936.....	−1	+122	+123	+244	1949....	−601	+446	+332	+177
1937.....	−77	+135	+122	+180	1950....	−400	+24	+42	−334
1938.....	−149	+127	+122	+100	1951....	−951	+223	+211	−517
1939.....	−116	+137	+105	+126	1952....	−853	+377	+627	+151
1940.....	−292	+343	+98	+149					

[1] Includes all net exports of non-monetary gold. [2] Excludes wheat exports diverted to other overseas countries and exports of gold. [3] Includes estimated value of wheat sold in European countries.

3.—Balance of International Payments between Canada and All Countries, 1947-52

(Millions of Canadian Dollars)

Item	1947	1948	1949	1950	1951	1952p
A. CURRENT RECEIPTS—						
Merchandise exports (adjusted)	2,723[1]	3,030[1]	2,989[1]	3,139	3,950	4,336
Mutual Aid to NATO countries	—	—	—	57	145	197
Gold production available for export	99	119	139	163	150	150
Tourist and travel expenditure	251	279	285	275	274	276
Interest and dividends	64	70	83	91	115	146
Freight and shipping	322	336	303	284	351	360
All other current credits	289	313	290	288	326	394
TOTALS, CURRENT RECEIPTS	3,748	4,147	4,089	4,297	5,311	5,859
B. CURRENT PAYMENTS—						
Merchandise imports (adjusted)	2,535	2,598	2,696	3,129	4,097	3,846
Tourist and travel expenditure	167	134	193	226	280	336
Interest and dividends	337	325	390	475	450	413
Freight and shipping	278	279	253	301	354	358
Official contributions	38	23	6	62	154	213
All other current debits	344	337	374	438	493	542
TOTALS, CURRENT PAYMENTS	3,699	3,696	3,912	4,631	5,828	5,708
C. NET BALANCE ON CURRENT ACCOUNT	+49	+451	+177	−334	−517	+151
D. CAPITAL TRANSACTIONS—						
Direct investment in Canada	+61	+71	+94	+222	+309	+332
Net new issues or retirements of Canadian securities held abroad	−269	+36	−42	−74	+227	+230
Net sales or purchases of outstanding securities	−12	−4	+30	+399	+53	−85
Loans and Advances by Government of Canada—						
Loan of 1946 to United Kingdom	−423	−52	−120	−50	+14	+14
Post-war loans to other countries	−140	−74	+13	+23	+20	+19
Repayments on war loans to United Kingdom	+104	+64	+5	+51	+34	+23
Change in Canadian dollar holdings of foreigners	−26	−21	+40	+233	−192	−66
Capital movements, *n.o.p.*[2]	−87	+25	−63	+224	+91	−538
NET MOVEMENT OF CAPITAL EXCLUSIVE OF CHANGE IN OFFICIAL HOLDINGS OF GOLD AND U.S. DOLLARS	−792	+45	−43	+1,028	+556	−71
E. CHANGE IN OFFICIAL HOLDINGS	−743	+496	+134	+694	+39	+80

[1] Includes official contributions in kind. [2] Includes errors and omissions.

4.—Current Account Transactions between Canada and the United States, 1947-52

(Millions of Canadian Dollars)

Item	1947	1948	1949	1950	1951	1952p
A. Current Receipts—						
Merchandise exports (adjusted)	1,061	1,508	1,521	2,046	2,326	2,345
Net exports of non-monetary gold	99	119	139	163	150	150
Travel expenditure	241	267	267	260	258	258
Interest and dividends	36	37	40	50	57	87
Freight and shipping	104	131	126	157	164	163
All other current receipts	171	185	176	201	223	288
Totals, Current Receipts	1,712	2,247	2,269	2,877	3,178	3,291
B. Current Payments—						
Merchandise imports (adjusted)	1,951	1,797	1,899	2,093	2,842	2,813
Travel expenditure	152	113	165	193	246	294
Interest and dividends	274	267	325	411	382	344
Freight and shipping	221	213	193	240	276	288
All other current payments	248	250	288	340	383	405
Totals, Current Payments	2,846	2,640	2,870	3,277	4,129	4,144
C. Current Account Balance	−1,134	−393	−601	−400	−951	−853

5.—Current Account Transactions between Canada and the United Kingdom, 1947-52

(Millions of Canadian Dollars)

Item	1947	1948	1949	1950	1951	1952p
A. Current Receipts—						
Merchandise exports (adjusted)	749	703	701	469	636	727
Travel expenditure	7	9	11	7	8	10
Interest and dividends	8	9	9	6	30	29
Freight and shipping	114	105	89	61	91	95
All other current receipts	89	96	87	47	56	56
Totals, Current Receipts	967	922	897	590	821	917
B. Current Payments—						
Merchandise imports (adjusted)	182	287	300	399	417	350
Travel expenditure	9	12	17	19	20	25
Interest and dividends	53	50	55	54	57	56
Freight and shipping	32	34	32	36	43	40
All other current payments	58	53	47	58	61	69
Totals, Current Payments	334	436	451	566	598	540
C. Current Account Balance	+633	+486	+446	+24	+223	+377

6.—Capital Transactions between Canada and the United States,[1] 1949-52

(Millions of Canadian Dollars)

Item	1949	1950	1951	1952p
A. Current Account Balance	−601	−400	−951	−853
B. Capital Account—				
Direct investments in Canada	+84	+200	+270	+306
Canadian direct investments abroad	+16	+41	−4	−42
New issues of Canadian securities	+105	+210	+404	+317
Retirements of Canadian securities	−136	−263	−159	−75
Net trade in outstanding Canadian securities	+25	+362	+20	−105
Transactions in foreign securities	+16	+73	+17	+2
Change in Canadian dollar holdings of foreigners	−8	+89	−53	−36
Other capital movements[2]	−38	+249	+59	−442
Net capital movement	+64	+961	+554	−75
Balance settled by exchange transfers	+671	+133	+436	+1,008
C. Change in Official Holdings of Gold and U.S. Dollars	+134	+694	+39	+80

[1] Includes some capital transactions on account of "other overseas countries". [2] Includes errors and omissions.

Section 2.—Travel Between Canada and Other Countries

The total number of persons crossing the International Boundary into Canada in 1952 was nearly 48,000,000, an increase of more than 4,000,000 over the previous record established in 1951. American travellers accounted for over 26,000,000 of the entries, and nearly 22,000,000 were residents of Canada returning after visits to the United States.

Although there were more visitors to Canada from the United States than ever before, there was not a corresponding increase in the expenditures in Canada by American travellers. There were substantial increases, however, both in the number of Canadians travelling in the United States and in their expenditures in that country. Consequently, the principal change in Canada's travel account in 1952 was the excess of payments over receipts in the account with the United States which appeared for the first time. A credit balance of $154,000,000 in 1948, when Canadian expenditures were restricted, was reduced progressively year by year to only $12,000,000 in 1951 and was replaced by a debit balance of $37,000,000 in 1952.

Compared with 1951, there was an increase of nearly 3,000,000 in the number of Canadian travellers returning during 1952 after visiting the United States and an increase of over 1,000,000 in the number of United States residents entering Canada. Although the number of visits to Canada by residents of the United States exceeded visits of Canadians to the United States by nearly 5,000,000 or 22 p.c., expenditures by Canadians in the United States exceeded expenditures of Americans in Canada by nearly $37,000,000 or 14 p.c. Thus, residents of Canada spent an average of $20.08 per capita in the United States during 1952, and residents of the United States spent an average of $1.62 per capita in Canada. Rising purchases of merchandise by Canadian travellers in the United States made up a considerable part of the increase in expenditures.

There was also an adverse trend in the balance on overseas travel account during 1952, the increase in payments being higher than the increase in receipts. Canadians spent $42,000,000 in overseas countries in 1952, $8,000,000 more than in 1951, whereas expenditures in Canada of travellers from overseas countries increased by only $2,000,000. Thus, the debit balance in Canada's travel account with overseas countries advanced from $18,000,000 in 1951 to $24,000,000 in 1952. With the additional $37,000,000 debit balance in Canada's account with the United States, the total deficit was $61,000,000 in account with all countries.

United States Travel Expenditures in Canada.—Expenditures by residents of the United States travelling in Canada decreased by $1,000,000 from $258,000,000 in 1951 to $257,000,000 in 1952. Aggregate expenditures of the non-automobile traffic increased by $8,000,000 or 8 p.c. when compared with 1951. Expenditures of traffic by common carrier had reached $122,000,000 in 1949 and declined to $112,000,000 in 1950 and $106,000,000 in 1951. The increase in 1952, however, was not sufficient to offset a decrease of $9,000,000 in expenditures of non-residents travelling in Canada by automobile, the first decline to be registered since 1943. Such expenditures had risen year by year from a low of $17,000,000 in 1943 to a peak of $152,000,000 in 1951. Lower average expenditures per visit for both the non-permit and customs-permit travellers were recorded in 1952, the decrease being consistent for both types of travel and distributed throughout the year. Average expenditures for automobile travellers on customs permits (excluding

special classes such as commuters, summer residents, etc.) dropped sharply, the declines varying from less than $1 per car in British Columbia to over $12 per car in Alberta. The decline in average expenditure per car was the result of lighter spending per day, judging from the fact that the trend toward a shorter length of stay, established during the previous five-year period, was checked in 1952. The average length of stay for motorists travelling in Canada on customs permits increased from 4·51 days in 1951 to 4·62 days in 1952. The average length of stay in Canada for non-automobile traffic declined during 1952.

Average expenditures of persons entering Canada by rail, bus and boat were higher in 1952, more than counteracting a slight drop in average expenditures of travellers by air and those in the "other travellers" category. The increase in the average expenditure per person-day was fairly substantial because the average length of visit for persons arriving by common carrier declined during 1952.

Canadian Travel Expenditures in the United States.—Expenditures by residents of Canada travelling in the United States climbed sharply from $246,000,000 in 1951 to $294,000,000 in 1952, an increase of 19 p.c. Compared with 1948 when maximum exchange restrictions were in force, the 1952 amount represented an increase of $180,000,000, and compared with 1949 when restrictions had been reduced, the increase was $129,000,000 or nearly 80 p.c. This was a much greater increase than that reported for all personal expenditures by Canadians on goods and services, an item that rose by 31 p.c. in the same three-year period. An important influence on this trend was the removal of most exchange restrictions on travel in October 1950, and of those remaining at the end of 1951, together with the higher value of the Canadian dollar in 1952.

Expenditures of Canadian motorists travelling in the United States increased by nearly $25,000,000 in 1952, a gain of approximately 26 p.c. The greatest proportionate gain occurred in the two-day class where expenditures advanced $10,000,000 or 54 p.c. Higher average expenditures per visit in addition to a gain of 37 p.c. in volume contributed to this increase. In 1951, the two-day class made up 6 p.c. of the total cars returning to Canada, increasing to 7 p.c. in 1952. Shopping trips remaining close to the 48-hour period in the United States may have been responsible for a considerable portion of the gain in the two-day class. Purchases declared under the $100 customs exemption were $66,000,000 in 1952, an increase of nearly $20,000,000, and amounted to more than one-fifth of the total expenditures by Canadian travellers in the United States in that year.

Expenditures for the one-day class of automobile traffic increased from 1951 to 1952 in the same proportion as the volume, around 22 p.c. The gain in expenditures of the group staying more than two days in the United States was less pronounced than the gain in volume owing to a slight decline in the average expenditure per car. The average length of stay for cars staying over two days in the United States was also lower in 1952 than in 1951.

Expenditures of Canadians returning by rail increased by $17,000,000 in 1952 over 1951, a gain of 29 p.c., although the increase in volume was only 5 p.c. Average expenditure per person increased by approximately 22 p.c., the gain being evenly

distributed throughout the year. Expenditures of Canadians returning by bus increased by $3,000,000 in 1952 reflecting higher average expenditure per person. Expenditures of Canadians returning by air increased by approximately 19 p.c., the gain being in the same proportion as the increase in volume. Lower total expenditures of persons returning by boat and the "Other Travellers" were accounted for by lower average expenditures per person.

Travel Between Canada and Overseas Countries.—Visitors arriving in Canada direct from overseas countries numbered 22,000 in 1952, an increase of 21 p.c. over the previous year. In addition, an estimated 16,000 arrived from overseas countries via the United States, making a total of 38,000. Expenditures of these overseas travellers, including transportation costs paid to Canadian carriers, amounted to $18,000,000, a figure slightly higher than in 1950 and 1951 and about the same as in 1949.

In 1952, 54,800 residents of Canada returned via Canadian ports after visiting overseas countries, an increase of 24 p.c. over 1951. Those arriving via United States ports numbered 10,000, the total of 64,800 being an increase of 17 p.c. over the previous year. Canadian travel expenditures in overseas countries, including transportation costs to non-Canadian carriers, amounted to $42,000,000 in 1952, the highest ever recorded and an increase of 23 p.c. over 1951. Most of these expenditures were made in the United Kingdom and Europe. Expenditures in the United Kingdom increased from $20,000,000 in 1951 to $25,000,000 in 1952, and outlays in the OEEC (Organization of European Economic Co-operation) countries of Europe rose from $8,000,000 to $10,000,000 in the same comparison. Expenditures in other Commonwealth countries, amounting to $5,000,000 in 1952, were made mostly in Bermuda and the British West Indies.

As stated previously, the adverse balance on overseas travel account during 1952 amounted to $24,000,000, the highest on record.

7.—Expenditure of Foreign Travellers in Canada and Canadian Travellers Abroad, 1951 and 1952

Class of Traveller	1951			1952		
	Foreign Expenditure in Canada	Canadian Expenditure Abroad	Excess of Foreign Expenditure in Canada	Foreign Expenditure in Canada	Canadian Expenditure Abroad	Excess of Foreign Expenditure in Canada
	$'000	$'000	$'000	$'000	$'000	$'000
Travellers from and to overseas countries	16,000	34,000	−18,000	18,000	42,000	−24,000
Travellers from and to the United States—						
Automobile	151,600	93,876	+57,724	142,500	118,500	+24,000
Rail	43,600	58,258	−14,658	45,900	75,200	−29,300
Boat	10,500	3,905	+6,595	14,200	3,800	+10,400
Bus (exclusive of local bus)	17,700	48,793	−31,093	18,100	51,600	−33,500
Aircraft	22,200	22,113	+87	21,900	26,100	−4,200
Other (pedestrians, local bus, etc.)	12,400	19,000	−6,600	14,400	18,400	−4,000
Totals, United States	258,000	245,945	+12,055	257,000	293,600	−36,600
Totals, All Countries	**274,000**	**279,945**	**−5,945**	**275,000**	**335,600**	**−60,600**

8.—Summary of Highway Traffic at Canadian Border Points, by Province, 1951 and 1952

Province or Territory	Foreign Vehicles Inward					
	Non-Permit Class Local Traffic		Travellers' Vehicle Permits		Commercial Vehicles	
	1951	1952	1951	1952	1951	1952
	No.	No.	No.	No.	No.	No.
Atlantic Provinces	890,596	967,478	151,219	152,421	84,394	89,951
Quebec	287,626	289,369	384,156	393,507	45,307	43,110
Ontario	3,670,008	3,806,941	1,343,083	1,362,363	108,366	138,571
Manitoba	65,060	71,783	35,480	38,040	6,990	6,801
Saskatchewan	21,390	25,655	16,786	19,288	4,769	5,658
Alberta	17,029	19,847	37,454	42,743	3,924	3,988
British Columbia	105,542	109,917	247,801	262,550	14,707	14,606
Yukon Territory	992	2,263	3,622	7,253	333	1,051
Totals	**5,058,243**	**5,293,253**	**2,219,601**	**2,278,165**	**268,790**	**303,736**
Percentage increase, 1952 over 1951	+4·6		+2·6		+13·0	
	Canadian Vehicles Returning					
	After Stay of 24 Hours or Less		After Stay of Over 24 Hours		Commercial Vehicles	
	1951	1952	1951	1952	1951	1952
	No.	No.	No.	No.	No.	No.
Atlantic Provinces	902,396	1,071,888	28,780	31,698	83,786	91,690
Quebec	457,655	589,205	109,660	141,396	61,866	68,751
Ontario	1,177,829	1,368,502	219,886	263,158	118,984	136,040
Manitoba	88,115	115,966	32,649	44,498	12,424	16,975
Saskatchewan	41,741	55,101	20,929	31,011	10,396	13,731
Alberta	25,868	28,146	19,451	32,260	7,000	8,418
British Columbia	351,087	465,460	107,313	141,238	23,609	28,471
Yukon Territory	10	212	20	167	15	95
Totals	**3,044,701**	**3,694,480**	**538,688**	**685,426**	**318,080**	**364,171**
Percentage increase, 1952 over 1951	+21·3		+27·2		+14·5	

Tourist Information.—Tourist information generally is supplied by the Canadian Government Travel Bureau, Ottawa, while detailed information on the National Parks and Historic Sites is available from the Department of Northern Affairs and National Resources, Ottawa. For advice regarding specific provinces or particular cities or resorts, the tourist may apply to the provincial or municipal bureau of information concerned. (*See* Directory of Sources of Official Information in Chapter XXVIII under the heading "Tourist Trade".)

PART IV.—THE GOVERNMENT AND FOREIGN TRADE

Section 1.—Foreign Trade Service and Associated Agencies concerned with the Development of Foreign Trade*

Foreign trade contributes substantially to the welfare and prosperity of Canadians, largely because of the fact that the productive capacity of Canada is greater than the ability of its population to consume the output of farms, factories, forests, fisheries and mines. Every effort is made, therefore, to establish and maintain close commercial relations with other countries whose markets are essential to the

* Prepared in the several branches and divisions concerned and collated in the Information Branch, Department of Trade and Commerce, Ottawa.

Canadian economy. It is appreciated, however, that two-way trade should be encouraged in order that goods and services may be accepted in partial payment for the products Canada is in a position to export. Furthermore, many commodities that are not indigenous to this country have to be imported from abroad. Some of these are required for Canadian industrial processes and others may be classed as consumer goods necessary for the maintenance of a high standard of living.

Although many private firms have established connections in other countries that enable them to maintain a steady flow of goods in either direction, others require the assistance of government agencies in finding markets or sources of supply. Import and export controls, imposed by many countries for a variety of reasons, together with post-war foreign exchange difficulties, present problems that no single firm or even an association of manufacturers, exporters or importers can solve without assistance from government representatives.

The Department of Trade and Commerce and associated agencies are at the disposal of exporters and importers engaged directly in the development of Canada's commercial relations with other countries. Services obtainable from the various branches, divisions and agencies are described below.

Canadian Trade Commissioner Service.—The Canadian Trade Commissioner Service is one of the important instruments in the continuous effort to increase Canadian international trade, to give world-wide distribution to Canadian products and to locate the best sources of supply for imports. With headquarters at Ottawa, the Service maintains 49 offices in 40 countries, staffed with trained Canadian trade officials and commodity specialists. The work of the Trade Commissioners in the field is co-ordinated at Ottawa by four Area Trade Officers. These officers are familiar with every aspect of foreign trade in their geographical or political areas and are responsible to the Director of the Service for the collection, preparation and presentation of information on all trade matters in their respective territories.

Trade Commissioners bring together exporters and importers of Canada and other countries. They study potential markets for specific Canadian products and report on the exact kind of goods in demand, competitive conditions, trade and exchange regulations, tariffs, shipping and packaging requirements, labelling, etc. Inquiries for Canadian goods are passed to the Department at Ottawa or directly to interested Canadian firms. For the Canadian importer, Trade Commissioners seek sources of supply of a wide variety of goods and, where necessary, furnish information on the Canadian market to the foreign exporter. The preparation of economic and other reports for departmental use is an important activity for the Trade Commissioner, while much attention is given to the dissemination of information on the Canadian International Trade Fair, securing exhibitors and encouraging the visits of foreign buyers. Assistance is also given to Canadian exhibitors at overseas trade fairs and a constant liaison is maintained with foreign government trade departments.

In countries where Canada maintains a diplomatic mission as well as a trade office, Trade Commissioners form an integral part of the mission and assume the title of Commercial Counsellor or Commercial Secretary. In some foreign countries they act as Consuls General, Consuls or Vice-Consuls, according to their status as Foreign Service Officers.

In order to provide Canadian manufacturers, exporters and importers with up-to-date information concerning their territories more effectively than is possible by correspondence, tours of Canadian industrial centres are arranged from time to

time for Trade Commissioners. Such direct contacts enable specific problems to be discussed and, at the same time, serve to bring into focus for the Trade Commissioner the Canadian industrial picture as a whole. He thus returns to his post with a knowledge of current Canadian conditions and in a better position to assist in the development and extension of Canadian trade opportunities.

FOREIGN TRADE SERVICE REPRESENTATIVES ABROAD, AS AT OCT. 15, 1953

ARGENTINA.—C. S. Bissett, Commercial Counsellor, Canadian Embassy, Bartolomé Mitré 478, Buenos Aires. Territory includes Paraguay.

AUSTRALIA.—C. M. Croft, Commercial Counsellor for Canada, City Mutual Life Bldg., 60 Hunter Street, Sydney, N.S.W.

R. W. Blake, Commercial Secretary for Canada and Agricultural Secretary, 83 William Street, Melbourne.

BELGIAN CONGO.—A. B. Brodie, Canadian Government Trade Commissioner, Forescom Building, Leopoldville. Territory includes Angola and French Equatorial Africa.

BELGIUM.—T. J. Monty, Commercial Secretary, Canadian Embassy, 35 rue de la Science, Brussels. Territory includes Luxembourg.

BRAZIL.—C. R. Gallow, Commercial Secretary, Canadian Embassy, Edificio Metropole, Av. Presidente Wilson 165, Rio de Janeiro.

C. J. Van Tighem, Consul of Canada and Trade Commissioner, Canadian Consulate, Edificio Alois, Rua 7 de Abril 252, São Paulo.

CEYLON.—James J. Hurley, High Commissioner for Canada, Galle Face Hotel, Colombo.

CHILE.—M. R. M. Dale, Commercial Secretary, Canadian Embassy, 6th Floor, Av. General Bulnes, 129, Santiago.

COLOMBIA.—W. J. Millyard, Commercial Secretary, Canadian Embassy, Office 613, Av. Jimenez, No. 7-25, Bogota. Territory includes Ecuador.

CUBA.—G. A. BROWNE, Commercial Secretary, Canadian Embassy, Edificio Motor Centre, Calle Infanta 16, Havana.

DOMINICAN REPUBLIC.—R. E. Gravel, Canadian Government Trade Commissioner, Edificio Copello 410, Calle El Conde, Ciudad Trujillo. Territory includes Haiti and Puerto Rico.

EGYPT.—Acting Canadian Government Trade Commissioner, Osiris Building, Sharia Walda, Kasr-el-Doubara, Cairo. Territory includes Aden, Anglo-Egyptian Sudan, Cyprus, Ethiopia, Hashemite Jordan Kingdom and Saudi Arabia.

FRANCE.—Acting Commercial Secretary for Canada, 3 rue Scribe, Paris. Territory includes Algeria, French Morocco, French West Africa and Tunisia.

GERMANY —B. A. Macdonald, Commercial Counsellor, Canadian Embassy, 22 Zitelmannstrasse, Bonn.

GREECE.—H. W. Richardson, Commercial Secretary, Canadian Embassy, 31 Vassillissis Sophias Ave., Athens. Territory includes Israel and Turkey.

GUATEMALA.—J. C. Depocas, Canadian Government Trade Commissioner, 28, 5a Avenida Sud, Guatemala City. Territory includes Costa Rica, El Salvador, Honduras, Nicaragua, Panama and Canal Zone.

HONG KONG.—T. R. G. Fletcher, Canadian Government Trade Commissioner, Hong Kong and Shanghai Banking Corporation Building, Hong Kong. Territory includes China, Indo-China, Macao and Taiwan.

INDIA.—Richard Grew, Commercial Counsellor, Office of the High Commissioner for Canada, 4 Aurangzeb Road, New Delhi.

Acting Commercial Secretary for Canada, Gresham Assurance House, Mint Road, Bombay.

FOREIGN TRADE SERVICE REPRESENTATIVES ABROAD—continued

INDONESIA.—W. D. Wallace, Commercial Secretary, Canadian Embassy, Tanah Abang Timur 2, Djakarta.

IRELAND.—T. Grant Major, Commercial Counsellor, 66 Upper O'Connell Street, Dublin.

ITALY.—S. G. MacDonald, Commercial Counsellor, Canadian Embassy, Via Saverio Mercadante 15, Rome. Territory includes Libya, Malta and Yugoslavia.

JAMAICA.—M. B. Palmer, Canadian Government Trade Commissioner, Canadian Bank of Commerce Chambers, Kingston. Territory includes Bahamas and British Honduras.

JAPAN.—J. C. Britton, Commercial Counsellor, Canadian Embassy, Tokyo. Territory includes Korea.

LEBANON.—G. F. G. Hughes, Canadian Government Trade Commissioner, Centre Urbain Emir Beshir, Batiment A, Rue Emir Beshir, L'Azarieh, Beirut. Territory includes Iraq and Syria.

MEXICO.—M. T. Stewart, Commercial Counsellor, Canadian Embassy, Edificio Internacional, Paseo de la Reforma, Mexico, D.F.

THE NETHERLANDS.—Acting Commercial Secretary, Canadian Embassy, Sophialaan 1-A, The Hague.

NEW ZEALAND.—L. S. Glass, Commercial Secretary, Office of the High Commissioner for Canada, Government Life Insurance Building, Wellington. Territory includes Fiji and Western Samoa.

NORWAY.—J. L. Mutter, Commercial Secretary, Canadian Legation, Fridtjof Nansens Plass 5, Oslo. Territory includes Denmark and Greenland.

PAKISTAN.—R. K. Thomson, Commercial Secretary, Office of High Commissioner for Canada, Hotel Metropole, Victoria Road, Karachi. Territory includes Afghanistan and Iran.

PERU.—H. J. Horne, Commercial Secretary, Canadian Embassy, Edificio Boza, Carabaya 831, Plaza San Martin, Lima. Territory includes Bolivia.

PHILIPPINES.—F. H. Palmer, Consul General of Canada and Trade Commissioner, Ayala Building, Juan Luna Street, Manila.

PORTUGAL.—L. M. Cosgrave, Commercial Counsellor, Canadian Legation, Avenida de Praia da Vitoria 48-1°D, Lisbon. Territory includes The Azores and Madeira.

SINGAPORE.—D. S. Armstrong, Canadian Government Trade Commissioner, Room D-5, Union Building, Singapore. Territory includes Brunei, Burma, Federation of Malaya, North Borneo, Sarawak and Thailand.

SOUTH AFRICA.—K. F. Noble, Canadian Government Trade Commissioner, Mutual Building, Harrison Street, Johannesburg. Territory includes Southern Rhodesia, Northern Rhodesia, Nyasaland, Portuguese East Africa, Kenya, Tanganyika, Uganda and Zanzibar.

A. W. Evans, Canadian Government Trade Commissioner, Grand Parade Centre Building, Adderley Street, Cape Town. Territory includes South-West Africa, Mauritius and Madagascar.

SPAIN.—E. H. Maguire, Commercial Secretary, Canadian Embassy, Madrid. Territory includes Balearic Islands, Canary Islands, Gibraltar, Rio de Oro, Spanish Morocco and Tangier.

SWEDEN.—F. W. Fraser, Commercial Counsellor, Canadian Legation, Strandvagen, 7-C, Stockholm. Territory includes Finland.

SWITZERLAND.—Yves Lamontagne, Commercial Counsellor, Canadian Embassy, Kirchenfeldstrasse 88, Berne. Territory includes Austria, Czechoslovakia and Hungary.

TRINIDAD.—P. V. McLane, Canadian Government Trade Commissioner, Colonial Building, 72 South Quay, Port-of-Spain. Territory includes Barbados, Windward and Leeward Islands, British Guiana, Dutch Guiana, French Guiana, and French West Indies.

FOREIGN TRADE SERVICE REPRESENTATIVES ABROAD—continued

UNITED KINGDOM.—R. P. Bower, Commercial Counsellor, Office of the High Commissioner for Canada, Canada House, Trafalgar Square, London, S.W.1.

R. Campbell Smith, Commercial Secretary, Office of the High Commissioner for Canada, Canada House, Trafalgar Square, London, S.W.1. Territory includes Iceland and British West Africa (Gambia, Gold Coast, Nigeria and Sierra Leone).

M. J. Vechsler, Canadian Government Trade Commissioner, Martins Bank Building, Water Street, Liverpool.

T. Grant Major, Canadian Government Trade Commissioner, 36 Victoria Square, Belfast. Territory includes Northern Ireland.

UNITED STATES.—R. G. C. Smith, Commercial Counsellor, Canadian Embassy, 1746 Massachusetts Ave., N.W., Washington, D.C.

A. E. Bryan, Deputy Consul General of Canada and Trade Commissioner, Canadian Consulate General, 620 Fifth Avenue, New York, N.Y.

G. S. Patterson, Consul General of Canada, Canadian Consulate General, 532 Little Building, 80 Boylston Street, Boston 16, Mass.

D. S. Cole, Consul General of Canada, Canadian Consulate General, Chicago Daily News Building, 400 West Madison Street, Chicago, Ill.

B. C. Butler, Consul of Canada and Trade Commissioner, Canadian Consulate, 1035 Penobscot Building, Detroit 26, Mich.

Leslie G. Chance, Consul General of Canada, Canadian Consulate General, Associated Realty Building, 510 West Sixth St., Los Angeles 14, Cal.

G. A. Newman, Consul of Canada and Trade Commissioner, Canadian Consulate, 215-217 International Trade Mart, New Orleans, La.

C. C. Eberts, Consul General of Canada, Canadian Consulate General, 3rd Floor, Kohl Building, 400 Montgomery Street, San Francisco, Cal.

Norman Senior, Consul General of Canada, Canadian Consulate General, The Tower Building, 7th Ave. at Olive Way, Seattle, Wash.

URUGUAY.—W. Gibson-Smith, Commercial Secretary, Canadian Embassy, Montevideo.

VENEZUELA.—J. A. Stiles, Commercial Secretary, Canadian Embassy, Edificio Pan American, Puente Urapal, Caracas. Territory includes Netherlands Antilles.

AGRICULTURAL REPRESENTATIVES

ARGENTINA.—W. F. Hillhouse, Acting Agricultural Secretary, Canadian Embassy, Bartolomé Mitré 478, Buenos Aires. Territory includes Paraguay and Uruguay.

AUSTRALIA.—R. W. Blake, Agricultural Secretary for Canada, 83 William Street, Melbourne.

GERMANY.—Wm. Van Vliet, Agricultural Secretary, Canadian Embassy, 22 Zitelmannstrasse, Bonn.

ITALY.—Dr. C. F. Wilson, Agricultural Counsellor, Canadian Embassy, Via Saverio Mercadante 15, Rome.

THE NETHERLANDS.—C. J. Small, Acting Agricultural Secretary, Canadian Embassy, Sophialaan 1-A, The Hague. Territory includes Belgium, Denmark and Luxembourg.

UNITED KINGDOM.—D. A. B. Marshall, Commercial Secretary (Agricultural), Office of the High Commissioner for Canada, Canada House, Trafalgar Square, London, S.W.1.

UNITED STATES.—Dr. W. C. Hopper, Agricultural Counsellor, Canadian Embassy, 1746 Massachusetts Avenue, N.W., Washington, D.C.

VENEZUELA.—D. B. Laughton, Assistant Agricultural Secretary and Vice-Consul, Canadian Embassy, Edificio Pan American, Puente Urapal, Caracas. Territory includes Colombia.

FISHERIES REPRESENTATIVES

ITALY.—M. S. Strong, Commercial Secretary (Fisheries), Canadian Embassy, Via Saverio Mercadante 15, Rome.

FOREIGN TRADE SERVICE REPRESENTATIVES ABROAD—concluded

FISHERIES REPRESENTATIVES—concluded

JAMAICA.—E. M. Gosse, Canadian Trade Commissioner (Fisheries), Canadian Bank of Commerce Chambers, Kingston.

UNITED STATES.—M. B. Bursey, Consul of Canada and Trade Commissioner (Fisheries), Canadian Consulate General, 620 Fifth Avenue, New York, N.Y.

TIMBER REPRESENTATIVE

UNITED KINGDOM.—G. H. Rochester, Commercial Secretary (Timber), Office of the High Commissioner for Canada, Canada House, Trafalgar Square, London, S.W.1.

Commodities Branch.—The Commodities Branch is responsible for maintaining the close liaison with industry and the export and import trades in Canada that is essential to foreign trade promotion. It contains commodity specialists organized in the following sections: Machinery and Plant Equipment, Non-ferrous Metals and Industrial Minerals, Iron and Steel, Automotive and Agricultural Equipment, Wood and Wood Products, Chemicals, Oils and Minerals, Textiles, Leather and Rubber, Imported Fats, and a General Products Section covering a wide range of miscellaneous items such as toys, electrical appliances, office equipment, handicrafts and hardware. The Commodity Officers maintain contact with industry by personal visits and exchange of correspondence, and follow conditions abroad by communication with Canadian Government Trade Commissioners.

The work of the commodity specialists is co-ordinated by the Directors of the Export and Import Divisions. It is the function of the former to call the attention of Trade Commissioners to changes in supply conditions in Canada and, in turn, to see that market news received from Trade Commissioners is relayed to Canadian manufacturers and exporters. Close attention is paid to opportunities for developing sales abroad for Canadian products, and exporters are informed about regulations governing foreign trade.

The Director of the Import Division relays information obtained from Trade Commissioners on foreign supply conditions and directs business to the attention of the import trade in Canada. He also directs the attention of Trade Commissioners to special requirements in the Canadian market as these arise. The Division is concerned particularly in locating advantageous sources of supply of materials for manufacturers and in promoting Canadian interests in international commodity markets.

The Transportation and Trade Services Division of the Branch comprises a Transportation and Communications Section, an Export and Import Permit Section, a Token Import Plan Section, and a Directories Section. The Transportation and Communications Section maintains an active liaison with railway and steamship operators and agents, marine insurance companies, forwarding firms and brokerage houses, for the purpose of assisting and facilitating movements of merchandise, either import or export. The Section also maintains a close review on action by foreign governments, changes of rates and regulations, etc., such as would affect the transportation of Canadian goods or affect Canadian business interests.

The Export and Import Permit Section is responsible for the administration of permit control on the movement of scarce commodities and strategic materials subject to regulation under the powers of the Export and Import Permits Act.

Control is exercised over the export of arms and munitions, implements of war, atomic energy materials and other strategic items. In collaboration with foreign governments, this Section also operates an import certificate and delivery verification procedure, instituted as an insurance against critically important shipments being diverted to undesirable destinations. The number and types of commodities under control change materially from time to time, reflecting the constant effort to remove restrictions as soon as the necessity for them disappears. Directories are maintained, which include lists of Canadian manufacturers and other exporters, together with details of the products they are in a position to sell abroad, and also lists of Canadian importing houses and details of their foreign connections and their interests in the import field. These directories are confidential and are supplied only to Canadian Government Trade Commissioners.

Agriculture and Fisheries Branch.—The main functions of this Branch include: (1) trade promotion relating to agricultural and fisheries products; (2) the programming, receiving and disseminating of information on foreign agriculture and fisheries; and (3) acting as a focal point for liaison on agricultural and fisheries matters with the Department of Agriculture, the Department of Fisheries, the Canadian Wheat Board, and other government departments and boards.

In the field of trade promotion, the Grain Division and the Food and Agriculture Division assist Canadian exporters of agricultural and fisheries products in finding markets in other countries. Canadian firms are supplied with information with respect to market conditions and requirements in foreign markets, competition from other sources of supply, exchange and tariff restrictions and other related information. Canadian Trade Commissioners throughout the world are kept fully informed on such matters as production and price trends in Canada, quantities of commodities available for export and sources of supply.

The Grain Division deals specifically with matters relating to Canada's grain trade. Assistance is rendered foreign governments and other buyers in the purchase of Canadian wheat, flour and other cereals. Close contact is maintained with the flour millers as well as daily liaison with the Canadian Wheat Board.

The Commodity Officers concerned with live stock, live-stock products, meat, dairy and poultry products, fruits and vegetables, and fish and fisheries products, keep in contact with the trade and trade organizations dealing with these commodities. They are in close touch with the officers of other departments of government concerned with the disposition of Canadian production surplus to domestic requirements, and who are responsible for such items as health standards, grading and inspection.

A great deal of information pertaining to foreign agriculture and fisheries is received from the Canadian Trade Commissioners. This material, which reflects foreign government policy, production trends and market information, is processed in the Branch and distributed to the departments of government concerned and others interested. Much of it is published in *Foreign Trade*. The Trade Commissioner Service includes a number of officers who deal specifically with agricultural and fisheries matters. Some of these officers are located in Canada's most important export outlets and others in those countries with which Canada competes on world markets, particularly in such commodities as wheat, coarse grains, live stock, meats and dairy products. The information received from the agricultural officers and other Trade Commissioners on foreign agricultural developments is distributed in Canada through publications issued by the Economics Division of the Department

of Agriculture and by direct communication with producers and exporters. Fisheries information from abroad is passed immediately to the Department of Fisheries, the provincial departments concerned, the Fisheries Council, and to fish exporters.

International Trade Relations Branch.—This Branch deals with a wide variety of current trade issues, ranging from the analysis of developments in international commercial relations to assisting in the reopening of dollar markets for Canadian products in Europe and to finding practical solutions for tariff difficulties encountered by Canadian exporters. The Branch has under constant review Canada's trading relations with other countries, and studies the effects of the work of such international organizations as the European Payments Union and the Organization for European Economic Co-operation on Canadian and world trade.

Trade treaties are under continuous examination by the Branch, which is responsible for the preparation of material for trade and tariff negotiations with other countries. Material is collected on foreign tariffs, customs legislation, taxes affecting trade, import licensing, exchange regulations, documentation, sanitation, marking and labelling requirements, and measures pertaining to quotas, embargoes and other import restrictions. These data are analysed, interpreted, clarified and made available in easily comprehensible form to exporters, government officials and other export interests.

Exporters who encounter difficulties resulting from the trade policies or regulations of other countries are given expert advice and interpretations of foreign regulations. Also, the Branch initiates official consultations with other governments respecting such problems.

Economics Division.—The Economics Division maintains a continuous review of business conditions in Canada. To do this, it is necessary to analyse foreign trade trends and to appraise their effect on economic development in Canada. Other aspects of the general economic situation considered include investment, consumption, production, prices, incomes and employment, as well as conditions in industries and localities.

Industrial Development Division.—This Division co-ordinates the assistance offered by the Federal Government in the establishment of new industries in Canada. Acting in this capacity, the Division provides information on a multiplicity of matters pertaining to industry establishment and assists in solving the variety of problems encountered by Canadian and foreign businessmen.

The Division also aids those established firms that wish to expand into new lines of production. Inquiries from foreign firms and individuals regarding the manufacture of products in Canada under licence or royalty are screened and brought to the attention of Canadian manufacturers interested in producing additional items.

The Division acts in an advisory capacity to the Immigration Branch of the Department of Citizenship and Immigration regarding the admission of individuals, other than those from Commonwealth countries and the United States, who wish to establish new industries in Canada.

The Division works in close co-operation with a widespread network of organizations throughout Canada, including industrial development departments of the provinces, municipalities, railways, banks, power companies, chambers of commerce, boards of trade, and the Canadian Manufacturers' Association.

Information Branch.—The principal function of the Information Branch is to furnish the commercial community of Canada with information concerning the assistance that exporters and importers may obtain from the Department of Trade and Commerce. The Branch is responsible also for stimulating a better appreciation by the general public of the importance of trade to the welfare of Canada. The attention of exporters and potential exporters is directed to opportunities for the disposal of their products in markets abroad, and of importers to the sources of supply for raw materials and consumer goods unobtainable in Canada. Its principal educational and informative medium is *Foreign Trade*, the weekly publication of the Foreign Trade Service, in which are reproduced reports of Canadian Trade Commissioners on conditions in their respective territories, articles by Head Office personnel and economists of the Dominion Bureau of Statistics, news items and charts portraying trade trends. Press releases are prepared and distributed to newspapers at home, and material of a similar character dispatched to Canadian Trade Commissioners for distribution to newspapers abroad. Pamphlets and brochures are prepared to supplement other information on foreign markets, sources of supply, documentation, regulations and trade restrictions. Assistance is rendered to correspondents of newspapers and periodicals at home and abroad in the preparation of articles pertaining to various phases of Canada's foreign trade. The educational and promotional work of this Branch is supported by advertising at home and abroad, through the daily press, periodicals and trade papers as well as films and radio.

Canadian Government Exhibition Commission.—The Canadian Government Exhibition Commission by graphic media of all kinds publicizes Canada and helps to sell Canadian products abroad. The Commission is solely responsible for the construction and administration of Federal Government exhibits at international expositions, trade fairs and displays outside Canada and of international expositions and trade fairs held in Canada and sponsored by the Government of Canada. The Commission's first fulfilment of the latter responsibility was the development of the Canadian International Trade Fair, held annually at Toronto since 1948.

The Commission also co-operates with Canadian exporters in securing representation for goods at trade fairs and trade promotional displays and is equipped to advise individual Canadian companies in the preparation of exhibits. It distributes at its various presentations large quantities of literature produced by other government departments and agencies.

Export Credits Insurance Corporation.—The Export Credits Insurance Corporation was established under the provisions of the Export Credits Insurance Act, 1944, and as amended in August 1946 and May 1948. The Corporation, which is administered by a board of directors including the Deputy Minister of Trade and Commerce, the Deputy Minister of Finance and the Governor of the Bank of Canada, insures exporters against losses arising from credit and political risks involved in the export or an agreement for the export of goods. Policies are generally issued on a yearly basis, covering exporters' sales to all countries. The main risks covered include: insolvency or protracted default on the part of the buyer; exchange restrictions in the buyer's country preventing the transfer of funds to Canada; cancellation of an import licence or the imposition of restrictions on the importation of goods not previously subject to restrictions; the occurrence of war between the buyer's country and Canada, or of war, revolution, etc., in the buyer's country.

The insurance is available under two main classifications—general commodities and capital goods. Coverage for general commodities can be procured by exporters under two types of policies: (1) the Contracts Policy, which insures an exporter against loss from the time he books the order until payment is received; or (2) the Shipments Policy, obtainable at lower rates of premium and covering the exporter from the time of shipment until payment is received.

Insurance of capital goods offers protection to exporters dealing in plant equipment, heavy machinery, etc., where extended credit for lengthy periods is often necessary. Specific policies are issued for transactions involving capital goods but the general terms and conditions are the same as those applicable to policies for general commodities.

The Corporation insures exporters on a co-insurance basis up to a maximum of 85 p.c. of the gross invoice value of shipments. This co-insurance basis also operates in the distribution of recoveries obtained after payment of a loss, and these recoveries are shared by the Corporation and the exporter in the proportions of 85 and 15 p.c., respectively.

The Corporation, from its inception to Dec. 31, 1952, issued policies having a total value of $374,549,750. Claims paid to exporters during the same period amounted to $1,702,705. A large majority of these claims resulted from exchange transfer difficulties, with relatively few arising from insolvencies. Recoveries made amounted to $592,403. Excess of income over expenditure to Dec. 31, 1952, was $1,631,617, which was added to the Corporation's underwriting reserve.

International Economic and Technical Co-operation Division.—The administration of Canada's participation in the Colombo Plan—a Commonwealth effort to help the peoples of south and southeast Asia to raise their standards of living and productivity—is the responsibility of this Division. This contribution is of two types—capital aid and technical co-operation. Under capital assistance, grants of goods or services are made to countries in the area on a government-to-government basis. Technical co-operation embraces the training of Asian peoples in a variety of fields in Canada and the supplying of Canadian experts to advise and instruct abroad. The Division also assists the United Nations and its specialized agencies in the recruiting of technical experts and in the arrangement of courses of instruction for trainees sent to Canada for study. For the year ended Mar. 31, 1954, $25,000,000 was voted by Parliament for capital aid and an additional $400,000 was provided for the Colombo Plan technical co-operation program.

Section 2.—The Development of Tariffs

A short sketch of trade and tariffs prior to Confederation is given in the 1940 Year Book, pp. 480-482. The 1942 Year Book, pp. 427-428, traces the development from Confederation to the adoption in 1904 of the present form of preferential tariff.

Owing to the limitations of space in the Year Book, it has been necessary, in regard to tariffs, to adopt the policy of confining any detail regarding commodities and countries to tariff relationships in force at present and to summarize as much as possible historical data and details of preceding tariffs, giving references to those editions of the Year Book where extended treatments can be found.

Subsection 1.—The Canadian Tariff Structure*

The Canadian Tariff consists mainly of three sets of tariff rates—British Preferential, Most-Favoured-Nation, and General. British Preferential rates consist of a specially low rate of duty on almost all imported dutiable commodities and apply to specified goods from Commonwealth countries if shipped direct to Canada. On certain goods special rates may be applied under the British Preferential Tariff; these special rates are lower on those goods than the ordinary British Preferential scale. Most-Favoured-Nation tariff rates apply to goods from countries that have been accorded tariff treatment more favourable than the General Tariff but which are not entitled to the British Preferential rate. To certain non-Commonwealth countries, a special concession under the Most-Favoured-Nation rates may be granted and rates lower than those of the Most-Favoured-Nation tariff may apply by agreement. The General Tariff is levied on all imports that do not qualify for Preferential or Most-Favoured-Nation tariff treatment.

In all cases where the tariff applies, there are provisions for drawbacks of duty on imported materials used in the manufacture of products later exported. The purpose of these drawbacks is to give Canadian manufacturers a fair basis of competition with foreign producers of similar goods where it is felt to be warranted. A second class of drawbacks known as 'home consumption' drawbacks apply mainly to imported materials and parts used in the production of specified classes of goods manufactured for home consumption.

Too often one-sided competition arises out of unfair practices, such as dumping or the manipulation of exchange advantages. Wide powers have been given, in certain instances, to supplement tariff provisions. Thus, the Minister of National Revenue or, through him, the customs officials have been empowered at times to establish a 'fair market value' as a basis of applying duties to be collected. The term 'fair market value' is vague and open to various interpretations and has been frequently criticized but, in exceptional cases of imports from General Tariff countries, arbitrary valuations have proved effective.

The exchange situation as it affects the Tariff is a different problem. A foreign currency that has become considerably depreciated in relation to the Canadian dollar enables the country concerned to export goods to Canada under a very definite advantage and customs officials have been given power, under conditions such as these, to value imports from such countries at a "fair rate of exchange". While this power has been applied to meet extraordinary conditions in the past, it has now been modified by clauses in trade agreements drawn up with individual countries.

The Tariff Board.—The Tariff Board, constituted by the Tariff Board Act, 1931, consists of three members, one of whom is chairman and another vice-chairman. The duties and powers of the Board derive from three Statutes of Canada: the Tariff Board Act, the Customs Act, and the Excise Tax Act.

Under the Tariff Board Act, the Board makes inquiry into and reports upon any matter in relation to goods that, if brought into Canada or produced in Canada, are subject to or exempt from duties of customs or excise and on which the Minister of Finance desires information. The investigation into any such matter may include inquiry as to the effect that an increase or decrease of the existing rate of duty upon a given commodity might have upon industry or trade and the extent to which

* The schedules and rates in force at any particular time may be obtained from the Department of National Revenue, Ottawa, which is responsible for administering the Canadian Tariff.

the consumer is protected from exploitation. It is also the duty of the Board to inquire into any other matter in relation to the trade and commerce of Canada that the Governor in Council sees fit to refer to the Board for inquiry and report. Usually the references take one of two forms: authority for review of sections of the Customs Tariff relating to an entire industry, or for investigation in respect of specified commodities. Reports are tabled in Parliament.

Under the provisions of the Customs Act and the Excise Tax Act, the Tariff Board is authorized to act as a tribunal to hear appeals from rulings of the Department of National Revenue in respect of matters of administration including those of excise taxes, tariff classification, value for duty, and drawback of customs duties. Declarations of the Board on appeals on questions of fact are final and conclusive, with provision for appeal on questions of law to the Exchequer Court of Canada. Tariff references and appeals receive public hearings at which interested parties submit oral statements and written briefs relating to matters under consideration.

Subsection 2.—Tariff and Trade Arrangements with other Countries, as at June 1, 1953

Canada's tariff arrangements with other countries fall into three main categories: trade agreements with a number of Commonwealth countries; the General Agreement on Tariffs and Trade (GATT); and other agreements and arrangements.

The Commonwealth countries with which Canada has trade agreements are as follows: Australia, British West Indies, Ceylon, Ireland, New Zealand, Union of South Africa, and the United Kingdom and Colonies. These agreements have been modified and supplemented by the GATT. Preferential arrangements are also in force with respect to Southern Rhodesia, India and Pakistan.

Canada exchanges most-favoured-nation treatment with 24 countries under the General Agreement on Tariffs and Trade. The Protocol of Provisional Application of the General Agreement on Tariffs and Trade was signed by Canada on Oct. 30, 1947, and brought the Agreement into force on Jan. 1, 1948.

The GATT is a multilateral trade agreement and the most-favoured-nation rates of duty bound under it apply equally to all signatories. The Agreement consists of three parts: the general provisions related to the schedules of tariff concessions and the exchange of most-favoured-nation treatment; the provisions relating to a code of regulations for conducting international trade; and the administrative provisions of the Agreement.

Under the new system of multilateral tariff negotiations, initiated under the GATT, three conferences have taken place: at Geneva, Switzerland, in 1947; at Annecy, France, in 1949; and at Torquay, England, in 1950-51. The tariff concessions Canada granted and received at the Geneva Conference are described in the 1948-49 Year Book, pp. 875-877, and those negotiated at Annecy are discussed in the 1950 Year Book, pp. 968-970. The Torquay negotiations were discussed in the 1952-53 edition, pp. 996-997. The existing tariff concessions remain in force until Jan. 1, 1954, and thereafter, unless modified in accordance with the terms of the Agreement.

Canada already had most-favoured-nation trade agreements with a number of GATT members prior to the effective date of the General Agreement. These agreements with individual countries continue in force in conjunction with the General Agreement. As an exception, however, the Canada-U.S. Trade Agreement of 1938 is suspended for so long as both countries continue to be contracting parties to GATT.

Tariff and Trade Arrangements with Commonwealth Countries, as at June 1, 1953

Country	Agreement	Terms
AUSTRALIA	Trade Agreement signed July 8, 1931; in force Aug. 3, 1931. GATT effective Jan. 1, 1948.	Agreement includes schedules of tariff rates and exchange of British preferential rates on items not scheduled. May be terminated on six months notice.
BRITISH WEST INDIES (BAHAMAS, BARBADOS, BRITISH HONDURAS, JAMAICA, LEEWARD AND WINDWARD ISLANDS, TRINIDAD AND TOBAGO), BERMUDA AND BRITISH GUIANA.	Trade Agreement signed July 6, 1925, in force Apr. 30, 1927; Canadian notice of termination of Nov. 23, 1938, was replaced by notice of Dec. 27, 1939, which continued the Agreement. The British West Indies, with the exception of Jamaica, are contracting parties to GATT.	The parties exchange specified tariff preferences. Agreement may be terminated on six months notice.
CEYLON	Ceylon is a party to the Trade Agreement of 1937 between United Kingdom and Canada. GATT effective July 29, 1948.	Canada and Ceylon exchange preferential tariff treatment.
INDIA	Since 1897, Canada has unilaterally accorded British preferential treatment to India but without contractual obligation. GATT effective July 8, 1948.	
IRELAND	Trade Agreement signed Aug. 20, 1932; in force Jan. 2, 1933.	Canada grants British preferential tariff in return for preferential rates where such exist and for most - favoured-nation rates on non-preferential items. May be terminated on six months notice.
NEW ZEALAND	Trade Agreement signed Apr. 23, 1932; in force May 24, 1932. GATT effective July 26, 1948.	The parties exchange specific preferences on scheduled goods and reciprocally concede British preferential rates on items not scheduled. May be terminated on six months notice.
PAKISTAN	Since 1947, Canada has unilaterally accorded Pakistan British preferential treatment but without contractual obligation. GATT effective July 30, 1948.	
SOUTHERN RHODESIA	Trade Agreement of Aug. 20, 1932, was terminated on Jan. 2, 1938, on notice from Southern Rhodesia. Tariff treatment established therein continues to be reciprocally accorded. GATT effective May 19, 1948.	Canada grants British preferential treatment and Southern Rhodesia extends tariff preferences granted to Commonwealth countries other than the United Kingdom.
UNION OF SOUTH AFRICA.	Trade Agreement signed Aug. 20, 1932; in force Oct. 13, 1932. Exchange of notes Aug. 2-31, 1935; effective retroactive from July 1, 1935. GATT effective June 14, 1948.	Agreement includes schedules of tariff preferences granted by each country. May be terminated on six months notice. Exchange of most - favoured - nation treatment. May be terminated on six months notice.

Tariff and Trade Arrangements with Commonwealth Countries, as at June 1, 1953—concluded

Country	Agreement	Terms
UNITED KINGDOM.....	Trade Agreement signed Feb. 23, 1937; in force Sept. 1, 1937. Modified by an exchange of letters of Nov. 16, 1938, and an exchange of notes Oct. 30, 1947. GATT effective Jan. 1, 1948.	Various concessions by both countries including exchange of preferential tariff rates (some minor reservations by Canada). Extends to Colonial Empire.

Tariff and Trade Arrangements with Non-Commonwealth Countries, as at June 1, 1953

Country	Agreement	Terms
ARGENTINA.....	Trade Agreement signed Oct. 2, 1941; provisionally in force Nov. 15, 1941.	Exchange of most - favoured - nation treatment. Provisional application may be terminated on three months notice.
AUSTRIA.....	GATT effective Oct. 19, 1951.	
BENELUX (BELGIUM, LUXEMBOURG AND THE NETHERLANDS).	Convention of Commerce with Belgium (including Luxembourg and Belgian colonies) entered into effect Oct. 22, 1924. The Convention was suspended during the War but reinstated by exchange of notes Feb. 1 and 5, 1946; includes Netherlands Antilles and Surinam. GATT covering Benelux as a whole effective Jan. 1, 1948.	Exchange of most - favoured - nation tariff treatment. May be terminated on one years notice.
BOLIVIA.....	Order in Council of July 20, 1935, accepted Article 15 of the United Kingdom — Bolivia Treaty of Commerce of Aug. 1, 1911.	Exchange of most - favoured - nation treatment. May be terminated on one years notice.
BRAZIL.....	Trade Agreement signed Oct. 17, 1941; provisionally in force from date of signing and definitively on Apr. 16, 1943. GATT effective July 31, 1948.	Exchange of most - favoured - nation treatment. May be terminated on six months notice.
BURMA.....	GATT effective July 29, 1948.	
CHILE.....	Trade Agreement signed Sept. 10, 1941; in force provisionally Oct. 15, 1941, and definitively on Oct. 29, 1943. GATT effective Mar. 16, 1948.	Exchange of most - favoured - nation treatment. May be terminated on six months notice.
CHINA.....	*Modus vivendi* signed Sept. 26, 1946; in effect since Sept. 28, 1946. China withdrew from GATT on May 5, 1950.	Exchange of most - favoured - nation treatment. May be terminated on three months notice.

Tariff and Trade Arrangements with Non-Commonwealth Countries, as at June 1, 1953—continued

Country	Agreement	Terms
COLOMBIA	Treaty of Commerce with United Kingdom of Feb. 16, 1866, applies to Canada. Modified by protocol of Aug. 20, 1912, and exchange of notes Dec. 30, 1938. A Trade Agreement between Colombia and Canada was signed Feb. 20, 1946, but has not been put into force.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
COSTA RICA	*Modus vivendi* signed Nov. 18, 1950; brought into force Jan. 26, 1951.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
CUBA	GATT effective Jan. 1, 1948.	
CZECHOSLOVAKIA	Convention of Commerce signed Mar. 15, 1928; in force Nov. 14, 1928. GATT effective May 21, 1948.	Exchange of most-favoured-nation treatment. May be terminated on one years notice.
DENMARK (including GREENLAND).	Treaties of Peace and Commerce with United Kingdom of Feb. 13, 1660, and July 11, 1670, apply to Canada. GATT effective May 28, 1950.	Exchange of most-favoured-nation treatment. Declaration of May 9, 1912, provides means for separate termination by Dominions on one years notice.
DOMINICAN REPUBLIC.	Trade Agreement signed Mar. 8, 1940; in force provisionally Mar. 15, 1950, and definitively Jan. 22, 1941. GATT effective May 19, 1950.	Exchange of most-favoured-nation treatment including scheduled concessions. May be terminated on six months notice.
ECUADOR	*Modus vivendi* signed Nov. 10, 1950; in force Dec. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
EGYPT	Exchange of notes Nov. 26 and Dec. 3, 1952; in force Dec. 3, 1952.	Exchange of most-favoured-nation rates. May be terminated on six months notice.
EL SALVADOR	Exchange of notes of Nov. 2, 1937; in force Nov. 17, 1937.	Exchange of most-favoured-nation treatment. May be terminated on four months notice.
FINLAND	Exchange of notes of Nov. 13–17, 1948; effective Nov. 17, 1948. GATT effective May 25, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
FRANCE AND FRENCH OVERSEAS TERRITORIES.	Trade Agreement signed May 12, 1933; in force June 10, 1933. Exchange of notes of Sept. 29, 1934, and additional protocol of Feb. 26, 1935. GATT effective Jan. 1, 1948.	Exchange of most-favoured-nation treatment including scheduled concessions. May be terminated on three months notice.
FEDERAL REPUBLIC OF GERMANY.	GATT effective Oct. 1, 1951.	

Tariff and Trade Arrangements with Non-Commonwealth Countries, as at June 1, 1953—continued

Country	Agreement	Terms
GREECE	*Modus vivendi* by exchange of notes of July 24-28, 1947; effective Aug. 28, 1947. GATT effective Mar. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
GREENLAND	(*See* Denmark.)	
GUATEMALA	Trade Agreement signed Sept. 28, 1937; in force Jan. 14, 1939.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
HAITI	Trade Agreement signed Apr. 23, 1937; in force Jan. 10, 1939. GATT effective Jan. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
ICELAND	Although there is no contractual obligation, Canada and Iceland adhere to the terms of a treaty originally concluded between Denmark and the United Kingdom on Feb. 13, 1660.	Exchange of most-favoured-nation treatment.
INDONESIA	GATT effective Mar. 1, 1948.	
IRAN	Special arrangement by Order in Council effective Feb. 1, 1951.	Canada grants most-favoured-nation tariff rates as long as Iran accords reciprocal treatment.
IRAQ	Special arrangement by Order in Council effective Sept. 15, 1951.	Canada grants and receives most-favoured-nation tariff rates.
ISRAEL	Canada-United Kingdom Agreement of 1937 applied under the British Palestine Mandate. Since the creation of the State of Israel in May 1948, Canada has continued to grant most-favoured-nation rates.	
ITALY	*Modus vivendi* by exchange of notes of Apr. 23-28, 1948; effective Apr. 28, 1948. GATT effective Jan. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
KOREA	Participated in Torquay negotiations but has not yet (June 1953) become a Contracting Party to GATT.	
LEBANON	Special arrangement by Order in Council of Nov. 19, 1946. Lebanon withdrew from GATT Mar. 1, 1951.	Canada grants most-favoured-nation tariff rates as long as Lebanon accords reciprocal treatment.
LIBERIA	GATT effective Jan. 1, 1950.	
MEXICO	Trade Agreement signed Feb. 8, 1946; in force provisionally same date. Ratifications exchanged on May 6, 1947; definitively in force 30 days from that date.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.

Tariff and Trade Arrangements with Non-Commonwealth Countries, as at June 1, 1953—continued

Country	Agreement	Terms
NICARAGUA	Trade Agreement signed Dec. 19, 1946; in force provisionally same date. GATT effective May 28, 1950.	Exchange of most - favoured - nation treatment. Provisional application may be terminated on three months notice.
NORWAY	Convention of Commerce and Navigation with United Kingdom of Mar. 18, 1826, applied to Canada. GATT effective July 10, 1948.	Exchange of most - favoured - nation treatment. Convention of May 16, 1913, provides means for separate termination by Dominions on one years notice.
PANAMA	Order in Council of July 20, 1935, accepted Article 12 of United Kingdom - Panama Treaty of Commerce of Sept. 25, 1928. Treaty terminated in 1942 but Canada continues to grant and receive most - favoured - nation tariff rates.	
PARAGUAY	Exchange of notes of May 21, 1940; in force June 21, 1940.	Exchange of most - favoured - nation treatment. May be terminated on three months notice.
PERU	GATT effective Oct. 8, 1951.	
PHILIPPINES	No agreement at present. United States-Canada Agreement of 1938 (now suspended) applied to Philippines until Philippines attained independence in 1946. Canada and Philippines have continued to exchange most-favoured-nation treatment. Participated in Torquay negotiations but has not yet (June 1953) become a Contracting Party to GATT.	
POLAND	Convention of Commerce signed July 3, 1935; in force Aug. 15, 1936.	Exchange of most - favoured - nation treatment including scheduled reductions. May be terminated on three months notice.
PORTUGAL, including MADEIRA, PORTO SANTO AND THE AZORES.	Trade Agreements Act of June 11, 1928, accepted Article 21 of the United Kingdom - Portugal Treaty of Commerce of Aug. 12, 1914; in force Oct. 1, 1928.	Exchange of most - favoured - nation treatment. May be terminated on one years notice.
SPAIN	Canada adheres to the United Kingdom - Spain Treaty of Commerce of Oct. 31, 1922 (revised Apr. 5, 1927); in force Aug. 1, 1928.	Exchange of most - favoured - nation treatment. May be terminated on six months notice.
SWEDEN	United Kingdom-Sweden Convention of Commerce and Navigation of Mar. 18, 1826, applies to Canada. GATT effective May 1, 1950.	Exchange of most - favoured - nation treatment. Declaration of Nov. 27, 1911, provides means for separate termination by Dominions on one years notice.

Tariff and Trade Arrangements with Non-Commonwealth Countries, as at June 1, 1953—concluded

Country	Agreement	Terms
SWITZERLAND	United Kingdom Switzerland Treaty of Friendship, Commerce and Reciprocal Establishment of Sept. 6, 1855, applies to Canada. By exchange of notes Liechtenstein included under terms of this agreement, effective Aug. 2, 1947.	Exchange of most-favoured-nation treatment. Convention of Mar. 30, 1914, provides means for separate termination by the Dominions on one years notice.
SYRIA	Special Arrangement by Order in Council of Nov. 19, 1946. Syria withdrew from GATT Aug. 6, 1951.	Canada grants most-favoured-nation tariff rates as long as Syria accords reciprocal treatment.
TURKEY	Exchange of notes signed Mar. 1, 1948; in effect Mar. 15, 1948. GATT effective Oct. 17, 1951.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
UNITED STATES	Trade Agreement signed Nov. 17, 1938, suspended as long as both countries continue to be contracting parties to GATT. GATT effective Jan. 1, 1948.	
URUGUAY	Trade Agreement signed Aug. 12, 1936; in force May 15, 1940. Participated in Torquay negotiations but has not yet (June 1953) become a Contracting Party to GATT.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
VENEZUELA	*Modus vivendi* signed and brought into force Oct. 11, 1950; renewed Oct. 11, 1951, and Oct. 11, 1952.	Exchange of most-favoured-nation treatment. Made for one year subject to annual renewal.
YUGOSLAVIA	Trade Agreements Act of June 11, 1928, accepted Article 30 of United Kingdom-Serb-Croat-Slovene Treaty of Commerce and Navigation of May 12, 1927; in force Aug. 9, 1928.	Exchange of most-favoured-nation treatment. May be terminated on one years notice.

CHAPTER XXII.—PRICES*

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—Index Numbers of Wholesale Prices

Wholesale prices are not restricted in this Chapter to the normal meaning of that word but may include price quotations ranging from those paid by primary producers for basic raw materials to prices paid by retailers for finished articles. Within this broad group, numerous sub-classifications are available, such as component material, degree of manufacture and special purpose series. Wholesale prices are frequently very sensitive to changing conditions and are often used to gauge the economic effect of events as well as to forecast retail price change. An example of this is the price increase that followed the outbreak of hostilities in Korea in 1950.

A new series of wholesale price index numbers, related to the base period 1935-39, was introduced in January 1951. Background material concerning the construction of this index is available in DBS Reference Paper No. 24, *Wholesale Price Indexes, 1913-1950.*

Wholesale price index numbers in Canada cover the period dating from Confederation in 1867. An intermittent decline characterized the first 30 years of this interval but, from an average of 56·8 in 1897, the general wholesale index (1935-39 = 100) advanced without appreciable interruption to 83·9 in July 1914. By November 1918, this index had reached 173·1 and continued upward to a post-war inflationary peak of 214·2 in May 1920. The subsequent deflationary period lasted about two years, and between 1922 and 1929 price levels remained comparatively stable. Annual averages in this interval held between a high of 133·8 for 1925 and 124·6 for 1929. For the four years following 1929, depressionary influences were so severe that prices fell almost to the level of those of 1913. In February 1933, the wholesale index touched an extreme low of 82·8 before turning upward again. Irregular recovery then continued until 1937, but the highest point reached, 110·6 in July 1937, was substantially below the 1926 average. The collapse of the wheat market in 1938, together with a fairly general depression in other markets, carried wholesale price levels just prior to the outbreak of war in 1939 down to about 15 p.c. above the 1913 level. The August 1939 index of 95·6 marked the extreme low of a two-year decline. The movement of prices prior to the outbreak of World War I was very different from that which preceded World War II. The relatively low level of prices in August 1939 probably influenced the sharper initial advance at the outbreak of war. However, during 1940, price levels steadied and showed

* Revised in the Prices Section, Labour and Prices Division, Dominion Bureau of Statistics.

no sign of a steep increase until 1941. By that time, great expansion in wartime production had made serious inroads into stocks of nearly all basic commodities and, at the end of 1941, wheat remained the only important commodity for which stocks exceeded predictable requirements. The introduction of general price control in December 1941 ended a year in which wholesale prices had advanced 10 p.c. as compared with about 3 p.c. in 1940. The effectiveness of price control is indicated by the fact that increases in wholesale prices amounted to only 3·1 p.c. and 5·2 p.c. during the years 1942 and 1943, respectively, while the December 1944 index was slightly below the December 1943 figure. The December 1945 index of 132·9 was 10 p.c. above that for December 1941, when price control became generally effective.

The precipitous advance in United States general wholesale prices that began during the latter half of 1946 was of great concern to Canadian price-control authorities. The advance had been anticipated in July 1946, when the Canadian dollar was returned to par with the United States dollar, thus reducing the Canadian dollar cost of imports from the United States. This provided a buffer of 10 p.c. only and the rise in United States prices was greater than that on a large majority of imported articles so that continuous pressure was felt, especially among individual items. The Canadian general wholesale price index rose from 132·3 to 142·5, an increase of over 8 p.c. between May 1945 and December 1946.

The Canadian price rise accelerated in 1947 as internal controls continued to be relaxed. The monthly general wholesale index advanced without interruption from 142·5 at December 1946 to 179·9 at December 1947, an increase of 26 p.c. The rise carried through into 1948, although at a decreasing rate, and by December the index had reached a level of 202·0. Wholesale price levels during 1949 were generally stable, then rose slightly during the first five months of 1950 to reach an index level of 204·7 by May. In June, a sharp gain to 209·2 occurred, owing mainly to rapidly advancing prices for live stock, lumber, iron and steel products and non-ferrous metals. An important factor stimulating further advance was the outbreak of war in Korea. The effect on basic commodities originating in or near that area was particularly sharp and by the end of the year the index had risen to 225·2.

In 1951, the index reached new peak levels, culminating in an all-time high of 243·7 in July. This trend was reversed in the second half of the year when the index declined steadily, reflecting marked recessions in animal products and textile products. The December 1951 index at 237·7, however, was still 5·6 p.c. above December 1950.

The downward movement continued throughout the first 10 months of 1952, the total index standing at 220·2 for October. Declines were recorded by most of the main commodity groups, although an upward trend was still apparent in iron and steel products and non-metallic mineral products. In the ensuing months of 1952 and through the first quarter of 1953, prices continued to decline fractionally as the composite wholesale index receded to 219·6 by April. Weakness continued to be felt most strongly in primary and secondary farm products and the lifting of the United States embargo on cattle on Mar. 2 did little to alleviate the decline. Lumber prices, too, were easier, particularly West Coast descriptions, while fibres, textiles and textile products receded slowly. Of the non-ferrous base metals, only

copper and its products registered a firmer tone in 1953 over 1952 levels. As in the previous year, prices for iron and its products continued to strengthen while non-metallic minerals and chemicals and allied products remained relatively steady.

1.—Annual Index Numbers of Wholesale Price Groups, 1943-52, and Monthly Indexes, 1952 and 1953

(1935-39=100)

Year and Month	General Wholesale	Raw and Partly Manufactured Goods	Fully and Chiefly Manufactured Goods	Industrial Materials	Canadian Farm Products[1]		
					Field	Animal	Total
1943	127·9	131·1	126·9	140·0	129·0	161·8	145·4
1944	130·6	134·4	129·1	143·1	144·5	166·1	155·3
1945	132·1	136·2	129·8	143·2	162·5	170·2	166·4
1946	138·9	140·1	138·0	148·6	177·9	181·2	179·5
1947	163·3	164·3	162·4	187·0	184·1	200·2	192·2
1948	193·4	196·3	192·4	222·7	200·6	263·7	232·1
1949	198·3	197·1	199·2	218·0	191·9	265·4	228·7
1950	211·2	212·8	211·0	244·6	191·9	281·4	236·7
1951	240·2	237·9	242·4	296·1	200·4	336·9	268·6
1952	226·0	218·7	230·7	252·6	219·9	277·5	248·7
1952							
January	236·7	233·3	239·6	281·4	224·8	318·2	271·5
February	232·5	227·5	236·1	270·7	221·9	297·3	259·6
March	230·7	225·2	234·5	265·1	230·1	283·3	256·7
April	226·8	221·3	230·6	258·4	234·0	273·7	253·8
May	224·6	220·2	227·8	250·7	240·0	265·4	252·7
June	226·3	220·4	230·3	248·3	244·4	271·4	257·9
July	225·4	218·2	229·8	247·8	230·2	276·8	253·5
August	223·7	216·2	228·5	245·4	215·4	277·2	246·3
September	221·9	212·4	227·6	241·7	202·0	269·1	235·6
October	220·2	209·7	227·4	239·7	199·9	263·0	231·4
November	221·5	210·5	228·2	241·2	199·3	266·5	232·9
December	221·1	210·0	227·8	241·2	196·6	268·3	232·4
1953							
January	221·5	209·4	229·0	240·2	193·6	266·4	230·0
February	220·9	207·9	228·8	237·9	189·3	263·1	226·2
March	221·9	209·8	229·2	237·0	184·4	264·3	224·4
April	219·6	205·7	227·9	231·9	180·2	256·0	218·1
May	220·1	206·3	228·3	233·2	177·8	263·2	220·5
June	221·7	207·2	230·4	234·0	177·1	268·8	222·9
July	221·2	207·2	229·6	231·7	180·3	265·3	222·8
August	222·4	210·0	230·1	231·4	157·2	269·9	213·6
September	221·5	207·0	230·2	228·8	154·0	263·7	208·9
October	220·7	204·9	230·0	227·0	151·7	265·3	208·5

[1] The wheat prices used in these indexes are prices currently effective for Manitoba Nos. 1, 2 and 3 Northern at Fort William. Participation payments are included and the series revised whenever such figures are announced. Between August 1945 and July 1950, the price included in the index for No. 1 Manitoba Northern was $1.83 per bu. For the crop year Aug. 1, 1950-July 31, 1951, the price included was $1.85 per bu. For the crop year Aug. 1, 1951-July 31, 1952, the price was $1.83 per bu. The initial payment of $1.40 per bu. for the crop year beginning Aug. 1, 1952, was increased to $1.60 per bu. according to an announcement made Feb. 19, 1953. Commencing Aug. 1, 1949, western oats and barley were brought under control of the Canadian Wheat Board. Prices used for Canadian farm products since that time have been initial payments to farmers. Participation payments are included whenever they are announced. An increase in the initial payments for barley for the crop year 1952-53 was announced Feb. 19, 1953.

Residential Building Materials.—In March 1949, a series of index numbers of residential building material prices (basis: 1935-39=100) was established to meet the need for a more precise measurement of material components of residential construction. A description of the index together with a record back to 1926 is given in DBS bulletin, *Price Index Numbers of Residential Building Materials 1926 to 1948.*

The decline in residential building material prices that commenced in the final quarter of 1951 continued through 1952 and the first ten months of 1953. This change is illustrated by the composite index which, after touching a post-war peak of 290·8 in September and October 1951, subsequently dropped to 282·3 in February 1953. By June, a slight recovery to 284·1 had taken place, but the index dropped again to 280·4 in October. Among the various components, lower prices were most apparent in lumber products with other groups continuing to exert a firmer price tone.

2.—Annual Price Index Numbers of Residential Building Materials, 1943-52, and Monthly Indexes, 1952 and 1953

(1935-39=100)

Year and Month	Composite Index	Principal Components								
		Cement, Sand and Gravel	Brick, Tile and Stone	Lumber and Lumber Products	Lath, Plaster and Insulation	Roofing Material	Paint and Glass	Plumbing and Heating Equipment	Electrical Equipment and Fixtures	Other Materials
1943	139·1	101·2	113·1	171·3	104·8	130·1	149·4	120·0	110·3	117·9
1944	146·6	101·8	114·9	188·4	104·8	136·0	146·6	120·0	110·3	117·9
1945	148·3	102·1	116·4	191·3	104·8	135·5	142·2	122·2	111·4	118·0
1946	154·5	102·0	121·0	202·1	104·2	146·2	144·2	127·2	116·9	126·4
1947	180·4	109·7	133·4	242·0	107·3	172·3	169·6	145·2	147·4	143·0
1948	217·5	122·3	143·1	305·8	116·7	201·6	183·1	168·3	169·8	162·3
1949	228·0	127·0	151·0	322·1	118·1	190·5	179·6	180·2	173·4	174·7
1950	242·7	131·3	163·8	349·2	116·7	235·4	174·8	183·2	184·5	181·1
1951	286·2	140·9	180·7	425·0	126·3	235·8	197·8	210·4	213·3	212·7
1952	284·8	149·5	195·3	415·7	128·5	217·7	194·9	215·6	212·0	226·3
1952										
January	288·0	148·3	183·2	424·7	126·7	210·9	197·5	217·3	218·8	222·1
February	287·9	148·9	183·2	423·6	126·7	223·0	200·5	217·3	215·9	222·1
March	286·8	148·9	192·5	420·9	126·7	220·0	199·7	216·6	211·6	222·1
April	284·9	148·1	192·5	415·8	129·1	216·9	198·5	216·9	208·4	227·4
May	283·9	148·1	198·8	413·4	129·1	213·9	193·7	216·2	208·4	227·4
June	283·5	148·1	198·8	413·4	129·1	210·9	194·2	215·1	206·6	227·4
July	283·8	148·3	198·8	413·1	129·1	216·9	192·4	215·2	212·9	227·4
August	284·1	150·1	198·8	413·1	129·1	223·0	192·4	215·2	212·6	227·4
September	284·0	151·1	198·8	413·1	129·1	220·0	192·4	215·2	212·2	227·4
October	283·8	151·1	198·8	412·5	129·1	220·0	192·4	215·2	212·2	227·4
November	283·4	151·1	199·5	412·4	129·1	220·0	190·2	213·3	212·2	228·8
December	283·3	151·9	199·5	411·9	129·1	217·0	195·0	213·1	212·1	228·8
1953										
January	283·7	152·1	199·5	412·9	129·1	217·0	195·8	213·1	211·0	228·8
February	282·3	152·1	199·5	409·5	129·1	217·0	195·4	213·1	211·0	228·8
March	283·4	152·1	205·7	411·5	129·1	217·0	195·4	211·7	217·9	228·8
April	283·6	151·6	205·7	410·3	129·1	216·9	195·0	215·5	217·9	228·8
May	282·8	151·6	207·4	410·4	129·1	216·9	195·8	212·1	209·7	228·8
June	284·1	151·6	207·4	413·1	129·1	220·0	202·7	211·3	209·7	228·8
July	283·9	151·6	207·4	412·8	128·9	219·7	203·9	211·3	209·7	228·8
August	283·6	151·7	207·4	412·6	127·7	219·7	204·4	210·5	210·0	228·8
September	281·0	151·7	207·4	409·1	127·7	219·7	205·2	203·4	210·0	230·4
October	280·4	151·7	207·4	406·6	127·7	219·7	205·7	203·4	222·1	231·0

Non-residential Building Materials.—A new index has been prepared to measure the price change of materials used in non-residential building construction. The index has been constructed on the base 1949=100, using weights obtained from

data on cost of building materials provided by general and trade contractors for a sample of buildings constructed in Canada during the years 1948-50. The methods of constructing the index are explained in DBS Reference Paper No. 43, *Non-Residential Building Materials Price Index, 1935-1952*. Price indexes for twelve principal component material groups have been calculated by months from January 1949; indexes for nine of these are given in Table 3 for 1952 and 1953.

The composite index of non-residential building materials increased from 112·6 in January 1951 to a peak of 124·8 in March 1953. Most of this increase of 12·2 points or 10·8 p.c. took place during 1951, the composite index increasing 9·7 points from January 1951 to December 1951 as compared with only 2·5 during the longer period December 1951 to March 1953. All component groups contributed to the increase during this period. At October 1953, the composite index and the indexes of all component groups except electrical equipment and materials were at or near previously established post-war record levels.

3.—Annual Price Index Numbers of Non-residential Building Materials, 1950-52, and Monthly Indexes, 1952 and 1953

(1949=100)

Year and Month	Composite Index	Principal Components								
		Cement and Concrete Mix	Blocks, Brick and Stone	Lumber and Lumber Products	Lath, Plaster and Insulation	Roofing Materials	Paint and Glass	Plumbing, Heating and Other Equipment	Electrical Equipment and Materials	Steel and Metal Work
1950	105·0	103·2	104·3	110·3	98·7	104·7	100·5	103·0	105·8	107·3
1951	118·6	111·3	113·0	128·3	107·1	128·9	113·0	115·7	125·4	122·0
1952	123·2	117·4	119·7	127·9	109·7	134·5	115·6	121·3	121·7	131·3
1952										
January	123·0	115·9	114·1	128·0	109·2	133·2	113·9	120·9	130·3	130·1
February	123·0	116·3	115·0	127·5	109·2	133·2	116·4	121·0	128·7	130·1
March	123·1	116·3	118·1	126·7	108·8	133·2	116·4	120·8	127·8	130·1
April	122·5	116·0	118·2	127·7	109·8	134·9	117·1	121·4	120·1	130·1
May	122·7	116·1	120·6	128·0	109·8	134·9	116·7	121·2	120·1	130·1
June	122·6	116·9	120·6	128·1	109·8	134·9	116·7	121·4	118·3	130·1
July	122·9	117·5	120·6	128·3	110·0	134·9	114·2	121·7	119·3	130·2
August	123·0	118·4	120·9	128·3	110·0	134·9	114·2	121·7	119·3	130·2
September	123·0	118·6	121·1	128·4	110·0	134·9	114·2	121·6	119·2	130·2
October	123·9	118·6	121·1	128·3	110·0	134·9	114·2	121·6	119·2	134·7
November	124·2	118·6	123·0	128·2	110·0	134·9	114·1	121·4	119·2	134·7
December	124·2	119·5	123·0	127·7	110·1	135·1	118·7	121·4	118·8	134·7
1953										
January	124·4	119·9	123·0	128·4	110·3	135·1	118·7	121·3	118·6	134·7
February	124·5	120·4	123·4	128·4	110·3	135·1	119·2	121·4	118·6	134·7
March	124·8	120·4	126·0	128·3	110·3	135·1	119·2	121·2	119·6	134·8
April	124·6	119·1	126·0	128·4	110·2	134·9	119·1	121·2	119·9	134·7
May	124·4	119·1	126·5	128·5	110·2	134·9	119·2	120·9	118·5	134·7
June	124·7	119·3	126·5	128·8	110·2	134·9	124·9	121·1	118·7	134·7
July	124·7	119·3	126·5	128·7	110·2	132·6	124·9	121·2	119·6	134·7
August	124·5	119·4	126·5	128·2	109·2	132·6	124·9	120·6	119·7	134·7
September	123·8	120·5	126·5	126·8	109·2	132·6	125·0	116·6	119·7	134·8
October	123·9	120·5	126·5	126·2	109·6	132·6	126·4	115·8	122·3	134·8

World Wholesale Price Indexes.—Price changes within different countries have varied widely since the years before World War II. Comparisons between Canadian wholesale price changes and those that have occurred in other countries are provided in Table 4.

4.—Index Numbers of Wholesale Prices in Canada and other Countries, 1949 and December 1951 and 1952

(Base: 1948 = 100, except for France where 1949=100. SOURCE: *Monthly Bulletin of Statistics of the United Nations.*)

Country	1949	Month of December—		Country	1949	Month of December—	
		1951	1952			1951	1952
Australia	112	173	187	New Zealand	99	135	142
Canada	**103**	**123**	**114**	Norway	102	149	155
Chile	114	192	232	Peru (Lima)	140	203	198
Denmark	102	151	139	Portugal (Lisbon)	102	117	122
Finland	101	177	162	Sweden	101	149	143
France	100	152	140	Switzerland	95	105	100
India	104	118	102	Union of South Africa	106	142	151
Mexico (Mexico City)	110	154	151	United Kingdom	105	151	149
The Netherlands	104	145	139	United States	95	109	105

Section 2.—The Consumer Price Index

The Consumer Price Index is Canada's official measure of retail price change. It replaces the Cost-of-Living Index and is the fifth in a series of Canadian index numbers of retail prices dating back to 1900. This new measure was introduced by the Dominion Bureau of Statistics in October 1952 in a publication entitled, *The Consumer Price Index, January 1949—August 1952.* Detailed information on the main aspects of the Index are contained in that publication.

The purpose of the Consumer Price Index is to measure changes in retail prices of goods and services bought by a representative cross-section of the Canadian urban population. The families covered by the Index lived in 27 Canadian cities of 30,000 population or over, ranged in size from two adults to two adults with four children and had annual incomes ranging from $1,650 to $4,050 during the survey year ended Aug. 31, 1948.

The budget of the Consumer Price Index represents the post-war level of consumption of those families. A list of 224 of the principal goods and services they purchased in the survey year forms the pricing sample of the Index, while the relative amounts they spent on those and similar categories of items determine the relative importance, or weight, given to each item in the Index.

The monthly index number is calculated from a sample of more than 50,000 retail price quotations. Prices are collected by field representatives in the 16 largest cities in Canada, while they are obtained by mail in 17 other cities having a population of 30,000 or over.

Changes observed in those prices are applied to the cost of the Index budget. The budget is often described as a market basket of goods and services. The physical content of this basket is kept constant from month to month and only changes in retail prices are allowed to influence its cost over time. A comparison between the current cost and the base-period cost of the same constant basket yields the Index, that is, a measure of the average percentage change in all retail

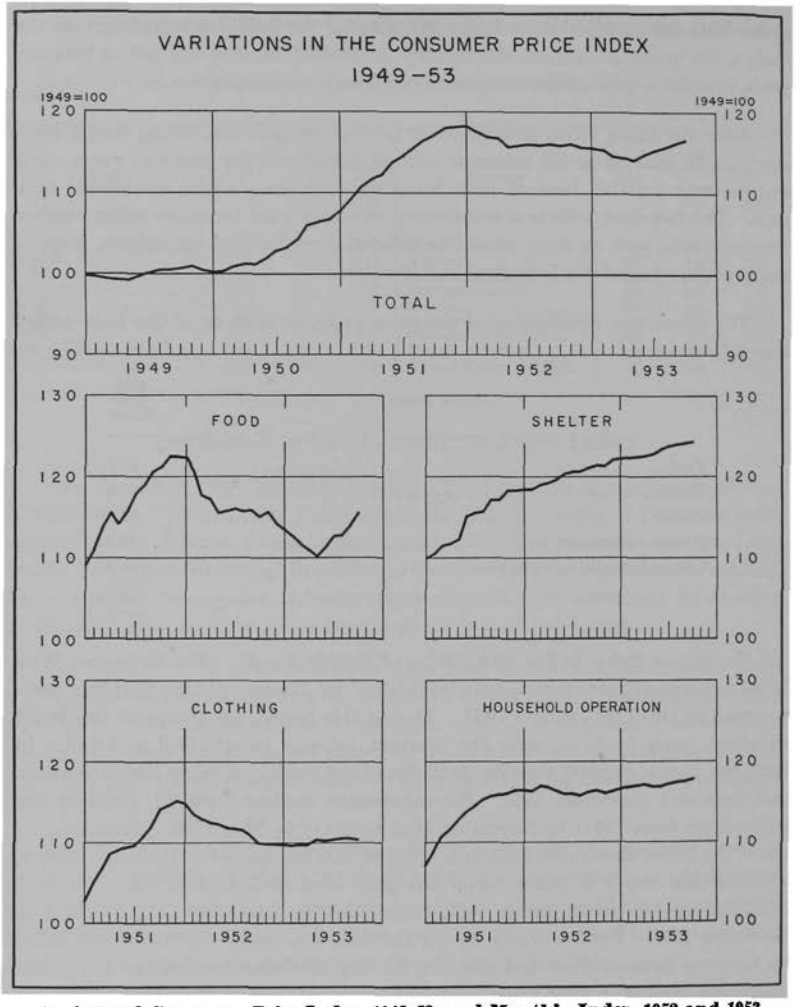
prices from the base period to date. For some of the food items entering into the basket, the quantities are allowed to vary as between months but not as between years, in order to take account of seasonal variations in consumption.

Since the Index refers to a post-war level of living it was fitting that a post-war year be selected as the reference level of prices. Of the post-war years, 1949 was the most suitable because price levels were relatively stable throughout that year. The fact that 1949 is a satisfactory reference level for other index number measurements, such as those related to industrial production, agriculture, imports and exports, was another important consideration.

The percentage distribution of the main group weights as of the base period is as follows:—

Budget Group	*1949 Base Weight*
Food	31·7
Clothing	11·5
Shelter	14·8
Household operation	17·3
Other commodities and services	24·7
TOTAL	100·0

Consumer Price Index and Prices of Staple Foods.—The Consumer Price Index rose steadily throughout 1951 from 107·7 for January of that year to a post-war peak of 118·2 for January 1952. During this period, all groups of the Index advanced, with foods showing the sharpest increase from 109·0 to 122·4. In 1952, the Index declined steadily until May, and remained fairly stable between that date and November 1952. Six consecutive declines followed, bringing the Index down from 116·1 in November 1952 to 114·4 in May 1953. Reversing its trend, the Index then moved up in a series of five increases to 116·7 by October, where it was only 1·5 points below the peak level of January 1952. The food index fell by 8·4 points during 1952, from 122·5 in December 1951 to 114·1 in December 1952. Further losses during the first five months of 1953 were offset by increases between June and October, leaving the index for October 1·4 points above the December 1952 figure. Shelter continued upward throughout 1952 and the first ten months of 1953, exceeding other group index levels from March 1952 on. Clothing, which reached its highest point in December 1951, declined throughout 1952 to stabilize at a level of 109·7 in the early months of 1953. Subsequent increases brought the index to 110·3 by October. The household operation index fluctuated narrowly between December 1951 and October 1953 showing a net gain of 1·1 points to 117·5 between these two dates. The other commodities and services series which moved between 115·5 and 116·6 throughout 1952, climbed to 116·7 early in 1953. A sharp drop in March and April, however, brought the index back to the December 1951 level of 115·0 but a subsequent rise of 0·9 points between May and October left the index at 116·0.



5.—Annual Consumer Price Index, 1943-52, and Monthly Index, 1952 and 1953

(1949=100)

Year	Food	Shelter	Clothing	Household Operation	Other Commodities and Services	Total Consumer Price Index
1943	65·2	90·9	66·1	76·1	84·8	74·2
1944	65·5	91·2	66·6	75·7	86·1	74·6
1945	66·3	91·4	66·9	74·9	86·4	75·0
1946	70·0	91·8	69·2	77·2	88·7	77·5
1947	79·5	95·1	78·9	86·2	91·6	84·8
1948	97·5	98·3	95·6	96·8	96·5	97·0
1949	100·0	100·0	100·0	100·0	100·0	100·0
1950	102·6	106·2	99·7	102·4	103·1	102·9
1951	117·0	114·4	109·8	113·1	111·5	113·7
1952	116·8	120·2	111·8	116·2	116·0	116·5

5.—Annual Consumer Price Index, 1943-52, and Monthly Index, 1952 and 1953— concluded

Year and Month	Food	Shelter	Clothing	Household Operation	Other Commodities and Services	Total Consumer Price Index
1952						
January	122·4	118·3	114·9	116·4	115·5	118·2
February	120·8	118·3	113·5	116·3	115·8	117·6
March	117·6	119·1	112·9	116·9	116·4	116·9
April	117·2	119·4	112·5	116·8	116·6	116·8
May	115·5	119·6	112·3	116·2	115·6	115·9
June	115·7	120·4	111·8	115·9	115·7	116·0
July	116·0	120·6	111·7	115·9	115·6	116·1
August	115·7	120·6	111·6	115·8	115·8	116·0
September	115·8	121·2	110·9	116·0	115·8	116·1
October	115·1	121·5	109·9	116·2	116·4	116·0
November	115·7	121·4	109·8	115·9	116·6	116·1
December	114·1	122·2	109·7	116·1	116·6	115·8
1953						
January	113·5	122·3	109·7	116·5	116·7	115·7
February	112·7	122·5	109·6	116·6	116·7	115·5
March	111·6	122·5	109·7	116·7	115·2	114·8
April	110·9	122·7	109·7	116·9	115·0	114·6
May	110·1	122·9	110·1	116·6	115·1	114·4
June	111·4	123·6	110·1	116·6	115·1	114·9
July	112·7	123·9	110·3	117·0	115·2	115·4
August	112·8	124·1	110·4	117·2	115·8	115·7
September	114·0	124·2	110·4	117·4	115·9	116·2
October	115·5	124·5	110·3	117·5	116·0	116·7

Table 6 provides single commodity price relatives on the base 1949 = 100 for a number of important foods entering into the food component of the Consumer Price Index. It also provides a record of average prices based on the actual average level of prices prevailing in October 1952 and calculated for the other months on the basis of the price relatives.

6.—Urban Average and Relative Retail Prices of Staple Foods, Annually 1943-52, and Monthly, 1952 and 1953

(1949 = 100)

Year	Beef, sirloin, per lb.		Pork, fresh loins, per lb.		Lard, pure, per lb.		Eggs, "A", fresh, per doz.		Milk, fresh, per qt.	
	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative
	cts.		cts.		cts.		cts.		cts.	
1943	39·2	55·6	37·0	57·9	17·5	74·5	48·3	78·5	10·3	57·7
1944	41·3	58·6	37·7	59·1	16·4	69·7	44·8	72·9	10·3	57·8
1945	42·9	60·9	38·9	60·9	17·0	72·5	47·2	76·7	10·3	57·8
1946	44·2	62·7	42·3	66·2	18·5	78·9	48·7	79·2	12·2	68·6
1947	48·3	68·6	46·5	72·9	25·5	108·6	50·3	81·8	15·2	85·4
1948	62·5	88·7	58·5	91·7	28·9	123·3	59·7	97·1	17·3	96·9
1949	70·4	100·0	63·8	100·0	23·5	100·0	61·5	100·0	17·8	100·0
1950	82·8	117·6	63·4	99·3	22·4	95·3	56·5	91·8	18·3	102·9
1951	101·1	143·5	73·3	114·8	28·4	121·1	71·6	116·5	19·6	110·0
1952	93·4	132·7	63·2	99·0	17·0	72·5	59·1	96·0	21·1	118·4

6.—Urban Average and Relative Retail Prices of Staple Foods, Annually 1943-52, and Monthly, 1952 and 1953—concluded

Year and Month	Beef, sirloin, per lb.		Pork, fresh loins, per lb.		Lard, pure, per lb.		Eggs, "A", fresh, per doz.		Milk, fresh, per qt.	
	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative
	cts.		cts.		cts.		cts.		cts.	
1952										
January	106·8	151·6	66·8	104·6	24·7	105·3	57·6	93·7	21·0	118·0
February	105·3	149·5	62·8	98·4	22·3	94·9	51·5	83·8	21·0	118·0
March	97·3	138·2	59·4	93·1	18·9	80·6	49·9	81·1	21·1	118·5
April	94·0	133·5	60·1	94·2	17·3	73·9	49·2	80·0	21·1	118·5
May	92·1	130·8	59·4	93·1	15·1	64·3	48·9	79·5	21·1	118·5
June	91·8	130·4	62·6	98·0	14·3	60·9	48·6	79·0	21·1	118·5
July	94·2	133·8	64·3	100·7	15·0	63·9	59·1	96·1	21·1	118·5
August	96·3	136·8	63·4	99·3	15·0	63·9	68·3	111·0	21·1	118·5
September	94·4	134·1	63·7	99·8	14·6	62·2	69·2	112·5	21·1	118·5
October	86·7	123·1	65·3	102·3	14·6	62·2	70·6	114·8	21·1	118·5
November	80·7	114·6	65·3	102·3	15·9	67·7	75·8	123·2	21·1	118·5
December	81·8	116·2	65·1	102·0	16·5	70·3	60·0	97·5	21·1	118·5
1953										
January	84·0	119·3	65·0	101·9	16·4	69·9	55·7	90·6	21·1	118·5
February	84·9	120·6	70·0	109·7	16·5	70·3	54·7	88·9	21·1	118·5
March	81·3	115·5	66·2	103·7	16·9	72·0	60·0	97·5	21·1	118·5
April	78·8	111·9	65·1	102·0	17·6	75·0	63·7	103·6	21·1	118·5
May	78·7	111·8	72·6	113·8	18·1	77·1	65·0	105·7	21·1	118·5
June	79·3	112·6	77·7	121·8	18·7	79·7	66·2	107·6	21·1	118·5
July	80·2	113·9	74·3	116·4	19·1	81·4	75·4	122·6	21·1	118·5
August	80·2	113·9	76·8	120·3	20·1	85·6	79·1	128·6	21·1	118·5
September	80·1	113·8	76·5	119·9	24·2	103·1	80·4	130·7	21·1	118·5
October	79·0	112·2	77·6	121·6	27·1	115·5	82·6	134·3	21·1	118·5

	Flour, per lb.		Tomatoes, canned, 2½'s, tin		Potatoes, 10 lb.		Sugar, granulated, per lb.		Bread, per lb.	
	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative
	cts.		cts.		cts.		cts.		cts.	
1943	4·1	58·4	13·1	65·2	32·1	92·2	8·1	87·5	6·6	66·7
1944	4·1	58·4	13·5	67·3	30·2	86·8	8·1	87·5	6·6	66·7
1945	4·0	57·0	13·5	67·1	34·9	100·3	8·1	87·5	6·6	66·7
1946	4·0	56·8	14·2	70·7	34·3	98·4	8·1	87·5	6·6	66·7
1947	4·5	64·7	18·5	92·1	33·8	97·1	8·8	95·2	7·1	72·4
1948	6·1	88·0	24·4	121·7	40·4	116·1	9·1	98·6	9·1	92·2
1949	7·0	100·0	20·1	100·0	34·8	100·0	9·2	100·0	9·9	100·0
1950	7·3	104·8	17·7	88·0	33·2	95·4	10·6	114·4	10·3	104·6
1951	7·5	106·9	23·1	115·0	34·8	99·9	12·0	129·8	11·4	115·5
1952	7·4	105·9	28·8	143·6	68·6	196·9	11·2	121·0	11·8	119·3
1952										
January	7·5	107·6	28·2	140·4	60·4	173·5	12·3	133·0	11·8	119·7
February	7·5	107·6	28·9	144·2	62·4	179·2	12·2	132·0	11·8	119·7
March	7·5	107·6	29·3	146·2	62·6	179·7	12·0	129·8	11·8	119·7
April	7·5	107·6	29·7	148·1	72·3	207·5	11·7	126·7	11·8	119·7
May	7·4	106·2	29·8	148·6	78·2	224·6	11·3	122·5	11·8	119·7
June	7·4	106·2	30·1	150·0	90·8	260·6	11·0	119·3	11·8	119·7
July	7·3	104·7	30·2	150·5	88·8	254·9	10·9	118·2	11·8	119·7
August	7·3	104·7	30·2	150·5	76·5	219·6	10·8	117·0	11·8	119·7
September	7·3	104·7	29·1	145·0	66·4	190·6	10·6	114·9	11·8	119·7
October	7·3	104·7	27·2	135·6	54·8	157·3	10·4	112·7	11·7	118·7
November	7·3	104·7	26·6	132·6	55·9	160·5	10·4	112·7	11·6	117·7
December	7·3	104·7	26·3	131·1	54·1	155·3	10·4	112·7	11·6	117·7
1953										
January	7·3	104·7	26·1	130·1	53·1	152·4	10·4	112·7	11·6	117·7
February	7·3	104·7	25·9	129·1	51·2	147·0	10·2	110·6	11·6	117·7
March	7·3	104·7	25·7	128·1	44·2	126·9	10·2	110·6	11·6	117·7
April	7·3	104·7	25·3	126·1	40·0	114·8	10·1	109·5	11·6	117·7
May	7·4	106·2	24·9	124·1	36·9	105·9	10·0	108·4	11·7	118·7
June	7·5	107·6	24·7	123·1	37·1	106·5	9·9	107·3	11·8	119·7
July	7·8	111·9	24·6	122·6	42·9	123·2	9·9	107·3	12·1	122·8
August	7·8	111·9	24·3	121·1	38·8	111·4	9·8	106·2	12·2	123·8
September	7·8	111·9	24·0	119·6	32·6	93·6	9·8	106·2	12·3	124·8
October	7·8	111·9	23·4	116·6	31·1	89·3	9·8	106·2	12·3	124·8

Consumer Price Indexes for Regional Cities.—Revised regional consumer price indexes were released by the Dominion Bureau of Statistics in November 1953 for nine cities or city combinations. The new series, which replace the cost-of-living indexes for eight regional cities, appear in Table 7. The index for St. John's, N'f'ld., which was prepared subsequent to the date Newfoundland joined Confederation, is calculated on the base June 1951 = 100 and is shown in Table 7 on that base.

The construction of each regional consumer price index involved three main phases: (1) the conversion of an existing cost-of-living index inclusive of all tobacco taxes, from the base August 1939 = 100 to the base 1949 = 100, up to and including Sept. 1, 1953; (2) the calculation of an entirely new index incorporating a revised weighting system and price sample, on the base Sept. 1, 1953 = 100; and (3) the linking of the new series to the converted series as at Sept. 1, 1953, to form a continuous index on the base 1949 = 100.

The regional indexes are not designed to show whether it costs more or less to live in one city than in another, and should not be used for that purpose. Their function is to measure percentage changes in retail prices over time in each city or city combination of a fixed basket of goods and services representing the level of consumption of a particular group of families.

7.—Consumer Price Indexes for Regional Cities, Annually 1940-52, and Monthly, 1952 and 1953

(1949 = 100)

Year and Month	St. John's, N'f'ld.[1]	Halifax, N.S.	Saint John, N.B.	Montreal, Que.	Ottawa, Ont.	Toronto, Ont.	Winnipeg, Man.	Saskatoon-Regina, Sask.	Edmonton-Calgary, Alta.	Vancouver, B.C.
1940	...	68·6	66·4	64·8	65·3	66·1	66·6	64·7	66·2	63·6
1941	...	71·3	69·8	68·6	68·7	69·9	69·8	68·5	69·0	66·9
1942	...	74·2	73·3	71·9	72·0	73·6	72·9	71·5	72·0	70·2
1943	...	76·0	74·7	73·4	73·1	74·4	74·0	72·6	73·9	72·4
1944	...	76·9	75·4	73·6	73·3	74·9	74·5	73·5	74·6	72·8
1945	...	77·6	75·8	74·4	73·8	75·3	75·2	74·0	75·3	73·6
1946	...	79·6	77·9	76·9	76·5	77·9	77·5	76·6	77·8	75·9
1947	...	86·3	84·6	84·3	84·5	85·5	84·3	84·4	84·6	83·3
1948	...	96·8	97·0	96·6	96·5	97·0	95·8	96·9	96·1	96·0
1949	..	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1950	..	102·1	103·3	103·7	103·1	104·1	103·8	102·2	103·9	103·6
1951	..	112·1	114·1	116·1	115·3	115·4	114·6	111·7	113·5	114·3
1952	103·5	115·3	117·4	117·6	116·8	117·5	116·1	112·8	114·8	117·4
1952										
January	103·9	116·6	119·4	120·9	120·6	119·6	118·3	115·1	117·6	119·5
February	103·7	115·9	119·0	120·3	120·1	118·9	118·1	115·1	117·4	118·8
March	104·0	115·6	118·7	119·2	118·7	117·9	117·2	114·2	116·2	118·6
April	103·8	115·6	118·6	118·2	118·1	118·2	117·1	113·0	115·4	118·7
May	103·1	115·3	117·0	116·5	116·4	116·9	116·2	111·4	114·0	117·7
June	102·7	116·5	117·8	117·4	116·2	117·9	116·3	111·3	113·8	117·7
July	103·9	116·8	118·3	118·0	116·5	117·9	116·5	112·6	114·4	117·2
August	105·3	116·4	118·2	117·0	116·2	117·8	115·9	113·2	114·8	117·0
September	103·6	114·9	116·8	117·0	115·8	117·2	115·3	112·4	113·9	116·7
October	103·0	113·1	115·3	115·8	114·5	116·2	114·3	111·7	113·5	115·6
November	102·5	113·6	115·2	115·7	114·7	116·0	114·1	112·1	113·3	115·8
December	102·3	112·8	114·5	115·2	113·9	115·6	113·5	111·3	112·9	116·1
1953										
January	102·4	112·8	114·7	115·7	114·4	115·9	113·7	111·9	112·6	116·2
February	102·3	113·1	114·8	116·2	114·8	116·0	114·1	112·1	112·6	115·7
March	101·3	112·9	114·5	115·8	114·3	115·9	113·7	112·2	113·0	115·5
April	101·5	112·7	114·6	114·8	114·3	115·7	113·9	112·3	113·1	115·6
May	101·1	112·2	114·4	114·9	113·7	115·7	113·6	112·1	113·2	115·7
June	101·2	112·7	114·9	116·0	114·7	116·5	114·1	112·9	114·0	115·8
July	101·9	113·7	115·8	117·3	115·2	117·2	115·2	113·9	114·7	116·5
August	102·9	114·2	116·7	117·0	115·4	117·5	115·0	114·2	115·3	116·0
September	102·8	113·8	116·1	116·5	115·5	117·6	114·7	113·8	115·1	116·2
October	102·8	114·0	116·1	117·4	116·4	118·4	115·0	114·3	115·3	116·7

[1] Explanation of methods used in compiling St. John's, N'f'ld., index (June 1951 = 100) is given in DBS Reference Paper No. 28.

World Retail Price Indexes.—In order to place changes in Canadian retail prices in perspective with those occuring in other countries, Table 8 provides retail price indexes for selected countries and dates. It will be noted that increases in retail prices have been world-wide. These indexes also measure price change only and should not be used to compare living costs from country to country.

8.—Index Numbers of Retail Prices in Canada and other Countries, 1949 and December 1951 and 1952

(Base: 1948=100, except for France and The Netherlands where 1949=100. SOURCE: *Monthly Bulletin of Statistics of the United Nations.*)

Country	1949	Month of December—		Country	1949	Month of December—	
		1951	1952			1951	1952
Australia	109	158	173	The Netherlands	100	119	122
Canada	**103**	**122**	**120**	New Zealand	102	125	130
Chile (Santiago)	119	183	205	Norway	100	127	135
Denmark	101	121	124	Peru (Lima)	115	146	156
Finland	102	152	155	Sweden	102	126	130
France (cost of food in Paris)	100	143	145	Switzerland	99	105	105
Iceland (Reykjavik)	102	165	177	Union of South Africa	104	121	129
India	101	109	104	United Kingdom	103	120	128
Mexico (Mexico City)	105	136	147	United States	99	110	111

Section 3.—Index Numbers of Security Prices

Security prices have long been utilized in statistical measurements related to economic phenomena and are generally sensitive to changing business conditions although this valuable characteristic is sometimes overshadowed by the fact that their movements may be influenced greatly by speculative interest very remotely associated with underlying economic conditions. Thus, in 1928 and 1929 common-stock prices advanced far beyond levels indicated by business profits and prospects. Security-price trends also have been at variance with other business indexes during World Wars I and II.

Common Stocks. — Common-stock prices were firmer in the final quarter of 1952 but the trend was reversed in the opening months of 1953. Changes in security price levels in 1953 reflected, in part, prospects for peace in Korea together with a less tense international situation. From a 1952 low point of 163·6 for October, the investors composite index advanced to 172·3 by January 1953. Following relative steadiness in February and March, the index dropped sharply in April to touch 160·8. Continued steadiness was maintained at this level until September and October when a further sharp drop to 152·9 and 151·9, respectively, occurred.

9.—Investors Index Numbers of Common Stocks, by Month, 1952 and 1953

(1935-39=100)

Year and Month	Types of Stocks									
	Industrials									
	Machinery and Equipment	Pulp and Paper	Milling	Oils	Textiles and Clothing	Food and Allied Products	Beverages	Building Materials	Industrial Mines	Industrials, Total
1952										
January	452·0	582·8	118·5	161·0	301·2	111·8	396·5	295·3	148·1	186·7
February	450·3	563·7	120·4	159·8	285·7	111·8	371·8	293·3	151·3	185·2
March	443·3	546·1	120·9	162·8	277·1	110·4	371·7	286·4	143·2	182·6
April	417·6	510·8	120·1	172·7	261·2	107·8	352·0	274·0	137·8	180·5
May	414·9	488·9	117·8	160·9	258·9	102·5	343·3	264·5	131·5	172·4
June	420·2	506·5	121·6	157·4	268·2	101·5	357·9	268·4	138·7	174·8
July	422·5	518·4	135·5	158·7	272·7	104·6	367·5	281·4	143·9	178·6
August	441·8	519·9	152·3	153·4	297·2	107·5	375·6	299·4	145·0	179·8
September	434·7	499·1	145·4	146·6	286·8	109·7	363·8	290·7	141·2	174·3
October	407·5	471·9	143·4	138·1	271·9	110·2	350·4	277·5	132·2	164·9
November	416·1	480·4	143·7	143·3	276·3	112·4	370·4	284·8	133·2	169·2
December	419·1	494·3	132·9	146·5	269·3	112·5	367·1	287·6	130·3	169·9
1953										
January	432·9	502·5	132·6	147·3	279·0	115·2	382·5	293·6	137·0	174·3
February	419·9	494·4	133·4	143·0	269·4	117·0	387·0	291·0	131·0	170·0
March	415·5	501·9	130·6	145·3	261·5	117·8	396·8	293·3	129·5	170·8
April	382·7	472·6	130·4	136·8	247·7	118·2	384·4	282·2	118·3	160·6
May	381·6	471·0	128·3	134·6	235·1	118·2	395·9	275·1	116·4	159·1
June	378·9	471·9	128·8	127·4	217·6	118·3	388·1	270·7	116·5	155·5
July	394·9	494·9	129·8	129·3	202·7	124·3	408·6	278·5	121·2	160·5
August	396·9	518·9	136·4	131·3	211·5	125·7	411·4	283·8	117·7	161·6
September	375·2	509·2	132·8	120·8	199·4	123·2	397·8	269·4	109·2	152·2
October	374·3	503·3	131·3	118·5	189·9	123·3	400·8	267·0	109·1	150·9

Year and Month	Types of Stocks					Grand Total
	Public Utilities				Banks, Total	
	Transportation	Telephone and Telegraph	Power and Traction	Public Utilities, Total		
1952						
January	388·0	98·6	147·9	175·0	146·5	181·7
February	375·7	97·3	141·2	169·5	143·8	179·5
March	390·2	93·8	140·8	170·4	143·6	177·6
April	404·1	90·3	138·2	170·4	140·1	175·8
May	390·6	90·6	133·6	166·2	141·2	169·0
June	388·6	91·7	138·4	168·1	146·6	171·6
July	389·1	92·1	140·7	169·3	149·5	174·9
August	382·4	94·7	142·1	169·9	152·4	176·0
September	367·4	95·0	139·6	166·5	155·2	171·6
October	346·8	94·8	138·1	162·1	153·7	163·6
November	356·1	97·8	137·6	165·1	152·9	167·3
December	363·9	98·4	139·1	167·4	155·4	168·4
1953						
January	353·6	97·8	146·3	167·9	162·0	172·3
February	341·7	98·1	146·2	166·0	164·8	169·0
March	344·2	100·0	147·0	167·7	165·9	170·0
April	314·0	99·3	144·8	161·0	163·0	160·8
May	307·7	101·1	143·4	160·4	166·3	159·8
June	296·0	101·4	140·9	157·5	168·4	156·8
July	296·4	101·4	141·9	157·9	169·1	160·7
August	281·8	99·3	142·9	154·6	171·7	161·2
September	261·5	95·0	141·5	148·1	171·6	152·9
October	263·2	95·3	142·9	149·0	168·5	151·9

Preferred Stocks.—Preferred stock prices remained within exceptionally narrow limits during the final quarter of 1952 and the first two months of 1953. From a level of 161·2 in October, the index for preferred stocks moved to 161·6 by February 1953. A firmer tone lifted prices to 163·6 in March but by April this advance had been cancelled as the index again stood at 161·6. Subsequent to that date prices held relatively steady, standing at 161·0 for October.

10.—Index Numbers of Preferred Stocks, by Month, 1944-53

(1935-39=100)

NOTE.—Figures for 1927-43 are given in the 1948-49 Year Book, p. 658.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1944	118·3	118·6	119·2	118·7	118·5	122·2	124·7	125·9	126·3	126·7	128·8	129·8
1945	131·8	132·1	130·9	130·3	132·4	137·2	138·0	137·8	139·4	142·5	145·0	146·6
1946	152·1	154·1	154·5	157·8	159·7	161·6	157·5	157·9	151·4	153·6	154·7	153·5
1947	157·5	158·5	156·0	153·1	154·3	155·8	155·4	153·5	153·6	152·0	150·2	148·1
1948	144·5	141·0	138·9	144·2	147·0	148·2	147·5	146·4	144·8	143·7	144·6	144·6
1949	144·7	144·0	142·8	140·9	139·9	136·3	138·6	140·4	141·8	145·8	150·0	150·7
1950	152·4	153·0	153·7	154·4	157·3	158·2	154·6	155·6	158·2	161·1	161·1	160·2
1951	166·0	169·3	166·0	165·2	164·3	162·2	163·1	165·2	166·4	164·2	162·8	159·5
1952	161·4	160·6	159·5	157·2	157·2	157·7	159·8	163·6	162·4	161·2	160·3	160·7
1953	161·0	161·6	163·6	161·6	162·9	163·0	163·8	164·3	162·0	161·0	..	..

Mining Stocks.—Prices for mining stocks, after touching a 1952 low point of 99·1 in October, advanced slowly through the final quarter of 1952. In January 1953 a peak of 106·0 was reached which subsequently proved to be the turning point for a decline that lowered the index to 82·7 by October. Both golds and base metals shared in the recession but the latter group suffered the greater losses. After reaching a peak of 180·6 in January, as compared with 166·9 in October 1952, the base metals index receded to 134·3 by October. Over the same period, the gold stocks series moved between 69·5 for October, 73·5 for January, and 60·1 for October.

11.—Weighted Index Numbers of Prices of Mining Stocks, by Month, 1950-53

(1935-39=100)

Year and Month	Gold	Base Metals	Total	Year and Month	Gold	Base Metals	Total
1950				**1952**			
January	75·0	127·8	92·8	January	72·0	177·7	104·2
February	73·2	127·2	91·3	February	71·2	174·6	102·6
March	73·9	124·5	91·0	March	73·4	169·6	102·7
April	75·4	127·5	93·0	April	77·0	162·1	102·8
May	73·6	129·2	92·3	May	75·1	161·6	101·4
June	70·2	130·8	90·5	June	75·5	162·6	102·0
July	58·5	126·1	80·9	July	76·6	176·6	107·0
August	61·6	138·2	86·9	August	77·6	184·9	110·2
September	62·7	145·1	90·0	September	74·4	180·2	106·6
October	64·0	147·6	91·7	October	69·5	166·9	99·1
November	61·1	148·6	90·0	November	71·1	168·8	100·8
December	59·8	146·0	88·2	December	73·2	172·5	103·4
1951							
January	68·8	163·5	97·6	**1953**			
February	74·3	174·5	104·7	January	73·5	180·6	106·0
March	71·2	166·7	100·3	February	72·2	174·3	103·2
April	66·8	165·3	96·7	March	70·1	174·0	101·7
May	63·7	158·6	92·5	April	69·2	159·0	96·5
June	63·7	152·3	90·6	May	68·9	150·9	93·8
July	65·5	155·0	92·7	June	66·8	143·7	90·2
August	69·7	161·7	97·7	July	66·3	148·9	91·4
September	73·7	173·6	104·0	August	67·5	144·0	90·7
October	75·3	181·2	107·5	September	62·5	136·3	85·0
November	71·9	172·3	102·4	October	60·1	134·3	82·7
December	73·2	172·4	103·4				

Section 4.—Index Numbers of Bond Yields

The exceptional financial requirements of the war years 1914-18 turned the federal authorities to the domestic market, a field that had hitherto served mainly the needs of the provinces and municipalities. Historical records of long-term bond yields in the domestic market prior to 1914 are obtainable, therefore, from provincial and municipal sources only.

The growing importance of Federal Government financing in the domestic market since World War I made it advisable to publish the Government's index of long-term bond yields shown in Table 12. This series (1935-39=100) has been prepared from January 1937 on the basis of yields computed from a 15-year, 3 p.c. theoretical issue. Quotations for the theoretical yields are computed by the Bank of Canada.

The easier tone for Government of Canada obligations, which developed in the second half of 1951, continued through 1952 and into 1953. There was, however, evidence of a more stable price in the first part of 1953 as indicated by the long-term bond yield index which hovered around 119·0 in the first quarter and reached 120·8 by October.

12.—Index Numbers of Government of Canada Long-Term Bond Yields, by Month, 1944-53

(1935-39=100)

Month	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953
January	97·3	96·7	90·0	84·9	92·1	95·4	90·1	97·9	113·4	118·3
February	97·3	96·6	85·9	84·7	92·1	95·2	90·3	97·7	113·9	118·8
March	97·3	96·3	83·8	84·6	96·7	94·7	90·2	104·6	115·1	118·9
April	97·3	96·0	84·3	84·8	96·5	94·4	90·7	104·9	115·3	118·9
May	97·2	96·0	85·1	84·6	95·3	94·4	90·2	104·9	112·6	119·6
June	97·0	95·6	84·9	84·3	95·4	94·4	90·2	105·3	114·0	120·6
July	97·0	94·6	85·1	83·8	95·6	93·8	91·0	104·7	117·3	120·7
August	97·0	94·4	85·0	83·9	96·2	92·7	90·5	104·9	119·1	121·0
September	97·0	94·6	84·9	84·0	96·1	91·8	89·8	105·0	119·6	121·5
October	97·0	94·4	85·0	84·2	96·3	89·1	92·0	105·7	118·6	120·8
November	97·0	93·9	85·0	84·4	95·7	89·2	93·9	107·8	117·8	
December	96·9	92·2	85·0	84·8	95·5	90·3	96·7	112·0	118·0	

CHAPTER XXIII.—PUBLIC FINANCE*

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—Combined Statistics of Public Finance for all Governments

Combined statistics of public finance for all governments in Canada—federal, provincial and municipal—are presented in this Section. Additional information is provided for each level of government in Sections 2, 3 and 4.

Combined Revenue and Expenditure.—Tables 1 and 3 give details of the federal, provincial and municipal net combined revenue by sources and net combined current and capital expenditure by services for 1950. This net basis has been prepared by deducting from revenue, and the appropriate expenditure, certain specified amounts such as grants-in-aid and shared-cost contributions from other governments, institutional revenue, certain other sales of commodities and services, and interest, premium, discount and exchange revenue, exclusive of sinking fund earnings. Amounts provided for debt retirement are excluded to avoid duplication since all expenditure resulting from capital borrowings is included.

Inter-governmental transfers such as subsidy payments by the Federal Government to the provincial governments are unconditional grants and, therefore, cannot be offset against any specific expenditure. These are set out separately in Tables 1 and 3 in order to prevent duplication and to provide additive totals. Because of the differing accounting practices of governments and variations in fiscal year-ends, discrepancies appear between the amounts recorded as inter-governmental transfers in the two tables.

* Except as otherwise noted, this Chapter has been revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

1.—Combined Revenue of All Governments, 1950

NOTE.—Figures for the fiscal years ended nearest Dec. 31.

Item	Federal	Provincial	Municipal[1]	Total
	$'000	$'000	$'000	$'000
Taxes—				
Corporation	838,566	151,022	—	989,588
Customs duties and import	296,433	—	—	296,433
Gasoline	—	155,441	—	155,441
General sales	460,121	75,846	25,389	561,356
Income—persons	652,328	116	—	652,444
Liquor[2]	129,209	138,909	—	268,118
Succession duties	33,599	31,216	—	64,815
Real and personal property	—	5,189	400,428[3]	405,617
Tobacco	206,995	10,003	—	216,998
Withholding	61,610	—	—	61,610
Other	131,489	46,755	52,742	230,986
Totals, Taxes	2,810,350	614,497	478,559	3,903,406
Licences, Permits and Fees—				
Motor-vehicle	—	66,948	—	66,948
Other	5,250	18,653	13,778	37,681
Totals, Licences, Permits and Fees	5,250	85,601	13,778	104,629
Public domain	2,360	114,046	—	116,406
Public utility contributions to municipalities	—	—	24,469	24,469
Post Office (net)	[4]	—	—	—
Bank of Canada profits	19,663	—	—	19,663
Bullion and coinage	4,708	—	—	4,708
Miscellaneous revenue	63,247[5]	13,142	43,631	120,020
Totals, Revenue (excluding Inter-governmental Transfers)	**2,905,578**	**827,286**	**560,437**	**4,293,301**
Inter-governmental Transfers—				
Federal subsidies to provinces	—	18,674	—	...
Subsidies to municipalities	—	—	14,350[6]	...
Transitional grant to Newfoundland	—	6,500	—	...
Dominion-Provincial Taxation Agreements	—	91,828	—	...
Share of income tax on power utilities	—	4,458	—	...
Nova Scotia highway tax	—	245	—	...
Manitoba Municipal Commissioner's levy	—	517	—	...
Interest on Common School Fund and School Lands Fund Debentures	—	800	—	...
Totals, Inter-governmental Transfers	—	**123,022**	**14,350**	...
Grand Totals, 1950	**2,905,578**	**950,308**	**574,787**	...

[1] Revenue of municipalities in the Province of Quebec is estimated. [2] Includes provincial profits from liquor control. [3] Excludes personal property which is inseparable from other taxes. [4] Expenditure exceeded revenue. [5] Includes $41,918,000 being excess of refunds over expenditure *re* expansion of industry and price control and rationing. [6] Includes federal grants to municipalities in lieu of taxes on federal properties which are not segregated from provincial subsidies to municipalities.

2.—Combined Revenue of All Governments, exclusive of Inter-governmental Transfers, 1947-50

NOTE.—Figures for the fiscal years ended nearest Dec. 31. Revenue of municipalities in the Province of Quebec is estimated.

Item	1947	1948	1949	1950[1]
	$'000	$'000	$'000	$'000
Taxes—				
Corporation	670,600	646,296	732,380	989,588
Customs duties and import	295,737	223,786	226,403	296,433
Gasoline	113,195	124,305	137,759	155,441
General sales	416,308	440,502	481,343	561,356
Income—persons	659,932	762,749	622,104	652,444
Liquor[2]	222,266	229,712	241,513	268,118
Succession duties	61,883	54,672	59,084	64,815
Real and personal property[3]	307,805	341,265	373,759	405,617
Tobacco	183,977	199,398	215,912	216,998
Withholding	35,889	43,445	47,475	61,610
Other	234,877	237,450	168,356	230,986
Totals, Taxes	3,202,469	3,303,580	3,306,088	3,903,406
Licences, Permits and Fees—				
Motor-vehicle	46,475	51,471	58,198	66,948
Other	29,503	30,793	33,472	37,681
Totals, Licences, Permits and Fees	75,978	82,264	91,670	104,629
Public domain	57,209	74,228	94,218	116,406
Public utility contributions to municipalities	19,852	20,415	23,718	24,469
Post Office (net)	9,857	3,011	1,933	[4]
Bank of Canada profits	18,828	19,107	20,442	19,663
Bullion and coinage	1,731	3,253	4,524	4,708
Miscellaneous revenue	224,594	168,330	111,302	120,020
Totals, Revenue (excluding Inter-governmental Transfers)	**3,610,518**	**3,674,188**	**3,653,895**	**4,293,301**

[1] Includes provincial and municipal revenue of Newfoundland. [2] Includes provincial profits from liquor control. [3] Excludes personal property for municipal governments which is inseparable from other taxes. [4] Expenditure exceeded revenue. Net excess included in Table 3 under "Other Expenditure".

3.—Combined Expenditure of All Governments, 1950

NOTE.—Figures for the fiscal years ended nearest Dec. 31.

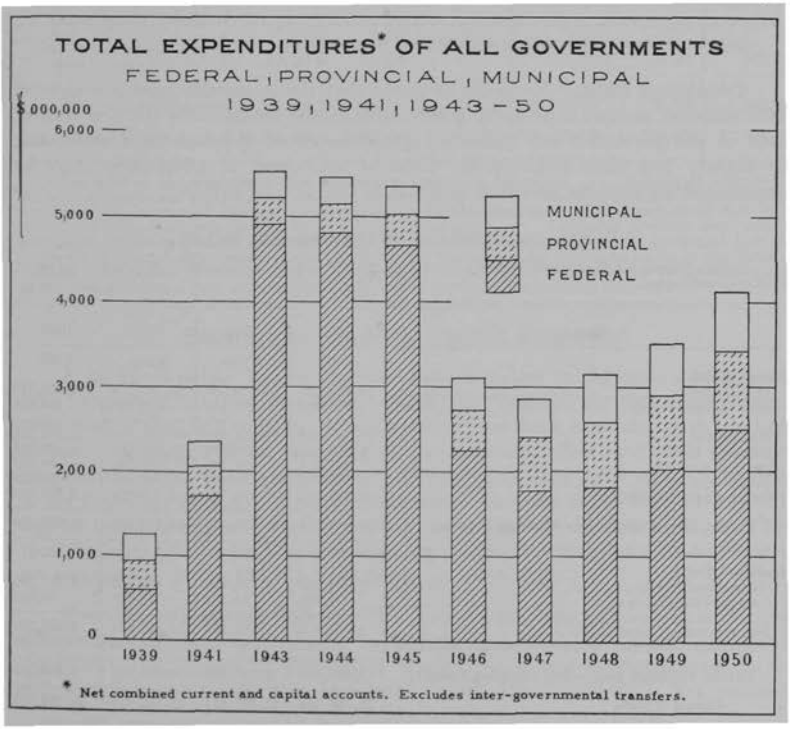
Item	Federal	Provincial	Municipal[1]	Total
	$'000	$'000	$'000	$'000
Public Welfare—				
Health and hospital care	22,536	152,956	40,107	215,599
Labour and unemployment insurance	56,304	4,057	—	60,361
Relief	—	11,807	5,901	17,708
Old age pensions	99,346	40,566	—	139,912
Family allowances	311,277	—	—	311,277
Other	22,188	39,089	68,570	129,847
Totals, Public Welfare	511,651	248,475	114,578	874,704
Education	22,196	177,839	246,155	446,190
Transportation	127,219	252,092	109,985	489,296
Agriculture	148,091	54,512	—	202,603
Public domain	45,776	22,660	—	68,436
National defence	759,779	—	—	759,779
Veterans' pensions and aftercare	191,777	—	—	191,777
Expansion of industry	[2]	—	—	—
Price control and rationing	[2]	—	—	—
Debt charges, net (excluding retirements)	358,563	53,253	34,544	446,360
Other expenditure	329,679	114,909	176,884	621,472
Totals, Expenditure (excluding Inter-governmental Transfers)	**2,494,731**	**923,740**	**682,146**	**4,100,617**

For footnotes, *see* end of table.

3.—Combined Expenditure of All Governments, 1950—concluded

Item	Federal	Provincial	Municipal[1]	Total
	$'000	$'000	$'000	$'000
Inter-governmental Transfers—				
Federal subsidies to provinces	18,735	—	—	...
Transitional grant to Newfoundland	6,500	—	—	...
Provincial subsidies to municipalities	—	14,074	—	...
Dominion-Provincial Taxation Agreements	94,123	—	—	...
Share of income tax on electric power utilities	4,565	—	—	...
Nova Scotia highway tax	—	—	246	...
Manitoba Municipal Commissioner's levy	—	—	482	...
Interest on Common School Fund and School Lands Fund Debentures	800	—	—	...
Grants to Municipalities in lieu of taxes on federal properties	1,378	—	—	...
Totals, Inter-governmental Transfers	**126,101**	**14,074**	**728**	...
Grand Totals	**2,620,832**	**937,814**	**682,874**	...

[1] Expenditure of municipalities in the Province of Quebec is estimated. [2] Refunds of expenditure exceeded expenditures. Excess included in Table 1 under "Miscellaneous Revenue".



4.—Combined Expenditure of All Governments, exclusive of Inter-governmental Transfers, 1947-50

NOTE.—Figures for the fiscal years ended nearest Dec. 31. Expenditure of municipalities in the Province of Quebec is estimated.

Item	1947	1948	1949[1]	1950[1]
	$'000	$'000	$'000	$'000
Public Welfare—				
Health and hospital care	100,079	137,738	194,579	215,599
Labour and unemployment insurance	41,502	45,466	52,182	60,361
Relief	10,032	10,992	18,754	17,708
Old age pensions	80,820	93,938	127,906	139,912
Family allowances	264,780	272,608	299,347	311,277
Other	81,145	98,705	117,812	129,847
Totals, Public Welfare	578,358	659,447	810,580	874,704
Education	282,227	364,405	406,590	446,190
Transportation	364,495	467,703	514,022	489,296
Agriculture	128,749	89,971	107,700	202,603
Public domain	69,727	91,304	103,602	68,436
National defence	154,263	256,092	372,596	759,779
Veterans' pensions and aftercare	311,856	235,578	202,466	191,777
Price control and rationing	59,011	30,721	2,748	—
Debt charges, net (excluding retirements)	495,064	475,136	490,159	446,360
Other expenditures	398,738	450,257	493,159	621,472
Totals, Expenditure (excluding Inter-governmental Transfers)	**2,842,488**	**3,120,614**	**3,503,622**	**4,100,617**

[1] Includes provincial and municipal expenditure of Newfoundland.

Combined Debt.—It should be noted that the increased direct and indirect debt reflected in 1949 is partially attributable to the inclusion for the first time of debt of the provincial and municipal governments of Newfoundland amounting to slightly less than $13,300,000. Debt of each level of government may be ascertained for 1950 by reference to Table 6.

5.—Combined Debt of All Governments, 1947-50

NOTE.—Figures for fiscal years ended nearest Dec. 31. The debt of municipalities in the Province of Quebec is estimated.

Item	1947	1948	1949[1]	1950[1]
	$'000	$'000	$'000	$'000
Direct Debt—				
Funded debt	16,764,727	16,810,054	16,763,373	16,708,748
Less Sinking Funds	373,729	399,158	499,992	464,403
Net funded debt	16,390,998	16,410,896	16,263,381	16,244,345
Treasury bills	1,340,457	1,339,872	1,339,681	1,463,835
Savings deposits	101,914	104,761	107,746	39,432
Temporary loans	65,417	71,409	87,896	88,993
Other direct liabilities	2,310,157	2,196,743	2,372,761	2,786,385
Totals, Direct Debt (less Sinking Funds)	**20,208,943**	**20,123,681**	**20,171,465**	**20,622,990**
Indirect Debt—				
Guaranteed bonds	1,066,342	1,194,630	1,405,206	1,517,400
Less Sinking Funds	24,326	31,331	29,738	33,817
Net guaranteed bonds	1,042,016	1,163,299	1,375,468	1,483,583
Guaranteed bank loans and other indirect liabilities	57,531	80,637	116,507	102,800
Totals, Indirect Debt (less Sinking Funds)	**1,099,547**	**1,243,936**	**1,491,975**	**1,586,383**
Grand Totals	**21,308,490**	**21,367,617**	**21,663,440**	**22,209,373**

[1] Includes provincial and municipal expenditure of Newfoundland.

6.—Composition of Total Debt of All Governments, 1950

NOTE.—Figures for fiscal years ended nearest Dec. 31.

Item	Federal	Provincial	Municipal[1]	Total	Deduct Inter-governmental Debt	Combined Governmental Debt
	$'000	$'000	$'000	$'000	$'000	$'000
Direct Debt—						
Funded debt	13,586,721	1,946,505	1,187,687	16,720,913	12,165	16,708,748
Less Sinking Funds	22,702	308,114	133,587	464,403	—	464,403
Net funded debt	13,564,019	1,638,391	1,054,100	16,256,510	12,165	16,244,345
Treasury bills	1,400,000[2]	153,251	1,757	1,555,008	91,173	1,463,835
Savings deposits	37,662	1,770	—	39,432	—	39,432
Temporary loans	—	5,071	83,922	88,993	—	88,993
Other direct liabilities	2,552,788[3]	206,588	138,062	2,897,438	111,053	2,786,385
Totals, Direct Debt (less Sinking Funds)	**17,554,469**	**2,005,071**	**1,277,841**	**20,837,381**	**214,391**	**20,622,990**
Indirect Debt—						
Guaranteed bonds	678,630[4]	787,152	58,071	1,523,853	6,453	1,517,400
Less Sinking Funds	15,910[5]	5,413	12,529	33,852	35	33,817
Net guaranteed bonds	662,720	781,739	45,542	1,490,001	6,418	1,483,583
Loans under the Municipal Improvement Assistance Act, 1938	—	4,212	—	4,212	4,212	—
Guaranteed bank loans and other indirect liabilities	38,461[6]	74,420	—	112,881	10,081	102,800
Totals, Indirect Debt (less Sinking Funds)	**701,181**	**860,371**	**45,542**	**1,607,094**	**20,711**	**1,586,383**
Grand Totals	**18,255,650**	**2,865,442**	**1,323,383**	**22,444,475**	**235,102**	**22,209,373**

[1] The debt of municipalities in the Province of Quebec is estimated. [2] Includes $200,000,000 deposit certificates and $750,000,000 six-month treasury notes. [3] Excludes provincial debt accounts. [4] Includes both guaranteed and unguaranteed issues of the Canadian National Railways as at Mar. 31 to correspond with fiscal year end of the Federal Government. [5] Includes proceeds from sale of mortgaged properties held by the Canadian National Railways. [6] Excludes contingent liability in respect of Federal Government guarantee of deposits maintained by chartered banks in the Bank of Canada, miscellaneous guarantees the amounts of which were not finally determined or were indeterminate at the close of the fiscal year, and contingent liabilities of the Canadian National Railways.

Section 2.—Federal Public Finance*

A sketch of public finance from the French régime to the outbreak of World War I appears in the 1941 Year Book, pp. 742-743. Detailed sketches *re* tax changes from 1914 to 1938 will be found in issues of the Year Book beginning with the 1926 edition. An outline of the financing of Canada's war effort, including the more important changes in taxation during the war years from 1939 to 1945, is given in the 1945 Year Book, pp. 918-923. Budgets for the years ended Mar. 31, 1946-51, will be found in issues of the Year Book beginning with the 1946 edition. The most important post-war Budget changes, up to and including the 1952-53 Budget, are summarized in the 1952-53 Year Book, pp. 1026-1030.

Post-War Financial Policy.—The post-war financial policies of the Federal Government can be evaluated only against the background of Canada's economic situation. The position at the end of World War II can be summarized in the following manner. The War had cost almost $20,000,000,000. Net national

*Revised, except as otherwise stated, under the direction of Dr. K. W. Taylor, C.B.E., Deputy Minister of Finance, Ottawa.

debt had increased from $3,200,000,000 pre-war to $13,400,000,000 at Mar. 31, 1946. In industry there was extensive war capacity that had to be converted to peace-time manufacture. The wartime labour force and the members of the Armed Services had to be fitted into a peace-time economy. The multilateral system of trade and payments had broken down and traditional Canadian export markets in Western Europe had been greatly weakened by the War.

Despite these factors, the Canadian economy began to expand in 1946. The rapid but balanced growth in the years immediately after the end of the War appears to be due broadly to five factors, which were, of course, closely related and which reacted upon each other. First, the wartime expansion of Canadian manufacturing capacity revealed that, at an optimum scale of production, Canada could produce many complex goods as cheaply and efficiently as any other nation. This encouraged the rapid conversion of capacity to peace-time use as well as investment in new capacity. Second, the size of the Canadian war effort created confidence among Canadians as to the possibilities of the Canadian economy. This increased confidence was evident in the willingness of Canadians to work, save and invest in Canada. Third, Canada's population expanded rapidly in the post-war period, enlarging the domestic market for many goods and services. The expansion of population was the result of increased immigration (which in turn was made possible by economic expansion), of substantial acceleration in the rate of natural increase and of the union of Newfoundland with Canada. A fourth factor behind the post-war expansion of the Canadian economy has been the success of the search for new minerals and metals. The Quebec-Labrador iron-ore discoveries and the new oil and gas fields in Alberta and Saskatchewan are the most obvious and important examples. These four factors have all affected the fifth factor—the high level of investment. Since 1946, a steadily increasing percentage of Canada's gross national product has been invested; in 1946 the proportion was 14·2 p.c. and in 1952, 22·3 p.c. From 1946 to 1952, capital investment has totalled almost $30,000,000,000 and has accounted for the employment of about 15 p.c. of the labour force. Since 1948, capital investment has exceeded exports as a mainspring of Canadian economic activity and it is worth noting that, since the end of the War, savings in Canada have been sufficient to finance the investment program. While there has been significant investment in Canada coming from abroad, notably from the United States, Canadian net investment in other countries since 1946 has been of similar magnitude. In 1952, for example, Canada was a net creditor in international investment despite the substantial flow of United States investment funds into Canada.

It was with these developments in mind that the Federal Government established its financial policies. At the end of the War there appeared to be four objectives of financial policy: (1) to smooth the change from war to peace; (2) to restore and maintain a free enterprise economy; (3) to promote a high and rising level of employment and income; and (4) to prevent excessive inflation. In the years 1950-52, the task of controlling inflation became even more important as heavy defence requirements were superimposed on an economy already stretched by a heavy investment program.

These four general aims were pursued, not by direct controls, but by fostering the right climate, by offering appropriate incentives and by steering the economy in the desired direction. As World War II drew to an end, a series of measures were enacted to smooth the adjustment to peace-time activity and to give driving power

to the dynamic Canadian economy. These measures included the establishment of the Industrial Development Bank, the enactment of the Farm Improvement Loans Act and the establishment of the Central Mortgage and Housing Corporation and the Export Credits Insurance Corporation. In addition to establishing the latter Corporation, Parliament gave the Minister of Finance authority to grant export credits to other countries. A $1,250,000,000 loan to the United Kingdom was the largest of such export credits.

In the annual Budget speeches of the Minister of Finance will be found his diagnoses of the economic stituation and his prescriptions of policy. For the first three post-war years the Budget speeches show him balancing several competing factors: first was the belief that the high wartime taxes reduced incentive to work and to invest; second was the belief that in periods of prosperity the national debt should be reduced; and third was the idea that a Budget surplus would help offset the inflationary forces of the post-war economy.

In the first three post-war Budgets, tax rates were reduced but substantial surpluses were achieved. In the Budget of 1949 a very small surplus, little better than a balance, was planned and the program of tax reduction to peace-time levels was completed. The main features of the 1949 Budget were a drastic recasting of commodity taxes and the beginning of a program to eliminate the double taxation of business profits, believed to be one cause of the relative shortage of equity capital.

By the end of 1948, a stable economic condition had been reached and during the following year and a half there was relatively little change in prices and inflation was well under control. This period of normal conditions was interrupted by the outbreak of the Korean war in June 1950. The defence program then adopted required expenditures that were to rise to four or five times their previous size. The economy was already strained by the capital investment program and by a high level of consumer spending.

Following the outbreak of the Korean conflict the size of the defence program made it necessary for the Federal Government to assess priorities, to limit competing demands, and to assure that there were adequate resources for the most important national needs. There were two main methods available for this task: comprehensive direct controls and general fiscal and monetary policies, which operate indirectly. Direct controls were judged to be burdensome to administer, needlessly restrictive of individual freedom and quite unsuited to a long-time effort.

The Federal Budgets after June 1950 reflected the decision to use general fiscal and monetary methods. Budgets were designed to pay for the defence program without borrowing and to use the necessary tax increases to control inflation where possible. Taxes on personal and corporate income were increased by 20 p.c. About half the new revenue required came from increased sales taxes and excise taxes. The Minister of Finance took the view that these affected the incentive to produce less adversely than would further increases in the taxes on income.

Though successive Budgets during the Korean conflict were designed to produce only a little better than a balance, rising national production and the lag in defence production produced moderate surpluses in 1950-51 and in 1951-52.

Monetary policies supplemented Budget policy. In October 1950, the Bank of Canada raised its discount rate from 1½ to 2 p.c. Interest rates on long-term bonds rose from 2·7 p.c. pre-Korea to 3·2 p.c. in March 1951 and, by the end of 1952, to 3·7 p.c. Consumer credit was restrained by regulations in November

1950 and March 1951. (These regulations were withdrawn in May 1952.) In February 1951 the chartered banks agreed to adopt lending policies that would prevent any increase in the total of bank loans and investments; and in September 1950 the Canadian dollar was 'unpegged'. The rise in its value tended to reduce the cost of imports and the internal price of exports.

The 1953-54 Budget.—The Budget for 1953-54 was opened by the Minister of Finance on Feb. 19, 1953, and a number of tax changes were proposed.

In the 1952-53 Budget the device of a defence surcharge on personal income tax had been dropped. About two-thirds of the surcharge rate was incorporated in the new schedule of rates and the remaining third was abandoned, thus achieving an effective reduction in personal income tax. In the February 1953 Budget, the remaining two-thirds of what had once been a surcharge was dropped so that personal income tax returned to its pre-Korean level. This reduction took effect from July 1, 1953.

The tax on corporate income was reduced by increasing from $10,000 to $20,000 the amount of profits subject to the rate of 20 p.c. The standard rate of 50 p.c. applied previously to all profits over $10,000 was reduced to 47 p.c. and applied to all profits over $20,000. It was estimated that after these changes only 30 p.c. of corporate taxpayers would be paying the standard 47-p.c. rate. Also, the low rate of 20 p.c. to be applied to the first $20,000 of profits was reduced to 18 p.c. In addition to the 18-p.c. and 47-p.c. rates there was, of course, the 2-p.c. old age security tax.

In addition to these rate reductions on personal and corporate income taxes, there was an increase in the amount of credit against personal income tax for dividends received from Canadian tax-paying corporations. The 10-p.c. credit provided in 1949 was increased to 20 p.c. in the February 1953 Budget, constituting a further attempt to reduce the element of double taxation of corporate income and to encourage Canadians to invest in the equities of Canadian companies.

The income-tax deduction for medical expenses, which allowed medical expenses in excess of 4 p.c. of income to be set against taxable income, was made more generous; the 1953-54 Budget provided that medical expenses in excess of 3 p.c. of income could be deducted from taxable income.

Other important changes made in the income-tax system included: the allowance of a deduction for dependent children over 21 years of age attending university; an increase of from $600 to $750 in the amount of income that a dependent might earn in a year; provision for deduction of expense allowances for municipal officials for income-tax purposes if they conform with the limits established for allowances for federal and provincial elected members; special provision to alleviate the tax on refunds paid out as a result of reorganizations of pension plans.

Following the post-war practice of withdrawing from minor tax fields that had been used by the provinces, the 1953-54 Budget proposed the repeal of the federal tax on the transfer of securities.

The Budget resolutions proposed reductions on the duty on certain items entering into costs of production, particularly on gasoline engines and wire rope of importance to the fishing industry, and on certain specialized items of equipment for the mining industry. The classifications under which universities, schools and hospitals can import scientific and medical apparatus and under which items for religious use are brought into the country free of duty were further widened.

In the field of commodity taxes, while there was no change in the rate of general sales tax or the special excise rate, there were a number of specific revisions. The excise duty on cigarettes was reduced by $2 a thousand, or by 4 cents for a package of 20 cigarettes. The stamp tax on cheques, money orders and other instruments was abandoned. The sales tax on books and on material used in books, magazines and newspapers was dropped. Certain materials used in the manufacture of sales-tax-free goods were also freed from sales tax.

The radio licence fee was abandoned and in its place the Canadian Broadcasting Corporation was given the revenue from the existing special excise tax of 15 p.c. on radio sets, on television sets and on their taxable parts.

All the tax changes together involved a reduction in revenue of $361,000,000 in a full fiscal year and of $237,000,000 in the year ended Mar. 31, 1954. The personal income-tax changes involved a reduction in taxes of $185,000,000 in a full year and $100,000,000 in the fiscal year 1953-54.

Prospective budgetary expenditure for 1953-54 was estimated at $4,462,000,000 and prospective budgetary revenue at $4,473,000,000, thus providing a surplus of $11,000,000, or less than 0·25 p.c. of the revenue. Finally audited figures for the year ended Mar. 31, 1953, showed total budgetary revenues of $4,361,000,000 and expenditures of $4,337,000,000, leaving a surplus of $24,000,000 or 0·5 p.c. of revenue.

Subsection 1.—Balance Sheets of the Federal Government

Table 7 shows the balance sheets of the Federal Government as at Mar. 31, 1952 and Mar. 31, 1953. The figures of this table are on a basis not strictly comparable to those in previous Year Books, chiefly because of changes in the method of accounting for cash.

7.—Balance Sheet of the Federal Government, as at Mar. 31, 1952 and 1953

Assets	1952	1953
	$	$
Assets—		
Cash and Other Current Assets—		
Cash in current and special deposits	148,214,187	255,836,979
Cash in hands of collectors and in transit	118,392,039	129,693,034
Cash in miscellaneous departmental imprest and advance accounts	10,453,562	11,142,586
Other Liquid Assets—		
Exchange Fund account—advances represented by cash and securities	1,799,403,755	1,770,789,386
Securities investment account	58,896,205	59,472,985
Working Capital Advances—		
Crown corporations	23,927,192	23,927,192
Defence Production Revolving Fund	82,383,664	102,110,487
Temporary loan to Old Age Security Fund	—	99,483,324
Departmental	35,346,211	96,019,433
Miscellaneous accountable advances	9,184,941	12,795,715
Other Current Assets—		
Miscellaneous accounts receivable	33,410,269	30,538,798
	2,319,612,025	2,591,809,919
Loans to, and Investments in, Crown Agencies—		
Bank of Canada—capital stock	5,920,000	5,920,000
Central Mortgage and Housing Corporation—capital and loans	359,973,294	432,534,975
Canadian Farm Loan Board—capital stock and loans	27,321,572	28,921,347
Railway and steamship companies	903,865,398	1,045,687,379
Miscellaneous	175,637,641	192,124,119
	1,472,717,905	1,705,187,820

7.—Balance Sheet of the Federal Government, as at Mar. 31, 1952 and 1953—continued

Assets and Liabilities	1952	1953
	$	$
Assets—concluded		
Other Loans and Investments—		
To provincial and municipal governments	91,028,508	87,246,392
To United Kingdom and other governments	1,925,668,362	1,864,894,875
Canada's Subscription to Capital of—		
International Monetary Fund	322,502,497	322,502,497
International Bank for Reconstruction and Development	70,864,349	70,864,349
Soldier Settlement and Veterans Land Act loans	163,924,939	162,665,595
Miscellaneous	17,283,327	17,928,054
	2,591,271,982	2,526,101,762
Sinking fund and other investments held for retirement of unmatured funded debt	25,902,746	27,625,178
Province debt accounts	2,296,152	2,296,152
Deferred Charges—		
Unamortized discounts and commissions on loans	54,293,455	60,659,579
Unamortized portion of Civil Service Superannuation Account liability	214,000,000	189,000,000
	268,293,455	249,659,579
Sundry suspense accounts	127,117,108	199,943,521
Gross Totals, Active Assets	**6,807,211,373**	**7,302,623,931**
Less: Reserve for possible losses on ultimate realization of active assets	470,867,388	545,867,388
Net Totals, Active Assets	**6,336,343,985**	**6,756,756,543**
Net Debt—		
Non-active Assets—		
Capital expenditures	1,103,805,519	1,125,550,860
Other	552,827,422	556,281,473
Consolidated deficit account	9,528,648,605	9,479,901,936
Totals, Net Debt	**11,185,281,546**	**11,161,734,269**
Totals, Gross Debt	**17,521,625,531**	**17,918,490,812**
Liabilities—[1]		
Floating Debt—		
Matured funded debt outstanding	24,670,763	20,017,378
Notes and other obligations payable on demand	289,660,309	282,000,828
Interest due and outstanding	75,885,979	57,105,303
Outstanding cheques and warrants	208,994,714	230,769,091
Miscellaneous accounts payable	242,288,833	257,585,611
Post Office Account	15,036,223	16,423,585
	856,536,821	863,901,795
Deposit and Trust Accounts—		
Post Office Savings Bank	38,031,232	39,322,230
Indian Trust Funds	21,359,035	22,541,954
Miscellaneous	72,454,008	121,203,568
	131,844,275	183,067,752
Insurance, Pension and Guaranty Accounts—		
Government Annuities	675,931,703	736,540,927
Insurance and Guaranty Funds	76,073,860	77,929,446
Pension and Retirement Funds	664,272,954	752,659,174
	1,416,278,517	1,567,129,547
Deferred Credits—		
Interest accrued on public debt	87,510,068	113,416,921
Miscellaneous	17,672,997	16,529,332
	105,183,065	129,946,253

[1] Direct liabilities only. Indirect liabilities or guarantees by the Government of Canada are given on p. 1094.

7.—Balance Sheet of the Federal Government, as at Mar. 31, 1952 and 1953—concluded

Liabilities	1952	1953
	$	$
Liabilities—concluded		
Sundry Suspense Accounts—		
Defence equipment replacement	201,428,457	271,133,711
Provincial 5-p.c. corporation income tax collections suspense	77,719,139	47,923,334
Miscellaneous	25,304,837	32,940,863
	304,452,433	351,997,908
Province Debt Accounts	11,919,969	11,919,968
Funded Debt Unmatured—		
Payable in Canada—		
Bonds, deposit certificates, treasury bills and notes	14,298,858,302	14,416,039,540
Payable in London	53,119,649	52,904,299
Payable in New York	343,432,500	341,583,750
	14,695,410,451	14,810,527,589
Totals, Liabilities or Gross Debt	**17,521,625,531**	**17,918,490,812**

Subsection 2.—Revenue and Expenditure

In the fiscal year ended Mar. 31, 1953, Federal Government revenue amounted to $4,361,000,000 compared with $3,981,000,000 in the previous year, an increase of $380,000,000. During the same period, expenditure increased by $604,000,000 from $3,733,000,000 to $4,337,000,000. The surplus of revenue over expenditure for the fiscal year was $24,000,000.

Tax revenue was $340,000,000 greater than in the previous fiscal year and non-tax revenue dropped $2,000,000. Special receipts and other credits increased by $42,000,000.

8.—Details of Revenue, Years Ended Mar. 31, 1950-53

Revenue	1950	1951	1952	1953
	$	$	$	$
Ordinary Revenue—				
Tax Revenue—				
Customs import duties	225,877,683	295,721,750	346,364,563	389,442,109
Excise duties	220,564,504	241,046,174	217,939,983	241,360,370
Income tax	1,272,650,191	1,513,135,510	2,161,373,408	2,473,790,089
Excess profits tax	−1,788,388	10,140,910	2,364,909	—
Sales tax (net)	403,437,159	460,120,405	573,470,562	563,340,942
Succession duties	29,919,780	33,599,089	38,207,985	38,070,530
Other taxes	172,456,150	231,586,061	318,053,672	291,588,897
Totals, Tax Revenue	2,323,117,079	2,785,349,899	3,657,775,082	3,997,592,937
Non-tax Revenue—				
Post Office	84,511,786	90,443,216	104,610,122	111,904,487
Return on investments[1]	91,528,987	89,529,233	117,621,906	116,905,516
Bullion and coinage	4,523,656	4,708,370	4,838,495	4,386,195
Other	25,034,929	48,667,563	54,901,137	46,938,466
Totals, Non-tax Revenue	205,599,358	233,348,382	281,971,660	280,134,664
Totals, Ordinary Revenue	**2,528,716,437**	**3,018,698,281**	**3,939,746,742**	**4,277,727,601**
Special Receipts and Other Credits	**51,424,178**	**93,837,667**	**41,161,910**	**83,095,188**
Grand Totals, Revenue	**2,580,140,615**	**3,112,535,948**	**3,980,908,652**	**4,360,822,789**

[1] Includes interest on investments, profits of the Bank of Canada and other items.

9.—Details of Expenditure, Years Ended Mar. 31, 1950-53

Expenditure	1950	1951	1952	1953
	$	$	$	$
Finance	745,239,512	752,572,062	873,613,548	946,967,875
Public Debt Charges—				
Interest on public debt	*439,816,335*	*425,217,500*	*519,933,151*[1]	*451,339,521*
Annual amortization of bond discounts and commissions	*9,733,818*	*12,508,005*	*9,665,295*	*11,981,727*
Servicing of public debt	*477,766*	*448,516*	*384,889*	*508,411*
Cost of loan flotation	*811,805*	*846,278*	*1,051,474*	*1,089,578*
Totals, Public Debt Charges	*450,839,724*	*439,020,299*	*531,034,809*	*464,919,237*
Provincial subsidies and tax rental payments	*103,925,886*	*123,923,171*	*127,208,136*	*338,699,912*
Government contribution to Civil Service superannuation account	*5,461,544*	*81,851,262*	*110,910,777*	*58,801,864*
Reserve for possible losses on realization of active assets	*75,000,000*	*75,000,000*	*75,000,000*	*75,000,000*
Premium, discount and exchange	*19,740,244*	—	—	—
Assumption of part of Newfoundland debt under Terms of Union	*62,292,609*	—	—	—
Grants re Red River Valley flood	—	*12,500,000*	—	—
Write-down from active to non-active assets	*8,425,120*	—	—	—
Other	*19,554,405*	*20,297,330*	*29,459,826*	*29,546,862*
Agriculture	75,046,567	142,785,183	67,134,389	106,710,890
Western drought area relief	*13,575,253*	*4,708,409*	[2]	—
Canadian Wheat Board	—	*65,000,000*	—	—
Freight assistance of western feed grains	*16,764,011*	*15,637,786*	*14,999,240*	*20,661,349*
Other	*44,707,303*	*57,438,988*	*52,135,149*	*86,049,541*
Auditor General's Office	561,804	573,777	601,128	576,211
Chief Electoral Officer	4,456,108	276,925	367,736	464,487
Citizenship and Immigration	17,701,414	20,672,564	23,240,788	23,646,348
Civil Service Commission	1,512,851	1,580,319	1,691,663	1,909,508
Defence Production	...	...	30,978,479	88,817,141
Capital assistance to defence industry	...	...	*22,694,911*	*79,079,453*
Other	...	...	*8,283,568*	*9,737,688*
External Affairs	16,680,410	22,079,561	37,582,459	39,251,463
Fisheries	7,586,370	8,964,464	8,733,025	10,776,926
Governor General and Lieutenant-Governors	274,025	244,239	275,114	396,924
Insurance	311,486	368,741	403,336	448,619
Justice, including Penitentiaries	10,959,086	12,406,679	14,038,715	14,908,495
Labour	56,143,234	62,628,099	64,302,099	67,021,861
Unemployment Insurance Act, administration and government contribution	*45,117,960*	*52,938,309*	*53,844,691*	*56,168,359*
Government annuities (payment required to maintain reserve)	*1,255,772*	*659,787*	*940,138*	*743,617*
Other	*9,769,502*	*9,030,003*	*9,517,270*	*10,109,385*
Legislation	5,229,174	4,710,966	5,945,263	6,157,261
Mines and Technical Surveys	25,356,752	17,556,401	27,751,836[3]	29,658,169[3]
National Defence	384,879,008	782,457,272	1,415,473,862	1,882,418,468
Defence Appropriation Act	—	*195,417,216*	*126,415,799*	*235,053,327*
Other	*384,879,008*	*587,040,056*	*1,289,058,063*	*1,647,365,141*
National Health and Welfare	423,320,122	448,852,907	498,752,115	406,564,698
General health grants	*15,716,261*	*18,874,786*	*24,382,497*	*27,333,354*
Family allowance	*297,514,034*	*309,465,461*	*320,457,673*	*334,197,685*
Old age assistance and allowances to blind persons[4]	*93,188,934*	*103,169,115*	*83,204,713*	*22,099,463*
Deficit Old Age Security Fund	...	...	*49,663,855*	
Other	*16,900,893*	*17,343,545*	*21,098,377*	*22,934,196*
National Revenue	50,604,219	48,460,884	54,063,557	55,548,489
Canadian Broadcasting Corporation	*2,772,004*	*2,405,031*	*8,300,972*	*8,235,311*
Other	*47,832,215*	*46,055,853*	*45,762,585*	*47,313,178*
Post Office	82,639,741	91,781,466	97,973,263	105,553,191
Prime Minister's Office	120,142	124,315		
Privy Council Office	4,008,269	4,125,791	4,057,687	3,720,571
Federal District Commission	*3,704,500*	*3,733,000*		
Other	*303,769*	*392,791*		

For footnotes, *see* end of table.

9.—Details of Expenditure, Years Ended Mar. 31, 1950-53—concluded

Expenditure	1950	1951	1952	1953
	$	$	$	$
Public Archives	198,134	205,960	251,018	306,714
Public Printing and Stationery	866,069	706,201	1,103,156	1,607,237
Public Works	67,058,184	73,646,433	77,544,088	81,847,470
Resources and Development	25,388,855	31,200,626	34,432,805	38,477,423
National Film Board	*2,122,854*	*2,307,805*	*2,662,385*	*2,919,779*
Trans-Canada Highway contributions	...	*5,868,827*	*12,666,028*	*13,952,545*
Other	*23,266,001*	*23,023,994*	*19,204,444*	*21,605,099*
Royal Canadian Mounted Police	15,970,904	19,800,688	27,340,713	31,141,321
Secretary of State	1,600,450	2,064,965	2,399,468	2,201,462
Trade and Commerce	50,758,895	48,878,312	46,896,842	44,846,035
National Research Council and Atomic Energy Control Board	*16,169,600*	*18,013,509*	*25,079,896*	*28,343,366*
Dominion Coal Board	*4,356,816*	*3,560,795*	[5]	[5]
Other	*30,232,479*	*27,304,008*	*21,816,946*	*16,502,669*
Transport	127,766,477	85,123,464	99,900,569	103,905,716
Veterans Affairs	246,377,400	216,392,434	216,026,529	241,424,539
Grand Totals, Expenditure	**2,448,615,662**	**2,901,241,698**	**3,732,875,250**	**4,337,275,512**

[1] Includes $87,510,068 adjustment required to place interest on public debt on accrual basis. [2] Only a small charge for administration applicable. [3] Includes Dominion Coal Board expenditure formerly under Trade and Commerce. [4] Pensions under the Old Age Security Act of 1951 (effective January 1952) are paid out of the Old Age Security Fund account and are not recorded under departmental expenditure. *See* pp. 245-246. [5] Included in Mines and Technical Surveys expenditure.

10.—Principal Sources of Revenue, Years Ended Mar. 31, 1947-53

NOTE.—Figures for 1931-46 are given in the 1951 Year Book, pp. 984-985.

Year	Customs Duties	Excise Duties	Income Tax	Excess Profits Tax	Banks, Insurance Companies, etc.
	$	$	$	$	$
1947	237,355,397	196,043,816	939,458,244[1]	442,497,443[1]	9,706,739
1948	293,012,027	196,794,208	1,059,848,357	227,030,494	3,804,001
1949	222,975,471	204,651,969	1,297,999,404	44,791,918	4,036,050
1950	225,877,683	220,564,504	1,272,650,191	−1,788,388	4,435,828
1951	295,721,750	241,046,174	1,513,135,510	10,140,910	4,938,374
1952	346,364,563	217,939,983	2,161,373,408[2]	2,364,909	5,595,930
1953	389,442,109	241,360,370	2,473,790,082[2]	—	13,039,736

Year	Sales and Other Excise Taxes	Succession Duties	Post Office	Interest on Investments[3]	Total Revenue[4]
	$	$	$	$	$
1947	579,023,601	23,576,071	72,978,339	69,438,880	3,007,876,313
1948	640,758,269	30,828,040	77,758,408	75,799,912	2,871,746,110
1949	636,137,688	25,549,777	80,604,216	107,888,905	2,771,395,075
1950	571,457,480	29,919,780	84,511,786	91,528,987	2,580,140,615
1951	686,768,092	33,599,089	90,443,216	89,529,233	3,112,535,948
1952	885,928,304[5]	38,207,985	104,610,122	117,621,906	3,980,908,652
1953	841,890,103[5]	38,070,530	111,904,487	116,905,516	4,360,822,789

[1] Excludes refundable portion. [2] Excludes 2-p.c. old age security income tax credited to Old Age Security Fund: $2,100,000 in 1952 and $82,100,000 in 1953. [3] Includes interest on investments, profits of the Bank of Canada and other items. [4] Includes other items not specified. [5] Excludes 2-p.c. sales tax credited to the Old Age Security Fund: $24,297,979 in 1952 and $141,558,292 in 1953.

11.—Per Capita Revenue and Expenditure, Years Ended Mar. 31, 1942-53

NOTE.—Population figures used are estimates as at June 1 of the immediately preceding year (*see* p. 129) except for 1942 and 1952 for which census figures were used. Figures of revenue and expenditure on which this table is based are given in Tables 8 and 9. Figures for 1868-1912 are given in the 1938 Year Book, p. 849; those for 1913-30 in the 1945 edition, p. 932; and those for 1931-41 in the 1951 edition, p. 987.

Year	Per Capita—			Year	Per Capita—		
	Revenue from Taxation	Total Revenue	Total Expenditure		Revenue from Taxation	Total Revenue	Total Expenditure
	$	$	$		$	$	$
1942	118·27	129·36	163·82	1948	195·37	228·81	174·94
1943	177·34	193·02	376·45	1949	189·98	216·13	169·68
1944	206·60	234·42	451·23	1950	172·76	191·87	182·09
1945	180·36	224·96	439·11	1951	203·13	226·99	211·58
1946	182·44	249·60	425·47	1952	261·10	284·17	266·46
1947	197·50	244·70	214·30	1953	277·04	302·21	300·57

12.—Per Capita Revenue and Expenditure, by Principal Items, Years Ended Mar. 31, 1950-53

NOTE.—Figures of revenue and expenditure to which these per capita figures relate are given in Tables 8 and 9. The basis of calculation was the estimated population as at June 1 of the immediately preceding year for 1950, 1951 and 1953; for 1952 census of 1951 figure was used.

Revenue and Expenditure	1950	1951	1952	1953
	$	$	$	$
Ordinary Revenue—				
Tax Revenue—				
Customs import duties	16·80	21·57	24·72	26·99
Excise duties	16·40	17·58	15·56	16·73
Income tax	94·64	110·35	154·28	171·43
Excess profits tax	−0·13	0·74	0·17	—
Sales tax (net)	30·00	33·55	40·94	39·04
Succession duties	2·23	2·45	2·73	2·64
Other taxes	12·82	16·89	22·70	20·21
Totals, Tax Revenue	172·76	203·13	261·10	277·04
Non-Tax Revenue—				
Post Office	6·28	6·60	7·47	7·76
Return on investments	6·81	6·53	8·40	8·10
Bullion and coinage	0·34	0·34	0·34	0·30
Other	1·86	3·55	3·92	3·25
Totals, Non-tax Revenue	15·29	17·02	20·13	19·41
Totals, Ordinary Revenue	**188·05**	**220·15**	**281·23**	**296·45**
Special Receipts and Other Credits	**3·82**	**6·84**	**2·94**	**5·76**
Grand Totals, Revenue	**191·87**	**226·99**	**284·17**	**302·21**
Expenditure—				
Finance—				
Interest on public debt	*32·71*	*31·01*	*37·11*	*31·88*
Annual amortization of bond discounts and commissions	*0·72*	*0·91*	*0·69*	*0·85*
Servicing of public debt	*0·04*	*0·03*	*0·03*	*0·03*
Cost of loan flotations	*0·06*	*0·06*	*0·08*	*0·08*
Totals, Public Debt Charges	*33·53*	*32·01*	*37·91*	*32·22*
Provincial subsidies and tax rental payments	*7·73*	*9·04*	*9·08*	*23·47*
Other	*14·16*	*13·83*	*15·37*	*9·93*
Totals, Department of Finance	55·42	54·88	62·36	65·62

12.—Per Capita Revenue and Expenditure, by Principal Items, Years Ended Mar. 31, 1950-53—concluded

Expenditure	1950	1951	1952	1953
	$	$	$	$
Expenditure—concluded				
Agriculture	5·58	10·41	4·79	7·40
Auditor General's Office	0·04	0·04	0·04	0·04
Chief Electoral Officer	0·33	0·02	0·03	0·03
Citizenship and Immigration	1·32	1·51	1·66	1·64
Civil Service Commission	0·11	0·12	0·12	0·13
Defence Production	...	...	2·21	6·16
External Affairs	1·24	1·61	2·68	2·72
Fisheries	0·56	0·65	0·62	0·75
Governor General and Lieutenant-Governors	0·02	0·02	0·02	0·03
Insurance	0·02	0·03	0·03	0·03
Justice, including Penitentiaries	0·82	0·91	1·00	1·03
Labour	4·18	4·57	4·59	4·64
Legislation	0·39	0·34	0·43	0·43
Mines and Technical Surveys	1·89	1·28	1·98	2·06
National Defence	28·62	57·06	101·04	130·45
National Health and Welfare	31·48	32·73	35·60	28·17
National Revenue	3·76	3·53	3·86	3·85
Post Office	6·15	6·69	6·99	7·31
Prime Minister's Office	0·01	0·01	0·29	0·26
Privy Council Office	0·30	0·30		
Public Archives	0·01	0·02	0·02	0·02
Public Printing and Stationery	0·06	0·05	0·08	0·11
Public Works	4·99	5·37	5·54	5·67
Resources and Development	1·89	2·28	2·46	2·67
Royal Canadian Mounted Police	1·19	1·44	1·95	2·16
Secretary of State	0·12	0·15	0·17	0·15
Trade and Commerce	3·77	3·57	3·35	3·11
Transport	9·50	6·21	7·13	7·20
Veterans Affairs	18·32	15·78	15·42	16·73
Grand Totals, Expenditure	**182·09**	**211·58**	**266·46**	**300·57**

Subsection 3.—Analysis of Revenue from Taxation

Table 13 gives a comparison of total expenditure with taxation revenue and total revenue for each of the fiscal years ended Mar. 31 since 1947. During the war years expenditure far exceeded revenue but in 1947 taxation met over 92 p.c. of expenditure and revenue from all sources exceeded expenditure. For 1948 and 1949, revenue from taxation alone exceeded total expenditure by a substantial amount owing to the maintenance of high taxation levels and a greatly increased national income.

13.—Relationship of Total Expenditure to Taxation Revenue and to Total Revenue, Years Ended Mar. 31, 1947-53

NOTE.—Figures for 1940-46 are given in the 1951 Year Book, p. 989.

Year	Total Expenditure	Taxation Revenue	Total Revenue	Percentage to Total Expenditure of—	
				Taxation Revenue	All Revenue
	$	$	$	p.c.	p.c.
1947	2,634,227,412	2,427,661,313	3,007,876,313	92·16	114·18
1948	2,195,626,454	2,452,075,395	2,871,746,110	111·68	130·79
1949	2,175,892,334	2,436,142,276	2,771,395,075	111·96	127·37
1950	2,448,615,662	2,323,117,079	2,580,140,615	94·87	105·37
1951	2,901,241,698	2,785,349,899	3,112,535,948	96·01	107·28
1952	3,732,875,250	3,657,775,082	3,980,908,652	97·99	106·64
1953	4,337,275,512	3,997,592,937	4,360,822,789	92·17	100·54

The revenue from customs and excise duties, the two most important sources prior to World War I, amounted in 1953 to 16 p.c. of the revenue derived from taxation while income tax accounted for 62 p.c. of the taxation revenue.

The following analysis of taxation revenue is confined to excise duties, excise taxes, income tax and succession duties; customs receipts constitute a single item in the *Public Accounts* and cannot be further analysed here.

Excise Duties

Excise duties proper are presented below with a summary of the excise tariff and statistics arising as a by-product of administration, such as the quantities of grain and other products used in distillation and the quantities of excisable goods taken out of bond.

Canadian Excise Tariff.—The following is a statement of the Canadian excise tariff, as at Feb. 20, 1953:—

Spirits	per proof gal.	$12·00
Spirits used by licensed bonded manufacturers	per proof gal.	1·50
Spirits used in bond for manufacture of perfume	per proof gal.	Free
Spirits used in bond for manufacture approved chemical compositions	per proof gal.	0·15
Spirits sold to druggists licensed under the Excise Act to be used exclusively in preparation of prescriptions for medicines and pharmaceutical preparations	per proof gal.	1·50
Spirits distilled from wine produced from native fruits, and used in any bonded manufactory for the treatment of domestic wine	per proof gal.	Free
Spirits imported and taken into a bonded manufactory (in addition to duties otherwise imposed)	per proof gal.	0·30
Spirits used directly in the manufacture of toilet preparations or cosmetics on which excise tax is applicable under Schedule I of the Excise Tax Act	per proof gal.	Free
Canadian brandy	per proof gal.	$10·00
Malt, all, when brought into a brewery	per lb.	0·21
Malt liquor or beer, when brewed in whole or in part from any substance other than malt	per Imp. gal.	0·42
Tobacco, manufactured, all descriptions except cigarettes	per lb.	0·35
Cigarettes, weighing not more than two and one-half pounds	per M	4·00
Cigarettes, weighing more than two and one-half pounds	per M	5·00
Cigars, all	per M	1·00
Raw leaf tobacco, imported, now dutiable under the customs tariff only.		
Canadian raw leaf tobacco, when sold for consumption	per lb.	0·20

A drawback of 99 p.c. of the duty may be granted when domestic spirits, testing not less than 50 p.c. over proof, are delivered in limited quantities for medicinal or research purposes to universities, scientific or research laboratories, bona fide public hospitals, or health institutions in receipt of Federal Government aid.

Revenue from Excise Duties.—In the year ended Mar. 31, 1953, tobacco and cigarettes supplied about 46 p.c. of the revenue from excise duties.

14.—Gross Excise Duties Collected, Years Ended Mar. 31, 1948-53

Item	1948	1949	1950	1951	1952	1953
	$	$	$	$	$	$
Spirits	39,391,092	40,634,697	46,547,587	60,126,300	45,944,724	48,627,965
Validation fee	770,880	825,371	790,587	1,108,252	1,223,933	746,877
Beer or malt liquor	3,819,875	3,740,065	3,678,316	2,745,851	3,812,065	5,294,283
Malt syrup	67,878	51,825	—	—	—	—
Malt	53,625,293	55,853,055	56,018,292	65,409,427	73,748,003	80,584,283
Tobacco and cigarettes	101,900,638	106,033,181	115,778,732	114,282,662	100,547,951	116,701,207
Cigars	215,479	207,823	203,043	203,945	162,968	212,817
Licences	37,468	39,115	38,241	38,009	36,092	38,183
Totals[1]	**199,828,603**	**207,385,132**	**223,054,798**	**243,914,446**	**225,475,736**	**252,205,615**

[1] These totals do not agree with net excise duties as shown in Table 8 owing to refunds and drawbacks and, in the case of spirits, a transfer tax which is included here.

Statistics of Licences and Distillation.—Secondary to the collection of excise duties, statistics are compiled of excise licences issued and of distillation.

15.—Statistics of Licences and Distillation, Years Ended Mar. 31, 1948-53

Item	1948	1949	1950	1951	1952	1953
Licences issued.....No.	25	27	28	28	29	29
Licence fees..... $	6,250	6,750	7,250	8,000	7,375	7,750
Grain, etc., used for Distillation—						
Malt..... lb.	49,997,856	31,699,705	26,764,523	31,914,170	33,688,521	31,169,426
Indian corn..... "	248,056,463	176,368,186	162,568,138	209,060,163	211,851,336	193,629,683
Rye..... "	25,694,278	30,189,564	37,525,049	32,137,858	29,427,040	30,404,971
Wheat and other grain. "	34,616,203	15,462,635	2,887,990	13,174,382	17,925,256	17,996,080
Totals, Grain Used... lb.	358,364,800	253,720,090	229,745,700	286,286,573	292,892,153	273,200,160
Molasses used..... lb.	111,812,928	128,034,436	61,951,935	32,836,406	26,989,288	22,614,185
Wine and other materials "	5,467,095	8,733,086	5,237,900	8,496,194	8,330,301	4,674,714
Sulphide liquor..... gal.	95,063,070	98,080,000	89,712,658	86,454,960	99,344,940	98,380,740
Proof spirits manufactured.....proof gal.	28,198,327	23,643,036	20,741,268	23,551,259	24,742,386	22,517,166

The quantity of spirits manufactured has fluctuated greatly since 1920, varying from a low of 2,356,329 proof gal. in that year to a high of 35,555,059 proof gal. recorded in 1945.

Alcohol and Tobacco Taken Out of Bond.—The amounts of beverage spirits, malt beer, malt, cigars, cigarettes and other tobacco taken out of bond for consumption are given in Table 16, p. 927.

Excise Taxes Collected

The statistics given in Table 16 represent gross excise tax collections by the Excise Division of the Department of National Revenue; these differ from the figures shown in Table 10 (in the column "Sales and Other Excise Taxes"), which represent net revenue received, by the amounts of the refunds shown in footnote 1 and the amounts of the 2-p.c. sales tax credited to the Old Age Security Fund shown in footnote 2 to Table 16.

16.—Excise Taxes Collected, by Commodity and Province, Years Ended Mar. 31, 1948-53

(Accrued Revenue)

Commodity and Province	1948	1949	1950	1951	1952	1953
Commodity	$	$	$	$	$	$
Domestic—						
Amusements	17,887,217	2,587,398	...	...	...	...
Automobiles, tires and tubes	26,203,014	32,976,441	32,988,931	59,791,585	89,111,798	78,810,971
Beverages	23,751,434	27,684,207	1,627,143	7,187,086	19,159,576	12,342,608
Candy and chewing gum	17,138,611	19,543,584	1,030,143	9,914,041	10,845,824	11,216,434
Carbonic acid gas	352,073	332,677	...	150,827	377,207	214,538
Cigarette papers and tubes	6,124,539	6,705,224	6,887,029	7,369,511	382,121	—
Cigars, cigarettes and tobacco	68,450,719	77,529,716	82,574,363	84,203,237	104,806,864	100,678,509
Electrical and gas apparatus	2,164,381	3,619,983	...	1,607,101	3,731,560	3,269,802
Embossed cheques (departmental)	372,698	409,974	359,617	391,377	433,667	334,884
Furs	2,860,355	3,570,044	2,773,723	4,165,195	4,221,849	5,213,346
Gasoline	2,193,131	...	...	...	...	...
Licences	90,139	90,006	84,004	85,831	81,663	86,768
Lighters	350,099	403,537	269,302	242,495	320,122	235,889
Matches	3,498,106	2,994,124	756,837	755,311	1,387,225	1,071,159
Other manufactures' tax	14,855,135	16,739,711	6,911,787	9,235,677	22,779,222	13,176,366
Phonographs, radios and tubes	4,863,237	3,499,260	3,065,057	5,372,408	7,912,329	10,085,974
Playing cards	512,414	614,400	648,000	834,400	665,200	723,600
Sales, domestic	323,670,079	342,075,177	363,308,872	406,350,795	521,173,389	611,362,280
Stamps	15,514,256	13,605,236	9,014,763	10,553,385	10,912,768	10,226,135
Sugar	10,100,679	...	...	...	...	...
Toilet preparations	6,813,907	7,582,907	4,246,481	4,452,144	8,233,581	6,961,538
Transportation and transmission	27,530,884	29,034,392	3,967,088	...	...	...
Wines	2,341,585	2,059,639	2,125,606	2,224,885	2,167,267	2,215,540
Penalties and interest	286,070	291,819	286,054	286,513	381,055	374,691
Totals, Domestic	577,924,762	593,950,456	522,924,800	615,173,804	809,084,287	868,601,027
Imported	73,516,745	55,058,635	60,317,200	82,100,696	114,865,035	135,346,520
Grand Totals[1]	**651,441,507**	**649,009,091**	**583,242,000**	**697,274,500**	**923,949,323**[2]	**1,003,947,516**[2]
Province						
Newfoundland	...	...	2,928,142	3,071,105	4,222,529	4,731,662
Prince Edward Island	498,170	354,308	175,093	192,576	294,581	319,600
Nova Scotia	10,409,922	9,712,259	7,297,503	8,237,983	11,085,795	12,567,288
New Brunswick	8,721,379	6,092,221	4,765,769	5,410,375	7,020,959	7,565,327
Quebec	249,820,294	259,953,961	234,362,155	259,597,052	330,235,421	355,969,247
Ontario	306,183,730	311,081,866	285,628,445	364,386,263	493,684,889	532,863,493
Manitoba	22,214,291	20,255,931	15,186,782	16,957,296	23,477,085	26,006,361
Saskatchewan	6,952,275	5,207,665	3,712,245	4,068,319	5,780,443	6,897,755
Alberta	14,071,770	10,760,329	7,784,071	8,716,339	13,415,997	17,592,743
British Columbia	31,746,420	24,972,017	20,785,415	26,010,974	33,957,805	38,800,329
Yukon Territory	202,788	203,295	208,220	180,873	267,536	279,666
General for Canada—						
Departmental sales	616,845	409,974	359,620	391,376	433,668	334,884
Miscellaneous	3,060	2,334	46,268	52,484	71,452	17,695
British post-office parcels	563	2,932	2,272	1,485	1,163	1,495

[1] Includes refunds and drawbacks of $10,683,238 in 1948; $12,871,403 in 1949; $11,784,520 in 1950; $10,506,408 in 1951; $13,723,040 in 1952 and $20,499,151 in 1953. [2] Includes 2-p.c. sales tax of $24,297,979 credited to the Old Age Security Fund in 1952 and $141,558,292 in 1953.

Income Tax*

The income tax was instituted in 1917 as a part of war-tax revenue. Before the outbreak of World War II, it had become a permanent and important part of the taxation structure and the chief source of raising ordinary revenue. In many respects, it is an ideal form of direct taxation and the experience and machinery for the collection of this tax has been built up over a period of years.

* More detailed information is given in the annual report *Taxation Statistics*, published by the Taxation Division, Department of National Revenue, Ottawa.

Income-tax rates were increased to help finance World War II, and a compulsory savings feature was adopted with respect to individuals and to corporations. A refundable portion of approximately $295,000,000 was collected from individuals under the personal income tax during the war years and approximately $220,000,000 from individuals and corporations under the excess profits tax. Repayment of the refundable portion of personal income tax was completed in 1949 and the refundable portion of excess profits tax was repaid by March 1952.

Since the end of the War, the weight of individual income tax was reduced each year up to and including 1949 and higher exemption allowances were given. However, the expansion of personal incomes and the growth of the labour force offset to a considerable extent the effect on revenue of the reduction in rates. Following the outbreak of war in Korea in 1950, rising defence costs led to an increase in the rates of personal income tax. A defence surtax of 20 p.c. was introduced in 1951 but this applied only at the rate of 10 p.c. to 1951 incomes. The Budget of 1952 announced a new schedule of rates which incorporated approximately two-thirds of the 20-p.c. defence surtax. The average of this schedule and the rates introduced in 1951 comprised the rates of tax on 1952 incomes. The Budget Speech of 1953 announced the elimination of the remaining portion of the 20-p.c. defence surtax. This meant a reversion to the schedule in force in 1949 and 1950. The average of this schedule and the rates of tax introduced in 1952 made up the rates applicable to 1953 incomes.

Taxes on corporation incomes were reduced following the end of World War II. Excess profits tax rates were also reduced and finally ceased to apply after Jan. 1, 1948. Concurrently with the ending of the excess profits tax, corporation income-tax rates were raised from 18 p.c. to 30 p.c.

To help small businesses, the tax rate on the first $10,000 of profits was reduced to 10 p.c. in 1949 but, at the same time, the rate on profits in excess of $10,000 was increased to 33 p.c. In the following years it became necessary to increase sharply the rates of tax on corporation profits and by 1953 they had become 20 p.c. on the first $10,000 of profits plus 50 p.c. on amounts in excess thereof, with a credit against the tax equal to 5 p.c. of the profits earned in provinces that continued to levy a corporation income tax. The Budget for 1953-54 brought a reduction in the rates of corporation income tax to 18 p.c. on the first $20,000 of profits, plus 47 p.c. on the remainder, with a credit against the tax equal to 7 p.c. of the profits earned in Quebec, the only province continuing to levy a corporation income tax.

Details of income-tax changes in the Budgets of 1945-46, 1946-47, 1947-48 and 1948-49 are given at pp. 1008-1009 of the 1948-49 Year Book. Details of the tax changes in the 1949-50 Budget are given at p. 1002 of the 1950 Year Book. The change made in income-tax rates in the 1950-51 Budget concerned corporation taxes only and is given at p. 979 of the 1951 Year Book. Income-tax changes made in the 1951-52 and 1952-53 Budgets are given at pp. 1029-1030 of the 1952-53 Year Book and the 1953-54 Budget changes are discussed in detail at pp. 1064-1065 of this volume.

The tax on dividends and interest and on rents and royalties is levied at the rate of 15 p.c. on payments going to non-residents of Canada. The payments subject to tax include income from an estate or trust, alimony payments, rents from real property, and rents, royalties or similar payments for the use in Canada of property, trade names or inventions. There is no non-resident tax on interest from Government of Canada bonds or bonds guaranteed by the Government

of Canada or where the interest is payable in other than Canadian currency. Where the payments are for interest from bonds of, or guaranteed by, a province of Canada or are dividends paid by a wholly owned subsidiary to its parent company outside Canada, the rate of tax is only 5 p.c.

The gift tax is imposed at the rate of 10 p.c. on gifts of up to $5,000 and at rates varying from 11 p.c. to 28 p.c. on gifts from $5,000 to $1,000,000 or over.

Income-tax revenue in Table 17 is as shown in the *Public Accounts* and represents collections made by the Taxation Division of the Department of National Revenue under the authority of the Income War Tax Act (R.S.C. 1952, c. 148).

17.—Collections under the Income Tax Act, Years Ended Mar. 31, 1946-53

NOTE.—Figures for 1919-34 are given in the 1947 Year Book, p. 966, and for 1935-45 in the 1951 edition, p. 993.

Year	General Income Tax	Tax on Dividends and Interest Paid to Non-Residents	Tax on Rents and Royalties Paid to Non-Residents	Gift Tax	Total
	Individual and Corporation				
	$	$	$	$	$
1946	907,340,303	26,823,894	1,485,725	770,369	937,729,273[1,2]
1947	888,808,484	28,428,143	1,708,003	1,538,888	963,458,245[1,3]
1948	1,008,408,409	33,928,935	1,960,093	2,268,845	1,059,848,357[4]
1949	1,248,701,580	40,965,426	2,480,337	1,632,930	1,297,999,404[5]
1950	1,221,335,985	47,474,846		2,089,821	1,272,650,191[6]
1951	1,360,239,389	61,610,319		3,118,019	1,513,135,510[7]
1952	2,091,743,522[8]	55,017,014		..	2,161,373,408[8,9]
1953	2,420,115,712[8]	53,674,377		..	2,473,790,089[8]

[1] Includes estimated refundable portion. [2] Includes deferred tax, $1,308,982. [3] Includes deferred tax, $1,002,027, and tax on private companies, $41,972,700. [4] Includes deferred tax, $685,967, and tax on private companies, $12,596,108. [5] Includes deferred tax, $778,617, and tax on private companies, $3,440,514. [6] Includes deferred tax, $629,029, and tax on private companies, $1,120,510. [7] Includes deferred tax, $548,007, and tax on private companies, $87,619,776. [8] Excludes Old Age Security tax. [9] Includes tax of $14,612,872 on undistributed income of companies.

Tax Collections by the Department of National Revenue on a Fiscal-Year Basis.—Statistics of income-tax collections are gathered at the time the payments are made and, therefore, have the value of being very up-to-date. Their timeliness has been enhanced within the past few years by the adoption of the "pay-as-you-go" system. Under this system most of the tax is collected during the year in which the income, on which the tax is based, is earned. On the average this is about ten months prior to the actual filing of an income-tax return by the taxpayer. The payments on behalf of most taxpayers, however, are made by their employers and a cheque from one employer may cover the tax payments of hundreds of employees. At this stage, therefore, it is not possible to link the moneys received to the individuals who are, in the final analysis, contributing the tax. Collection statistics, for this reason, are not capable of being closely related to the persons who are being taxed and any statistical tables that attempt to describe the taxpayer by occupation or income class must be based on the income-tax returns that are filed by the taxpayers many months after the payment of tax. However, collection statistics, if interpreted along with the tax rate, do serve the purpose of indicating the general trend of income upon which tax is levied well in advance of the final compilation of assessment data.

The statistics given in Table 18 pertain to tax collections under the Income Tax Act administered by the Taxation Division of the Department of National Revenue. The collections are for fiscal years ended Mar. 31.

18.—Taxes Collected by the Taxation Division of the Department of National Revenue, Years Ended Mar. 31, 1946-53

NOTE.—Figures for 1917-34 are given in the 1947 Year Book, pp. 999-1000, and for 1935-45 in the 1951 edition, p. 994.

Year	Income Tax			Excess Profits Tax	Succession Duties	Total Collections
	Individual	Corporation	Total			
	$	$	$	$	$	$
1946	719,895,733[1]	217,833,540	937,729,273[1]	494,196,483[1]	21,447,574	1,453,373,330[1]
1947	724,666,292[1]	238,791,953	963,458,245[1]	448,697,443[1]	23,576,071	1,435,731,759[1]
1948	695,717,243	364,131,114	1,059,848,357	227,030,494	30,828,040	1,317,706,891
1949	806,009,280	491,990,124	1,297,999,404	44,791,918	25,549,777	1,368,341,099
1950	669,457,059	603,193,132	1,272,650,191	−1,788,387[2]	29,919,780	1,300,781,584
1951	713,938,999	799,196,511	1,513,135,510	10,140,910	33,599,089	1,556,875,509
1952	1,030,793,334[3]	1,132,680,074[3]	2,163,473,408[3]	2,364,909	38,207,985	2,204,046,302
1953	1,278,949,939[3]	1,276,940,150[3]	2,555,890,089[3]	—	38,070,529	2,593,960,618

[1] Includes refundable portion of taxes. [2] Refunds arising out of renegotiation of war contracts were in excess of collections. [3] Includes old age security tax.

Individual Income-Tax Statistics.—Individual income-tax statistics are presented herein on a calendar-year basis. These data are compiled from a 10-p.c. sample of all returns received.

19.—Taxpayers, Income and Tax, by Province and Occupational Class, 1951

Province or Territory	Tax-payers	Total Income Declared	Total Tax Declared	Class	Tax-payers	Total Income Declared	Total Tax Declared
	No.	$'000	$'000		No.	$'000	$'000
Newfoundland	25,850	81,979	6,916	Primary producers	67,190	255,683	23,094
P. E. Island	5,830	16,732	1,323	Professional	29,400	222,938	45,366
Nova Scotia	79,770	226,449	15,916	Employees	2,444,800	7,051,853	543,891
New Brunswick	56,400	161,957	11,566	Salesmen	29,460	142,308	17,408
Quebec	611,030	1,940,674	180,766	Business proprietors	144,870	731,295	111,901
Ontario	1,249,960	3,954,180	377,798	Financial	52,840	312,959	65,791
Manitoba	147,000	443,044	38,018	Estates	4,610	10,061	1,880
Saskatchewan	109,780	341,646	28,683	Deceased	4,100	18,415	2,559
Alberta	176,190	559,323	51,951	Unclassified	680	2,038	177
British Columbia	303,450	983,048	93,402				
Yukon Territory	2,530	8,373	832				
Non-residents	10,160	30,145	4,896				
Totals	**2,777,950**	**8,747,550**	**812,067**	**Totals**	**2,777,950**	**8,747,550**	**812,067**

20.—Individual Income-Tax Statistics, by Income Class, 1950 and 1951

Income Class	Taxpayers		Total Income Declared		Total Tax Declared		Average Tax	
	1950	1951	1950	1951	1950	1951	1950	1951
	No.	No.	$'000	$'000	$'000	$'000	$	$
Under $1,000	7,700	17,910	4,163	10,247	354	655	46	37
$1,000 to $1,100	57,340	55,180	60,689	58,689	503	635	9	12
$1,100 to $1,200	77,220	65,360	88,622	75,227	1,538	1,476	20	23
$1,200 to $1,300	79,890	72,270	99,869	90,107	2,607	2,633	33	36
$1,300 to $1,400	82,750	74,350	111,275	100,363	3,826	3,845	46	52
$1,400 to $1,500	78,530	76,230	113,688	110,504	4,678	5,075	60	67
$1,500 to $1,600	81,030	77,680	125,526	120,292	5,849	6,145	72	79
$1,600 to $1,700	74,150	78,180	122,020	129,421	6,476	7,358	87	94
$1,700 to $1,800	73,690	75,730	128,678	132,412	7,157	8,189	97	108
$1,800 to $1,900	71,130	73,000	131,283	135,140	7,743	8,907	109	122
$1,900 to $2,000	63,630	67,020	123,995	130,800	7,788	9,127	122	136
$1,000 to, but not including, $2,000	739,360	715,000	1,105,645	1,082,955	48,165	53,390	65	75
$2,000 to $2,100	78,720	78,750	161,316	161,786	8,654	10,080	110	128
$2,100 to $2,200	80,540	82,540	172,932	177,393	8,499	10,678	105	129
$2,200 to $2,300	85,560	85,840	192,242	193,132	8,764	11,171	102	130
$2,300 to $2,400	89,880	99,360	211,216	233,159	8,884	12,440	99	125
$2,400 to $2,500	97,260	98,270	237,907	240,739	9,820	12,505	101	127
$2,500 to $2,600	99,230	104,940	253,056	267,657	10,055	13,491	101	129
$2,600 to $2,700	101,180	103,950	267,547	275,169	10,537	13,677	104	132
$2,700 to $2,800	94,060	107,230	258,224	294,729	10,700	14,622	114	136
$2,800 to $2,900	85,280	102,710	242,712	292,423	10,336	14,900	121	145
$2,900 to $3,000	78,190	98,030	230,195	288,793	10,255	14,991	131	153
$2,000 to, but not including, $3,000	889,900	961,620	2,227,347	2,424,980	96,504	128,555	108	134
$3,000 to $3,500	288,490	407,470	928,102	1,315,207	47,650	75,983	165	186
$3,500 to $4,000	145,710	236,180	543,006	879,676	37,326	60,658	256	257
$4,000 to $4,500	82,870	134,580	349,964	568,599	24,738	44,925	298	334
$4,500 to $5,000	51,510	77,170	243,318	365,435	19,485	32,516	378	421
$3,000 to, but not including, $5,000	568,580	855,400	2,064,390	3,128,917	129,199	214,082	227	250
$5,000 to $6,000	54,940	84,620	298,143	459,439	31,090	46,723	566	552
$6,000 to $7,000	30,500	41,320	196,333	266,971	21,278	31,910	698	772
$7,000 to $8,000	18,190	23,520	135,935	175,648	16,361	23,478	899	998
$8,000 to $9,000	12,720	16,350	107,450	138,924	14,172	20,560	1,114	1,257
$9,000 to $10,000	9,070	11,080	86,096	105,404	12,308	16,701	1,357	1,507
$5,000 to, but not including, $10,000	125,420	176,890	823,957	1,146,386	95,209	139,372	759	788
$10,000 to $15,000	23,390	28,280	281,634	339,645	48,471	64,199	2,072	2,270
$15,000 to $20,000	9,410	10,070	161,696	171,948	36,586	42,941	3,888	4,264
$20,000 to $25,000	4,090	4,520	90,714	100,603	24,158	29,838	5,907	6,601
$10,000 to, but not including, $25,000	36,890	42,870	534,044	612,196	109,215	136,978	2,960	3,195
$25,000 to $50,000	5,050	6,690	169,399	221,746	55,317	80,507	10,954	12,034
$50,000 or over	1,340	1,570	103,858	120,123	44,973	58,528	33,562	37,279
$25,000 or over	6,390	8,260	273,257	341,869	100,290	139,035	15,695	16,832
Grand Totals	**2,374,240**	**2,777,950**	**7,032,803**	**8,747,550**	**578,936**	**812,067**	**244**	**292**

Corporation Income-Tax Statistics.—Corporation statistics are presented in Tables **21** and **22** on a taxation-year basis prior to assessment. The data have been extracted and compiled from the returns shortly after they have been filed and

are as declared by the taxpayer without the scrutiny or revision of the Department of National Revenue. Provincial figures contain an unavoidable bias in favour of Ontario and Quebec because many large companies operating across Canada file their returns in one or other of these two Provinces.

21.—Summary Statistics for Corporations Reporting a Profit, Taxation Year 1950

Item	Companies Reporting	Current Year Profit	Income Tax Declared
	No.	$'000	$'000
Active taxable companies—excluding co-operatives	28,723	2,352,090	758,147
Inactive companies	716	382	48
Co-operatives	1,800	6,593	1,469
Totals, Taxable Companies	31,239	2,359,065	759,664
Personal corporations	1,115	19,208	—
Other exempt companies[1]	2,274	27,587	11
Grand Totals—Taxable and Exempt	**34,628**	**2,405,860**	**759,675**

[1] Includes foreign business corporations paying $100 filing fee which is recorded here as tax declared.

22.—Distribution of Active Taxable Companies Reporting a Profit, by Income Class, Industry and Province, Taxation Years, 1950 and 1951

Income Class, Industrial Division and Province	1950			1951		
	Companies Reporting	Current Year Profit	Income Tax Declared	Companies Reporting	Current Year Profit	Income Tax Declared
	No.	$'000	$'000	No.	$'000	$'000
Income Class						
Under $1,000	3,931	1,646	166	4,404	1,848	226
$ 1,000 to $ 2,000	2,570	3,716	430	2,810	4,060	570
$ 2,000 to $ 3,000	1,938	4,757	566	2,166	5,324	792
$ 3,000 to $ 4,000	1,584	5,501	675	1,661	5,745	866
$ 4,000 to $ 5,000	1,386	6,211	780	1,420	6,334	989
$ 5,000 to $ 10,000	5,118	38,121	4,828	5,726	43,375	6,838
$ 10,000 to $ 15,000	2,569	31,250	5,032	2,877	34,704	6,985
$ 15,000 to $ 20,000	1,496	25,902	5,468	1,483	25,705	6,865
$ 20,000 to $ 25,000	1,064	23,800	5,691	1,047	23,350	7,076
$ 25,000 to $ 50,000	2,644	93,091	25,253	2,680	94,531	32,359
$ 50,000 to $ 100,000	1,751	124,216	37,654	1,808	126,819	48,237
$ 100,000 to $ 250,000	1,436	225,098	72,193	1,553	245,844	98,989
$ 250,000 to $ 500,000	572	199,101	65,850	643	224,664	94,378
$ 500,000 to $1,000,000	339	231,485	77,317	329	227,061	96,187
$1,000,000 to $5,000,000	263	547,216	185,467	302	625,906	271,314
Over $5,000,000	62	790,979	270,777	83	1,091,068	488,972
Totals	**28,723**	**2,352,090**	**758,147**	**30,992**	**2,786,338**	**1,161,643**
Industrial Division						
Agriculture, fishing and forestry	529	18,627	5,406	613	21,580	8,075
Mining	409	167,776	56,160	425	208,653	91,792
Manufacturing	7,817	1,345,551	446,892	8,113	1,594,402	686,449
Construction	1,467	54,956	16,185	1,652	53,051	19,306
Public utilities	1,380	168,174	55,101	1,581	237,196	102,145
Wholesale trade	5,065	213,132	65,470	5,594	268,288	107,008
Retail trade	5,510	184,208	55,691	5,931	181,140	66,089
Service	2,956	47,537	12,895	3,162	52,575	18,432
Finance	3,577	152,014	44,321	3,889	169,229	62,286
Unclassified	13	115	26	32	224	61
Province						
Newfoundland	275	17,400	5,578	345	29,881	12,453
Prince Edward Island	173	5,013	1,009	153	3,018	747
Nova Scotia	1,056	40,159	12,606	1,117	46,923	19,378
New Brunswick	688	29,909	9,363	743	43,213	17,843
Quebec	7,541	717,413	231,975	8,189	889,294	374,588
Ontario	10,174	1,112,377	362,515	10,790	1,258,420	527,602
Manitoba	1,661	89,763	28,541	1,729	101,181	41,268
Saskatchewan	768	16,605	4,698	855	16,488	5,786
Alberta	1,854	78,500	23,264	2,085	87,093	33,524
British Columbia	4,533	246,051	78,598	4,986	310,827	128,454

Succession Duties

The first imposition of succession duties in Canada was in 1892, when Nova Scotia, New Brunswick, Quebec and Ontario enacted legislation of this nature. Legislation was passed in the other provinces in the following years: Manitoba, 1893; Prince Edward Island and British Columbia, 1894; Saskatchewan and Alberta, 1905. The Federal Government first imposed succession duties in 1941. Current legislation is the Dominion Succession Duty Act (R.S.C. 1952, c. 89).

Table 23 shows the receipts of the various governments from this source from 1948.

In 1947, seven provinces—Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, Saskatchewan, Alberta and British Columbia—withdrew from the succession-duty field. The seven provinces entered into agreements with the Federal Government to 'rent out' the succession-duty field for the period Apr. 1, 1947, to Mar. 31, 1952. Accordingly, in these provinces, the previous combination of federal and provincial succession duties was replaced by a single federal succession duty at double the previous federal level which, in most cases, resulted in a combined duty approximately the same as previously levied under the separate federal and provincial duties. On the other hand, the Provinces of Quebec and Ontario did not enter into the agreements but the doubled rates of federal duty were applied and were capable of being reduced up to one-half by a credit for the duty paid to these Provinces. The Yukon Territory in 1948, and the Province of Newfoundland in 1949, entered into a similar tax-rental agreement.

In 1952, the tax-rental agreements expired but new five-year agreements were negotiated with the same eight provinces which again elected not to cultivate the succession-duty field. The Province of Ontario also entered into an agreement on income tax, but elected to continue to cultivate the succession-duty field. Consequently, in all the provinces of Canada the situation in regard to succession duty is likely to be the same as that described above until Mar. 31, 1957.

23.—Federal and Provincial Net Revenue from Succession Duties, Years Ended Mar. 31, 1948-53

Province	1948	1949	1950	1951	1952	1953[p]
	$'000	$'000	$'000	$'000	$'000	$'000
Federal	30,828	25,550	29,920	33,599	38,208	38,000
Provincial—[1]						
Newfoundland	...	...	[2]	[2]	[2]	[2]
Prince Edward Island	63	21	6	3	12	1
Nova Scotia	513[3]	208[3]	73[3]	26[4]	25	15
New Brunswick	432[5]	53[5]	46[5]	6[6]	1	1
Quebec	9,283	11,991	13,325	13,007	12,428	12,985
Ontario	17,945	15,995	14,978	17,828	21,652	18,500
Manitoba	403	92	32	28	15	2
Saskatchewan	509	121	23	127	30	..
Alberta	652	149	98	101	25	25
British Columbia	1,049	398	161	—	—	—

[1] Under terms of the 1947 and 1952 Dominion-Provincial Taxation Agreements, all provinces except Ontario and Quebec refrain from levying succession duties; amounts shown are arrears. [2] Arrears of pre-union death duties cannot be shown. [3] Fiscal year ended Nov. 30 of preceding calendar year. [4] Sixteen months. [5] Fiscal year ended Oct. 31 of preceding calendar year. [6] Seventeen months.

Double taxation of estates resulting from taxation of the same property by more than one Canadian jurisdiction has been common in the past, but the withdrawal of eight of the provinces from the field, an interprovincial agreement between Ontario and Quebec, and the credit provision of the federal legislation have reduced this problem considerably. In the international field, dual taxation has been dealt with by way of tax conventions. A tax convention between Canada and the United States was signed on June 8, 1944, and amended effective Nov. 21, 1951. An agreement respecting succession duties was signed June 5, 1946, between Canada and the United Kingdom. A convention between Canada and France, signed on Mar. 16, 1951, came into effect on July 2, 1953.

The difficulties of working out succession-duty tables to show the combined effects of federal and provincial duties are readily realized. The best that can be done here is to choose typical estates in the main classes laid down in the legislation and give examples of the combined duties applicable in such cases. This has been attempted in the following series of tables in the hope that it will be useful in presenting a general picture of the incidence of succession duties in Canada under conditions existing at present.

Federal Duty.—Beneficiaries are divided into four classes, as follows:—

(1) Widow or dependent child or dependent grandchild.
(2) Husband; parent; grandparent; child over 18 years of age, not infirm; son- or daughter-in-law.
(3) Lineal ancestor other than parent or grandparent; brother, sister or their descendant; uncle or aunt or their descendant.
(4) Others.

No duty is payable on estates not exceeding $50,000, or on bequests of up to $1,000 to any one individual, nor is duty levied on gifts to the Federal Government or provinces, on residential property of certain diplomatic or consular officials, on pensions administered by the Canadian Pensions Commission or those payable by allied nations for war services, nor on insurance moneys or annuities if the person with whom the contract was made was domiciled outside Canada at the time of death. Provision is made for increased exemptions and reduced duties in the case of those dying as a result of war service. Bequests to non-profit charitable organizations in Canada are exempt.

Widows are exempt up to $20,000, dependent children to $5,000 each and, in cases where dependent children do not benefit, the widow's exemption is increased by $5,000 for each child who does not benefit. In the case of dependent orphaned children, there is a further exemption of $15,000 (in addition to $5,000) divisible proportionately among such orphans according to their number and the value of each individual benefit. Duty is payable on the excess only when the limit is passed, i.e., these exemptions are deductible exemptions.

Gifts made during the lifetime of the deceased are exempt if the transfer was carried out more than three years prior to his death and the recipient of such gifts secured full possession at the time of the transfer and the donor (the deceased) thereafter did not retain any rights therein or secure any benefits therefrom.

If gift tax payable under the provisions of the Income Tax Act has been paid in connection with the transfer made by a deceased person during his lifetime then no succession duty is payable in respect of such gift except to the extent that succession duty thereon is in excess of the gift tax.

Examples of the rates of duty and duty levied are given in Table 24.

24.—The Incidence of Succession Duties in all Provinces (except Quebec and Ontario) on Typical Estates

Class	Aggregate Net Value	Dutiable Value	Rate	Duty
	$	$	p.c.	$
A. Widow only	60,000	40,000	10·6	4,240
	100,000	80,000	14·7	11,760
	300,000	280,000	26·7	74,760
	500,000	480,000	32·7	156,960
	1,000,000	980,000	38·7	379,260
B. Only child over 25 years	60,000	60,000	11·9	7,140
	100,000	100,000	16·7	16,700
	300,000	300,000	28·7	86,100
	500,000	500,000	34·7	173,500
	1,000,000	1,000,000	40·7	407,000
C. Brother or sister	60,000	60,000	13·9	8,340
	100,000	100,000	18·7	18,700
	300,000	300,000	30·7	92,100
	500,000	500,000	36·7	183,500
	1,000,000	1,000,000	42·7	427,000
D. Stranger	60,000	60,000	15·9	9,540
	100,000	100,000	20·7	20,700
	300,000	300,000	32·7	98,100
	500,000	500,000	38·7	193,500
	1,000,000	1,000,000	44·7	447,000

The Incidence of Combined Federal and Provincial Succession Duties.—Only the Provinces of Quebec and Ontario have retained their own succession duties. In Tables 25 and 26 for all classes of beneficiaries, the duties collectable are shown for the case where an estate of given value is left to one beneficiary only. It would be impossible to cover the many different combinations of the various beneficiaries and the exemptions and saving clauses to be found in the legislation of the respective provinces. In every case, the estate is assumed to be wholly situated within the province and the beneficiary domiciled therein to be the sole heir.

Quebec.—The current legislation under which succession duties are collected is S.Q. 1943, c. 18, as amended. As stated above, the following text and table can give only a broad outline of such duties as applied to comparable classes of beneficiaries in other provinces. Full details regarding other cases may be obtained from the Act or from the Collector of Succession Duties, Provincial Revenue Offices, Quebec, Que.

Under the legislation, beneficiaries are divided into three classes, as follows:—

(1) Those in direct ascending or descending line, of a relationship between consorts, between father- or mother-in-law and son- or daughter-in-law, or between step-father or step-mother and step-son or step-daughter. There is no limitation of degree in the direct ascending or descending line in these relationships.

(2) Those in collateral line including a brother or sister, or descendant of a brother or sister of the deceased, or to a brother or sister, or son or daughter of a brother or sister, of the father or mother of the deceased.

(3) Others.

No duty is payable when the aggregate value of the property passing to persons in Class (1) does not exceed $10,000; in an estate, the aggregate value of which does not exceed $50,000, this sum is increased by $1,500 for each child, in the first degree,

under 25 years of age, domiciled in the Province, left by and surviving the deceased (15-16 Geo. VI, c. 14). If the whole value of the estate is less than $1,000, bequests to collateral relatives are exempt. No duty is payable on bequests of up to $1,000 to beneficiaries in Class (3) who have been in the employ of the testator for five years or more. In estates that devolved prior to Mar. 10, 1949, no duty is payable on legacies for religious, charitable or educational purposes in Quebec and the same privilege is extended to legacies for similar work outside that Province, provided that the province or State within which the work is to be carried out extends reciprocal privileges under its succession duty laws. Since Mar. 10, 1949 (13 Geo. VI, c. 32), all legacies, gifts and subscriptions for religious, charitable and educational purposes are tax-free, regardless of the country, province or state where the institutions benefiting therefrom are located.

25.—The Incidence of Federal and Quebec Succession Duties on Typical Estates

Class	Aggregate Net Value	Federal Duty[1]			Provincial Duty			Combined Duties[2]
		Dutiable Value	Rate	Duty	Dutiable Value	Rate	Duty	
	$	$	p.c.	$	$	p.c.	$	$
A. Widow only.....	20,000	—	—	—	20,000	2·80	560	560
	25,000	—	—	—	25,000	3·00	750	750
	50,000	—	—	—	50,000	4·00	2,000	2,000
	60,000	40,000	10·60	4,240	60,000	5·60	3,360	5,480
	100,000	80,000	14·70	11,760	100,000	8·00	8,000	13,880
	300,000	280,000	26·70	74,760	300,000	12·00	36,000	74,760
	500,000	480,000	32·70	156,960	500,000	15·50	77,500	156,960
	1,000,000	980,000	38·70	379,260	1,000,000	23·00	230,000	419,630
B. Only child over 25 years.....	20,000	—	—	—	20,000	2·80	560	560
	25,000	—	—	—	25,000	3·00	750	750
	50,000	—	—	—	50,000	4·00	2,000	2,000
	60,000	60,000	11·90	7,140	60,000	5·60	3,360	7,140
	100,000	100,000	16·70	16,700	100,000	8·00	8,000	16,700
	300,000	300,000	28·70	86,100	300,000	12·00	36,000	86,100
	500,000	500,000	34·70	173,500	500,000	15·50	77,500	173,500
	1,000,000	1,000,000	40·70	407,000	1,000,000	23·00	230,000	433,500
C. Brother or sister...	20,000	—	—	—	20,000	7·80	1,560	1,560
	25,000	—	—	—	25,000	8·50	2,125	2,125
	50,000	—	—	—	50,000	12·00	6,000	6,000
	60,000	60,000	13·90	8,340	60,000	13·40	8,040	12,210
	100,000	100,000	18·70	18,700	100,000	16·00	16,000	25,350
	300,000	300,000	30·70	92,100	300,000	19·00	57,000	103,050
	500,000	500,000	36·70	183,500	500,000	21·67	108,350	200,100
	1,000,000	1,000,000	42·70	427,000	1,000,000	28·33	283,300	496,800
D. Stranger.....	20,000	—	—	—	20,000	14·00	2,800	2,800
	25,000	—	—	—	25,000	14·50	3,625	3,625
	50,000	—	—	—	50,000	17·00	8,500	8,500
	60,000	60,000	15·90	9,540	60,000	18·00	10,800	15,570
	100,000	100,000	20·70	20,700	100,000	22·00	22,000	32,350
	300,000	300,000	32·70	98,100	300,000	25·75	77,250	126,300
	500,000	500,000	38·70	193,500	500,000	28·25	141,250	239,000
	1,000,000	1,000,000	44·70	447,000	1,000,000	34·50	345,000	568,500

[1] The rates of federal duty shown are those actually applied but a credit may be made to the taxpayer up to one-half of this amount on account of duty paid to the Province, *see* p. 1080. [2] After deduction of credit on federal duty.

Ontario.—The current legislation on succession duties is R.S.O. 1950, c. 378, as amended. Full information may be obtained on application to the Succession Duty Office, Treasury Department, Parliament Buildings, Toronto, Ont.

Beneficiaries are divided into three classes, as follows:—

(1) Widow; child; husband; parent; grandparent; grandchild; son- or daughter-in-law.

(2) Brother; sister; nephew; niece; uncle; aunt; cousin; child of nephew or niece.

(3) Others.

No duty is payable on estates not exceeding $5,000 in aggregate value, nor on estates not exceeding $50,000 devised to persons in Class (1), nor on those not exceeding $10,000 devised to persons in Class (2).

Where any person in Class (3) was in the employ of the deceased for at least five years immediately prior to his death, no duty is payable with respect to any benefits which such person derived from the deceased where the total value of such benefits is not in excess of $1,000. Such benefits, while exempt are, nevertheless, taken as a factor in fixing the rates applicable to the dutiable portions of the estate.

Bequests for religious or educational purposes to any religious or educational organization which carries on its work solely in Canada, and bequests for charitable purposes to any charitable organization which carries on its work solely in Ontario, are exempt from duty and are ignored altogether in the computation of duty on the portions of the estate that are not exempt. The same rule applies to bequests to the Canadian National Institute for the Blind, the Canadian Red Cross Society and other approved patriotic organizations.

26.—The Incidence of Federal and Ontario Succession Duties on Typical Estates

Class	Aggregate Net Value	Federal Duty[1]			Provincial Duty			Combined Duties[2]
		Dutiable Value	Rate	Duty	Dutiable Value	Rate	Duty	
	$	$	p.c.	$	$	p.c.	$	$
A. Widow only.....	20,000	—	—	—	—	—	—	—
	25,000	—	—	—	—	—	—	—
	50,000	—	—	—	—	—	—	—
	60,000	40,000	10·60	4,240	60,000	4·60	3,174[3]	5,294
	100,000	80,000	14·70	11,760	100,000	7·50	8,625[3]	14,505
	300,000	280,000	26·70	74,760	300,000	10·00	34,500[3]	71,760
	500,000	480,000	32·70	156,960	500,000	12·50	71,875[3]	156,960
	1,000,000	980,000	38·70	379,260	1,000,000	18·00	207,000[3]	396,630
B. Only child over 25 years.....	20,000	—	—	—	—	—	—	—
	25,000	—	—	—	—	—	—	—
	50,000	—	—	—	50,000	2·50	1,438[3]	1,438
	60,000	60,000	11·90	7,140	60,000	4·60	3,174[3]	7,140
	100,000	100,000	16·70	16,700	100,000	7·50	8,625[3]	16,975
	300,000	300,000	28·70	86,100	300,000	10·00	34,500[3]	86,100
	500,000	500,000	34·70	173,500	500,000	12·50	71,875[3]	173,500
	1,000,000	1,000,000	40·70	407,000	1,000,000	18·00	207,000[3]	410,500
C. Brother or sister...	20,000	—	—	—	20,000	8·60	2,064[4]	2,064
	25,000	—	—	—	25,000	9·15	2,745[4]	2,745
	50,000	—	—	—	50,000	11·90	7,140[4]	7,140
	60,000	60,000	13·90	8,340	60,000	13·00	9,360[4]	13,530
	100,000	100,000	18·70	18,700	100,000	15·20	18,240[4]	27,590
	300,000	300,000	30·70	92,100	300,000	18·00	61,800[4]	110,850
	500,000	500,000	36·70	183,500	500,000	20·50	123,000[4]	214,750
	1,000,000	1,000,000	42·70	427,000	1,000,000	26·00	312,000[4]	525,500
D. Stranger.....	20,000	—	—	—	20,000	13·10	3,275[5]	3,275
	25,000	—	—	—	25,000	13·40	4,188[5]	4,188
	50,000	—	—	—	50,000	15·00	9,375[5]	9,375
	60,000	60,000	15·90	9,540	60,000	15·50	11,625[5]	16,395
	100,000	100,000	20·70	20,700	100,000	17·50	21,875[5]	32,225
	300,000	300,000	32·70	98,100	300,000	22·50	84,375[5]	133,425
	500,000	500,000	38·70	193,500	500,000	27·50	171,875[5]	268,625
	1,000,000	1,000,000	44·70	447,000	1,000,000	35·00	437,500[5]	661,000

[1] The rates of federal duty shown are those actually applied but a credit may be made to the taxpayer up to one-half of this amount on account of duty paid to the Province, *see* p. 1080. [2] After deduction of credit on federal duty but inclusive of surtax on provincial duty. [3] Includes a surtax of 15 p.c. [4] Includes a surtax of 20 p.c. [5] Includes a surtax of 25 p.c.

Subsection 4.—Subsidies and Taxation Agreements with the Provinces

Subsidies.—By the provisions of the British North America Act and subsequent arrangements entered into from time to time, the Federal Government makes certain annual payments to the provinces.

Interest on Debt Allowance.—By the terms of the union of the provinces at Confederation in 1867, the Federal Government assumed all the outstanding debts and liabilities of the provinces and undertook to pay, except in the case of Ontario and Quebec, interest at 5 p.c. per annum on the amounts by which the actual per capita indebtedness of the provinces fell short of a basic debt allowance calculated at approximately $25 per capita. On the subsequent entry of additional provinces into Confederation, similar arrangements were effected regarding the assumption of their pre-Confederation indebtedness. From time to time, adjustments have been made in the basis of calculating the debt allowances of provinces; moreover, the Federal Government pays interest at 5 p.c. per annum on the amounts by which the actual debts of the provinces, on their entry into Confederation, fell short of the allowed debts as adjusted. The aggregate annual payment by the Federal Government to the provinces in respect of interest on debt allowances is $1,609,386.

Allowances for Governments and Legislatures.—Under the terms of the union, annual specific grants were made to the various provinces toward the support of their governments and legislatures. These amounts vary with the population of the provinces, according to the following scale approved in 1907:—

Where population is—	$
Under 150,000	100,000
150,000, but does not exceed 200,000	150,000
200,000, " " 400,000	180,000
400,000, " " 800,000	190,000
800,000, " " 1,500,000	220,000
Over 1,500,000	240,000

Aggregate annual allowances presently paid under this head amount to $1,990,000, including the $180,000 that became payable to Newfoundland upon union with Canada in 1949.

Allowances per Capita of Population.—Under the British North America Act of 1867, a grant of 80 cents per capita of population was allowed to each province. The British North America Act of 1907 provided that the grant would be paid to each province at the rate of 80 cents per capita up to a population of 2,500,000, and at the rate of 60 cents per capita for so much of the population as exceeded that number. These allowances were last adjusted in 1951 following the Census. The allowances paid to the provinces in the year ended Mar. 31, 1953, amounted to $10,465,338.

The Act to approve the Terms of Union of Newfoundland with Canada in 1949 provided for an annual subsidy equal to 80 cents per capita of the population of the Province (being taken at 325,000 until the first decennial Census after the date of union), subject to increase to conform with the scale of grants authorized by the British North America Act, 1907.

Special Grants.—In the case of certain of the provinces, grants have been added to the original scale of subsidies in view of special circumstances obtaining in regard to those provinces. For the year ended Mar. 31, 1953, the special grants amounted to $2,468,380, distributed as follows:—

PRINCE EDWARD ISLAND.—Various special grants totalling $155,880 per annum.

NEW BRUNSWICK.—An annual grant of $150,000 since 1875 in consideration of the repeal of lumber duties reserved to the Province by the B.N.A. Act of 1867.

MANITOBA.—A special grant on the basis of population amounting at present to $562,500 per annum.

SASKATCHEWAN AND ALBERTA.—An annual sum as compensation for loss of public lands revenue, based on their respective populations and amounting at present to $750,000 for Saskatchewan and $750,000 for Alberta.

BRITISH COLUMBIA.—A special grant in lieu of lands amounting at present to $100,000 per annum.

27.—Subsidy Allowances to Provincial Governments, Years Ended Mar. 31, 1947-53[1]

Province	1947	1948	1949	1950	1951	1952	1953
	$	$	$	$	$	$	$
Newfoundland[2]	...	...	...	1,925,000	1,540,000	1,569,133	1,569,133
Prince Edward Island	381,932	656,932	656,932	656,932	656,932	656,932	656,932
Nova Scotia	705,140	2,005,140	2,005,140	2,005,140	2,005,140	2,056,838	2,056,838
New Brunswick	732,386	1,632,386	1,632,386	1,632,386	1,632,386	1,679,022	1,679,022
Quebec	2,866,590	2,866,590	2,866,590	2,866,590	2,866,590	3,300,869	3,300,869
Ontario	3,155,007	3,155,007	3,155,007	3,155,007	3,155,007	3,640,940	3,640,940
Manitoba	1,709,043	1,722,202	1,715,623	1,767,315	1,750,084	1,755,317	1,755,317
Saskatchewan	2,034,650	10,079,651[3]	2,041,525	2,071,900	2,061,775	2,040,757	2,040,757
Alberta	1,794,561	10,272,767[3]	2,018,039	2,086,043	2,063,375	2,126,976	2,126,976
British Columbia	1,003,440	1,003,440	1,003,440	1,003,440	1,003,440	1,281,319	1,281,319
Totals	**14,382,749**	**33,394,115**	**17,094,682**	**19,169,753**	**18,734,729**	**20,108,103**	**20,108,103**

[1] Does not include additional payments under the Wartime Tax Agreements or the Tax-Rental Agreements. [2] Excludes the transitional grant allowed to this Province under the Terms of Union. [3] Includes a payment of $8,031,250 under authority of the Western Provinces Treasury Bills and Natural Resources Settlement Act.

28.—Subsidy Allowances to Provincial Governments, July 1, 1867, to Mar. 31, 1953

Province	Allowances for Governments	Allowances on Basis of Population	Special Grants[1]	Interest on Debt Allowances	Total[1]
	$	$	$	$	$
Newfoundland	765,000	1,163,265	4,675,000	—	6,603,265
Prince Edward Island	5,620,000	6,883,427	9,276,022	3,301,058	25,080,507
Nova Scotia	11,140,000	31,835,777	8,626,980	4,185,354	55,788,111
New Brunswick	10,500,000	24,548,426	18,030,000	1,900,469	54,978,895
Quebec	13,840,000	128,861,513	—	7,618,545	150,320,058
Ontario	14,240,000	154,235,037	—	7,591,979	176,067,016
Manitoba	10,345,000	27,937,617	30,581,733	20,600,719	89,465,069
Saskatchewan	9,676,667	28,786,724	39,312,500	19,458,000	97,233,891
Alberta	9,051,667	24,332,606	35,125,000	19,458,000	87,967,273
British Columbia	10,100,000	24,472,464	9,200,000	2,400,171	46,172,635
Totals	**95,278,334**	**453,056,856**	**154,827,235**	**86,514,295**	**789,676,720**

[1] Excludes the additional special grants paid until 1941 to the Maritime Provinces, Manitoba, Saskatchewan and British Columbia. Excludes additional payments to Provinces under the Wartime Tax Agreements and the Tax-Rental Agreements. Excludes transitional grant to Newfoundland. Includes payments under the provisions of the Maritime Additional Subsidies Act. Includes additional annual subsidy to Newfoundland under the Terms of Union. *See* text.

Additional Special Grants.—Additional special grants were voted annually to the Maritime Provinces, Manitoba, Saskatchewan and British Columbia until 1941; they were suspended with the coming into force of the Wartime Tax Agreements, 1942. The grants were paid in 1947 and later years to the three Maritime Provinces, under the provisions of the Maritime Additional Subsidies Act, 1942. The Terms of Union with Newfoundland, 1949, provide for an additional annual subsidy of $1,100,000 in recognition of the special problems of that Province by reason of geography and its sparse and scattered population.

Tax-Rental Agreements.—The Wartime Tax Agreements, 1942 (*see* 1946 Year Book, pp. 900-901), lapsed in the period from Oct. 30, 1946, to Mar. 31, 1947, and were succeeded by the Tax-Rental Agreements, 1947. These, in turn, were succeeded by the Tax-Rental Agreements, 1952. By the 1947 and 1952 Agreements, a province agrees to refrain from levying certain direct taxes, for a period of five years, in return for compensation from the Federal Government. The main purposes of these Agreements are to establish a more equitable system of taxation throughout Canada by reducing duplication of direct taxation and duplication of machinery for the collection of direct taxes, to give a greater measure of stability to the revenue of the provinces and to enable the Federal Government, together with the provincial governments, to carry out national policies intended to maintain high levels of employment and production.

Tax-Rental Agreements, 1947.—The 1947 Agreements were entered into by the Federal Government pursuant to the Dominion-Provincial Tax Rental Agreements Act, 1947. Seven provinces—Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, Saskatchewan, Alberta and British Columbia—entered into these Agreements for the full five-year period, the Yukon Territory for four years, and the Province of Newfoundland for three years. The Agreements contained the basic provisions of the Wartime Tax Agreements whereby the provinces and their municipalities withdrew their personal income taxes, corporation income taxes and special taxes on corporations, in return for compensation from the Federal Government. The Agreements contained significant changes and additions which had been worked out at the meetings of the Dominion-Provincial Conference on Reconstruction in 1945 and 1946, and in the negotiations that followed the June 1946 Budget offer of the Federal Minister of Finance. The main features of this offer, which were embodied in the Agreements, are outlined in the 1946 Year Book, pp. 883-884.

Under the 1947 Agreements, a province and its municipalities were required to refrain from levying personal income taxes, corporation income taxes and special taxes on corporations for the period Jan. 1, 1947, to Dec. 31, 1951. (Shorter periods were required of Yukon Territory and Newfoundland.) However, a province was encouraged to levy a corporation income tax of 5 p.c. in order to keep the level of income taxes on corporations in all provinces—whether or not they had entered into Agreements—approximately uniform, and such a tax was levied by all the provinces and Yukon Territory. The tax was imposed on the income of a corporation attributable to its operations in the province, and the Agreements provided

a set of rules according to which an appropriate allocation could be made of a corporation's income to the province. As provided in the Agreements, the tax was imposed under the same general provisions as those of the Income War Tax Act and The Income Tax Act, and was administered by the Federal Government without cost to the provinces. The revenue from the tax was paid over to each province but a corresponding reduction was made in the amount of compensation otherwise payable under the Agreements.

The 1947 Agreements were concerned also with the succession duties which were not "rented" under the Wartime Tax Agreements (*see* p. 1080).

The Agreements expressly permitted the imposition by a province of royalties and rentals on natural resources when such royalties and rentals were of a nature conforming with the definitions set forth in the Agreements. Provincial taxation of income derived from logging and mining operations, as defined in the Agreements, was also permitted. Furthermore, the Federal Government was obligated by the Agreements to allow such royalties, rentals and taxes to be deducted in the computation of income for federal income-tax purposes for the term of the Agreements.

Under the Agreements, the provinces were given a choice of two alternative bases of compensation. The components of the first option were $12.75 per capita of provincial population in 1942, plus 50 p.c. of the province's 1940 revenue from personal and corporate income taxes and corporation taxes, plus the statutory subsidies payable in 1947. The components of the second option were $15.00 per capita of provincial population in 1942, plus the statutory subsidies payable in 1947. A special arrangement was made for Prince Edward Island which was offered a flat amount of $2,100,000—a sum slightly in excess of the amount determined by either of the two formulas. The guaranteed minimum annual payments to the provinces under the most favourable option and the adjusted annual payments for the period of the Agreements are shown in Table 29.

An interesting feature of the Agreements was the provision that, in the year following their termination, provincial taxpayers were to be allowed, by the Federal Government, tax credits of a maximum of 5 p.c. of the federal income tax, 50 p.c. of federal succession duties, and one-seventh of federal corporation income tax for similar taxes and duties paid to provincial governments. The main purpose of this provision was to enable the provinces to re-enter these tax fields with greater ease, if they so desired, after the termination of the Agreements.

Under an offer ancillary to the Agreements but one which applied to all provinces whether agreeing or not, the Federal Government pays to each province one-half of the federal corporation income tax collected on income of corporations derived in the province from generating and/or distributing to the public, electric energy, gas or steam, where this is the main business of the corporation. This arrangement originally had effect for the five taxation years ended Dec. 31, 1951, and has been extended under the Tax Rental Agreements Act, 1952, to the five taxation years ending Dec. 31, 1956.

29.—Guaranteed Minimum Annual Payments[1] to Provinces and Yukon Territory under Most Favourable Option, and Adjusted Annual Payments,[1] as Finally Calculated,[2] for Years Ended Mar. 31, 1948-52.

Province or Territory and Option	Guaranteed Minimum Annual Payment	Adjusted Payment 1948	Adjusted Payment 1949	Adjusted Payment 1950	Adjusted Payment 1951	Adjusted Payment 1952	Total Adjusted Payments 1948-52
	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Newfoundland (Second)	6,209	...	...	8,090	8,912	9,713	26,715
Prince Edward Island (Special arrangement)	2,100	2,322	2,420	2,641	2,891	3,131	13,405
Nova Scotia (Second)	10,870	11,994	12,490	13,622	14,905	16,133	69,144
New Brunswick (First)	8,773	9,756	10,186	11,137	12,214	13,251	56,544
Manitoba (First)	13,540	14,485	15,002	16,359	17,971	19,531	83,348
Saskatchewan (Second)	15,291	15,696	16,017	17,215	18,662	20,013	87,603
Alberta (First)	14,228	15,338	16,029	17,740	19,847	21,958	90,912
British Columbia (First)	18,120	21,621	23,087	25,784	28,818	31,853	131,163
Yukon Territory (Second)	89	...	141	159	177	195	672
Totals	**89,220**	**91,212**	**95,372**	**112,747**	**124,397**	**135,778**	**559,506**
Quebec (First)[3]	56,382	64,403	67,837	74,800	82,658	90,358	380,056
Ontario (First)[3]	67,158	76,409	80,380	88,524	97,717	106,705	449,735
Grand Totals[4]	**212,760**	**232,024**	**243,589**	**276,071**	**304,772**	**333,841**	**1,389,297**

[1] Subject to deduction of statutory subsidies. (*See* Table 27, p. 1086.) [2] In accordance with the terms of the Tax-Rental Agreements, payments for all five years were recalculated in June 1952, in the light of the revised statistics for gross national product and population. [3] Quebec and Ontario did not enter into the 1947 Agreements; consequently, the payments shown were not actually made.

Tax-Rental Agreements, 1952.—In December 1950, a Federal-Provincial Conference was held primarily to discuss fiscal and social security matters. At the Conference the Federal Government made an offer for new tax-rental agreements which was modified, subsequently, in minor respects only. This new offer, apart from the amount of the guaranteed minimum payments, contained substantially the same provisions as the 1947 Agreements. The provinces were again to repeal or suspend the same taxes for periods of five years, and were to be compensated in much the same manner although on a larger scale.

One important difference in the 1952 Agreements was that the provincial 5-p.c. corporation income-tax levy was abolished. By an amendment to the federal Income Tax Act, 5 p.c. was added to the federal rate and a credit of 5 p.c. given on corporation income earned within a non-agreeing province. The credit was raised the next year to 7 p.c. (*see* p. 1075). Another significant difference was that the 1952 Agreements contained additional protection for the provinces in the event of their re-entering the tax fields (temporarily given up) after the end of the five-year periods. The credits which the Federal Government undertook to allow taxpayers in provinces withdrawing from the Agreements remained the same in respect of the personal income tax and succession duties. In regard to the corporation income tax, the credit was raised to 7 p.c. and all Agreements were guaranteed for five years.

On the compensation side there were several differences. The provinces had the choice of two alternative methods of determining the guaranteed minimum annual payment to be received from the Federal Government. The first option was a guaranteed minimum payment based on the one allotted to a province under the 1947 Agreements with an increase proportionate to change in provincial population and per capita gross national product between 1942 and 1948. Increases in guaranteed minimum payments averaged almost 50 p.c.

The second option was designed to provide a more up-to-date evaluation of the rental value of the tax fields abandoned by the provinces. Under this option the guaranteed minimum payment was made up in the following way:—

(1) The yield of a personal income tax of 5 p.c. applied to 1948 incomes in the province.
(2) The yield of a tax of 8½ p.c. on corporation profits earned in the province in 1948. (The rate of 8½ p.c. was taken as fair measure of the corporation tax potential, since it took account of the special taxes on corporations levied traditionally by provinces as well as taxes on corporate profits.)
(3) The average revenue received by the province from succession duties. (For the agreeing provinces this was the average of the revenue received during the last two years before their succession duties were suspended and, for Ontario and Quebec, the average of the three fiscal years 1946-47, 1947-48 and 1948-49.)
(4) Statutory subsidies payable to the province for 1948.

This option was more favourable to only one province—Ontario. Under either option, these guaranteed minimum payments were, as formerly, subject to upward adjustment for changes in gross national product per capita and in provincial population from 1948. However, instead of using as adjustment factors the average of the ratios for the three years preceding the year of payment, there was a choice of the single year, or of the average of the two years preceding the year of payment. Another change was that the 'gross national product', used as an adjustment factor, was changed from the 'gross national product at market prices' to the 'gross national product at factor cost' in order to eliminate the effect of changes in indirect taxes.

All provinces, with the exception of Quebec, as well as the Yukon and Northwest Territories, have signed Agreements. Ontario chose to retain its succession duties and receives reduced compensation on this account.

The guaranteed minimum annual payments under the 1952 Agreements, and the estimated payments calculated for the years ended Mar. 31, 1953 and 1954, are shown in Table **30.**

30.—Guaranteed Minimum Annual Payments[1] to Provinces and Territories under Most Favourable Option, and Adjusted Annual Payments,[1] as Calculated[2] for Years Ended Mar. 31, 1953 and 1954.

Province or Territory and Option	Guaranteed Minimum Annual Payment	Adjusted Payment 1953	Adjusted Payment 1954
	$'000	$'000	$'000
Newfoundland (First)	9,175	12,374	13,311
Prince Edward Island (First)	2,977	3,942	4,288
Nova Scotia (First)	15,348	20,286	21,429
New Brunswick (First)	12,576	16,737	17,745
Ontario (Second)[3]	101,801	138,097	148,811
Manitoba (First)	18,635	24,927	26,627
Saskatchewan (First)	20,026	25,743	27,122
Alberta (First)	20,986	29,566	31,732
British Columbia (First)	29,647	41,655	44,519
Yukon Territory (First)	170	231	256
Northwest Territories (First)	186	241	266
Totals	**231,527**	**313,799**	**336,106**
Quebec (First)[4]	85,080	115,778	123,862
Grand Totals[4]	**316,607**	**429,577**	**459,968**

[1] Subject to deduction of statutory subsidies payable in 1952. (*See* Table 27, p. 1086.) [2] The annual adjusted payments are instalment payments subject to final recalculation after Feb. 28, 1957, in the light of revised statistics for gross national product and population then available. They are also subject to recalculation in June of the year following the fiscal year in which the initial payments are made and at that time any additional payments, or deductions from the current year's payments, are made. The figures for the year ended Mar. 31, 1953, include additional payments calculated in June 1953 totalling $2,872,000. [3] Since Ontario retained its succession duties, payments to this Province are subject to a deduction on this account. The deductions are to be finally determined when final information is available some time after the termination of the Agreement, but an estimated amount is deducted each year. The amount was $10,205,000 for 1953 and $11,646,000 for 1954. [4] Quebec had not entered into the 1952 Agreements as at Jan. 1, 1954; consequently, the payments shown were not actually made.

Subsection 5.—National Debt

The gross national debt of Canada at Mar. 31, 1914, was $544,391,369 as against assets of $208,394,519, leaving a comparatively small net debt of $335,996,850 incurred almost completely for public works of general utility which, like the intercolonial and transcontinental railways and the canal system, remained assets, though perhaps not realizable assets, of the nation. The debt was also expanded by the subsidizing of enterprises like the Canadian Pacific Railway, which, though not government-owned, assisted greatly in extending the area of settlement as well as the productive and, therefore, the taxable capacity of the country. Broadly speaking, the debt was incurred for productive purposes and was held mainly outside the country; the principal of the Federal Government funded debt payable at London, England, was $302,842,485 on Mar. 31, 1914, as against only $717,453 payable in Canada.

From 1914 to 1920, the gross debt increased by almost $2,500,000,000 to a total of $3,042,000,000 owing to heavy war and post-war expenditure and, while there was a slight reduction to a low point of $2,544,586,411 at Mar. 31, 1930, additional expenditure during the depression years resulted in a gross debt of $3,710,610,593 by Mar. 31, 1939.

From 1939 to 1946 there was an increase of $15,249,235,590, incurred mainly for war purposes, bringing the total gross debt to $18,959,846,183 at the end of March 1946. After deduction of active assets held by the Government, the net debt showed an increase of $10,268,846,135 during this period, amounting to $13,421,405,449 at the end of March 1946. At the end of March 1953, total gross debt had been reduced to $17,918,490,812 and net debt to $11,161,734,269.

The portion of the funded debt payable in foreign currencies decreased sharply during the war years, as was inevitable under conditions where almost the entire amount of the country's war financing was carried out through domestic operations. Of the total funded debt and treasury bills outstanding as at Mar. 31, 1953, amounting to $14,810,527,589, only 2·66 p.c. was payable outside Canada—$52,904,299 at London (England) and $341,583,750 at New York.

31.—Summary of the Public Debt and Interest Payments thereon, Years Ended Mar. 31, 1944-53

NOTE.—Statistics for 1867-99 are given in the 1942 Year Book, p. 775; those for 1900-13 in the 1945 edition, p. 944; those for 1914-35 in the 1947 edition, p. 972; and those for 1936-43 in the 1951 edition, p. 1009.

Year	Gross Debt	Net Active Assets	Net Debt	Net Debt Per Capita[1]	Increase or Decrease of Net Debt During Year	Interest Paid on Debt	Interest Paid Per Capita[2]
	$'000	$'000	$'000	$'000	$'000	$'000	$'000
1944...	12,359,123,230	3,619,038,337	8,740,084,893	731·63	2,557,235,792	242,681,180	20·57
1945...	15,712,181,527	4,413,819,509	11,298,362,018	935·91	2,558,277,125	318,994,821	26·70
1946...	18,959,846,183	5,538,440,734	13,421,405,449	1,091·88	2,123,043,431	409,134,502	33·89
1947...	17,698,195,740	4,650,439,192	13,047,756,548	1,039·58	−373,648,901	464,394,876[3]	37·78
1948...	17,197,348,981	4,825,712,088	12,371,636,893	964·80	−676,119,656	455,455,204	36·29
1949...	16,950,403,795	5,174,269,643	11,776,134,152	875·74	−595,502,741	465,137,958[3]	36·27
1950...	16,750,756,246	5,106,147,047	11,644,609,199	849·23	−131,524,953	439,816,335	32·71
1951...	16,923,307,028	5,489,992,080	11,433,314,948	816·14	−211,294,251	425,217,500	31·01
1952...	17,257,668,676	6,072,387,129	11,185,281,546	775·14	−248,033,402	432,423,082[4]	30·87
1953...	17,918,490,812[5]	6,756,756,543[5]	11,161,734,269	755·14	− 23,547,277	451,339,521	31·28

[1] Based on the official estimates of population for June 1 of the year indicated (*see* p. 129). [2] Based on the official estimates of population for June 1 of the year immediately preceding the one indicated (*see* p. 129). [3] The apparent increase in interest paid is due to the accrued interest on refundable taxes having been charged in the year of repayment. [4] Excludes $87,510,068 adjustment required to place interest on public debt on accrued basis. [5] The figures for 1953 are not strictly comparable with those for previous years, chiefly because of changed methods in accounting for cash.

Funded Debt Operations.—The funded debt and treasury bills outstanding as at Mar. 31, 1953, are given in Table **32** and information on the Federal Government securities (payable in Canada) issued during the year ended Mar. 31, 1953, is given in Table **33**.

32.—Unmatured Funded Debt and Treasury Bills as at Mar. 31, 1953, and Annual Interest Payable Thereon

Date of Maturity	Description	Rate	Where Payable	Amount of Loan	Annual Interest Charge
		p.c.		$ cts.	$ cts.
1953—May 1	Six-Month Treasury Notes	1¼	Canada	200,000,000 00	3,500,000 00
May 15	Deposit Certificates	1¾	Canada	200,000,000 00	3,500,000 00
Sept. 1	Six-Month Treasury Notes	1¾	Canada	550,000,000 00	11,000,000 00
Nov. 1	Loan of 1951	2	Canada	200,000,000 00	4,000,000 00
Nov. 1	Loan of 1952	2	Canada	300,000,000 00	6,000,000 00
1954—Mar. 1	Second Victory Loan	3	Canada	676,355,489 00[1]	20,089,767 00
July 1	Loan of 1953	2	Canada	100,000,000 00	2,000,000 00
Dec. 15	Refunding Loan	2	Canada	395,000,000 00	7,900,000 00
Dec. 15	Loan of 1952	2	Canada	150,000,000 00	3,000,000 00
1955—July 1	Loan of 1953	2½	Canada	200,000,000 00	4,500,000 00
1956—July 1	Loan of 1950	2½	Canada	400,000,000 00	9,000,000 00
Nov. 1	Third Victory Loan	3	Canada	855,607,410 50[2]	25,414,081 50
Nov. 1	Canada Savings Series I	2¾	Canada	170,190,950 00	4,680,251 12
1957—May 1	Fourth Victory Loan	3	Canada	1,111,261,650 00	33,337,849 50
Nov. 1	Canada Savings Series II	2¾	Canada	90,145,400 00	2,478,998 50
1958—June 1	Loan of 1938-39	3	Canada	88,200,000 00	2,646,000 00
Sept. 1	Loans of 1933	4	London	1,764,770 43	70,590 82
Nov. 1	Canada Savings Series III	2¾	Canada	84,651,200 00	2,327,908 00
1959—Jan. 1	Fifth Victory Loan	3	Canada	1,197,324,750 00	35,919,742 50
Nov. 1	Canada Savings Series IV	2¾	Canada	122,576,600 00	3,370,856 50
1960—June 1	Sixth Victory Loan	3	Canada	1,165,300,350 00	34,959,010 50
Nov. 1	Canada Savings Series V	2¾	Canada	113,641,350 00	3,125,137 12
1961—Jan. 15	Loan of 1936	3½	New York	47,115,000 00	1,531,237 50
1962—Feb. 1	Seventh Victory Loan	3	Canada	1,315,639,200 00	39,469,176 00
Aug. 1	Canada Savings Series VI	3¼	Canada	246,238,250 00	8,618,338 75
1963—July 1	Loan of 1938	3½	London	1,952,749 65	63,464 36
July 1	Stock	3	London	49,186,778 94	1,475,603 37
Aug. 1	Loan of 1948	3	New York	147,234,375 00	4,417,031 25
Aug. 1	Canada Savings Series VII	3¼	Canada	340,304,350 00	12,761,413 12
Oct. 1	Eighth Victory Loan	3	Canada	1,295,819,350 00	38,874,580 50
1966—June 1	Loan of 1936	3½	Canada	54,703,000 00	1,777,847 50
Sept. 1	Ninth Victory Loan	3	Canada	1,691,796,700 00	50,753,901 00
1968—June 15	Loan of 1950	2½	Canada	350,000,000 00	9,625,000 00
1974—Sept. 1	Bonds	2¾	New York	98,156,250 00	2,699,296 88
1975—Sept. 15	Bonds	2¼	New York	49,078,125 00	1,349,648 44
1978—Jan. 15	Loan of 1953	3¼	Canada	60,000,000 00	2,250,000 00
Perpetual	Loan of 1936	3	Canada	55,000,000 00	1,650,000 00
Various	Treasury Bills	Various	Canada	600,000,000 00	9,229,250 00
Various	War Savings Certificates	3	Canada	36,283,540 13	1,088,506 20
Totals, Unmatured Funded Debt and Treasury Bills				**14,810,527,588 65**	**410,454,487 93**
	Payable in Canada			14,416,039,539 63	398,847,615 31
	Payable in London (England)			52,904,299 02	1,609,658 55
	Payable in New York			341,583,750 00	9,997,214 07

[1] Redeemable at 101 p.c. Amount outstanding includes $6,696,589 redemption bonus. [2] Redeemable at 101 p.c. Amount outstanding includes $8,471,360.50 redemption bonus.

33.—Federal Government New Security Issues during the Year Ended Mar. 31, 1953

(Payable in Canada)

Security Issues	Issue Date	Maturity Date	Interest Rate	Price to Government	Yield at Price to Government	Total Amount Issued	Renewals or Reconversion Included in Amount Issued	Amount Issued for Cash
			p.c.	$	p.c.	$	$	$
Issued to Chartered Banks—								
Deposit certificates	Aug. 27, 1952	Feb. 25, 1953	1¾	100·00	1·75	200,000,000	200,000,000	—
Deposit certificates	Feb. 25, 1953	May 15, 1953	1¾	100·00	1·75	200,000,000	200,000,000	—
Deposit certificates	July 23, 1952	Nov. 15, 1952	1½	100·00	1·50	100,000,000	—	100,000,000
Totals						**500,000,000**	**400,000,000**	**100,000,000**
Issued to Bank of Canada—								
Six-month treasury notes	May 1, 1952	Nov. 1, 1952	1¾	100·00	1·375	200,000,000	200,000,000	—
Six-month treasury notes	Sept. 1, 1952	Mar. 1, 1953	1¾	100·00	1·75	550,000,000	550,000,000	—
Six-month treasury notes	Nov. 1, 1952	May 1, 1953	1¾	100·00	1·75	200,000,000	200,000,000	—
Six-month treasury notes	Mar. 1, 1953	Sept. 1, 1953	1¾	100·00	1·75	550,000,000	550,000,000	—
Totals						**1,500,000,000**	**1,500,000,000**	**—**
Issued to General Public—								
One-year-four-month loan	Mar. 1, 1953	July 1, 1954	2	98·60	3·08	100,000,000	100,000,000	—
Two-year-four-month loan	Mar. 1, 1953	July 1, 1955	2¼	97·60	3·33	200,000,000	200,000,000	—
One-year loan	Nov. 1, 1952	Nov. 1, 1953	2	99·05	2·97	300,000,000	300,000,000	—
Two-year-1½-month loan	Nov. 1, 1952	Dec. 15, 1954	2	97·75	3·10	150,000,000	150,000,000	—
Twenty-five-year loan	Jan. 15, 1953	Jan. 15, 1978	3¼	98·00	3·87	60,000,000	—	60,000,000
Canada Savings Bonds Series VII Net	Nov. 1, 1952	Aug. 1, 1963	3¼	98·9375		340,304,350	—	340,304,350
Totals						**1,150,304,350**	**750,000,000**	**400,304,350**
Increase in treasury bills	Various	Various	Various	Various	Various	150,000,000	—	150,000,000
Grand Totals						**3,300,304,350**	**2,650,000,000**	**650,304,350**

Guaranteed Debt.—Besides the direct debt of the Federal Government, already dealt with, there are large indirect obligations arising mainly out of the guarantee of securities, by the Federal Government, of the railway lines that now form the Canadian National Railways and the subsequent extensions thereof. Together with these are other small indirect obligations originating in the Government's guarantees of the bonds of the Canadian National Steamship services and of the bonds of the Harbour Commissions issued mainly for harbour improvements. Since 1932, guarantees of certain bank loans have been made under the various Relief Acts. With the commencement of business by the Bank of Canada on Mar. 11, 1935, the guarantee [authorized by Sect. 27 (6) of the Bank of Canada Act] of the deposit required to be maintained in the Bank of Canada by every chartered bank came into force. This guarantee must be implemented "in the event of the property and assets of the Bank being insufficient to pay its liabilities and if the Bank suspends payment of any of its liabilities".

Full details of other guarantees also outstanding at Mar. 31, 1953, are given in Schedule "V" to the *Public Accounts* for 1953.

34.—Guaranteed Debt of the Federal Government (Amounts Held by the Public), as at Mar. 31, 1947-53

NOTE.—Figures for 1914-23 are given in the 1943-44 Year Book, p. 837; those for 1924-35 in the 1947 edition, p. 978; and those for 1936-46 in the 1951 edition, p. 1013.

Year	Railways, Guaranteed as to Principal and Interest	Railways, Guaranteed as to Interest Only	Canadian National Steamships	Harbour Commissions	Other Guarantees	Bank of Canada	Total
	$	$	$	$	$	$	$
1947.....	528,505,889	8,309,454	9,400,000	20,739,182	14,724,473	536,264,805	1,117,943,803
1948.....	483,502,968	8,304,100	9,400,000	20,739,182	20,631,122	519,211,261	1,061,788,633
1949.....	518,500,224	6,985,175	9,400,000	19,756,282	28,718,353	540,250,731	1,123,610,765
1950.....	553,433,724	6,985,175	9,400,000	671,282	70,217,282	567,309,813	1,208,017,276
1951.....	559,433,723	6,985,175	9,400,000	671,282	38,460,873	552,915,324	1,167,866,377
1952.....	511,411,723	6,985,175	9,400,000	671,282	89,204,683	656,529,140	1,254,202,003
1953.....	511,411,723	6,985,175	9,400,000	3,329	53,138,915	626,629,981	1,207,569,123

Section 3.—Provincial Public Finance

In order to prepare comparable provincial finance statistics it is essential that data be presented, to the greatest possible extent, in uniform categories. In many instances, activities relating to a specific function are excluded by some provincial governments from their ordinary account, whereas similar activities are included by other provinces. The special or administrative funds of this nature so excluded are, therefore, added to provincial ordinary account and capital account to arrive at revenue and expenditure in the tables of this Section. Thus, it is obvious that the figures of revenue and expenditure presented will differ considerably in some cases from the totals shown in provincial public accounts.

Fiscal periods dealt with are as nearly coincident as is possible in view of the variations in provincial fiscal year-ends. Figures for the Province of Newfoundland are included commencing with the year 1949 and those for Yukon Territory with the year 1950.

Subsection 1.—Revenue and Expenditure of Provincial Governments

The figures of revenue and expenditure presented in this Subsection do not agree with those shown in Tables **1** and **3**, pp. 1057 and 1058-1059, mainly because of differences in the methods used to compute "net" figures.

The classification of revenue by source and of expenditure by function was revised considerably in 1946 and again in 1948. Details of these changes may be found in the 1951 Year Book, p. 1014, and in the 1952-53 Year Book, p. 1064.

The term "general" as used in this edition, differs in concept from that used in previous years, in so far as revenue and expenditure are concerned. Heretofore, "general" revenue and expenditure included only provincial ordinary or current account items with the addition of those special or administrative funds, working

capital funds, and funds of provincial institutions that are added to achieve inter-provincial uniformity. Currently, however, "general" includes not only those provincial accounts described above, but also the revenue and expenditure transactions of provincial capital accounts.

"Net general revenue" (*see* Tables **35** and **36**) is arrived at by deducting from "gross general revenue" (a) all institutional revenue, (b) revenue in the form of interest, premium, discount and exchange, (c) grants-in-aid and shared-cost contributions, and (d) all capital revenue. These revenues are then offset against the related functions of expenditure to arrive at "Net general expenditure", as shown in Tables **35** and **37**. The term "ordinary" now replaces the former "general" i.e., "ordinary" excludes capital account transactions (*see* Table **38**).

The following statement gives some indication of the increase in the revenue collected and services rendered by the provincial governments since 1946, the year this statistical series was introduced.

Item	*1946*	*1950*	*Increase*
	(Millions of Dollars)		
NET GENERAL REVENUE—			
Taxes—			
Corporation income tax	1	127	126
Motor fuel and fuel oil tax	73	155	82
General sales tax	25	75	50
Other taxes	73	119	46
Federal tax-rental agreements	84	85	1
Privileges, Licences and Permits—			
Motor-vehicles	38	67	29
Natural resources	42	99	57
Other	24	40	16
Liquor profits	100	109	9
Other revenue and non-revenue and surplus receipts	42	54	12
TOTALS, NET GENERAL REVENUE	502	930	428
NET GENERAL EXPENDITURE—			
Transportation and communications	135	244	109
Health and Social Welfare	101	233	132
Education	88	179	91
Debt charges	73	120	47
Other	112	205	93
TOTALS, NET GENERAL EXPENDITURE	509	981	472

35.—Net General Revenue and Expenditure of Provincial Governments, Fiscal Years Ended Nearest Dec. 31, 1948-50

Province or Territory	Revenue			Expenditure		
	1948	1949	1950	1948	1949	1950
	$'000	$'000	$'000	$'000	$'000	$'000
Newfoundland	...	17,424	21,028	...	26,077	27,536
Prince Edward Island	4,730	5,091	5,590	5,915	6,743	7,537
Nova Scotia	32,667	34,249	35,685	44,346	52,703	53,988
New Brunswick	28,453	29,431	32,271	42,484	40,037	43,463
Quebec	203,258	207,040	238,883	234,027	197,651	233,986
Ontario	220,024	235,421	265,705	250,738	280,550	298,779
Manitoba	35,902	38,042	41,643	35,897	38,831	40,912
Saskatchewan	56,332	61,275	66,668	55,375	60,446	68,168
Alberta	62,957	88,363	105,276	55,938	58,729	73,702
British Columbia	100,678	124,265	138,681	109,550	163,267	160,169
Yukon Territory	..	..	1,023	..	..	1,001
Totals	**745,001**	**840,601**	**952,453**	**834,270**	**925,034**	**1,009,241**

36.—Details of Net General Revenue of Provincial Governments, Fiscal Years Ended Nearest Dec. 31, 1949 and 1950

Source	1949	1950
	$'000	$'000
Taxes—		
Corporations	20,928	23,022
Income—		
Corporations	105,948	127,217
Individuals	122	115
Property	5,731	7,299
Sales—		
Alcoholic beverages	1,477	1,608
Amusements and admissions	20,533	19,007
Motor-fuel and fuel-oil	138,769	156,587
Tobacco	9,578	10,003
General	61,900	75,845
Other commodities and services	3,265	3,295
Succession duties	28,838	31,216
Other	20,739	23,294
Totals, Taxes	417,828	478,508
Federal Tax-Rental Agreements	79,931	92,782
Privileges, Licences and Permits—		
Liquor control and regulation	25,932	26,907
Motor-vehicles	58,198	67,060
Natural resources	81,670	99,325
Other	12,219	13,418
Totals, Privileges, Licences and Permits	178,019	206,710
Sales and Services	20,222	23,387
Fines and Penalties	2,230	2,439
Other Governments—		
Government of Canada—		
Share of income tax on power utilities	1,490	4,458
Subsidies	25,541	25,300
Totals, Government of Canada	27,031	29,758
Municipalities	865	851
Totals, Other Governments	27,896	30,609
Government Enterprises and Other Funds—		
Liquor profits	106,803	111,939
Other	3,816	3,486
Other revenue	1,086	700
Totals, excluding Non-Revenue and Surplus Receipts	837,831	950,560
Non-revenue and Surplus Receipts—		
Refund of previous years' expenditure	530	717
Repayment of advances credited to revenue	2,219	1,152
Other	21	24
Totals, Non-revenue and Surplus Receipts	2,770	1,893
Totals, Net General Revenue	**840,601**	**952,453**

37.—Details of Net General Expenditure of Provincial Governments, Fiscal Years Ended Nearest Dec. 31, 1949 and 1950

Function	1949	1950
	$'000	$'000
General Government—		
Executive and administrative	28,066	33,191
Legislative	4,292	3,518
Research, planning and statistics	314	333
Totals, General Government	32,672	37,042
Protection of Persons and Property—		
Law enforcement	10,494	11,276
Corrections	10,807	11,687
Police protection	12,706	13,904
Other	11,859	13,916
Totals, Protection of Persons and Property	45,866	50,783
Transportation and Communications—		
Highways, roads and bridges	249,455	246,483
Railways	301	353
Telephone, telegraph and wireless	25	30
Waterways	3,914	3,086
Other	6	6
Totals, Transportation and Communications	253,701	249,958
Health and Social Welfare—		
Health—		
General	2,768	3,049
Public health	9,495	10,286
Medical, dental and allied services	4,984	6,306
Hospital care	125,804	138,501
Totals, Health	143,051	158,142

37.—Details of Net General Expenditure of Provincial Governments, Fiscal Years Ended Nearest Dec. 31, 1949 and 1950—concluded

Function	1949	1950	Function	1949	1950
	$'000	$'000		$'000	$'000
Social Welfare—			Trade and Industrial Development	5,094	5,667
Aid to aged persons	40,059	43,302			
Aid to blind persons	1,520	1,598			
Aid to unemployed employables and unemployables	12,566	13,226	Local Government Planning and Development	1,289	1,500
Mothers' allowances	16,063	17,938	Debt Charges[3]	101,341	119,502
Child welfare	3,815	4,412			
Labour	2,017	2,253			
Other	4,013	4,140			
Totals, Social Welfare	80,053	86,869	Contributions to Other Governments—		
			Shared-revenue contributions	11,079	12,788
Totals, Health and Social Welfare	223,104	245,011	Subsidies	3,797	3,807
Recreational and cultural services	5,654	5,768	Totals, Contributions to Other Governments	14,876	16,595
Education—					
Schools operated by local authorities	115,988	131,068	Contributions to Government Enterprises and Other Funds	13,687	11,754
Universities, colleges and other schools	32,069	38,165	Other Expenditure	5,324	8,110
Education of the handicapped	1,287	1,485	Totals, excluding Non-expense and Surplus Payments	923,000	1,006,739
Superannuation and pensions	[1]	6,173			
Other	10,909	6,224			
Totals, Education	160,253	183,115			
			Non-expense and Surplus Payments—		
Natural Resources and Primary Industries—			Advances charged to revenue	205	125
Fish and game	7,405	8,161	Refunds of previous years' revenue	204	378
Forests	28,523	22,399	Other	1,625	1,999
Lands: settlement and agriculture	34,384	34,339			
Minerals and mines	4,258	4,154	Totals, Non-expense and Surplus Payments	2,034	2,502
Other	−14,431[2]	2,881			
Totals, Natural Resources and Primary Industries	60,139	71,934	**Totals, Net General Expenditure**	**925,034**	**1,009,241**

[1] Included in "Other". [2] Negative amount because of $19,641,000 capital revenue offset against expenditure. [3] Includes debt retirement amounting to $48,677,000 in 1949 and $66,937,000 in 1950.

38.—Gross Ordinary Revenue and Expenditure of Provincial Governments,[1] Fiscal Years Ended Nearest Dec. 31, 1948-50

Province or Territory	Revenue			Expenditure		
	1948	1949	1950	1948	1949	1950
	$'000	$'000	$'000	$'000	$'000	$'000
Newfoundland	...	19,944	27,744	...	24,542	28,099
Prince Edward Island	5,697	6,375	7,007	5,086	6,418	6,993
Nova Scotia	40,253	44,426	46,540	35,371	44,301	47,496
New Brunswick	34,026	36,885	40,283	32,176	36,997	40,892
Quebec	231,508	244,514	283,846	197,622	212,605	245,853
Ontario	254,901	280,914	313,336	258,059	291,425	310,155
Manitoba	44,107	48,663	65,327	39,182	43,340	61,706
Saskatchewan	66,226	72,690	79,192	60,729	67,961	74,819
Alberta	71,347	98,626	118,088	47,444	52,105	61,166
British Columbia	119,669	145,090	156,586	113,327	156,120	162,792
Yukon Territory	..	..	1,077	..	..	900
Totals	**867,734**	**998,127**	**1,139,026**	**788,996**	**935,814**	**1,040,871**

[1] Comparable with figures given in previous years, described as "gross general revenue" and "expenditure". *See* text on pp. 1094-1095.

Subsection 2.—Debt of Provincial Governments

The average coupon rate of gross bonded debt of Provincial Governments has decreased from 3·66 p.c. in 1947 to 3·47 p.c. in 1951.

Tables **39** to **42** dealing with the direct and indirect debt of the Provincial Governments reveal that while total gross bonded debt has steadily increased in the past five years, the average coupon rate has decreased slightly. Table **40** reflects the preponderance of bond issues payable in Canada only. There has been a steady decline in bonded debt payable in London (England).

39.—Gross Bonded Debt (exclusive of Treasury Bills) of Provincial Governments, as at Fiscal Year Ends Nearest Dec. 31, 1947-51

Year	Bonded Debt	Average Coupon Rate	Average Term of Issue	Bonded Debt	Average Coupon Rate	Average Term of Issue
				Newfoundland		
				$'000	p.c.	yrs.
1949				6,223	3·34	22·3
1950				6,223	3·34	22·3
1951				5,000	3·30	18·0
	Prince Edward Island			Nova Scotia		
	$'000	p.c.	yrs.	$'000	p.c.	yrs.
1947	11,023	3·29	12·7	99,345	3·58	18·9
1948	13,873	3·18	12·0	124,470	3·42	17·0
1949	15,402	3·13	12·3	141,098	3·38	16·5
1950	15,666	3·09	12·5	156,632	3·29	16·8
1951	17,500	3·22	12·3	172,291	3·33	16·8
	New Brunswick			Quebec		
	$'000	p.c.	yrs.	$'000	p.c.	yrs.
1947	123,681	3·60	18·3	390,275	3·45	17·2
1948	137,967	3·55	18·2	437,900	3·36	17·2
1949	158,654	3·51	17·3	419,450	3·43	17·4
1950	165,842[1]	3·48	17·3	420,085[1]	3·39	17·7
1951	188,868[1]	3·59	17·0	435,885[1]	3·33	18·0
	Ontario			Manitoba		
	$'000	p.c.	yrs.	$'000	p.c.	yrs.
1947	576,947	3·77	22·0	62,806	4·27	25·4
1948	583,349	3·64	21·2	74,686	4·07	23·3
1949	654,503	3·56	21·2	91,480	3·82	21·5
1950	672,667[1]	3·52	21·9	98,446	3·68	19·6
1951	794,499[1]	3·54	21·1	128,409	3·66	18·8

[1] Excludes bonds assumed by the Province.

39.—Gross Bonded Debt (exclusive of Treasury Bills) of Provincial Governments, as at Fiscal Year Ends Nearest Dec. 31, 1947-51—concluded

Year	Bonded Debt	Average Coupon Rate	Average Term of Issue	Bonded Debt	Average Coupon Rate	Average Term of Issue
	Saskatchewan			Alberta		
	$'000	p.c.	yrs.	$'000	p.c.	yrs.
1947	138,329	4·24	20·0	108,565	3·38	22·3
1948	142,460	4·20	19·4	108,289	3·37	22·3
1949	130,822	4·16	19·6	168,700	3·16	20·5
1950	134,594	4·02	19·5	88,765	2·86	15·0
1951	135,331	3·87	18·8	86,270	2·87	15·2
	British Columbia			Totals		
	$'000	p.c.	yrs.	$'000	p.c.	yrs.
1947	130,884	3·82	22·0	1,641,855	3·66	20·3
1948	143,984	3·69	21·7	1,766,978	3·61	19·8
1949	168,763	3·55	21·2	1,955,095	3·53	19·5
1950	185,820	3·36	20·0	1,944,740[1]	3·46	19·3
1951	245,266	3·38	20·1	2,209,319[1]	3·47	19·1

[1] Excludes bonds assumed by the Province.

40.—Total Gross Bonded Debt (exclusive of Treasury Bills) of Provincial Governments, by Currency of Payments, as at Fiscal Year Ends Nearest Dec. 31, 1947-51

Payable in—	1947	1948	1949	1950	1951
	$'000	$'000	$'000	$'000	$'000
Canada only	1,057,162	1,210,291	1,361,933	1,421,651	1,450,160
London (England) only	29,957	29,958	28,670	19,359	16,643
London (England) and Canada	11,405	8,721	7,582	2,974	3,499
New York only	3,000	—	—	16,875	265,025
New York and Canada	318,753	301,787	346,182	300,867	296,047
London (England), New York and Canada	221,578	216,221	210,728	183,014	177,945
Totals	**1,641,855**	**1,766,978**	**1,955,095**	**1,944,740[1]**	**2,209,319[1]**

[1] Excludes bonds assumed by the provinces.

41.—Provincial Government Net Direct and Indirect Debt (less Sinking Funds), as at Fiscal Year Ends Nearest Dec. 31, 1950

Direct and Indirect Debt	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	Total
Direct Debt	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Bonded debt	6,223	15,666	156,632	166,292	420,500	673,567	98,446	134,594	88,765	185,820	—	1,946,505
Less Sinking Funds	2,243	1,860	14,483	29,217	91,235	90,850	23,808	15,989	—	38,429	—	308,114
Totals, Net Bonded Debt	3,980	13,806	142,149	137,075	329,265	582,717	74,638	118,605	88,765	147,391	—	1,638,391
Treasury Bills—												
Held by Federal Government	—	—	—	—	—	—	17,747	37,100	11,832	22,985	—	89,664
Held by others	—	—	10,000	7,211	1,500	4,960	19,734	—	—	20,182	—	63,587
Totals, Treasury Bills	—	—	10,000	7,211	1,500	4,960	37,481	37,100	11,832	43,167	—	153,251
Savings certificates and deposits	262	835	—	—	—	—	—	—	673	—	—	1,770
Temporary loans and overdrafts	—	850	3,823	390	—	—	—	—	—	—	8	5,071
Bonds (or debentures) due	—	—	67	64	—	—	—	—	3	167	—	301
Bond (or debenture) interest due	—	—	80	—	78	—	—	—	1,261	—	—	1,419
Accounts and Other Payables—												
Trust funds and other deposits	—	43	1,706	322	7,648	20,158	2,325	2,038	7,827	7,201	4	49,272
Other	9	50	3,044	4,345	26,587	67,936	69	2,625	4,766	23,866	8	133,305
Accrued interest and other accrued expenditure	146	132	1,535	2,066	3,302	8,441	2,136	1,433	428	2,110	—	21,729
Other liabilities	—	—	—	—	—	—	—	85	477	—	—	562
Totals, Net Direct Debt (less Sinking Funds)	**4,397**	**15,716**	**162,404**	**151,473**	**368,380**	**684,212**	**116,649**	**161,886**	**116,032**	**223,902**	**20**	**2,005,071**
Indirect Debt												
Guaranteed bonds or debentures	4,141	234	1,010	4,464	254,468	491,060	630	267	26	30,852	—	787,152
Less Sinking Funds	—	—	106	311	212	1,372	—	243	—	3,169	—	5,413
Totals, Net Guaranteed Bonds or Debentures	4,141	234	904	4,153	254,256	489,688	630	24	26	27,683	—	781,739
Guaranteed Bank Loans	1,726	—	2,454	8,173	3,141	3,211	386	296	3,701	—	—	23,088
Municipal Improvement Assistance Act loans	—	4	456	289	1,356	—	87	444	394	1,182	—	4,212
Other guarantees	—	—	—	—	51,291	—	—	41	—	—	—	51,332
Totals, Net Indirect Debt (less Sinking Funds)	**5,867**	**238**	**3,814**	**12,615**	**310,044**	**492,899**	**1,103**	**805**	**4,121**	**28,865**	**—**	**860,371**
Totals, Net Direct and Indirect Debt (less Sinking Funds)	**10,264**	**15,954**	**166,218**	**164,088**	**678,424**	**1,177,111**	**117,752**	**162,691**	**120,153**	**252,767**	**20**	**2,865,442**

42.—Provincial Government Net Direct and Indirect Debt (less Sinking Funds), as at Mar. 31, 1952

Direct and Indirect Debt	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Direct Debt												
Bonded debt	5,000	17,500	172,291	189,318	436,300	795,399	128,409	135,331	86,270	245,266	—	2,211,084
Less Sinking Funds	1,207	2,153	15,488	30,332	105,882	125,126	23,090	13,451	—	48,200	—	364,929
Totals, Net Bonded Debt	3,793	15,347	156,803	158,986	330,418	670,273	105,319	121,880	86,270	197,066	—	1,846,155
Treasury Bills—												
Held by Federal Government	—	—	—	—	—	—	17,230	34,753	11,472	22,288	—	85,743
Held by others	1,250	—	10,915	—	—	38,000	12,699	1,415	—	3,100	—	67,379
Totals, Treasury Bills	1,250	—	10,915	—	—	38,000	29,929	36,168	11,472	25,388	—	153,122
Savings certificates and deposits	179	947	—	—	—	—	—	11	411	—	—	1,548
Temporary loans and overdrafts	—	996	—	—	—	—	—	—	—	—	—	996
Bonds (or debentures) due	9	—	85	282	—	—	—	—	1	—	—	377
Bond (or debenture) interest due	—	—	81	398	79	—	—	—	458	41	—	1,057
Accounts and Other Payables—												
Trust funds and other deposits	—	69	3,959	—	8,693	24,411	2,182	2,394	25	12,412	1	54,146
Other	12	48	1,883	4,036	18,775	62,926	26	2,196	5,981	19,387	101	115,371
Accrued interest and other accrued expenditure	109	155	1,776	2,538	3,673	9,706	2,709	1,335	306	2,458	6	24,771
Totals, Net Direct Debt (less Sinking Funds)	**5,352**	**17,562**	**175,502**	**166,240**	**361,638**	**805,316**	**140,165**	**163,984**	**104,924**	**256,752**	**108**	**2,197,543**
Indirect Debt												
Guaranteed bonds or debentures	3,135	293	885	6,569	294,557	568,463	363	256	4	26,033	—	900,558
Less Sinking Funds	—	—	113	238	—	700	—	238	—	3,596	—	4,885
Totals, Net Guaranteed Bonds or Debentures	3,135	293	772	6,331	294,557	567,763	363	18	4	22,437	—	895,673
Guaranteed Bank Loans	3,381	—	3,706	3,436	3,148	3,532	—	334	5,536	—	—	23,073
Municipal Improvement Assistance Act loans	—	4	436	262	1,309	—	77	406	365	1,086	—	3,945
Other guarantees	24,876	—	—	—	—	—	—	42	—	—	—	24,918
Totals, Net Indirect Debt (less Sinking Funds)	**31,392**	**297**	**4,914**	**10,029**	**299,014**	**571,295**	**440**	**800**	**5,905**	**23,523**	**—**	**947,609**
Totals, Net Direct and Indirect Debt (less Sinking Funds)	**36,744**	**17,859**	**180,416**	**176,269**	**660,652**	**1,376,611**	**140,605**	**164,784**	**110,829**	**280,275**	**108**	**3,145,152**

Section 4.—Municipal Finance

Subsection 1.—Municipal Assessed Valuations

The revenue resources of municipalities are limited, generally, to direct taxation based on assessed valuations of real and other types of property. In the Provinces of Prince Edward Island, Nova Scotia, New Brunswick, Manitoba and Alberta, municipalities assess and tax personal property. In Alberta municipal districts, the valuations of personal property assessed have risen sharply with the growth of the oil industry. In Manitoba, the personal property tax is used generally by all classes of municipalities except cities. Aside from property, the most important type of valuation for taxation purposes is business assessment, although not all provinces assess for business purposes separately and distinctly from real property valuations. A variation of methods, schedules and rates exists not only between provinces but also between municipalities within the same province. Some municipalities use the rental basis, others the value of floor space occupied and still others the capital value of the premises occupied. Four of the provinces have other miscellaneous types of assessment, the general nature of which are given in the footnotes to Table 43.

It should be noted that the figures in Table 43 are not entirely comparable, on an interprovincial basis, from the standpoint of relative values of properties taxable for municipal purposes. Each province operates under its own assessment laws, which are not all similar either in application or in effect. For instance, in British Columbia cities and municipal districts, improvements cannot be taxed on a value in excess of 75 p.c. of taxable values or, in most of the villages, in excess of 50 p.c. of taxable values; the values actually taxed in 1951 ranged from nil to 75 p.c. In the majority of cases, improvements were assessed for tax purposes at 50 p.c. of taxable values, but for all municipalities the total improvements actually taxed represented 50·2 p.c. of total taxable values. In addition, there are other intra-provincial inconsistencies between municipalities which, in turn, further affect interprovincial comparisons. These may be said to be caused by the lack of integrated municipal assessment systems and uniform standards for establishing values on a province-wide basis, under the direction and control of a central authority. Some provinces, however, have made considerable progress along these lines in recent years.

43.—Municipal Assessed Valuations, by Province, 1947-51

Province and Year	Taxable Valuations on which Taxes were Levied					Total Exemptions[2]
	Real Property	Personal Property	Business	Other[1]	Total	
	$	$	$	$	$	$
N'f'ld.—[3]	..	..	..	..	..	..
P.E.I.—[4]						
1947	11,425,735	4,656,100	..	..	16,081,835	6,176,500
1948	12,272,825	5,353,199	..	..	17,626,024	7,456,500
1949	13,714,935	5,777,847	..	..	19,492,782	7,456,500
1950	16,872,045	6,085,510	..	..	22,957,555	7,788,500
1951	23,539,274	9,650,989	..	..	33,190,263	9,585,500
N.S.—						
1947	163,793,261	30,708,957	10,473,500	3,831,875	208,807,593	95,469,188
1948	172,646,093	32,901,111	10,866,035	3,934,300	220,347,539	98,190,291
1949	179,425,853	35,658,983	11,826,635	4,039,860	230,951,331	96,594,851
1950	186,588,461	36,277,551	12,527,060	4,212,700	239,605,772	100,567,331
1951	223,083,830	49,077,698	13,704,315	4,582,280	290,448,123	121,862,179

For footnotes, *see* end of table.

43.—Municipal Assessed Valuations, by Province, 1947-51—concluded

Province and Year	Taxable Valuations on which Taxes were Levied					Total Exemptions[2]
	Real Property	Personal Property	Business	Other[1]	Total	
	$	$	$	$	$	$
N.B.—						
1947	202,428,452	33,671,051	21,704,153[5]	...	257,803,656	..
1948	216,747,760	39,148,968	24,838,762[5]	...	280,735,490	..
1949	232,968,026	49,867,238	20,242,638	4,548,246	307,626,148	..
1950	248,004,509	52,053,312	20,005,507	5,049,356	325,112,684	..
1951	277,823,120[6]	57,940,014	20,084,431	5,549,813	361,397,378	..
Que.—						
1947	..	...		—	..	..
1948	..	...		—	2,870,933,000	844,926,000
1949	..	...		—	..	..
1950	..	...		—	3,250,913,000	956,491,000
1951	3,667,164,730	...		—	3,667,164,730	1,020,186,968
Ont.—						
1947	3,030,283,255	...	316,084,049	—	3,346,367,304	639,762,954
1948	3,097,590,198	...	337,253,277	—	3,434,843,475	672,486,650
1949	3,541,093,264	...	439,425,168	—	3,980,518,432	690,345,875
1950	3,724,238,000	...	475,081,000	—	4,199,319,000	813,812,000
1951	3,883,874,441	...	526,167,093	—	4,410,041,534	873,847,077
Man.—						
1947	459,840,343	6,416,250	14,902,614	—	481,159,207	156,403,203
1948	497,463,070	6,444,105	18,689,579	—	522,596,754	145,537,582
1949	545,455,305	6,765,685	20,686,352	—	572,907,342	150,227,268
1950	567,470,959	6,866,910	23,655,349	—	597,993,218	150,610,692
1951	588,596,298	6,841,122	25,064,239	—	620,501,659	156,258,385
Sask.—[7]						
1947	833,639,358	...	42,721,139	374,900	876,735,397	124,433,714
1948	856,567,899	...	45,138,084	224,200	901,930,183	126,093,885
1949	851,346,814	...	45,358,694	74,830	896,780,338	125,049,181
1950	866,976,708	...	45,874,623	72,780	912,924,111	129,356,385
1951	881,911,929	...	46,341,360	61,320	928,314,609	477,649,877
Alta.—[7]						
1947	617,662,412	26,483,991	14,547,559	—	658,693,962	66,463,605
1948	643,444,139	32,058,972	16,859,447	—	692,362,558	71,396,730
1949	689,096,752	41,259,257	19,690,072	—	750,046,081	76,510,667
1950	736,603,247	39,823,230	24,392,850	—	800,819,327	88,450,368
1951	803,411,739	47,376,105	29,033,624	—	879,821,468	91,290,874
B.C.—						
1947	487,636,072	...	..	—	487,636,072	190,427,963
1948	528,714,750	...	..	—	528,714,750	199,388,993
1949	573,460,256	...		—	573,460,256	206,974,496
1950	622,441,721	...		—	622,441,721	226,258,620
1951	658,828,264	...	..	—	658,828,264	249,473,826

[1] Includes the following: N.S.—household tax, Halifax; N.B.—occupancy tax, Fredericton, and rentals tax, Moncton; Sask.—special franchise. [2] Valuations of real property wholly exempt from taxation by statute except Nova Scotia which includes $2,807,946 personal property exemptions. [3] Taxes are levied on rental values in most municipalities using a property base. [4] Includes estimated values for some municipalities; total exemptions are incomplete. [5] Includes some other types of valuations not specified. [6] Includes personal property tax for local improvement districts and commissions, not separable. [7] Includes improvement districts.

While complete figures for tax-exempt properties are not available for each province, the information given shows that these properties have assumed relatively high proportions. Most provinces have shown consistent increases in taxable assessed valuations that may be attributed largely to the stimulus to business and industry arising from the War and the buoyancy of the economy in succeeding years.

Subsection 2.—Municipal Taxation

Table 44 shows, by province, the taxes levied by municipalities in the years 1947-51 and the total taxes outstanding at the end of those years. Although these figures are as nearly comparable as existing published reports permit, nevertheless they still reflect some inconsistencies owing particularly to intra-provincial variations in the division of responsibility for tax administration between municipalities and school authorities. In some instances, school taxes are not included in the municipal levies.

44.—Municipal Taxation, by Province, 1947-51

Province and Year	Tax Levy	Tax Collections, Current and Arrears		Taxes Receivable, Current and Arrears	Property Acquired for Taxes	Total Taxes Receivable and Property Acquired for Taxes	
		Total	P.C. of Levy			Total	P.C. of Levy
	$	$		$	$	$	
Newfoundland—							
1949	931,215	845,334	90·8	265,703	...	265,703	28·5
1950	1,030,979	969,971	94·1	353,138	...	353,138	34·3
1951	1,453,917	1,347,540	92·7	404,946	...	404,946	27·9
P. E. Island—							
1947	730,367	741,228	101·5	232,808	..	232,808	31·9
1948	833,366	833,575	100·0	222,960	..	222,960	26·8
1949	777,767	761,625	97·9	225,577	..	225,577	29·0
1950	864,602	822,688	95·2	244,482	..	244,482	28·3
1951	1,073,484	997,612	92·9	288,833	..	288,833	26·9
Nova Scotia—							
1947	12,054,778	11,501,026	95·4	3,713,902	198,637	3,912,539	32·5
1948	12,707,972	12,342,248	97·1	3,806,377	195,841	4,002,218	31·5
1949	13,610,727	13,199,199	96·9	4,038,184	179,418	4,217,602	31·0
1950	14,320,422	13,946,136	97·4	4,203,943	1,007,109	5,211,052	36·4
1951	16,531,193	15,899,368	96·2	4,702,645	175,781	4,878,426	29·5
New Brunswick—							
1947	8,015,433	7,673,308	95·7	2,704,833	93,674	2,798,507	34·9
1948	9,141,136	8,426,173	92·2	2,792,139	88,474	2,880,613	31·5
1949	11,116,471	10,201,899	91·8	3,544,853	80,629	3,625,482	32·6
1950	12,294,380	11,178,375	91·0	4,356,118	183,070	4,539,188	36·9
1951	12,579,650	12,116,729	96·3	4,207,475	89,148	4,296,623	34·2
Quebec—							
1950[1]	80,204,341	..	..	18,549,933	4,205,544	22,755,477	28·4
1951	143,689,638	..	..	23,091,184	3,554,166	26,645,350	18·5
Ontario—							
1947	135,402,232	133,406,269	98·5	10,891,288	7,138,715	18,030,003	13·3
1948	150,141,445	149,383,137	99·5	12,765,099	6,163,786	18,928,885	12·7
1949	170,378,640	167,154,308	98·1	16,223,329	5,385,640	21,608,969	12·7
1950	188,959,809	187,672,943	99·3	17,707,760	4,801,022	22,508,782	11·9
1951	228,919,382	221,230,840	96·6	21,948,812	4,678,915	26,627,727	11·6
Manitoba—							
1947	22,913,313	22,495,093	98·2	3,570,625	4,758,020	8,328,645	36·3
1948	27,154,286	26,210,912	96·5	4,447,077	4,549,261	8,996,338	33·1
1949	30,423,998	29,223,263	96·1	5,528,560	4,266,927	9,795,487	32·2
1950	32,658,247	30,416,670	93·1	6,977,569	3,769,230	10,746,799	33·0
1951	36,415,815	34,735,950	95·4	7,995,116	3,584,765	11,579,881	31·8
Saskatchewan—							
1947	26,474,721	25,894,925	97·8	11,365,059	10,863,771	22,228,830	84·0
1948	30,768,101	29,961,977	97·4	10,714,649	10,298,050	21,012,699	68·3
1949	34,202,279	32,030,434	93·7	11,411,352	9,724,520	21,135,872	61·8
1950	36,215,067	33,241,810	91·8	13,002,572	9,111,191	22,113,763	61·1
1951	39,591,746	37,655,710	95·1	12,937,436	8,497,767	21,435,203	54·1

For footnotes, *see* end of table.

44.—Municipal Taxation, by Province, 1947-51—concluded

Province and Year	Tax Levy	Tax Collections, Current and Arrears		Taxes Receivable, Current and Arrears	Property Acquired for Taxes	Total Taxes Receivable and Property Acquired for Taxes	
		Total	P.C. of Levy			Total	P.C. of Levy
	$	$		$	$	$	
Alberta—[2]							
1947	28,539,423	28,961,806	101·5	9,329,701	11,439,178	20,768,879	72·8
1948	33,223,845	33,625,854	101·2	8,369,719	12,150,325	20,520,044	61·8
1949	38,343,373	37,572,671	98·0	9,672,256	11,028,278	20,700,534	54·0
1950	42,251,428	39,648,740	93·8	11,445,409	10,772,481	22,217,890	52·6
1951	46,065,178	44,066,024	95·7	13,022,860	10,356,788	23,379,648	50·8
British Columbia—							
1947	28,885,429	30,019,731	103·9	1,976,956	7,423,629	9,400,585	32·5
1948	31,569,359	32,129,247	101·8	2,547,197	6,627,977	9,175,174	29·1
1949	35,935,608	35,292,415	98·2	3,024,234	6,160,178	9,184,412	25·6
1950	38,958,707	38,941,143	100·0	3,135,089	6,003,092	9,138,181	23·5
1951	43,190,910	42,746,414	99·0	3,616,090	5,679,215	9,295,305	21·5

[1] Does not include schools; information not available. [2] Excludes certain provincial and other special taxes (*see* text following this table), but includes taxes in improvement districts.

Because of the considerable differences in the division of responsibility for services between the provincial governments and their respective municipalities, extreme caution should be exercised in using the figures in Table 44 as a basis for interprovincial comparisons of the relative burden of municipal taxation. Also, in Saskatchewan and Alberta municipalities are required to levy certain taxes for and on behalf of the provincial government and for other special purposes for which there is no comparable situation in other provinces. The amounts of such taxes excluded in the municipal levies in Table 44 in these two provinces are as follows:—

Province and Tax	*1947*	*1948*	*1949*	*1950*	*1951*
	$	$	$	$	$
SASKATCHEWAN—					
Public revenue	1,689,695	1,719,041	1,751,388	1,809,703	1,830,314
Hail	1,717,629	1,433,916	1,092,058	1,217,658	1,111,465
Telephone	576,005	633,287	678,358	718,987	760,610
Drainage	16,060	16,060	14,762	13,101	13,157
TOTALS, SASKATCHEWAN	3,999,389	3,802,304	3,536,566	3,759,449	3,715,546
ALBERTA—					
Educational and wild land taxes	40,542	33,236	29,299	28,655	...

There has been a slow steady rise in the trend of municipal tax levies in recent years. While most provinces show increases, this does not necessarily mean an increased burden on the individual taxpayer in all instances, but is the result, in part at least, of increased assessed valuations. In the Provinces of Nova Scotia and New Brunswick the increases have, to a considerable extent, resulted from the establishment of larger school units, so that certain municipalities are now levying taxes formerly levied by rural school boards. During the years 1947-51, tax collections continued high in relation to total levies, resulting in substantial reductions in the amount of taxes outstanding, although these are still relatively high in most provinces. The situation varies considerably for different classes of municipalities.

Subsection 3.—Municipal Debt

The rapid growth experienced by municipalities in Canada, coupled with increased demands and responsibilities for improvements, schools, utilities and other services or facilities, has resulted in the incurring of a heavy burden of debt. Debenture borrowings increased rapidly in the period 1900-12 and again during the 1920's and early 1930's. From 1933 to 1946 the trend was downward but since 1947 it has shown a considerable increase.

Several important factors contributed to the 1933-46 decline, not the least important of which was the measure of control exercised by the provincial governments over capital expenditure involving the incurring of debt. In addition, there was a more or less orderly retrenchment during the depression years following periods of what proved to be unwarranted expansion which, along with widespread demands to ease the tax burden on real property, resulted in the severe curtailment of capital undertakings and works requiring debenture financing. Also, the greater part of the municipal long-term debt was represented by serial or instalment-type debentures, which require yearly repayments of principal. During the 1930's, the rehabilitation of existing assets and new works and improvements necessitated by normal expansion and development were sacrificed mainly in the interests of the taxpayers. After the outbreak of war in 1939 the policy of deferment was continued, or even extended, to free the financial market to the needs of the Federal Government in meeting war-financing requirements. Since the end of the War, however, municipalities have resumed their improvement programs and thus increased their debenture debts. Table 45 shows figures of municipal indebtedness for 1950 and 1951 and includes temporary loans and other liabilities in addition to debenture debt.

45.—Debt of Municipal and School Corporations, by Province, for their Fiscal Years Ended in 1951, and Totals for 1950 and 1951

NOTE.—Figures shown are compiled from published reports of provincial Departments of Municipal Affairs, auditors reports and financial statements of municipalities, and information secured from other official sources.

Direct and Indirect Debt	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick
	$	$	$	$
Direct Debt—				
Debenture debt	3,645,988	3,740,406	49,190,968[1]	47,354,185
Less Sinking Funds[2]	191,168	1,171,299	13,010,319	7,790,745
Net Debenture Debt	3,454,820	2,569,107	36,180,649	39,563,440
Temporary loans and bank overdrafts	139,399	851,147	7,352,890	2,352,697
Accounts payable and other liabilities	407,354	40,700	2,903,500	3,001,166[4]
Totals, Direct Liabilities (less Sinking Funds)	**4,001,573**	**3,460,954[3]**	**46,437,039**	**44,917,303**
Indirect Debt—				
Guaranteed bonds, debentures, etc.	..	..	931,000	2,278,000
Less Sinking Funds	..	..	174,810	—
Totals, Indirect Liabilities (less Sinking Funds)	..	..	**756,190**	**2,278,000**
Grand Totals	**4,001,573**	**3,460,954[3]**	**47,193,229**	**47,195,303**

For footnotes, *see* end of table.

45.—Debt of Municipal and School Corporations, by Province, for their Fiscal Years Ended in 1951, and Totals for 1950 and 1951—concluded

Direct and Indirect Debt	Quebec	Ontario	Manitoba	Saskatchewan
	$	$	$	$
Direct Debt—				
Debenture debt	444,255,782	458,505,450	72,449,479[1]	35,639,316
Less Sinking Funds[2]	19,209,662	8,355,340	14,739,378	6,158,282
Net Debenture Debt	425,046,120	450,150,110	57,710,101	29,481,034
Temporary loans and bank overdrafts	19,620,679	37,566,285[3]	12,067,804	4,008,638
Accounts payable and other liabilities	104,595,660	50,401,166[3]	7,810,345	13,593,593
Totals, Direct Liabilities (less Sinking Funds)	**549,262,459**	**538,117,561**	**77,588,250**	**47,081,265**
Indirect Debt—				
Guaranteed bonds, debentures, etc.	7,312,000	12,446,191	867,500	..
Less Sinking Funds	—	526,819	—	..
Totals, Indirect Liabilities (less Sinking Funds)	**7,312,000**	**11,919,372**	**867,500**	..
Grand Totals	**556,574,459**	**550,036,933**	**78,455,750**	**47,081,265**

Direct and Indirect Debt	Alberta	British Columbia	Totals 1950	Totals 1951
	$	$	$	$
Direct Debt—				
Debenture debt	102,915,931	174,567,305[1]	1,187,687,072	1,392,264,810
Less Sinking Funds[2]	789,446	32,678,289	133,586,775	104,093,928
Net Debenture Debt	102,126,485	141,889,016	1,054,100,297	1,288,170,882
Temporary loans and bank overdrafts	2,841,193	2,892,977	83,921,809	89,691,709
Accounts payable and other liabilities	14,496,177[4]	8,358,793	139,819,232	205,608,454
Totals, Direct Liabilities (less Sinking Funds)	**119,463,855**	**153,140,786**	**1,277,841,338**	**1,583,471,045**
Indirect Debt—				
Guaranteed bonds, debentures, etc.	..	53,000	58,071,312	23,887,691
Less Sinking Funds	..	47,848	12,529,382	749,477
Totals, Indirect Liabilities (less Sinking Funds)	..	**5,152**	**45,541,930**	**23,138,214**
Grand Totals	**119,463,855**	**153,145,938**	**1,323,383,268**[6]	**1,606,609,259**

[1] Includes debt previously shown as indirect: Nova Scotia—Caledonia Power and Water Board; Manitoba—Greater Winnipeg Water District; British Columbia—Greater Vancouver and Greater Victoria Water Districts and Vancouver and Districts Joint Sewerage and Drainage Board. [2] In 1951 the sinking fund reserve for retirement of debenture debt; previous years the total assets of sinking fund. [3] Excludes rural schools. [4] Includes treasury bills. [5] Excludes current liabilities of schools and liabilities of other local boards and commissions but includes in lieu thereof amounts due by municipalities to such schools and other local authorities; information required to make the necessary eliminations on this account is not available from published reports. [6] Includes some estimated figures for Quebec Province.

CHAPTER XXIV.—NATIONAL ACCOUNTS AND RELATED STATISTICS

CONSPECTUS

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Section 1. National Accounts	1108	Section 3. Corporation Profits and Income to Shareholders	1121
Section 2. Canada's International Investment Position	1115	Section 4. Federal Incorporation of Companies	1123

NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—National Accounts*

The national accounts, in summarizing the nation's economic transactions, make possible the study of interrelationships in the economic system as a whole. They are particularly important to governments concerned with problems of full employment, taxation and prices, and to businessmen concerned with programs of investment and marketing.

The main body of the national accounts provides a summary of production and consumption in terms of prices established in the market. Thus, it is necessary to keep in mind that the value of the nation's production may change because of price changes as well as variations in the volume of output. When the resources of the economy are fully employed the volume of goods and services produced can increase but slowly from one year to the next in response to population growth and additions to the country's real wealth, or as a result of more efficient utilization of existing resources. Consequently, a rapid rise in the value of output under conditions of full employment is explained mainly by price increases. However, when there are unemployed resources in the country, a substantial increase in the value of production of goods and services may occur from one year to the next if these resources are brought into use, even though prices remain stable.

Data are now available showing volume changes as well as price changes in gross national expenditure. Gross national expenditure is shown in constant dollars (i.e., in terms of average prices prevailing in the period 1935-39) in Table 3. Since the gross national expenditure equals the gross national product, these data also reflect volume changes in the production of goods and services as measured by the gross national product. For all other tables the data are expressed in current dollars, and year-to-year changes in these tables must be considered in relation to price changes over the period.

The tables presented here cover the more important aspects of the national income analysis. Tables 1 and 2 show the main aggregates of national income, gross national product, gross national expenditure, and their components; Table 3 shows gross national expenditure in constant dollars and other tables are included to show the source and disposition of personal income, government revenue and expenditure, and personal expenditure on consumer goods and services.†

* Prepared in the Research and Development Division, Dominion Bureau of Statistics.

† More detailed information is given in DBS bulletins, *National Accounts, Income and Expenditure, 1926-1950* and *National Accounts, Income and Expenditure, 1949-1953.*

National Income.—Net national income at factor cost or, more briefly, national income, is the income currently earned by persons in productive pursuits, whether their services are rendered to business, to governments or directly to the consuming public. It includes the earnings of residents of Canada from the current year's production of goods and services, that is, the sum of salaries and wages, supplementary labour income (employer contributions to unemployment insurance, pension funds, Workmen's Compensation funds and income in kind, etc.), profits, interest, net rent and net income of agriculture and other unincorporated business.

Gross National Product.—Gross national product is the market value of all final goods and services produced in the year. It is equal to national income plus net indirect taxes (indirect taxes less subsidies), plus depreciation allowances and similar business costs.

Gross National Expenditure.—Gross national expenditure measures the same aggregate as gross national product, namely, the total production of final goods and services at market prices. However, gross national product is measured in terms of costs, whereas gross national expenditure is obtained by adding together all sales and adjusting them for imports and changes in inventories. Four broad types of sales can be distinguished: sales to persons, to governments, to business on capital account (gross domestic investment including changes in inventories), and to non-residents (exports). The total of these sales includes imports of goods and services but, as the purpose is to measure only domestic production, imports of goods and services, including net payments of interest and dividends to non-residents, are deducted.

Personal Income.—Personal income is the sum of current receipts of income whether or not these receipts represent earnings from production. Thus, it includes (in addition to salaries and wages, net income of unincorporated business, interest and dividends and net rental income of persons) transfer payments from governments, such as family allowances, unemployment insurance benefits and war service gratuities. It does not include undistributed profits of corporations and other elements of the national income not paid out to persons.

Historical Perspective.—Between 1926 and 1951—slightly less than a generation—gross national product increased fourfold in value. A substantial part of this apparent growth was the result of rising prices; however, it will be seen from Table 3 that the growth in physical production was 140 p.c. The population of Canada in this period increased by 48 p.c. so that the per capita growth in physical product was over 60 p.c., an indication of the growth in living standards and prosperity that occurred during this period. This increase is the more remarkable in the light of the disastrous set-back suffered during the depression years and the more recent decline in the average hours worked weekly in industry. In 1933, at the depth of the depression, per capita real production registered a decline of one-third as compared with the relatively prosperous year of 1929.

The historical series reveal many other interesting features of the economy including, among others: the relative stability of the portion of total income going to labour in the form of wages and salaries as opposed to the instability of farm and investment incomes (Table 4); the increasing significance of government spending in the economy as opposed to the declining importance of exports (Table 2); the

relative changes in the proportion of government revenue represented by direct and indirect taxes (Table 6); and changing consumer preferences as revealed by the composition of personal expenditure (Table 8).

Current Perspective.—*Gross National Product and National Income.*—Gross national product in 1952 was estimated at $23,011,000,000, a 7-p.c. increase over the 1951 total of $21,450,000,000. Some of this increase resulted from a general increase in the prices at which the total output of goods and services was valued. After having made allowance for these price changes, however, there remained an increase in total real output of 6 p.c. Further comment is made below on the manner in which this increase in real output was absorbed by major groups such as consumers, governments and businesses (for investment purposes). The increase in total output was accompanied by a gain of 1 p.c. in the employed labour force. There was a continuation of the shift from agricultural to non-agricultural pursuits, so that the increase in the employed non-agricultural labour force exceeded the over-all increase.

National income in 1952 was estimated at $18,135,000,000, an increase of 6 p.c. over the preceding year. Wages, salaries and supplementary labour income, the largest component of national income, amounted to $10,743,000,000, a gain of 11 p.c. over 1951, while investment income, which consists of corporation profits, interest and net rental income received by persons, government investment income and a number of other items, showed little change from 1951. In the unincorporated business sector, there was a sharp decline of 8 p.c. in accrued net income of farm operators from farm production, the result of lower gross income and higher operating expenses. On the other hand, net income of non-farm unincorporated business, which includes unincorporated retailers, unincorporated manufacturing establishments, professionals and unincorporated service establishments, increased slightly.

1.—National Income and Gross National Product, Selected Years, 1929-52

(Millions of dollars)

Item	1929	1933	1939	1944	1946	1950[1]	1951	1952
Wages, salaries and supplementary labour income	2,929	1,778	2,575	4,940	5,323	8,311	9,676	10,743
Military pay and allowances	8	8	32	1,068	340	137	201	270
Investment income	836	299	917	1,829	1,975	3,155	3,642	3,666
Net Income of Unincorporated Business—								
Accrued net income of farm operators from farm production	408	74	385	1,185	1,112	1,503	2,106	1,934
Net income of non-farm unincorporated business	608	293	464	804	1,071	1,444	1,503	1,522
Net National Income at Factor Cost	**4,789**	**2,452**	**4,373**	**9,826**	**9,821**	**14,550**	**17,128**	**18,135**
Indirect taxes less subsidies	681	537	733	1,111	1,269	2,018	2,468	2,687
Depreciation allowances and similar business costs	709	547	610	957	903	1,636	1,889	2,070
Residual error of estimate	−13	16	−9	60	33	−1	−35	119
Gross National Product at Market Prices	**6,166**	**3,552**	**5,707**	**11,954**	**12,026**	**18,203**	**21,450**	**23,011**

[1] Newfoundland included for 1950 and subsequent years.

Gross National Expenditure. — Gross national expenditure indicates the manner in which the nation's output is absorbed. In 1952, there was a substantial increase in the real amount taken by consumers in contrast to 1951, when the over-all value increase of 10 p.c. was almost exactly matched by the price rise. Expenditure on durable goods also increased significantly in physical terms and in value terms 1952 expenditure was 11 p.c. higher than that of the previous year. Expenditure on goods and services by federal, provincial and municipal governments rose by over $1,000,000,000 or approximately 31 p.c., from $3,212,000,000 in 1951 to $4,216,000,000 in 1952. Most of the increase was accounted for by the rise in federal defence spending from $1,143,000,000 in 1951 to $1,832,000,000 in 1952, a gain of 60 p.c. The major components of gross domestic investment showed increases in 1952. Investment in new housing increased slightly although the volume remained about the same as in 1951, a result of increases in building costs. Investment in new non-residential construction increased by about 17 p.c. in value, with a corresponding increase in volume of 10 p.c. Investment in new machinery and equipment showed a small increase, amounting to 5 p.c. in physical volume, chiefly the result of increased spending by basic industries and utilities. Additions to inventories, in both volume and value terms, were considerably lower than in 1951.

In 1952 there was a net surplus on current international account, following two years of deficits. The over-all surplus, represented by the difference between 'exports of goods and services' and 'imports of goods and services' in Table 2, was about $164,000,000. Reflecting this surplus, the Canadian dollar strengthened its position on the international market and exchange reserves continued to grow.

2.—Gross National Expenditure, Selected Years, 1929-52

(Millions of dollars)

Item	1929	1933	1939	1944	1946	1950[1,r]	1951[r]	1952
Personal expenditure on consumer goods and services	4,393	2,887	3,904	6,187	7,977	12,029	13,297	14,334
Government expenditure on goods and services	682	526	735	5,022	1,832	2,326	3,212	4,216
Gross Domestic Investment—								
New residential construction	247	76	185	225	371	801	781	803
New non-residential construction	486	79	166	257	443	1,026	1,260	1,476
New machinery and equipment	597	84	254	377	584	1,389	1,769	1,859
Change in inventories	61	−82	331	−46	519	960	1,620	278
Exports of goods and services	1,632	826	1,451	3,561	3,210	4,183	5,089	5,581
Deduct: Imports of goods and services	−1,945	−828	−1,328	−3,569	−2,878	−4,513	−5,613	−5,417
Residual error of estimate	+13	−16	+9	−60	−32	+2	+35	−119
Gross National Expenditure at Market Prices	**6,166**	**3,552**	**5,707**	**11,954**	**12,026**	**18,203**	**21,450**	**23,011**

[1] Newfoundland included for 1950 and subsequent years.

3.—Gross National Expenditure in Constant (1935-39) Dollars, Selected Years, 1929-52

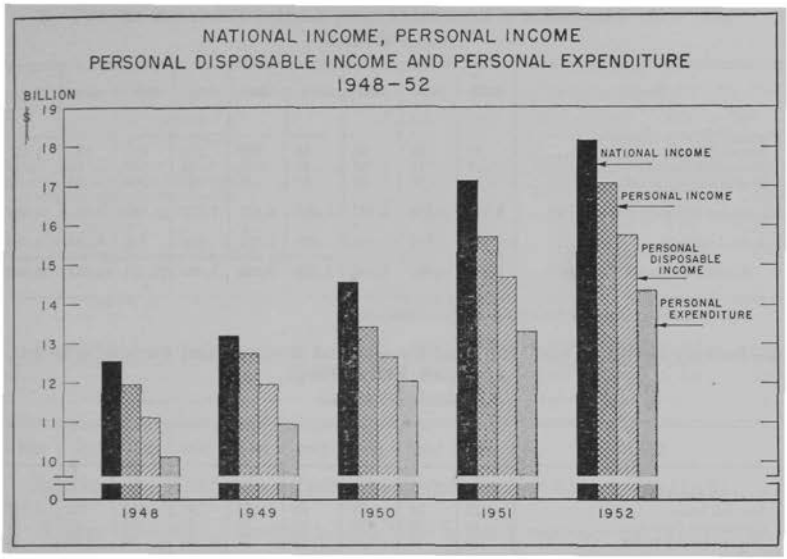
(Millions of dollars)

Item	1929	1933	1939	1944	1946	1950[1,r]	1951[r]	1952
Personal expenditure on consumer goods and services	3,685	3,055	3,820	5,030	6,189	7,022	6,991	7,381
Government expenditure on goods and services	629	529	742	4,001	1,484	1,375	1,692	2,169
Gross Domestic Investment—								
New residential construction	214	84	180	150	225	340	291	290
New non-residential construction	439	86	164	204	330	554	606	665
New machinery and equipment	575	89	247	298	467	784	893	934
Change in inventories	48	−125	338	−77	226	389	657	257
Exports of goods and services	1,314	982	1,494	2,614	2,079	2,027	2,220	2,453
Deduct: Imports of goods and services	−1,578	−911	−1,330	−2,450	−1,930	−2,095	−2,340	−2,442
Residual error of estimate and adjusting entries	+11	−17	+9	−49	−25	−66	−111	−153
Gross National Expenditure in Constant Dollars	**5,337**	**3,772**	**5,664**	**9,721**	**9,045**	**10,330**	**10,899**	**11,554**

[1] Newfoundland included for 1950 and subsequent years.

Personal Income, Personal Saving and Spending.—Personal income in 1952 amounted to $17,073,000,000, an increase of nearly 9 p.c. as compared with 1951. The increase was the net result of divergent movements in components, varying from a decline of 12 p.c. in net farm income to an increase of 34 p.c. in military pay and allowances. Direct personal tax collections rose sharply from $1,028,000,000 in 1951 to $1,320,000,000 in 1952, a gain of $292,000,000 or 28 p.c. This increase was almost wholly accounted for at the federal level by an increase in personal tax collections. Personal expenditure amounted to $14,334,000,000, 8 p.c. above 1951. The composition of personal expenditure is shown in Table 8, p. 1115.

Subtracting personal taxes and personal expenditure from personal income, personal saving of $1,419,000,000 is obtained for 1952. This represents the amount saved during the year, not the total accumulated savings of persons, which would be very much greater. Savings include not only additions to liquid savings in the form of cash and government bonds but also net repayment of debt, increase in home-owner's equity and the reinvested earnings of farms and small businesses.



4.—Sources of Personal Income, Selected Years, 1929-52

(Millions of dollars)

Item	1929	1933	1939	1944	1946	1950[1,r]	1951[r]	1952
Wages, salaries and supplementary labour income	2,929	1,778	2,575	4,940	5,323	8,311	9,676	10,743
Deduct: Employer and employee contributions to social insurance and government pension funds	−27	−21	−35	−133	−149	−256	−313	−336
Military pay and allowances	8	8	32	1,068	340	137	201	270
Net income received by farm operators from farm production	407	103	435	1,206	1,090	1,402	2,142	1,909
Net income of non-farm unincorporated business	608	293	464	804	1,071	1,444	1,503	1,522
Interest, dividends and net rental income of persons	616	471	602	836	957	1,295	1,420	1,540
Transfer payments (excluding interest)—								
From governments	93	181	229	259	1,106	1,033	1,030	1,370
Charitable contributions from corporations	5	2	6	11	12	25	27	30
Net bad debt losses of corporations	18	28	12	11	11	23	25	25
Totals, Personal Income	**4,657**	**2,843**	**4,320**	**9,002**	**9,761**	**13,414**	**15,711**	**17,073**

[1] Newfoundland included for 1950 and subsequent years.

5.—Disposition of Personal Income, Selected Years, 1926-52

(Millions of dollars)

Item	1926	1929	1933	1939	1944	1946	1950[1,r]	1951[r]	1952
Personal Direct Taxes—									
Income taxes	22	34	38	62	772	711	612	891	1,177
Succession duties	16	16	13	28	39	54	66	69	71
Miscellaneous taxes	15	18	18	22	27	31	62	68	72
Purchases of goods and services	3,687	4,393	2,887	3,904	6,187	7,977	12,029	13,297	14,334
Personal savings	352	196	−113	304	1,977	988	645	1,386	1,419
Totals, Personal Income	**4,092**	**4,657**	**2,843**	**4,320**	**9,002**	**9,761**	**13,414**	**15,711**	**17,073**

[1] Newfoundland included for 1950 and subsequent years.

6.—Federal, Provincial and Municipal Government Revenue and Surplus or Deficit, Selected Years, 1926-52

(Millions of dollars)

Item	1926	1929	1933	1939	1944	1946	1950[1,r]	1951[r]	1952
Direct Taxes: Persons—									
Income taxes	22	34	38	62	772	711	612	891	1,177
Succession duties	16	16	13	28	39	54	66	69	71
Miscellaneous taxes	15	18	18	22	27	31	62	68	72
Direct Taxes: Corporations—									
Income and excess profits taxes	34	48	37	115	598	654	981	1,429	1,372
Withholding taxes	—	—	5	10	27	29	54	56	55
Indirect taxes	614	686	545	716	1,378	1,505	2,081	2,596	2,784
Investment Income—									
Interest	63	74	75	71	105	120	155	180	205
Profits of government business enterprises	25	29	−37	19	222	243	245	263	290
Employer and employee contributions to social insurance and government pension funds	17	27	21	35	133	149	256	313	336
Deficit + or surplus − (on transactions relating to the national accounts)	−56	−9	+174	+41	+2,566	+133	−648	−1,044	−214
Totals, Revenue[2]	**750**	**923**	**889**	**1,119**	**5,867**	**3,629**	**3,864**	**4,821**	**6,148**

[1] Newfoundland included for 1950 and subsequent years. [2] Plus deficit or minus surplus.

7.—Federal, Provincial and Municipal Government Expenditure, Selected Years, 1929-52

(Millions of dollars)

Item	1929	1933	1939	1944	1946	1950[1,r]	1951[r]	1952
Purchases of goods and services	682	526	735	5,022	1,832	2,326	3,212	4,216
Transfer Payments—								
Interest	143	174	172	319	455	442	451	465
Other	93	181	229	259	1,106	1,033	1,030	1,370
Subsidies	5	8	−17	267	236	63	128	97
Totals, Expenditure	**923**	**889**	**1,119**	**5,867**	**3,629**	**3,864**	**4,821**	**6,148**

[1] Newfoundland included for 1950 and subsequent years.

8.—Personal Expenditure on Consumer Goods and Services, Selected Years, 1939-52

(Millions of dollars)

Item	1939	1944	1946	1950[1,r]	1951[r]	1952
Food	919	1,769	2,085	3,039	3,515	3,683
Tobacco and alcoholic beverages	281	624	846	1,094	1,155	1,243
Clothing and personal furnishings	490	966	1,191	1,568	1,707	1,823
Shelter	629	807	866	1,376	1,554	1,731
Household operation	522	660	935	1,504	1,597	1,767
Transportation	392	465	771	1,475	1,567	1,687
Personal and medical care and death expenses	257	369	478	730	813	887
Miscellaneous	414	527	805	1,243	1,389	1,513
Totals	**3,904**	**6,187**	**7,977**	**12,029**	**13,297**	**14,334**
Durable goods	292	296	590	1,343	1,382	1,532
Non-durable goods	2,210	3,928	5,073	7,241	8,016	8,470
Services	1,402	1,963	2,314	3,445	3,899	4,332

[1] *Newfoundland included for 1950 and subsequent years.*

Section 2.—Canada's International Investment Position*

A large balance of Canadian indebtedness to other countries has always been characteristic of Canada's international investment position. Much of the development of Canada has been financed by investments of capital from other countries, particularly in earlier decades. This balance of indebtedness has been reduced from the levels obtaining immediately before World War II which, in turn, were lower than the earlier peak period around 1930. Net indebtedness to other countries at the end of 1952 was $4,700,000,000 compared with about $6,500,000,000 in 1930. The balance of Canada's international indebtedness did not change significantly in 1952, contrasting with the two previous years when appreciable increases occurred through both net inflows of capital and retained earnings.

Foreign Investments in Canada.—The relative importance of British and United States capital invested in Canada has changed greatly in recent decades. British capital constituted the largest part of the external capital invested in Canada before World War I but United States investments underwent a rapid development during and after that War. By 1926, the first year for which official estimates are available, United States investments in Canada had a value of $3,196,000,000 compared with British investments of $2,636,000,000. During the 1930's, reductions occurred in the amount of external capital invested in Canada.

Further growth in United States investments in Canada took place during World War II and, by the end of the War, these investments had reached a new peak, whereas British investments in Canada were sharply reduced by repatriation of securities. As a result of these divergent trends in British and United States investments, total non-resident investments in Canada increased only moderately during World War II.

* Prepared in the Balance of Payments Section, International Trade Division, Dominion Bureau of Statistics. A more extended review appears in DBS report, *Canada's International Investment Position, Selected Years 1926 to 1949*, and statistics for more recent years in the reports, *The Canadian Balance of International Payments, 1952*, and *International Investment Position* and *The Canadian Balance of International Payments in the Post-War Years (1946-1952)*.

In the post-war years there was a substantial increase in the value of United States capital invested in Canada. The largest increases occurred in the years following 1948, particularly in 1950, 1951 and 1952 when there were substantial net inflows of United States capital for long-term investment. The increase in the value of United States investments in Canada in the seven years 1946 to 1952 amounted to about $3,000,000,000. The growth in direct investments in Canadian branches, subsidiaries and controlled companies accounted for $2,200,000,000 of this increase and increased holdings of government and municipal bonds for nearly $400,000,000. The accelerated rate in the later post-war years was accounted for by the development of petroleum and other resources. Throughout the period, reinvested earnings accounted for nearly one-half the increased investment. Portfolio holdings of government and other securities increased each year, except for 1947. There were particularly large increases in 1950 in holdings of Government of Canada bonds through a demand for outstanding domestic issues, and in 1951 in holdings of provincial and municipal bonds through new issues in the United States. Repatriation of government bonds on a substantial scale in the later months of 1951 and in 1952 was offset by sales of corporate securities. Direct investments in companies in Canada controlled in the United States made up the largest part of United States investments. In 1951, such investments were valued at $3,922,000,000 in 2,821 establishments. By the end of 1952 the value of this group of investments had risen to about $4,540,000,000 out of total investments of United States capital in Canada of approximately $8,000,000,000.

At the end of 1952, British investments of somewhat over $1,800,000,000 were only moderately higher in value than at the end of World War II. A considerable increase in these investments occurred in 1950 and 1951 in the direct investment group, and the totals since 1949 also increased significantly by the inclusion of British investments in Newfoundland. The principal change in the post-war period in investments of other countries in Canada occurred in 1951, when a substantial increase took place, mainly through larger portfolio holdings of Canadian stocks.

Canadian capital has been the principal source of financing for Canadian development in the past 20 years or more. Investment, which was subnormal during the 1930's, showed notable expansion in certain fields during World War II and rose to peak levels in the post-war years. Even in 1950 and 1951, when net capital inflows were very substantial, the proportion of investment financed by non-resident capital was minor. In those years the net contribution by non-residents and foreign-controlled companies to the savings used for all types of investment in Canada was only about one-seventh of the total.

Thus, the ratio of investments of external capital, in relation to total investments of capital in Canada, has been declining for some years. It is difficult to express this relationship in terms of any simple ratio, however, because of the variety of types of investment that must be compared. Important changes have taken place also in the relative positions of different types of investment. Non-resident holdings of Canadian bonds constitute a much smaller proportion of the outstanding funded debt of Canadian governments and corporations than before World War II. The external holdings of Canadian bonds represented only about 15 p.c. of the total Canadian funded debt at the end of 1952 compared with about one-third of the bonds outstanding in 1939. The most conspicuous feature in this change in ownership has been the great increase in Canadian holdings. As a result mainly

of wartime financing, Canadian holdings of Canadian bonds rose from about $6,500,000,000 in 1939 to $19,700,000,000 in 1952. Non-resident holdings did not change much in total between these two years and a decline in British holdings, through wartime repatriation, was offset by a rise in United States holdings in the past few years.

9.—Estimate of the Canadian Balance of International Indebtedness, as at Dec. 31, 1939, 1945 and 1947-52

(Thousands of millions of dollars)

Item	1939	1945	1947	1948	1949	1950	1951	1952
Canadian Liabilities (Foreign Capital Invested in Canada)—								
United States investment in Canada	4·2	5·0	5·2	5·6	5·9	6·6	7·3	8·0
United Kingdom investment in Canada	2·5	1·7	1·6	1·6	1·7	1·7	1·8	1·8
Other countries' investment in Canada	0·3	0·4	0·3	0·3	0·3	0·4	0·4	0·4
Totals, Non-resident Long-Term Investment in Canada	6·9	7·1	7·2	7·5	8·0	8·7	9·5	10·2
Equity of non-residents in Canadian assets abroad	0·2	0·2	0·3	0·3	0·3	0·3	0·3	0·3
Canadian dollar holdings of non-residents	0·3	0·3	0·3	0·3	0·4	0·6	0·4	0·3
Canadian short-term assets of International Monetary Fund and International Bank	—	—	0·3	0·3	0·3	0·3	0·3	0·3
Totals, Gross Liabilities[1]	7·4	7·6	8·1	8·4	8·9	9·9	10·5	11·1
Canadian Assets (Canadian Capital Invested Abroad)—								
Direct investments abroad	0·7	0·7	0·8	0·8	0·9	1·0	1·2	1·3
Portfolio holdings of foreign securities	0·7	0·6	0·6	0·6	0·6	0·6	0·6	0·6
Government of Canada credits	—	0·7	1·8	1·9	2·0	2·0	1·9	1·9
Government of Canada subscriptions to International Monetary Fund and International Bank	—	—	0·4	0·4	0·4	0·4	0·4	0·4
Totals, Canadian Long-Term Investment Abroad	1·4	2·0	3·6	3·6	3·9	4·0	4·1	4·2
Government of Canada holdings of gold and foreign exchange	0·5	1·7	0·5	1·0	1·2	1·9	1·8	1·8
Other Canadian short-term assets abroad	—	0·1	—	—	0·1	0·1	0·1	0·3
Totals, Gross Assets[1]	1·9	3·8	4·1	4·7	5·2	5·9	5·9	6·4
Canadian Net Indebtedness[1]	5·5	3·9	4·0	3·7	3·7	4·0	4·6	4·7

[1] Totals are rounded figures and may not represent sums of components; they are exclusive of short-term commercial indebtedness and blocked currencies.

Non-resident ownership of Canadian industry, mines, railways and public utilities was estimated in 1951 to be about 30 p.c. of the total capital invested, a percentage less than the corresponding ratio at the beginning of World War II. The ratio of non-resident ownership in Canadian manufacturing companies in 1950 was estimated at about 39 p.c. The percentages for the different groups of the manufacturing industry varied considerably but was greatest in the non-ferrous metal industry, being close to 75 p.c., as compared with about 25 p.c. in the textile industry; in the chemical industry it was more than 50 p.c. and in the vegetable products, animal products, wood and paper products, iron and its products and the non-metallic minerals groups the ratio was between 33 p.c. and 50 p.c. Furthermore, in some subdivisions of these industries, non-resident ownership and control

were predominant even though only the minor parts of the groups, when taken as a whole, were owned abroad. Other important industrial subdivisions were mainly Canadian owned and controlled, such as the primary iron and steel and the cotton textile industries.

Non-resident ownership of railways was large, being 40 p.c. in 1951. The mining and smelting field was also developed to an important extent by external capital, the ratio of non-resident ownership being 47 p.c. Some major units in this field were non-resident-controlled.

In financial institutions, non-resident ownership was substantial but non-resident control was largely limited to branches of foreign insurance companies; Canadian banks, trust companies and most Canadian insurance companies were mainly Canadian-controlled.

From 1946 to 1951, capital inflow from the United States for petroleum investment amounted to about $532,000,000, or over 33 p.c. of the net capital movement from that country to Canada. The book value of United States ownership in the industry, which reflects profits and losses and accounting adjustments in addition to capital movements, increased from $115,000,000 to $636,000,000, or from 39 p.c. to 52 p.c. of the aggregate book value of the industry in Canada. United States investment in United States-controlled companies in Canada was valued at $556,000,000, or 45 p.c. of the industry at the end of 1951.

10.—Foreign Capital Invested in Canada, by Type of Investment, as at Dec. 31, 1933, 1939, 1946 and 1949-51

Type of Investment	1933	1939	1946	1949	1950	1951
	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
Government Securities—						
Federal	752	823	750	975	1,141	1,013
Provincial	572	536	594	534	565	771
Municipal	394	344	267	246	256	319
Totals, Government Securities	1,718	1,703	1,611	1,755	1,962	2,103
Public Utilities—						
Railways	2,245	1,871	1,583	1,445	1,456	1,467
Other	625	549	557	494	543	588
Totals, Public Utilities	2,870	2,420	2,140	1,939	1,999	2,055
Manufacturing	1,422	1,445	1,895	2,539	2,763	3,136
Mining and smelting	338	329	386	494	628	787
Merchandising	192	189	238	300	331[r]	388
Financial institutions	480	473	557	548	566	572
Other enterprises	75	69	69	83	98	120
Miscellaneous assets	270	285	282	302	320	328
Totals, Investment	**7,365**	**6,913**	**7,178**	**7,960**	**8,667[r]**	**9,489**
United States[1]	4,492	4,151	5,157	5,905	6,565	7,303
United Kingdom[1]	2,683	2,476	1,668	1,715	1,744	1,770
Other countries	190	286	353	340	358	416

[1] Includes some investments held for residents of other countries.

11.—Foreign Capital Invested in Canada, by Type of Investment, classified by Estimated Distribution of Ownership, as at Dec. 31, 1951

NOTE.—Common and preferred stocks are at book values as shown in the balance sheets of the issuing companies; bonds and debentures are valued at par; and liabilities in foreign currencies are converted into Canadian dollars at par of exchange.

Type of Investment	Estimated Distribution of Ownership			Total Investments of Non-Residents
	United States[1]	United Kingdom[1]	Other Countries	
	$'000,000	$'000,000	$'000,000	$'000,000
Government Securities—				
Federal	887	70	56	1,013
Provincial	732	38	1	771
Municipal	279	38	2	319
Totals, Government Securities	1,898	146	59	2,103
Public Utilities—				
Railways	687	704	76	1,467
Other	503	56	29	588
Totals, Public Utilities	1,190	760	105	2,055
Manufacturing	2,594	484	58	3,136
Mining and smelting	695	60	32	787
Merchandising	270	103	15	388
Financial institutions	355	142	75	572
Other enterprises	106	10	4	120
Miscellaneous assets	195	65	68	328
Totals, Investments	**7,303**	**1,770**	**416**	**9,489**

[1] Includes some investments held for residents of other countries.

Canadian Assets Abroad.—Canada's external assets have changed greatly in size and composition in recent years. The total value, including holdings of gold and foreign currencies, rose from about $1,900,000,000 in 1939 to $6,400,000,000 at the end of 1952. The principal factor in this increase was the extension by the Federal Government of loans and export credits to the United Kingdom and other countries. At the end of 1952, Canadian Government credits outstanding totalled over $1,850,000,000. Included in this total was about $200,000,000 outstanding on the 1942 loan to the United Kingdom, $1,157,000,000 on the 1946 loan to the United Kingdom and about $473,000,000 of post-war export credits and advances. In addition, at the end of 1952, official holdings of gold and foreign exchange aggregated about $1,809,000,000; in terms of the U.S. dollar these reserves were higher at that date than in any earlier year. Other official Canadian assets include Canada's subscriptions to the capital of the International Bank and the International Monetary Fund which, by the end of 1952, amounted to $70,900,000 and $322,500,000, respectively. A small part of the subscription to the Bank was in the form of convertible exchange and $75,000,000 of the subscription to the Fund was in gold. The remainder of both subscriptions was made in the form of demand notes of the Federal Government or in Canadian funds.

Besides the officially owned assets referred to above, there were the privately owned investments in the form of foreign securities and property owned by Canadian companies and individuals. In 1939, these privately owned assets constituted most of the total value of Canadian assets abroad, whereas, since the end of World War II, they amounted to only a minor part of the total, chiefly because of the sharp rise in officially owned assets. Total privately owned portfolio investments abroad

declined in value since 1939 because of the liquidations of Canadian holdings of United States securities. Portfolio holdings of foreign securities owned in Canada were reduced from $719,000,000 at the end of 1939 to $609,000,000 at the end of 1951. This decline was less than the total sales of these securities by private investors during the period as there was a considerable increase in the book value of holdings of United States stocks. Appreciable gains occurred in Canadian direct investments in businesses outside Canada which had a value of $1,160,000,000 at the end of 1951 compared with $671,000,000 at the end of 1939. During 1952, there was a further substantial increase in the value of this group of investments.

12.—Canadian Assets Abroad, 1939, 1946, 1948, 1950 and 1951

NOTE.—Excludes investments of insurance companies and banks, Canada's subscriptions to international financial institutions and short-term assets, other than official holdings of gold and foreign exchange. Holdings of stocks are at book values as shown in the books of issuing companies; holdings of bonds are shown at par values. Foreign currencies are converted into Canadian dollars at current market rates.

Assets	1939	1946	1948	1950	1951
	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
Direct investments in businesses outside Canada..	671	772	788	990	1,160
Portfolio holdings of foreign securities.....	719	551	605	598	609
Government credits.....	31	1,362	1,878	1,990	1,922
Official balances abroad and gold.....	459[r]	1,251	1,006	1,876	1,848
Totals, Canadian Assets Abroad.....	**1,880[r]**	**3,936**	**4,277**	**5,454**	**5,539**

13.—Canadian Assets Abroad, by Location of Investment, as at Dec. 31, 1951

NOTE.—*See* headnote to Table **12.**

Location of Investment	Direct Investments	Portfolio Investment		Government Credits	Official Holdings of Exchange	Total Investments
		Stocks	Bonds	Total		
	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
United States.....	906	376	—	948	2,230	
United Kingdom.....	74	34	1,394	48	1,550	
Other Commonwealth countries.....	88	14	—	—	102	
Other foreign countries.....	92	185	528	—	805	
Official gold holdings.....	—	—	—	852	852	
Totals.....	**1,160**	**609**	**1,922**	**1,848**	**5,539**	

The privately owned Canadian investments abroad are chiefly in the United States, the total value of investments in that country at the end of 1951 being $1,282,000,000. Investments in other foreign countries in 1951, mainly in Latin America, were $277,000,000, while investments in the United Kingdom were $108,000,000, and in other Commonwealth countries $102,000,000. These figures exclude the investments abroad of Canadian insurance companies and banks, as well as the official assets referred to in Table **13**, and certain small amounts of miscellaneous investments that were difficult to evaluate.

Section 3.—Corporation Profits and Income to Shareholders

Estimates of corporation profits presented in this Section cover all Canadian corporations. The figures for the years 1944 to 1951 are based on the reports, *Taxation Statistics*, published annually by the Taxation Division, Department of National Revenue, Ottawa. Prior to 1944, corporation financial statistics were made the subject of a comprehensive study in the Department of National Revenue.

Profits before taxes of Canadian corporations are shown in Table 14 for selected years 1926-52. From a peak of $530,000,000 in 1929, they dropped to $17,000,000 in 1932 and then, with the exception of a decline in 1938, rose steadily from 1932 to 1942, the wartime peak. Since 1944, they have risen fairly steadily, with declines in 1949 and 1952. In the latter year, corporation profits before taxes were $2,640,000,000, down $170,000,000 from the record high in 1951.

Corporation profits taxes, which were relatively low during the period 1926 to 1939, ranged from 40 p.c. to 50 p.c. of profits during the war period. After the War they dropped to 35 p.c. of profits in 1948, but were again over 50 p.c. in both 1951 and 1952. It should be noted that the 1951 and 1952 tax figures include the elective tax on undistributed income, which began only in 1950. Tax liabilities were $1,372,000,000 in 1952.

Dividends paid by corporations (excluding dividends paid to other Canadian Corporations) reached a peak in 1950 of $681,000,000 and declined in both 1951 and 1952 to $634,000,000 in 1952. Undistributed corporation profits also declined from 1950 to 1952 because of the sharp increase in taxes from 1950 to 1951 and the drop in profits in 1952.

14.—Profits, Taxes and Dividends of Canadian Corporations, Selected Years, 1926-52

(Millions of dollars)

Item	1926	1929	1932	1939	1942	1944	1946	1949	1950	1951	1952
Corporation profits before taxes[1]	403	530	17	689	1,292	1,221	1,455	1,906	2,506[r]	2,810[r]	2,640
Deduct: income and excess profits taxes[2]	34	48	32	115	629	598	654	731	981[r]	1,429[r]	1,372
Corporation profits after taxes	369	482	−15	574	663	623	801	1,175	1,525[r]	1,381[r]	1,268
Deduct: dividends paid and charitable donations	190	271	157	302	308	282	390	568	681	660[r]	634
Undistributed corporation profits	179	211	−172	272	355	341	411	607	844[r]	721[r]	634

[1] Includes corporate taxable income, depletion charges and charitable donations, and are adjusted for corporate losses, renegotiation of war contracts and conversion to a calendar-year basis. [2] Includes elective tax on undistributive income of $54,000,000 in 1950, $48,000,000 in 1951 and $10,000,000 in 1952.

Analysis by Industries.—Detailed data on profits by industries are available for the years since 1944. Corporation profits as shown in Table 15 do not agree with those in the national accounts since the national accounts figures include depletion charges and charitable donations. National account figures are also adjusted for renegotiation of war contracts and for conversion to a calendar-year basis. It should be noted that only federal taxes are deducted from the profits by industry. Provincial taxes were not significant in amount from 1944 to 1946, but after 1947 they were levied at the rate of 7 p.c. for Ontario and Quebec and 5 p.c. for the other provinces. Profits of Newfoundland corporations are included for 1950 and 1951 only.

Between 1950 and 1951, profits before taxes increased by $417,000,000 or by 18·5 p.c. Of the 34 sub-groups listed in Table **15** only seven showed decreases in profits. The most significant increases took place in the pulp and paper, other metal mining, transportation equipment (except automobiles), transportation, communication and storage, and wholesale trade groups. None of the declines were very significant.

Because of the 20-p.c. surtax imposed on corporations in 1951, profits after taxes rose only 0·9 p.c. compared with 18·5 p.c. before taxes. Seventeen industrial groups showed declines in profits from 1950 to 1951 and seven declined before taxes. However, no industrial group showed a net loss.

15.—Corporation Profits, by Industry, Before and After Federal Income Taxes, 1946 and 1949-51

NOTE.—Figures are for the company fiscal years ended within the calendar years. SOURCE: *Taxation Statistics* published annually by the Taxation Division, Department of National Revenue, Ottawa.

Industry	Net Income Before Federal Income Taxes				Net Income After Federal Income Taxes			
	1946	1949	1950	1951	1946	1949	1950	1951
	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
Agriculture	2·2	2·1	1·7	1·8	0·8	1·2	0·9	0·8
Fishing	1·3	1·0	1·3	0·6	0·8	0·6	0·9	0·4
Forestry	3·1	4·0	12·7	15·7	1·2	2·4	8·4	8·8
Gold mining	16·2	11·6	13·6	12·5	8·2	7·4	8·7	7·2
Other metal mining	54·0	94·8	125·8	165·5	28·7	63·6	82·7	90·7
Other mining	9·4	14·9	19·1	22·8	4·7	8·8	10·9	11·0
Animal food products	14·5	15·2	23·8	24·0	8·2	10·3	15·8	14·6
Vegetable food products	46·9	60·7	61·4	70·4	24·9	40·3	39·8	40·1
Alcoholic beverages	69·5	59·3	64·1	69·6	32·2	40·2	42·5	39·6
Tobacco	11·6	13·2	15·5	19·4	6·6	8·9	10·1	10·7
Textile and textile products	67·8	81·2	81·2	75·5	35·7	54·4	53·4	42·4
Wood and wood products	37·8	47·3	85·3	92·3	19·1	31·1	57·0	52·7
Pulp and paper	138·3	188·5	271·0	376·1	71·4	126·0	178·1	208·6
Chemicals, paints and drugs	57·1	63·6	87·1	108·5	29·9	42·3	57·6	60·1
Petroleum products	41·5	29·6	64·2	81·6	26·5	20·5	42·5	44·8
Rubber	12·4	4·6	20·3	26·6	6·5	2·8	13·4	14·7
Leather	12·8	6·6	6·4	2·5	6·5	4·3	4·2	0·2
Non-metallic mineral products	21·5	38·0	51·4	59·9	10·9	25·6	33·8	33·1
Iron and steel products	37·3	58·8	66·9	88·7	19·7	39·9	44·4	49·5
Primary iron and steel	18·0	50·1	60·1	76·8	10·0	33·8	39·6	42·8
Non-ferrous metal smelting and refining and products	27·8	53·0	70·4	72·8	15·4	35·5	46·5	40·6
Machinery	61·1	131·4	160·1	176·2	30·1	87·4	105·9	98·3
Transportation equipment except automobiles	20·2	18·4	11·6	22·6	9·0	12·6	7·3	12·4
Automobiles	10·2	68·3	94·0	87·9	5·3	45·9	61·6	48·2
Miscellaneous manufactured products	15·1	13·5	16·4	20·4	7·2	9·0	11·0	11·8
Construction	11·4	41·1	50·9	46·1	5·2	28·1	34·7	26·8
Heat, light and power	35·7	36·4	42·7	46·6	20·2	24·6	28·1	25·9
Transportation, communication and storage	89·6	68·6	114·1	171·1	47·8	44·2	74·8	94·8
Other public utilities	3·0	3·4	3·6	11·9	1·6	2·3	2·4	6·8
Wholesale trade	119·9	150·5	203·3	254·2	60·6	102·9	137·8	147·2
Retail trade	148·8	163·2	176·4	171·3	66·6	113·8	120·8	105·3
Services	38·0	41·8	41·3	45·8	19·7	29·1	28·4	27·4
Chartered banks and insurance companies	28·8	60·6	51·9	55·2	13·5	42·9	34·0	32·3
Other financial institutions	51·6	57·2	86·2	99·6	31·1	39·7	59·7	60·3
Companies not classified	0·3	—	0·1	0·1	0·1	—	—	—
Total Profits, All Corporations[1]	**1,334·7**	**1,752·5**	**2,255·9**	**2,672·6**	**685·9**	**1,182·4**	**1,497·7**	**1,510·9**
Adjustment to National Income Estimate[1]	120·3	153·5	250·1r	137·4	115·1	−7·4	27·3r	−129·9
Total Profits, National Income Estimates	**1,455·0**	**1,906·0**	**2,506·0r**	**2,810·0**	**801·0**	**1,175·0**	**1,525·0r**	**1,381·0**

[1] Total profits of all corporations shown here differ from those presented in Table **14** which are used for national income purposes—*see* text at p. 1121.

Section 4.—Federal Incorporation of Companies

Statistics of companies incorporated under the Companies Act are given in Table 16.

16.—Numbers and Capitalizations of Companies Incorporated under the Dominion Companies Act and Amendments, Years Ended Mar. 31, 1943-52

NOTE.—Statistics for 1900-25 are given in the 1938 Year Book, p. 1061; for 1926-41 in the 1942 edition, p. 934; and for 1942 in the 1952-53 edition, p. 1094. Capitalization includes consideration of the amounts of capital received on the issue of shares without nominal or par value.

Year	New Companies		Old Companies with—				Gross Increase in Capitalization	Net Increase in Capitalization
			Increased Capitalization		Decreased Capitalization			
	No.	Capitalization	No.	Amount	No.	Amount		
		$		$		$	$	$
1943.....	205	51,630,000	35	56,198,739	29	7,728,436	107,828,739	100,100,303
1944.....	217	53,462,000	59	31,351,380	52	18,204,490	84,813,380	66,608,890
1945.....	412	56,719,900	51	108,411,400	20	10,680,250	165,131,300	154,451,050
1946.....	649	187,588,775	88	129,163,798	32	15,407,127	316,752,573	301,345,446
1947.....	910	206,547,650	121	147,084,194	60	157,365,948	353,631,844	196,265,896
1948.....	717	176,891,600	109	109,305,261	54	68,941,194	286,196,861	217,255,667
1949.....	669	163,407,950	92	115,233,095	61	115,029,743	278,641,045	163,611,302
1950.....	690	132,426,495	71	120,432,957	57	34,042,682	252,859,452	218,816,770
1951.....	611	329,117,200	367	298,975,315	55	60,809,421	628,092,515	567,283,094
1952.....	658	304,899,200	354	626,996,463	91	51,107,369	931,895,663	880,788,295

During the year ended Mar. 31, 1952, 148 Supplementary Letters Patent were granted for variation of corporate powers, changes of name, confirmation of compromises or arrangements with shareholders and for various other purposes. In addition to the companies with share capital, 34 corporations without share capital were granted Letters Patent under Part II of the Companies Act, 1934 (R.S.C. 1952, c. 53).

CHAPTER XXV.—CURRENCY AND BANKING; MISCELLANEOUS COMMERCIAL FINANCE

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—CURRENCY AND BANKING

A historical sketch of currency and banking in Canada, tracing certain features of the central banking system that culminated in the establishment of the Bank of Canada appears in the 1938 Year Book, pp. 900-905. In chronological order these were:—

(1) *Central Note Issue*, permanently established with the issue of Dominion notes under legislation of 1868.

(2) *The Canadian Bankers' Association*, established in 1900 and designed to effect greater co-operation among the banks in the issue of notes, in credit control and in various aspects of bank activities.

(3) *The Central Gold Reserves*, established by the Bank Act of 1913.

(4) *Rediscount Facilities*, originated as a war measure by the Finance Act of 1914 and made a permanent feature of the system by the Finance Act of 1923. This Act empowers the Minister of Finance to issue Dominion notes to the banks on deposit by them of approved securities, thus providing the banks with a means of increasing their legal tender cash reserves at will.

Section 1.—The Bank of Canada

The Bank of Canada Act (R.S.C. 1952, c. 13).—The Bank of Canada was incorporated in 1934 and commenced operations on Mar. 11, 1935. An account of the capital structure of the Bank and its transition from a privately owned institution to one wholly government owned is given in the 1941 Year Book, p. 800.

The Bank is authorized to pay cumulative dividends of 4½ p.c. per annum from its profits after making such provision as the Board thinks proper for bad and doubtful debts, depreciation in assets, pension funds, and all such matters as are properly provided for by banks. The Act provided that the remainder of the

profits were to be paid, in specified proportions, into the Rest Fund of the Bank (so long as it remained less than twice the paid-up capital) and the Consolidated Revenue Fund. Since 1944, when the transfer brought the Rest Fund up to slightly more than twice the paid-up capital, the whole of the remaining profits have been paid into the Consolidated Revenue Fund.

The Bank may buy and sell securities of the Government of Canada and provincial governments without restriction if of a maturity not exceeding two years and in limited amounts if of longer maturity; short-term securities of the Government of Canada and provincial governments may be rediscounted. The Bank may buy and sell short-term securities of Commonwealth countries, the United States or France without restriction if maturing within six months, and such securities having a maturity exceeding six months in limited amounts. The Bank may buy and sell certain classes of commercial paper of limited currency and, if endorsed by a chartered bank, may rediscount such commercial paper. Advances for six-month periods may be made to chartered banks, Quebec Savings Banks, the Government of Canada or any provincial government against certain classes of collateral, and advances of specified duration may be made to the Government of Canada or any provincial government in amounts not exceeding a fixed proportion of such government's revenue. The Bank may accept deposits that do not bear interest from the Government of Canada or provincial governments, or from any chartered bank or any bank incorporated under the Quebec Savings Banks' Act. The Bank may buy and sell gold, silver, nickel and bronze coin, and gold and silver bullion, and may also deal in foreign exchange.

The provisions regarding the note issue of the Bank of Canada are dealt with at pp. 1128-1129.

The Bank of Canada Act provides that the Bank shall maintain a reserve of gold equal to not less than 25 p.c. of its total note and deposit liabilities in Canada. Under the terms of the Exchange Fund Order, 1940, authorizing the transfer of the Bank's gold holdings to the Foreign Exchange Control Board, the minimum gold reserve requirement was temporarily suspended; this suspension was continued under the Foreign Exchange Control Act, 1946, and subsequently to July 4, 1952, under the Currency, Mint and Exchange Fund Act (R.S.C. 1952, c. 315). The reserve, in addition to gold, may include silver bullion; balances in pounds sterling in the Bank of England, in United States dollars in the Federal Reserve Bank of New York, and in gold currencies in central banks in gold-standard countries or in the Bank for International Settlements; treasury bills of the United Kingdom or the United States of America having a maturity not exceeding three months; and bills of exchange having a maturity not exceeding 90 days, payable at London or New York, or in a gold-standard country, less any liabilities of the Bank payable in the currency of the United Kingdom, the United States of America or a gold-standard country.

The chartered banks are required to maintain a reserve of not less than 5 p.c. of their deposit liabilities, payable in Canadian dollars, in the form of deposits with, and notes of, the Bank of Canada.

The Bank acts as the fiscal agent of Canada without charge and may, by agreement, act as banker or fiscal agent of any province. The Bank does not accept deposits from individuals and does not compete with the chartered banks in commercial banking fields.

Head office of the Bank is at Ottawa and it has an agency in each province, in the cities of St. John's, Charlottetown, Halifax, Saint John, Montreal, Toronto, Winnipeg, Regina, Calgary and Vancouver.

The Governor of the Bank is its chief executive officer and Chairman of the Board of Directors; he is assisted by a Deputy Governor and an Assistant Deputy Governor appointed by the Board of Directors subject to the approval of the Governor in Council. The twelve directors are appointed by the Minister of Finance, with the approval of the Governor in Council, for terms of three years. In the transaction of the business of the Bank, each director has one vote.

There is also an Executive Committee of the Board of Directors consisting of the Governor, Deputy Governor and one member of the Board. Meeting once a week, this Committee has the same powers as the Board but every decision is submitted to the Board of Directors at its next meeting. The Board must meet at least four times a year. The Deputy Minister of Finance is an ex officio member of the Board of Directors and of the Executive Committee, but is without a vote.

The Governor of the Bank, or in his absence the Deputy Governor, has the power to veto any action or decision of the Board of Directors or the Executive Committee, subject to confirmation or disallowance by the Governor in Council.

The Bank of Canada and Its Relationship to the Canadian Financial System.—An article under this title is given in the 1937 Year Book, pp. 881-885. It deals with such subjects as the functions of the Bank, its control and regulation of credit and currency, the mechanism by which such control is exercised, the expansion and contraction of credit, the mitigation of general economic fluctuations, the control of exchange operations, the advisory function of the Bank and its duties as the Government's banker.

Bank of Canada Operations.—The expansion of Bank of Canada liabilities and assets in recent years has provided for increased Bank of Canada notes in active circulation (the chartered-bank note issue has been gradually retired) and has enlarged the cash reserves of the chartered banks.

1.—Assets and Liabilities of the Bank of Canada, Mar. 13, 1935, and Dec. 31, 1950-52

SOURCE: Annual Statements of the Bank of Canada.

Assets and Liabilities	Mar. 13, 1935	Dec. 31, 1950	Dec. 31, 1951	Dec. 31, 1952
Assets	$	$	$	$
Reserves (at market values)—				
Gold coin and bullion	106,584,356	[1]	—	—
Silver bullion	986,363	—	—	—
Sterling and U.S.A. dollars	394,875	111,415,812	117,833,770	77,084,868
Other currencies	—	265,130	90,262	109,780
Totals, Reserves	107,965,594	111,680,942	117,924,032	77,194,648
Subsidiary coin	297,335	408,039	374,485	402,237
Investments (at not exceeding market values)—				
Government of Canada and Provincial Government short-term securities	*34,846,294*	*1,229,344,790*	*1,141,766,818*	*1,459,819,460*
Other Government of Canada and Provincial Government securities	*115,013,637*	*712,453,368*	*1,049,343,336*	*767,173,559*
Other securities	—	*247,888,525*	*89,033,502*	*13,042,535*
Totals, Investments	149,859,931	2,189,686,683	2,280,143,156	2,240,035,555

[1] The Exchange Fund Order, 1940, authorized the transfer of the Bank's gold holdings to the Foreign Exchange Control Board and suspended the requirement for a minimum gold reserve.

1.—Assets and Liabilities of the Bank of Canada, Mar. 13, 1935, and Dec. 31, 1950-52 —concluded

Assets and Liabilities	Mar. 13, 1935	Dec. 31, 1950	Dec. 31, 1951	Dec. 31, 1952
	$	$	$	$
Assets—concluded				
Industrial Development Bank capital stock	...	25,000,000	25,000,000	25,000,000
Bank premises	—	5,081,069	5,069,987	5,081,886
All other assets	1,191,897	18,474,022	15,585,338	33,689,385
Totals, Assets	**259,314,757**	**2,350,330,755**	**2,444,096,998**	**2,381,403,712**
Liabilities				
Capital paid up	4,991,640	5,000,000	5,000,000	5,000,000
Rest fund	—	10,050,367	10,050,367	10,050,367
Notes in circulation	97,805,665	1,367,421,840	1,464,160,786	1,561,193,061
Deposits—				
Government of Canada	*4,212,200*	*44,378,082*	*118,901,465*	*44,945,805*
Chartered banks	*151,927,628*	*578,588,783*	*618,996,408*	*626,629,987*
Other	*277,922*	*207,052,610*	*66,089,987*	*44,510,937*
Totals, Deposits	156,417,750	830,019,475	803,987,861	716,086,729
Liabilities payable in sterling, United States and foreign gold currencies	—	133,560,519	155,573,289	82,933,783
Dividends declared	—	112,500	112,500	112,500
Other liabilities	99,702	4,166,054	5,212,195	6,027,272
Totals, Liabilities	**259,314,757**	**2,350,330,755**	**2,444,096,998**	**2,381,403,712**

The Industrial Development Bank.—The Industrial Development Bank, a subsidiary of the Bank of Canada, was incorporated by Act of Parliament during 1944 and its banking operations commenced on Nov. 1, 1944. Its functions are described in the preamble to the Act as follows:—

> "To promote the economic welfare of Canada by increasing the effectiveness of monetary action through ensuring the availability of credit to industrial enterprises which may reasonably be expected to prove successful if a high level of national income and employment is maintained, by supplementing the activities of other lenders and by providing capital assistance to industry with particular consideration to the financing problems of small enterprises."

The President of the Industrial Development Bank is the Governor of the Bank of Canada and the Directors are the Directors and Assistant Deputy Governor of the Bank of Canada. The $25,000,000 capital stock of the Bank (completely paid up) was subscribed by the Bank of Canada. The Industrial Development Bank may also raise funds by the issue of bonds and debentures provided that its total direct liabilities and contingent liabilities in the form of guarantees and underwriting agreements do not exceed three times the aggregate of the Bank's paid-up capital and Reserve Fund.

The lending powers of the Bank may be extended only to industrial enterprises or commercial air services in Canada with respect to which it is empowered to:—

(1) lend money or guarantee loans;
(2) enter into underwriting agreements with regard to any issue of stock, bonds or debentures;
(3) acquire stock, bonds or debentures from the issuing corporation or any person with whom the Bank has entered into an underwriting agreement.

The Bank may accept any form of collateral security against its advances, including real property.

The Industrial Development Bank is intended to supplement the activities of other lending agencies, not to compete with them, and the Act of incorporation requires that it should extend credit only when the Board of Directors is of the opinion that similar credit would not be available elsewhere on reasonable terms and conditions. The Bank is specifically prohibited from engaging in the business of deposit banking.

2.—Authorized and Outstanding Loans and Investments of the Industrial Development Bank, by Province, Size and Industry, as at Mar. 31, 1953

Province	Authorized	Outstanding
	$	$
Newfoundland	—	—
Prince Edward Island	90,000	60,467
Nova Scotia	699,250	409,715
New Brunswick	1,290,721	1,026,542
Quebec	23,764,359	16,112,449
Ontario	12,725,862	9,068,101
Manitoba	1,811,050	957,967
Saskatchewan	3,545,348	2,006,478
Alberta	1,674,200	961,521
British Columbia[1]	8,064,685	6,589,580
Canada	**53,665,475**	**37,192,820**

Size of Loan	Authorized	Credits
	$	No.
$5,000 or under	56,200	15
$5,001 to $25,000	3,744,338	244
$25,001 to $50,000	4,863,377	123
$50,001 to $100,000	8,042,038	107
$100,001 to $200,000	9,711,208	65
$200,001 or over	27,248,314	46
Totals	**53,665,475**[2]	**600**

Industry	Authorized	Outstanding
	$	$
Foods and beverages	5,514,113	3,607,624
Rubber goods	50,000	10,000
Leather products	1,002,500	382,217
Textile products (except clothing)	3,677,625	2,633,284
Clothing (textiles and fur)	1,426,650	886,000
Wood products	7,605,752	5,699,681
Paper products (including pulp)	4,056,400	3,845,158
Printing, publishing and allied industries	752,500	351,125
Iron and steel products (including machinery and equipment)	5,371,180	3,474,322
Transportation equipment	2,756,664	1,875,341
Non-ferrous metal products	450,500	360,443
Electrical apparatus and supplies	2,705,106	1,091,721
Non-metallic mineral products	2,647,090	1,857,525
Petroleum and coal products	2,965,000	1,497,744
Chemical products	7,019,692	5,795,922
Miscellaneous manufacturing industries	970,000	520,764
Refrigeration	3,520,703	2,693,949
Generating or distributing electricity	250,000	80,000
Commercial air services	924,000	530,000
Totals	**53,665,475**	**37,192,820**

[1] Includes the Yukon and Northwest Territories. [2] Because of partial repayments on account of current authorizations, the net authorizations were $44,177,884 of which those in excess of $200,000 totalled $23,946,837.

Section 2.—Currency

Subsection 1.—Notes and Coinage

Note Circulation.—The development by which bank notes became the chief circulating medium in Canada prior to 1935 is described in the 1938 Year Book, pp. 900-905. The main steps of this development that remained as permanent features of the system are outlined in the 1941 Year Book, pp. 809-810.

When the Bank of Canada commenced operations in 1935 it assumed liability for Dominion notes outstanding. These were replaced in public circulation and partly replaced in cash reserves by the Bank's legal tender notes in denominations of $1, $2, $5, $10, $20, $50 and $100. Deposits of chartered banks at the Bank of Canada completed the replacement of the old Dominion notes of $1,000 to $50,000 denomination that had previously been used as cash reserves.

The chartered banks were required under the Bank Act of 1934 to reduce gradually the issue of their own bank notes during the years 1935-45 to an amount not in excess of 25 p.c. of their paid-up capital on Mar. 11, 1935. Bank of Canada notes thus replaced chartered bank notes as the issue of the latter was reduced. Further restrictions introduced by the 1944 revisions of the Bank Act cancelled the

right of chartered banks to issue or re-issue notes after Jan. 1, 1945, and in January 1950 the chartered banks' liability for such of their notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada in return for payment of a like sum to the Bank of Canada.

The classification of Bank of Canada notes in circulation, by denomination, shown in Table 3 for 1950-52 is not strictly comparable with the classification for earlier years. Dominion notes have been excluded from the denomination classification and the total only is shown. Also, an item has been added showing the outstanding chartered bank notes issued originally for circulation in Canada. The statistics of total notes in the hands of the general public are comparable with earlier years.

3.—Bank of Canada Notes, by Denomination, and Other Notes in Circulation, 1950-52

NOTE.—Annual averages of month-end figures. The totals outstanding are not always multiples of the denominations of notes because of adjustments made according to scale when parts of mutilated notes are turned in for cancellation.

Denomination	1950	1951	1952
	$	$	$
$1	45,910,769	48,809,962	51,641,466
$2	34,243,030	35,911,842	37,927,230
$5	103,833,274	107,085,457	110,816,640
$10	404,655,684	422,317,512	441,728,407
$20	323,572,326	353,237,484	392,511,009
$25	46,614	46,565	46,515
$50	104,392,817	108,221,783	114,672,846
$100	244,904,066	258,018,267	273,053,869
$500	170,875	139,583	112,038
$1,000	13,735,750	10,183,083	9,528,692
Totals	1,275,465,205	1,343,971,538	1,432,038,712
Provincial notes	27,568	27,568	27,568
Dominion notes	4,713,347	4,696,543	4,675,772
Defunct bank notes	88,429	88,380	88,364
Chartered bank notes[1]	12,944,361	11,895,393	11,108,797
Grand Totals	**1,293,238,910**	**1,360,679,422**	**1,447,939,213**

[1]In January 1950 the chartered banks' liability for such of their notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada.

4.—Annual Averages of Note Circulation in the Hands of the Public, 1943-52

NOTE.—Newfoundland has long used Canadian bank notes so that when that Province united with Canada in 1949, no adjustment was necessary in the circulation figures, but the effect of including the population of Newfoundland from 1949 was to reduce the per capita note circulation by an estimated $1. Figures comparable to those shown below for the years 1926-42 are given in the 1946 Year Book, p. 959.

Year	Annual Averages of Month-End Figures			Annual Averages of Daily Figures	
	Bank of Canada Notes[1]	Chartered Bank Notes[2]	Total	Amount[3]	Per Capita[4]
	$	$	$	$	$
1943	660,998,231	49,082,172[5]	710,080,403	688,000,000	58·33
1944	821,330,660	37,056,187	858,386,847	835,000,000	69·90
1945	940,911,000	28,636,174	969,547,174	951,000,000	78·78
1946	981,727,494	23,172,717	1,004,900,211	992,000,000	80·70
1947	1,009,112,506	19,675,994	1,028,788,500	1,013,000,000	80·71
1948	1,055,587,720	17,109,071	1,072,696,791	1,053,000,000	82·12
1949	1,086,744,068	14,731,992	1,101,476,060	1,087,000,000	80·84
1950	1,100,898,470	[6]	1,101,322,513	1,085,000,000	79·13
1951	1,151,201,531	—	1,151,481,161	1,132,000,000	80·81
1952	1,227,449,385	—	1,227,449,385	1,207,000,000	83·57

[1] Total issue less notes held by chartered banks. [2] Gross note circulation only; notes held by other chartered banks are not available. Includes, prior to 1950, a relatively small amount issued for circulation outside Canada. [3] *Figures, to nearest million, supplied by the Bank of Canada.* [4] *Figures based on* estimates of population as given at p. 129; *see* headnote to this table. [5] Gross note circulation, less notes held by other chartered banks. [6] In January 1950 the chartered banks' liability for such of their notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada.

Coinage.—Under the Currency, Mint and Exchange Fund Act (R.S.C. 1952, c. 315), gold coins may be issued in denominations of twenty dollars, ten dollars and five dollars (nine-tenths fine or millesimal fineness, 900). Subsidiary coins include: silver coins in denominations of one dollar, 50 cents, 25 cents and 10 cents (eight-tenths fine or millesimal fineness, 800); pure nickel five-cent coins; and bronze (copper, tin and zinc) one-cent coins. Provision is made for the temporary alteration of composition in event of a shortage of prescribed metals. A tender of payment of money in coins is a legal tender in the case of gold coins for the payment of any amount; in the case of silver coins for the payment of an amount up to $10; nickel coins for payment up to $5; and bronze coins up to 25 cents.

5.—Circulation of Canadian Coin, as at Dec. 31, 1943-52

NOTE.—The figures shown are of net issues of coin. Figures for 1901-25 are given in the 1927-28 Year Book, p. 858, and for 1926-42 in the 1946 edition, p. 956.

Year	Silver	Nickel	Tombac[1]	Steel	Bronze	Total	Per Capita[2]
	$	$	$	$	$	$	$
1943	51,009,046	4,826,033	1,407,424	—	6,300,627	63,543,130	5·39
1944	54,972,812	4,825,057	1,407,754	571,000	6,753,329	68,529,952	5·74
1945	58,327,590	4,823,237	1,407,462	1,521,170	7,499,263	73,578,722	6·09
1946	59,944,549	5,113,103	1,155,791	1,520,849	8,024,547	75,758,839	6·16
1947	61,049,986	5,503,117	868,994	1,520,647	8,382,327	77,325,071	6·16
1948	63,829,640	6,117,555	730,064	1,520,210	9,088,221	81,285,690	6·34
1949	67,874,750	6,753,780	661,333	1,519,743	9,407,325	86,216,931	6·41
1950	73,473,724	7,393,138	621,440	1,519,419	10,012,143	93,019,864	6·78
1951	78,638,143	7,815,103	599,655	1,701,849	10,794,169	99,548,919	7·11
1952	83,463,939	7,814,398	584,882	2,278,329	11,476,591	105,618,139	7·32

[1] Tombac, a copper-zinc alloy, was used to conserve nickel for war purposes. [2] Per capita figures are based on estimates of population as given at p. 129.

The Royal Canadian Mint.—The Mint at Ottawa was established as a branch of the Royal Mint under the (Imperial) Coinage Act, 1870, and opened on Jan. 2, 1908. In 1931 (21-22 Geo. V, c. 48) it was constituted a branch of the Canadian Department of Finance and has since operated as the Royal Canadian Mint. From 1858 the British North American provinces, and later Canada, obtained their coins from the Royal Mint at London or from The Mint, Birmingham. Before that date, coins were mainly British, United States and Spanish. In its earlier years the operations of the Mint in Canada were confined to the production of gold, silver and bronze coins for domestic circulation and of British sovereigns and small coins struck under contract for Newfoundland and Jamaica.

Before 1914, only small quantities of gold bullion were refined, but during World War I the Mint came to the assistance of the British Government by establishing a refinery in which nearly 20,000,000 oz. t. of South African gold were treated on account of the Bank of England. The subsequent development of the gold-mining industry in Canada has resulted in gold-refining becoming one of the principal activities of the Mint. Fine gold produced from the rough bullion shipments received from the mines is purchased by the Mint and later delivered to the Bank of Canada for account of the Minister of Finance in bars of approximately 400 oz. t. each, or, in the case of those mines authorized to sell gold in the open market, the bullion is shipped to various domestic and foreign processors. The fine silver extracted from the rough gold is generally used for coinage purposes.

6.—Annual Receipts of Gold Bullion at the Royal Canadian Mint, and Bullion and Coinage Issued, 1943-52

NOTE.—Figures for 1926-42 are given in the 1946 Year Book, p. 957.

Year	Gold Received	Gold Bullion Issued	Silver Coin Issued	Nickel Coin Issued	Steel Coin Issued	Tombac[1] Coin Issued	Bronze Coin Issued
	oz. t.	oz. t.	$	$	$	$	$
1943	3,616,959	3,645,740	7,044,000	—	—	1,238,000	881,300
1944	2,862,048	2,829,755	4,006,000	—	571,000	400	454,600
1945	2,503,416	2,499,163	3,416,300	—	950,300	—	748,500
1946	2,652,245	2,665,964	1,710,000	291,500	—	—	528,500
1947	2,868,469	2,859,084	1,186,000	391,000	—	—	360,300
1948	3,401,991	3,405,073	2,829,956	615,500	—	—	708,300
1949	3,925,618	3,865,296	4,148,842	637,500	—	—	321,901
1950	4,422,968	4,347,961	5,641,805	640,510	—	—	607,003
1951	4,169,480	4,167,485	5,213,677	423,003	182,829	—	783,329
1952	3,937,298	4,031,063	4,869,552	597	576,965	—	683,820

[1] *See* footnote 1, Table 5.

Subsection 2.—General Public Holdings of Certain Liquid Assets

The Bank of Canada has developed a presentation of statistics concerning the volume of money. This presentation shows not only currency and active bank deposits (formerly referred to as "money supply"), but also inactive chartered bank deposits and Government of Canada securities which, although not used to make payments, are forms in which the public holds its liquid funds. The series has been carried back to 1938 and provides a good approach to the problem of measuring changes in the volume of money under present-day conditions.

7.—General Public Holdings of Certain Liquid Assets, as at Dec. 31, 1938-52

(Millions of dollars)

As at Dec. 31—	Currency and Active Bank Deposits	Chartered Bank Notice Deposits[1]	Government of Canada Securities[2]	Total
1938	1,131	1,472	3,228	5,831
1939	1,370	1,544	3,279	6,193
1940	1,563	1,438	3,670	6,671
1941	1,901	1,433	4,162	7,496
1942	2,349	1,436	5,344	9,129
1943	2,726	1,654	7,184	11,564
1944	3,153	2,060	9,131	14,344
1945	3,514	2,391	11,310	17,215
1946	3,996	2,856	11,175	18,027
1947	3,944	3,143	10,763	17,850
1948	4,335	3,408	10,249	17,992
1949	4,422	3,751	9,902	18,075
1950	4,851	3,861	10,066	18,778
1951	4,843	3,894	9,388	18,125
1952	5,173	4,129	9,062	18,365

[1] Estimated aggregate minimum quarterly balances in chartered bank personal savings deposits in Canada plus non-personal notice deposits in Canada. [2] Holdings of all investors, other than the Bank of Canada, chartered banks and Government of Canada accounts. Includes direct and guaranteed securities (including refundable taxes) at par. Direct debt includes both matured and unmatured issues outstanding, exclusive of sinking fund holdings; guaranteed debt is included on the basis of total unmatured issues outstanding; Newfoundland debt assumed by the Government of Canada has been included since June 1949. Foreign pay securities have been valued at official mid-rates of exchange to Sept. 30, 1950, and at market rates thereafter.

In measuring currency and active bank deposits, it is necessary to decide which categories of bank deposits should be classed as active and which, by their nature, should be regarded more appropriately as part of the public's other liquid asset holdings. Generally, it has been satisfactory to classify bank deposits as active if cheques may be drawn against them. In other countries this criterion has seemed to work fairly well because cheques may not be drawn against savings

deposits. In Canada, however, cheques are, in practice, drawn freely against savings deposits and this poses an awkward problem. To omit all savings deposits of chartered banks would ignore the obvious fact that, for many people, a savings account is an active chequing account which is very similar to a current deposit. On the other hand it is known from available information that, of the total amount on deposit in savings accounts in Canada, much the larger part is, in practice, inactive. Chartered banks pay interest on the minimum quarterly balances in personal savings accounts, i.e., on the sum that has been left undisturbed for the quarterly period; from the amount of interest that is actually paid on this basis as compared with the nominal rate of interest, it is apparent that the aggregate minimum quarterly balances in personal savings accounts are about five-sixths of the total of such deposits at the present time.

It is felt, therefore, that a more realistic account of monetary developments in Canada—and one more comparable with the usual presentation of similar statistics in other countries—is obtained by omitting the minimum quarterly balances in personal savings deposits and non-personal notice deposits from active money statistics. It has seemed preferable to exclude these deposits on the basis that they are inactive in practice rather than to include them on the grounds that they are potentially active because cheques may be issued against them.

The published returns of Canadian chartered banks include among assets "Cheques on Other Banks" which represents the amount of cheques that have been credited to the deposit account of the payee but not yet cleared against the deposit account of the drawer. To the extent of such items in 'float' there is, therefore, duplication in the figures of bank deposits. In Table 8, "Cheques on Other Banks" has been deducted from the figure of chartered bank deposits in order to eliminate this duplication.

Government deposits are given different treatment in different countries as far as volume-of-money statistics are concerned. In most cases, the commonly used figure of bank deposits excludes Government deposits and, on the whole, it appears preferable to exclude Government of Canada deposits from the Canadian active money figures.

8.—Summary Statistics of Currency and Active Bank Deposits, as at Dec. 31, 1938-52

(Millions of dollars)

As at Dec. 31—	Currency Outside Banks[1]			Active Bank Deposits			Total Currency and Active Bank Deposits
	Notes	Coin	Total Currency	Chartered Bank Net[2]	Bank of Canada 'Other' Deposits[3]	Total Active Bank Deposits	
1938	207	31	238	890	3	893	1,131
1939	247	34	281	1,071	18	1,089	1,370
1940	341	38	379	1,174	10	1,184	1,563
1941	450	42	492	1,403	6	1,409	1,901
1942	633	49	682	1,648	19	1,667	2,349
1943	794	55	849	1,859	18	1,877	2,726
1944	930	60	990	2,135	28	2,163	3,153
1945	992	63	1,055	2,429	30	2,459	3,514
1946	1,031	65	1,096	2,806	94	2,900	3,996
1947	1,046	66	1,112	2,764	68	2,832	3,944
1948	1,115	70	1,185	3,069	81	3,150	4,335
1949	1,110	74	1,184	3,111	127	3,238	4,422
1950	1,136	78	1,214	3,430	207	3,637	4,851
1951	1,191	84	1,275	3,502	66	3,568	4,843
1952	1,289	88	1,377	3,751	45	3,796	5,173

[1] Note circulation excluding notes held by chartered banks together with total coin issued by the Mint, less coin held by the banks. [2] Demand and notice deposits, deposits of Provincial Governments, United Kingdom and foreign banks; less 'float' deposits, that is, cheques on banks as shown in month-end returns. [3] Excludes Government of Canada, chartered bank and foreign deposits.

Section 3.—Commercial Banking

Since one of the chief functions of the early banks in Canada was to issue notes to provide a convenient currency or circulating medium, it has been expedient to cover both currency and banking in one historical sketch, which is given in the 1938 Year Book, pp. 900-905. A list of the banks at Confederation appears in the 1940 Year Book, p. 897, and bank absorptions since 1867 are given in the 1941 edition, pp. 812-813. A table in the 1937 Year Book, pp. 894-895, shows the insolvencies from Confederation; the last insolvency occurred in 1923. A summary of the more important changes resulting from the revision of the Bank Act in 1944 is given in the 1946 Year Book, pp. 961-962.

Subsection 1.—Chartered Banks

Canadian commercial banks are "chartered" or licensed by the Federal Government and operate under one federal statute—the Bank Act (R.S.C. 1952, c. 12). In the period 1881-1901, the number of chartered banks doing business in Canada under the Bank Act remained almost the same (36 in 1881 and 1891, and 34 in 1901), but during the present century there has been in banking, as in industry, an era of amalgamations and the number of banks declined to 25 in 1913 and to 10 in 1931. At the same time, banking facilities increased and the banking business continued its rapid development.

An Act to incorporate an additional chartered bank, called the Mercantile Bank of Canada (2 Eliz. II, c. 67), was given Royal Assent on Mar. 31, 1953. This Bank, the main office of which is located at Montreal, has a capital stock of $3,000,000 divided into 300,000 shares of the par value of $10 each. The Bank commenced business on Dec. 7, 1953.

9.—Branches of Chartered Banks in Canada, by Province, as at Dec. 31, for Certain Years 1868-1952

NOTE.—Figures for 1920 and subsequent years include sub-agencies in Canada for receiving deposits for the banks employing them.

Province or Territory	1868	1902	1905	1920	1926	1930	1940	1943	1946	1949	1950	1951	1952
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland	...	...	...	...	...	...	...	...	...	38	39	40	42
P. E. Island	—	9	10	41	28	28	25	23	23	23	23	23	23
Nova Scotia	5	89	101	169	134	138	134	126	127	137	144	147	148
New Brunswick	4	35	49	121	101	102	97	93	96	98	100	101	101
Quebec	12	137	196	1,150	1,072	1,183	1,083	1,041	1,067	1,145	1,164	1,184	1,211
Ontario	100	349	549	1,586	1,326	1,409	1,208	1,092	1,117	1,219	1,257	1,304	1,315
Manitoba	—	52	95	349	224	239	162	148	151	161	165	168	174
Saskatchewan	—	30	87	591	427	447	233	213	226	235	238	240	243
Alberta				424	269	304	172	163	190	230	246	257	264
British Columbia	2	46	55	242	186	229	192	180	216	268	294	304	318
Yukon and N.W.T.	—	—	3	3	3	4	5	5	6	8	9	8	9
Canada	**123**	**747**	**1,145**	**4,676**	**3,770**	**4,083**	**3,311**	**3,084**	**3,219**	**3,562**	**3,679**	**3,776**	**3,848**

10.—Branches of Individual Canadian Chartered Banks, by Province, as at Dec. 31, 1952

NOTE.—This table does not include 691 sub-agencies in Canada for receiving deposits.

Chartered Banks	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.
	No.	No.	No.	No.	No.	No.
Bank of Montreal	9	1	16	14	113	190
Bank of Nova Scotia	17	8	41	36	31	140
Bank of Toronto	—	—	1	—	25	131
Provincial Bank of Canada	—	2	—	10	120	12
Canadian Bank of Commerce	3	6	20	8	72	247
Royal Bank of Canada	9	4	63	22	92	228
Dominion Bank	—	—	1	2	14	117
Banque Canadienne Nationale	—	—	—	—	227	12
Imperial Bank of Canada	—	—	1	—	11	127
Barclays Bank (Canada)	—	—	—	—	2	1
Totals	**38**	**21**	**143**	**92**	**707**	**1,205**

Chartered Banks	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Total
	No.	No.	No.	No.	No.	No.
Bank of Montreal	26	36	51	67	2	525
Bank of Nova Scotia	9	23	28	36	—	369
Bank of Toronto	15	25	16	18	—	231
Provincial Bank of Canada	—	—	—	—	—	144
Canadian Bank of Commerce	38	47	54	77	3	575
Royal Bank of Canada	58	75	55	65	2	673
Dominion Bank	14	5	10	8	—	171
Banque Canadienne Nationale	4	—	—	—	—	243
Imperial Bank of Canada	9	24	31	18	1	222
Barclays Bank (Canada)	—	—	—	1	—	4
Totals	**173**	**235**	**245**	**290**	**8**	**3,157**

11.—Branches of Individual Canadian Chartered Banks outside Canada, with their Locations, as at Dec. 31, 1951 and 1952

NOTE.—This table does not include six sub-agencies operating outside Canada.

Bank and Location	1951	1952
	No.	No.
Bank of Montreal—		
United Kingdom	2	2
United States	3	2
Bank of Nova Scotia—		
United Kingdom	1	1
British West Indies	13	14
Dominican Republic	1	1
United States	1	1
Cuba	7	7
Puerto Rico	2	3
Canadian Bank of Commerce—		
United Kingdom	1	1
British West Indies	3	3
United States	5	5

Bank and Location	1951	1952
	No.	No.
Royal Bank of Canada—		
United Kingdom	2	2
British West Indies	12	12
United States	1	1
Cuba	18	18
Puerto Rico	3	3
Central and South America	19	20
Haiti	6	6
Dominican Republic		
France	1	1
Dominion Bank—		
United Kingdom	1	1
United States	1	1
Banque Canadienne Nationale—		
France	1	1
Totals	**104**	**106**

Combined Financial Statistics of Chartered Banks.—In order to afford a clear account of the nature of banking transactions in Canada, bank liabilities have been classified in Table 12 into two main groups: liabilities to shareholders and liabilities to the public. Only the latter group is ordinarily considered when determining the financial position of any such institution. Assets are divided into four

groups, 'other assets' being included in the total. The relative rates of increase of capital and reserve funds may be noted in the table, also the great increase in the proportion of liabilities to the public to total liabilities and the gradually increasing percentage of liabilities to the public to total assets. The declining proportion of chartered bank notes in circulation to total liabilities to the public is also characteristic of the evolution of banking in recent times (*see* pp. 1128-1129).

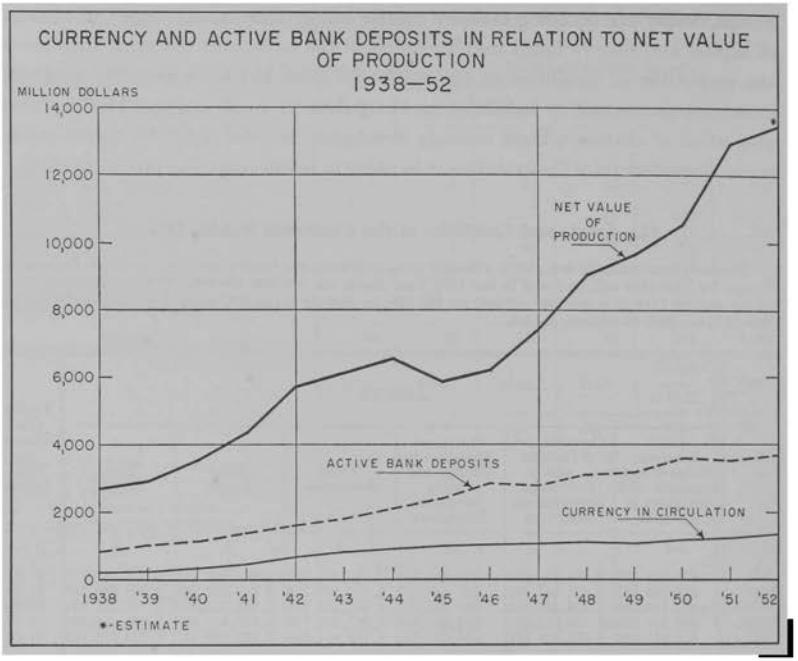
12.—Assets and Liabilities of the Chartered Banks, 1943-52

NOTE.—These statistics are yearly averages computed from the twelve monthly returns in each year. Figures for 1867-1880 will be found in the 1938 Year Book, pp. 918-919; for 1881-1915 in the 1941 edition, pp. 815-816; for 1916-26 in the 1946 edition, pp. 963-964; for 1927-36 in the 1947 edition, pp. 1025-1026; and for 1937-42 in the 1952-53 edition, p. 1105.

Year	ASSETS						Public Liabilities to Total Assets
	Gold Reserves, Notes of and Deposits with the Bank of Canada	Government of Canada and Provincial Government Securities	Municipal Securities in Canada and Public Securities Elsewhere	Total Securities	Total Loans	Total Assets[1]	
	$	$	$	$	$	$	p.c.
1943...	422,561,348	2,404,756,734	232,405,156	2,713,939,940	1,334,080,022	5,148,458,722	94·19
1944...	538,206,187	2,991,047,582	283,417,399	3,353,259,736	1,343,938,364	5,990,410,887	94·98
1945...	604,842,928	3,438,830,751	313,061,291	3,857,534,890	1,505,039,333	6,743,217,134	95·48
1946...	686,368,427	3,734,872,237	381,996,554	4,287,002,710	1,642,519,066	7,429,608,029	95·89
1947...	679,051,569	3,395,306,552	436,075,580	4,108,441,158	2,125,582,441	7,810,913,975	95·72
1948...	719,499,043	3,314,539,556	393,841,399	4,120,137,032	2,388,597,680	8,140,145,708	95·81
1949...	762,901,802	3,573,294,569	387,844,005	4,370,052,504	2,618,421,119	8,657,764,277	95·99
1950...	769,951,696	3,563,018,724	402,235,668	4,363,401,201	2,872,411,227	9,015,109,852	96·06
1951...	799,304,753	3,134,186,339	384,481,994	3,930,581,704	3,495,723,921	9,384,800,263	96·11
1952...	850,995,055	3,271,073,120	416,556,385	4,070,324,029	3,607,883,433	9,760,480,522	96·14

Year	LIABILITIES						
	Liabilities to Shareholders		Liabilities to the Public				
	Capital	Rest or Reserve Fund	Notes in Circulation	Demand Deposits in Canada	Notice Deposits in Canada	Total on Deposit[2]	Total Public Liabilities[3]
	$	$	$	$	$	$	$
1943...	145,500,000	136,750,000	50,230,204	1,619,407,736	1,864,177,700	4,592,336,705	4,849,222,532
1944...	145,500,000	136,750,000	37,056,187	1,863,793,981	2,272,573,361	5,422,302,978	5,689,443,095
1945...	145,500,000	136,750,000	28,636,174	1,986,075,142	2,750,358,254	6,159,997,976	6,438,617,676
1946...	145,500,000	144,666,667	23,172,717	2,155,312,749	3,327,057,442	6,771,555,153	7,123,979,417
1947...	145,500,000	178,000,000	19,675,994	2,138,771,178	3,681,231,057	7,075,355,884	7,476,627,449
1948...	145,500,000	182,416,667	17,109,071	2,258,658,693	3,972,159,586	7,402,776,952	7,798,910,335
1949...	145,500,000	187,000,000	14,731,992	2,353,033,907	4,333,888,999	7,921,694,763	8,310,215,001
1950...	145,500,000	200,000,000	424,043[4]	2,562,813,591	4,547,880,387	8,220,886,332	8,660,173,804
1951...	146,502,115	200,837,564	279,630[4]	2,711,524,845	4,592,929,318	8,464,510,837	9,019,780,755
1952...	148,522,618	211,798,615	180,369[4]	2,931,558,298	4,811,471,906	8,899,236,252	9,384,111,788

[1] Includes other assets not specified. [2] Includes deposits of Federal and Provincial Governments and also deposits elsewhere than in Canada. [3] Includes other liabilities not specified. [4] After January 1950, the chartered banks' liability for such notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada; these figures cover notes in circulation outside Canada which were not taken over by the Bank of Canada.



13.—Analysis of Assets of Chartered Banks, 1950-52

NOTE.—The statistics in this table are averages computed from the twelve monthly returns in each year.

Assets	1950	1951	1952
	$	$	$
Cash reserves against Canadian deposits (as per Table 26)	753,914,014	782,564,265	833,332,674
Subsidiary coin	13,647,917	14,567,622	15,994,769
Notes of other Canadian banks	379,044,434[1]	471,665,967[1]	562,336,604[1]
Deposits at other Canadian banks	1,132,255	877,118	313,582
Gold and coin abroad	2,389,765	2,172,866	1,667,612
Foreign currencies	70,328,005	40,333,387	38,764,903
Deposits at United Kingdom banks	19,218,843	22,569,857	18,301,927
Deposits at foreign banks	222,287,683	237,614,233	259,198,723
Securities—			
Federal and Provincial Government securities	3,563,018,724	3,134,186,339	3,271,073,120
Other Canadian and foreign public securities	402,235,668	384,481,994	416,556,385
Other bonds, debentures and stocks	398,146,809	411,913,371	382,694,524
Call and Short Loans—			
In Canada	110,588,658	98,103,643	128,478,786
Elsewhere	92,927,396	107,849,379	132,534,268
Current Loans—			
Canada—			
Loans to Provincial Governments	24,848,392	34,723,105	18,862,541
Loans to cities, towns, municipalities and school districts	90,355,111	113,707,104	112,732,282
Other current loans and discounts	2,330,155,352	2,867,753,460	2,942,485,180
Elsewhere than in Canada	22,227,092	272,180,790	271,281,371
Non-current loans	1,309,226	1,406,440	1,509,005

[1] Includes cheques of other banks.

13.—Analysis of Assets of Chartered Banks, 1950-52—concluded

Assets	1950	1951	1952
	$	$	$
Other Assets—			
Real estate, other than bank premises	429,804	156,372	109,269
Mortgages on real estate sold by the banks	598,750	417,479	390,850
Bank premises	94,026,032	116,185,897	125,138,049
Bank circulation redemption fund	68,506	—	—
Liabilities of customers under letters of credit as *per contra*	200,960,794	255,207,737	208,972,300
All other assets	21,250,622	14,161,838	17,751,798
Totals, Assets	**9,015,109,852**	**9,384,800,263**	**9,760,480,522**

14.—Analysis of Liabilities of Chartered Banks, 1950-52

NOTE.—The statistics in this table are averages computed from the twelve monthly returns in each year.

Liabilities	1950	1951	1952
	$	$	$
LIABILITIES TO THE PUBLIC			
Notes in circulation	424,043[1]	279,630[1]	180,369[1]
Deposit Liabilities—			
Government Deposits—			
Federal	193,005,487	229,123,262	141,069,925
Provincial	186,606,599	170,266,769	191,521,145
Public Deposits—			
Demand	2,562,813,591	2,711,524,845	2,931,558,298
Notice	4,547,880,387	4,592,929,318	4,811,471,906
Other[2]	81,868,085	99,007,261	133,447,802
Foreign	648,712,183	661,659,382	690,167,176
Inter-Bank Deposits—			
Canadian	81,925,038	117,943,058	119,361,485
United Kingdom	39,206,389	45,176,237	43,345,413
Other	107,215,570	127,526,578	105,212,030
Totals, Deposit Liabilities[3]	8,449,233,329	8,755,156,710	9,167,155,180
Canadian currency (estimated)	*7,597,000,000*	*7,851,000,000*	*8,238,000,000*
Foreign currency (estimated)	*852,000,000*	*904,000,000*	*929,000,000*
Totals, Note and Deposit Liabilities	8,449,657,372	8,755,436,340	9,167,335,549
Other Liabilities to the Public—			
Letters of credit outstanding	200,960,794	255,207,737	208,972,300
Liabilities not included under foregoing headings	9,555,638	9,136,678	7,803,939
TOTALS, LIABILITIES TO THE PUBLIC	8,660,173,804	9,019,780,755	9,384,111,788
LIABILITIES TO SHAREHOLDERS			
Capital	145,500,000	146,502,115	148,522,618
Rest or reserve fund	191,750,000	200,837,564	211,798,615
Grand Totals, Liabilities	**8,997,423,804**	**9,367,120,434**	**9,744,433,021**

[1] After January 1950, the chartered banks' liability for such notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada; these figures cover notes in circulation outside Canada which were not taken over by the Bank of Canada. [2] Deposits in currencies other than Canadian are expressed in Canadian dollars at current rate of exchange. [3] Totals do not correspond with those in Table 12 because of the inclusion here of inter-bank deposits.

15.—Significant Ratio Comparisons of Assets and Liabilities of Chartered Banks, 1943-52

NOTE.—Yearly averages of month-end figures, except where otherwise specified. Figures for the years 1926-42 are given in the 1946 Year Book, p. 966.

Year	Canadian Cash to Canadian Deposits		Securities to Note and Deposit Liabilities	Loans to Note and Deposit Liabilities
	Daily[1]	Month-End		
	p.c.	p.c.	p.c.	p.c.
1943	10·9	10·4	57·4	28·2
1944	11·8	11·2	60·2	24·1
1945	11·4	11·0	61·2	23·9
1946	11·4	11·2	61·8	23·7
1947	10·8	10·6	56·6	29·3
1948	10·9	10·6	54·3	31·5
1949	10·4	10·3	53·8	32·2
1950	10·1	9·9	51·6	34·0
1951	10·2	10·0	44·9	39·9
1952	10·4	10·3	44·4	39·4

[1] Figures supplied by the Bank of Canada.

16.—Deposits in Chartered Banks, according to Size and Currency, as at Sept. 30, 1951 and 1952

Class and Amount of Deposit	Deposit Accounts (Canadian Currency)	Deposits in Canadian Currency	Deposit Accounts (Other than Canadian Currency)	Deposits in Currencies other than Canadian
1951	No.	$	No.	$
Deposits Payable on Demand—				
$1,000 or less	852,867	187,152,357	2,589	749,463
$1,000 to $5,000	164,953	363,407,427	716	1,903,033
$5,000 to $25,000	49,726	501,344,301	484	6,424,776
$25,000 to $100,000	10,197	475,660,230	208	12,123,359
Over $100,000	3,344	1,275,890,807	145	64,736,559
Adjustment items[1]	...	−152,347,068	...	+14,653,509
Totals	1,081,087	2,651,108,054	4,142	100,590,699
Deposits Payable After Notice—				
$1,000 or less	6,415,911	1,021,377,846	60	15,734
$1,000 to $5,000	821,593	1,737,639,550	9	22,201
$5,000 to $25,000	135,617	1,143,673,834	1	22,072
$25,000 to $100,000	6,688	289,032,606	—	—
Over $100,000	1,128	393,138,836	1	298,356
Adjustment items[1]	...	+9,848,161	...	+32
Totals	7,380,937	4,594,710,833	71	358,395
1952				
Deposits Payable on Demand—				
$1,000 or less	873,472	197,178,682	3,543	1,118,995
$1,000 to $5,000	183,074	405,335,460	1,157	2,753,001
$5,000 to $25,000	56,835	578,690,094	769	9,075,987
$25,000 to $100,000	11,879	550,924,973	353	19,471,251
Over $100,000	3,979	1,470,506,292	204	108,157,848
Adjustment items[1]	...	−176,678,833	...	+14,953,548
Totals	1,129,239	3,025,956,668	6,026	155,530,630
Deposits Payable After Notice—				
$1,000 or less	6,665,742	1,091,495,949	90	18,804
$1,000 to $5,000	880,546	1,866,287,102	20	45,845
$5,000 to $25,000	145,925	1,223,356,827	3	38,799
$25,000 to $100,000	6,911	295,333,488	3	149,063
Over $100,000	1,090	414,990,694	2	457,499
Adjustment items[1]	...	+9,416,256	...	+54
Totals	7,700,214	4,900,880,316	118	710,064

[1] Represents certified cheques, interest accrued on interest-bearing accounts, items in transit, etc.

17.—Loans of Chartered Banks, according to Class, Outstanding at Sept. 30, 1950-52

NOTE.—The classification of chartered bank loans was revised in 1950; the figures in this table are, therefore, not comparable with those for 1947-49 in the 1951 Year Book, pp. 1043-1044.

Class of Loan	1950	1951	1952
	$'000	$'000	$'000
Government and Other Public Services—			
Provincial governments	23,600	24,859	6,349
Municipal governments and school districts	91,505	114,531	102,399
Religious, educational, health and welfare institutions	33,143	45,912	43,284
Totals, Government and Other Public Services	148,248	185,302	152,032
Financial—			
Investment dealers and brokers to the extent payable on call or within thirty days	101,177	107,091	135,173
Trust, loan, mortgage, investment and insurance companies and other financial institutions	85,983	91,720	107,519
Totals, Financial	187,160	198,811	242,692
Personal—			
Individuals, for other than business purposes, on the security of marketable stocks and bonds	243,370	255,605	274,324
Individuals, for other than business purposes, *n.e.s.*	218,201	211,303	227,992
Totals, Personal	461,571	466,908	502,316
Agricultural, Industrial and Commercial—			
Farmers	255,783	298,936	334,202
Industry—			
Chemical and rubber products	29,175	54,257	30,322
Electrical apparatus and supplies	14,310	41,388	22,886
Food, beverages and tobacco	122,514	171,968	168,366
Forest products	76,057	115,685	136,500
Furniture	16,188	19,776	14,363
Iron and steel products	53,389	97,509	95,641
Mining and mine products	26,015	33,381	47,991
Petroleum and products	22,914	31,055	32,813
Textiles, leather and clothing	138,862	213,377	157,963
Transportation equipment	30,102	46,437	52,810
Other products	55,180	63,118	53,156
Public utilities, transportation and communication companies	53,912	87,937	67,526
Construction contractors	122,736	151,774	158,643
Grain dealers and exporters	93,124	98,558	186,518
Instalment finance companies	96,476	100,830	149,397
Merchandisers	436,144	542,869	483,967
Other business	135,492	133,837	139,047
Totals, Agricultural, Industrial and Commercial	1,778,373	2,302,692	2,332,111
Grand Totals	**2,575,352**	**3,153,713**	**3,229,151**

Cheque Payments.—The monthly record of amounts of cheques charged to accounts at all banking offices situated in the clearing-house centres of Canada is available from 1924. The trend indicated by cheques cashed shows the occurrence of three major economic cycles since World War I. The first reached its peak in 1920 with the low point of the succeeding depression in 1922. The high point was next achieved in 1929, owing partly to economic conditions involving heavy stock speculation. The low point was reached in 1932 and, with the exception of a minor set-back in 1938, an upward trend has continued to the present time.

The amount of cheques cashed in the clearing-house centres of Canada advanced year by year from 1938 to a maximum of $125,196,894,021 in 1952; this advance paralleled the upward movement in the payment of salaries and wages and the greater distribution of consumer goods through wholesale and retail outlets. The increase, amounting to 305 p.c. since 1938, was general in the five economic areas,

British Columbia showing the highest gain at 474 p.c. The Prairie Provinces came second, followed by the Atlantic Provinces, Ontario and Quebec. However, of the $94,000,000,000 increase, Ontario and Quebec contributed $64,000,000,000, or 68 p.c.

Thirty-one of the 35 clearing-house centres showed an advance in 1952 over 1951, although the magnitude of the gains varied. With the exception of Ottawa and three of the smaller Ontario cities, a new maximum was established in each centre. Payments at Toronto, the leading centre, increased 13·4 p.c., those at Montreal 8·7 p.c., Winnipeg 10·9 p.c. and Vancouver 11·9 p.c.

18.—Cheques Cashed at Individual Clearing-House Centres, 1948-52

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Clearing-House Centre	1948	1949	1950	1951	1952
	$	$	$	$	$
Atlantic Provinces—					
Halifax	1,049,266,016	1,065,168,877	1,186,545,819	1,334,025,774	1,374,609,920
Moncton	353,563,290	383,934,526	408,604,811	431,781,204	437,891,776
Saint John	567,250,089	511,975,434	521,695,644	568,605,976	632,357,394
St. John's[1]	...	356,595,091	531,314,367	554,032,197	621,505,645
Totals, Atlantic Provinces	1,970,079,395	2,317,673,928	2,648,160,641	2,888,445,151	3,066,364,735
Quebec—					
Montreal	20,978,798,588	22,037,124,579	26,099,176,124	29,184,504,317	31,720,259,139
Quebec	2,433,327,617	2,410,872,120	2,695,919,675	3,163,124,781	3,358,306,012
Sherbrooke	277,706,843	284,493,033	311,762,513	381,090,356	415,994,071
Totals, Quebec	23,689,833,048	24,732,489,732	29,106,858,312	32,728,719,454	35,494,559,222
Ontario—					
Brantford	381,128,797	435,843,033	422,413,293	486,994,671	495,283,901
Chatham	276,949,470	315,369,271	346,208,709	407,321,638	404,889,560
Cornwall[2]	...	...	104,523,918	187,013,346	196,278,431
Fort William	225,285,630	225,286,483	248,218,046	266,631,817	282,770,535
Hamilton	1,952,144,798	2,124,308,068	2,369,329,690	2,996,002,993	3,085,730,125
Kingston	232,559,287	241,453,150	273,225,082	279,208,526	316,909,862
Kitchener	463,306,010	494,710,382	536,279,128	623,023,658	617,647,692
London	1,069,977,738	1,181,502,918	1,391,711,953	1,528,832,870	1,567,887,355
Ottawa	3,676,301,837	4,040,899,636	4,140,136,704	4,459,566,076	5,454,556,571
Peterborough	260,089,790	279,739,034	308,157,373	339,002,949	334,153,813
St. Catharines	348,356,620	379,037,195	444,388,945	551,345,610	589,866,082
Sarnia	299,390,423	310,461,518	339,483,674	425,659,981	398,218,819
Sudbury	231,991,381	267,190,931	290,184,475	352,304,822	384,039,124
Toronto	22,655,184,798	24,712,385,631	30,276,045,017	32,271,836,720	36,606,773,373
Windsor	1,308,938,613	1,460,893,330	1,655,860,938	1,872,210,810	1,982,438,963
Totals, Ontario	33,381,605,192	36,469,080,580	43,146,166,945	47,046,956,487	52,717,444,206
Prairie Provinces—					
Brandon	133,695,331	145,757,042	154,492,112	176,870,098	181,575,950
Calgary	2,072,825,960	2,507,516,671	2,870,683,290	3,349,247,240	4,452,583,018
Edmonton	1,568,264,769	1,893,296,099	2,371,405,098	2,459,202,689	2,966,420,466
Lethbridge	219,442,238	246,492,056	284,387,678	309,577,383	311,448,198
Medicine Hat	100,545,349	102,839,449	105,443,903	123,547,273	127,437,055
Moose Jaw	231,955,560	248,492,488	248,525,487	277,985,850	310,945,984
Prince Albert	123,868,921	133,321,676	140,421,297	154,870,799	163,053,807
Regina	1,333,318,232	1,565,139,921	1,640,419,630	1,759,586,765	2,147,982,066
Saskatoon	442,603,392	465,492,857	511,781,987	590,104,806	637,830,056
Winnipeg	8,375,790,546	9,186,178,131	8,960,145,720	10,373,940,214	11,508,237,900
Totals, Prairie Provinces	14,602,310,298	16,494,526,390	17,287,706,202	19,574,933,117	22,807,514,530
British Columbia—					
New Westminster	326,958,401	319,810,859	401,102,786	479,943,321	491,736,985
Vancouver	5,765,370,362	6,157,070,811	6,901,611,242	8,212,945,667	9,193,882,535
Victoria	951,290,865	1,063,710,543	1,143,852,711	1,252,689,860	1,425,391,808
Totals, British Columbia	7,043,619,628	7,540,592,213	8,446,566,739	9,945,578,848	11,111,011,328
Grand Totals	**80,687,447,561**	**87,554,362,843**	**100,635,458,839**	**112,184,633,057**	**125,196,894,021**

[1] Included from April 1949. [2] Included from May 1950.

Financial Statistics of Individual Chartered Banks.—The principal assets and liabilities of the individual chartered banks are given for the five latest years in Tables **19** and **20**.

19.—Principal and Total Assets of Individual Chartered Banks, 1948-52

NOTE.—The statistics in this table are averages computed from the twelve monthly returns in each year. Figures for earlier years will be found in the corresponding table of previous Year Books.

Chartered Bank	Year	Cash Reserve Against Canadian Deposits[1]	Total Securities	Total Loans	Total Assets
		$	$	$	$
Bank of Montreal	1948	190,936,684	1,132,548,224	466,206,499	1,959,374,448
	1949	198,839,952	1,198,396,566	506,870,310	2,087,644,326
	1950	191,016,530	1,174,589,623	552,718,886	2,119,873,626
	1951	200,107,510	1,107,947,826	656,577,531	2,211,281,293
	1952	215,777,959	1,100,814,002	667,093,782	2,240,588,354
Bank of Nova Scotia	1948	52,883,260	299,319,646	270,639,558	727,956,674
	1949	61,980,211	312,681,002	307,239,629	783,613,909
	1950	65,845,694	268,697,300	348,433,490	800,761,697
	1951	67,622,645	256,251,196	409,774,033	865,013,063
	1952	72,085,522	265,323,337	432,765,453	904,879,308
Bank of Toronto	1948	40,898,287	210,585,319	122,612,071	408,449,544
	1949	42,979,749	231,027,870	138,250,480	446,511,338
	1950	43,127,671	227,601,591	152,578,963	463,048,709
	1951	49,515,953	189,427,769	192,550,796	483,232,621
	1952	47,723,871	203,608,439	197,857,089	505,344,564
Provincial Bank of Canada	1948	14,152,354	84,683,391	45,393,572	157,230,233
	1949	14,312,526	79,270,394	52,297,136	158,187,412
	1950	14,692,842	82,090,665	56,273,110	167,241,272
	1951	16,321,625	79,722,292	63,224,812	174,666,980
	1952	17,034,410	87,184,699	66,039,332	187,346,432
Canadian Bank of Commerce	1948	130,729,073	781,747,684	422,682,280	1,484,744,829
	1949	125,794,695	821,003,490	486,636,542	1,589,480,484
	1950	134,567,081	812,244,338	542,079,465	1,669,015,086
	1951	136,739,020	698,032,511	674,461,500	1,717,687,434
	1952	151,473,937	708,404,301	696,852,142	1,766,535,649
Royal Bank of Canada	1948	156,088,452	1,054,214,867	597,229,707	2,139,275,066
	1949	175,243,729	1,112,548,662	634,830,429	2,237,314,965
	1950	181,864,282	1,182,485,204	685,317,779	2,385,999,922
	1951	188,444,863	1,077,074,515	833,241,545	2,459,891,410
	1952	190,988,267	1,112,957,173	888,679,717	2,588,138,130
Dominion Bank	1948	39,924,645	162,721,210	136,833,775	381,433,720
	1949	42,144,497	163,387,422	158,749,545	406,787,719
	1950	39,913,392	170,970,431	175,266,211	437,759,966
	1951	40,515,499	123,093,854	224,941,378	454,980,847
	1952	44,505,290	145,656,549	224,745,862	489,879,099
Banque Canadienne Nationale	1948	38,612,101	185,748,804	145,104,464	397,555,711
	1949	39,823,480	207,237,242	143,411,373	417,057,585
	1950	38,955,630	202,421,326	155,556,240	423,504,345
	1951	37,737,765	183,807,508	194,948,635	447,669,846
	1952	41,354,385	214,707,113	185,243,619	475,006,948
Imperial Bank of Canada	1948	38,164,439	189,916,690	177,358,980	451,886,227
	1949	43,684,979	227,963,454	183,698,606	498,578,396
	1950	40,328,068	223,294,804	198,016,258	513,528,659
	1951	41,925,811	199,729,358	237,027,874	535,031,692
	1952	48,833,403	217,973,446	239,577,993	568,935,009

[1] Total Bank of Canada notes in the possession of the chartered bank together with its deposits with the Bank of Canada, but excluding minor amounts of gold carried in such reserves.

19.—Principal and Total Assets of Individual Chartered Banks, 1948-52—concluded

Chartered Bank	Year	Cash Reserve Against Canadian Deposits[1]	Total Securities	Total Loans	Total Assets
		$	$	$	$
Barclays Bank (Canada)	1948	2,966,372	18,651,197	4,536,774	32,239,256
	1949	3,621,232	16,536,402	6,437,069	32,588,143
	1950	3,602,728	19,005,919	6,170,825	34,376,570
	1951	3,633,533	15,494,875	8,975,817	35,345,077
	1952	3,555,623	13,694,970	9,028,444	33,827,029
Totals	**1948**	**705,355,667**	**4,120,137,032**	**2,388,597,680**	**8,140,145,708**
	1949	**748,425,050**	**4,370,052,504**	**2,618,421,119**	**8,657,764,277**
	1950	**753,913,918**	**4,363,401,201**	**2,872,411,227**	**9,015,109,852**
	1951	**782,564,224**	**3,930,581,704**	**3,495,723,921**	**9,384,880,263**
	1952	**833,332,667**	**4,070,324,029**	**3,607,883,433**	**9,760,480,532**

[1] Total Bank of Canada notes in the possession of the chartered bank together with its deposits with the Bank of Canada, but excluding minor amounts of gold carried in such reserves.

20.—Principal and Total Liabilities of Individual Chartered Banks, 1948-52

NOTE.—The statistics in this table are averages computed from the twelve monthly returns in each year. Figures for earlier years will be found in the corresponding table of previous Year Books.

Chartered Bank	Year	Notes in Circulation	Deposit Liabilities			Liabilities to Shareholders	Total Liabilities
			Government	Public	Inter-Bank		
		$	$	$	$	$	$
Bank of Montreal	1948	4,392,455	112,637,481	1,691,430,471	40,517,831	80,000,000	1,957,829,960
	1949	3,762,901	143,557,605	1,775,070,481	47,430,907	81,000,000	2,085,150,943
	1950	[1]	113,188,046	1,823,451,538	59,927,419	84,000,000	2,118,132,091
	1951	[1]	129,684,548	1,860,667,574	81,557,845	84,750,000	2,208,273,742
	1952	[1]	107,611,441	1,926,754,279	65,041,858	87,500,000	2,239,262,077
Bank of Nova Scotia	1948	1,535,056	20,634,134	624,644,899	13,016,868	36,000,000	725,864,470
	1949	1,267,888	25,405,279	681,721,012	13,417,246	36,000,000	781,151,368
	1950	53,686	18,355,416	699,625,336	19,454,097	36,000,000	797,830,286
	1951	47,669	20,907,810	749,998,378	23,984,242	39,006,346	861,700,956
	1952	43,153	17,603,545	795,682,063	22,355,716	44,913,105	901,237,786
Bank of Toronto	1948	631,158	13,908,247	362,944,852	5,317,967	20,000,000	407,627,107
	1949	552,345	24,848,030	388,741,854	8,152,963	20,000,000	445,343,956
	1950	[1]	16,436,186	409,860,096	11,137,427	20,000,000	461,577,056
	1951	[1]	17,682,531	422,591,985	15,031,086	20,000,000	481,528,415
	1952	[1]	11,886,591	451,750,319	15,837,822	20,000,000	503,476,293
Provincial Bank of Canada	1948	316,766	2,662,392	143,949,047	1,656,324	6,000,000	156,874,730
	1949	269,588	3,406,916	144,253,494	2,256,683	6,000,000	157,776,795
	1950	[1]	3,491,839	154,160,746	2,623,962	6,000,000	166,729,836
	1951	[1]	5,347,649	159,347,422	2,960,043	6,000,000	174,104,128
	1952	[1]	3,291,919	172,965,142	4,091,695	6,074,795	186,753,322
Canadian Bank of Commerce	1948	3,570,826	65,890,265	1,280,048,414	19,949,550	60,000,000	1,482,052,049
	1949	3,067,362	91,752,261	1,355,465,678	24,151,597	60,000,000	1,586,237,445
	1950	31,268	76,413,172	1,435,888,140	34,135,503	60,000,000	1,665,056,260
	1951	25,909	82,882,336	1,459,848,644	42,592,363	60,000,000	1,712,711,379
	1952	20,430	57,997,732	1,551,364,034	44,875,576	61,250,000	1,761,814,574
Royal Bank of Canada	1948	4,500,346	69,948,684	1,862,485,458	51,905,653	75,666,667	2,136,124,395
	1949	3,948,699	104,372,640	1,936,689,313	56,516,637	79,000,000	2,235,394,252
	1950	339,089	81,870,705	2,093,354,592	63,769,448	80,000,000	2,382,629,654
	1951	206,052	76,713,987	2,143,313,746	75,401,653	85,333,333	2,458,953,685
	1952	116,786	72,503,287	2,292,228,477	69,405,292	87,500,000	2,587,152,962

For footnote, *see* end of table.

20.—Principal and Total Liabilities of Individual Chartered Banks, 1948-52—concluded

Chartered Bank	Year	Notes in Circulation	Deposit Liabilities			Liabilities to Shareholders	Total Liabilities
			Government	Public	Inter-Bank		
		$	$	$	$	$	$
Dominion Bank	1948	628,455	16,998,800	327,649,965	8,008,815	17,000,000	380,695,783
	1949	517,692	24,164,802	345,866,988	8,450,743	17,000,000	405,657,911
	1950	[1]	16,974,562	380,924,138	10,982,024	17,250,000	436,615,341
	1951	[1]	15,060,164	388,829,356	16,577,613	18,000,000	454,387,198
	1952	[1]	11,981,890	426,908,833	18,306,790	18,000,000	488,959,013
Banque Canadienne Nationale	1948	637,615	10,928,193	364,371,461	5,102,830	14,000,000	397,093,101
	1949	563,659	14,106,098	382,769,935	4,146,958	14,000,000	416,560,358
	1950	[1]	9,639,856	394,021,804	4,093,873	14,000,000	422,940,949
	1951	[1]	15,959,778	409,827,537	5,130,031	14,000,000	447,001,315
	1952	[1]	10,349,047	442,147,527	5,822,107	14,083,333	474,311,732
Imperial Bank of Canada	1948	819,559	38,640,599	371,565,561	11,440,063	17,000,000	450,546,032
	1949	726,098	56,621,027	400,899,914	12,759,535	17,000,000	496,993,803
	1950	[1]	41,202,187	428,550,979	15,635,653	17,000,000	511,693,047
	1951	[1]	33,376,885	448,779,517	20,993,681	17,250,000	533,285,747
	1952	[1]	38,557,293	485,294,673	16,205,049	18,000,000	567,824,514
Barclays Bank (Canada)	1948	76,835	2,760,272	18,677,757	6,912,715	2,250,000	32,119,375
	1949	55,760	2,092,673	19,888,763	6,549,143	2,500,000	32,448,170
	1950	[1]	2,040,117	21,436,877	6,587,591	3,000,000	34,219,284
	1951	[1]	1,774,343	21,916,647	6,417,316	3,000,000	35,173,869
	1952	[1]	808,325	21,549,835	5,977,023	3,000,000	33,640,748
Totals	**1948**	**17,109,071**	**355,009,067**	**7,047,767,885**	**163,828,616**	**327,916,667**	**8,126,827,002**
	1949	**14,731,992**	**490,327,331**	**7,431,367,432**	**183,832,412**	**332,500,000**	**8,642,715,001**
	1950	**424,043**	**379,612,086**	**7,841,274,246**	**228,346,997**	**337,250,000**	**8,997,423,804**
	1951	**279,630**	**399,390,031**	**8,065,120,806**	**290,645,873**	**347,339,679**	**9,367,120,434**
	1952	**180,369**	**332,591,070**	**8,566,645,182**	**267,918,928**	**360,321,233**	**9,744,433,021**

[1] After January 1950, the chartered banks' liability for such of their notes as then remained outstanding was transferred to the Bank of Canada.

Net Profits of Individual Chartered Banks.—The chartered banks are, for the most part, nation-wide institutions, doing business in all parts of the country. Their earnings, therefore, reflect with considerable accuracy the fluctuations of general business.

21.—Net Profits of Chartered Banks and Rates of Dividend Paid, for their Business Years Ended 1950-52

Chartered Bank	1950		1951		1952	
	Net Profits	Dividend Rate	Net Profits	Dividend Rate	Net Profits	Dividend Rate
	$	p.c.	$	p.c.	$	p.c.
Bank of Montreal	5,942,898	10	5,355,374	10[1]	5,668,778	10
Bank of Nova Scotia	2,297,542	14[1]	2,428,256	16	2,538,166	16
Bank of Toronto	1,207,816	14[1]	1,116,234	14[1]	1,163,220	14[1]
Provincial Bank of Canada	336,494	6[2]	306,025	6[2]	332,845	6[2]
Canadian Bank of Commerce	4,015,259	10	4,023,145	10[3]	4,510,641	10[1]
Royal Bank of Canada	6,559,725	10	6,306,115	10	7,129,085	10
Dominion Bank	1,245,679	10	1,169,064	10	1,558,556	10
Banque Canadienne Nationale	665,639	8	802,612	8	847,052	8
Imperial Bank of Canada	1,158,311	12	1,236,400	12	1,318,996	12
Barclays Bank (Canada)	[4]	...	[4]	...	10,333	...
Totals, Net Profits	**23,429,363**	...	**22,743,225**	...	**25,077,672**	...

[1] Plus extra of 2 p.c. [2] Plus extra of 1 p.c. [3] Plus extra of ½ of 1 p.c. [4] Not reported.

Subsection 2.—Government and Other Savings Banks

There are three distinct types of savings banks in Canada in addition to the savings departments of the chartered banks and of trust and loan companies: (1) the Post Office Savings Bank, in which deposits are a direct obligation of the Government of Canada; (2) Provincial Government savings banking institutions in Newfoundland, Ontario and Alberta, where the depositor becomes a direct creditor of the province; and (3) two important savings banks in the Province of Quebec, the Montreal City and District Savings Bank and La Banque d'Économie de Québec, established under federal legislation and reporting monthly to the Department of Finance. Other agencies for the promotion of thrift, through encouraging regular savings, are the co-operative credit unions.

Post Office Savings Bank.—The Post Office Savings Bank was established under the Post Office Act of 1867 (31 Vict., c. 10) in order to "enlarge the facilities now available for the deposit of small savings, to make the Post Office available for that purpose, and to give the direct security of the nation to every depositor for repayment of all money deposited by him together with the interest due thereon". Branches of the Government of Canada's Savings Bank under the Department of Finance were gradually amalgamated with this Bank over a period of 50 years and the amalgamation was completed in March 1929.

22.—Financial Business of the Post Office Savings Bank, as at Mar. 31, 1948-53

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books. Totals back to 1868 are given in the 1926, 1946 and 1951 editions, at pp. 833-834, 978, and 1051, respectively.

Item	1948	1949	1950	1951	1952	1953
	$	$	$	$	$	$
Deposits—						
Total	36,226,060	37,741,389	38,754,634	37,661,921	38,031,232	39,322,230
Made during year	11,983,690	12,843,954	12,144,889	10,368,266	11,011,092	11,521,743
Interest on deposits	690,584	710,012	729,007	733,899	722,804	741,954
Totals, cash and interest	12,674,274	13,553,966	12,873,896	11,102,165	11,733,896	12,263,697
Withdrawals	12,212,726	12,038,638	11,860,651	12,194,872	11,364,584	10,972,700

Provincial Government Savings Banks.—Institutions for the deposit of savings are operated by the Provincial Governments of Newfoundland, Ontario and Alberta.

Newfoundland.—The following is a summary financial statement of the Newfoundland Savings Bank for the years ended Mar. 31, 1951 and 1952:—

	1951	*1952*
Interest on investments, etc.	739,489	765,752
Less interest on deposits	*637,520*	*657,917*
Less Expenses	*40,856*	*42,692*
Profit on sale of investments	2,865	2,093
Less Transfer to reserves	—	*30,000*
NET INCOME	64,598	37,236

The number of accounts increased from 28,799 at Mar. 31, 1951, to 31,601 at Mar. 31, 1952, and deposits from $24,561,048 to $24,875,733 in the same comparison. The interest rate on deposits of private individuals, trust funds and

estates is 3 p.c. per annum on accounts up to $5,000, decreasing to 1½ p.c. per annum on accounts of over $10,000; on deposits of corporations the rate is 1 p.c. per annum. A general reserve of $1,137,911 is held.

Ontario.—The establishment of the Province of Ontario Savings Office was authorized by the Ontario Legislature at the 1921 session and the first branches were opened in March 1922. Interest at the rate of 1 and 1½ p.c. per annum, compounded half-yearly, is paid on accounts, and deposits are repayable on demand. Total deposits at Mar. 31, 1953, were $62,689,000, and the number of depositors was approximately 100,000. Twenty-one branches are in operation throughout the Province.

Alberta.—Savings deposits are accepted at 45 Provincial Treasury Branches throughout Alberta. The total of these deposits at Mar. 31, 1953, was $18,977,705 made up of $14,495,141 payable on demand and bearing interest at ½ of 1 p.c. to 1½ p.c. and $4,482,564 payable one year after deposit and bearing interest at 1 p.c. to 2 p.c.

The Provincial Treasury has issued demand certificates bearing interest at 1½ p.c. or term certificates for one, two, three, four or five years, in denominations of $25 and upwards, bearing interest at 2 p.c. for one or two years, 2½ p.c. for three or four years and 2½ p.c. for five years. The total amount in savings certificates at Mar. 31, 1953, was $307,614 made up of $129,764 in demand certificates and $177,850 in term certificates. Deposits from the public for the purchase of such certificates were discontinued as from April 1951.

Other Savings Banks.—The Montreal City and District Savings Bank, founded in 1846 and now operating under a charter of 1871, had at Mar. 31, 1953, a paid-up capital and reserve of $7,000,000, savings deposits of $186,887,958, and total liabilities of $194,238,816. Total assets amounted to $194,374,976, including over $160,000,000 of federal, provincial and municipal securities. La Banque d'Économie de Québec, founded in 1848 (as La Caisse d'Économie de Notre-Dame de Québec) under the auspices of the St. Vincent de Paul Society, incorporated by Act of the Canadian Legislature in 1855 and given a federal charter by 34 Vict., c. 7, had at Mar. 31, 1953, savings deposits of $27,234,043 and a paid-up capital and reserve of $3,000,000. Liabilities amounted to $30,443,868 and total assets to $30,886,522.

Table 23 shows the savings deposits in the Montreal City and District Savings Bank and La Banque d'Économie de Québec for the years ended Mar. 31, 1939-53.

23.—Deposits in the Montreal City and District Savings Bank and La Banque d'Économie de Québec, Years Ended Mar. 31, 1939-53

NOTE.—Figures for 1868-1926 are given in the 1926 Year Book, pp. 833-834, and for 1927-38 in the 1946 edition, p. 980.

Year	Deposits	Year	Deposits	Year	Deposits
	$		$		$
1939	81,566,754	1944	103,276,757	1949	184,250,615
1940	79,838,963	1945	122,574,607	1950	192,567,275
1941	76,391,775	1946	140,584,525	1951	193,982,871
1942	74,386,412	1947	153,137,545	1952	200,342,385
1943	84,023,772	1948	170,103,786	1953	214,122,001

Credit Unions.*—Credit unions are co-operative savings and loan associations through which members with a common bond of association pool their savings in order to make loans among themselves for "provident and productive" purposes.

*Prepared by J. E. O'Meara, Economics Division, Marketing Service, Department of Agriculture, Ottawa.

At the end of 1952, there were 3,335 credit unions in Canada distributed among the ten provinces. Membership numbered 1,250,000 and total assets amounted to approximately $425,000,000. Loans amounting to $154,000,000 were made during the year. The figures reported for 1952 were the highest on record and the increases in that year over 1951 were higher than in any other year.

Since Quebec was the first province to establish credit unions, the year 1900 marking the beginning, that Province has, of course, the greatest credit union development. Nearly one-third of all credit unions in Canada are in that Province. Also, because of the large rural population of Quebec, credit unions there are largely agricultural. Ontario follows Quebec in credit-union development and in that Province, as well as in British Columbia and Alberta, the establishment of unions among industrial workers is increasing rapidly. These three Provinces reported 563 industrial credit unions in 1952, which is 75 p.c. of all groups classified as industrial.

In 1952, the average savings per member in credit unions in Canada amounted to $316.53, compared with $235.44 in 1945. Quebec members had average savings of $395.06, the highest reported, compared with $71.03 per member in Newfoundland, the lowest reported.

24.—Growth of Credit Unions in Canada, Certain Years, 1920-52

Year	Provinces in which Unions Exist	Credit Unions	Members	Assets
	No.	No.	No.	$
1920	1[1]	113	31,752	6,306,965
1925	1[1]	122	33,279	8,261,515
1930	2[2]	179	45,767	11,178,810
1935	3[3]	277	52,045	10,173,997
1940	9	1,167	201,137	25,069,685
1945	9	2,219	590,794	145,890,889
1946	9	2,422	688,739	187,507,303
1947	9	2,516	779,199	221,116,168
1948	9	2,608	850,608	253,584,282
1949	10	2,819	940,427	282,242,278
1950	10	2,965	1,036,175	311,532,143
1951	10	3,121	1,137,931	358,646,767
1952	10	3,335	1,249,665	424,564,711

[1] Quebec. [2] Quebec and Ontario. [3] Quebec, Ontario and Nova Scotia.

25.—Summary Statistics of Credit Unions, by Province, 1952

Province	Credit Unions Chartered	Credit Unions Reporting	Members	Assets	Shares	Deposits	Loans to Members During Year	Total Loans Since Inception
	No.	No.	No.	$	$	$	$	$
N'f'ld	76	60	4,070	323,165	283,443	6,581	173,228	2,583,926
P.E.I.	54	54	9,595	988,962	790,531	110,132	629,987	4,119,509
N.S.	218	196	47,823	6,290,026	5,676,950	135,368	3,760,923	29,960,157
N.B.	163	161	49,144	6,559,757	5,828,798	152,474	3,623,686	26,067,170
Que.—								
Desjardins	1,118	1,108	693,258	290,505,580	19,336,976	254,124,550	62,553,611	543,003,967
Que. League	59	59	20,742	4,010,428	1,314,614	2,391,663	3,224,508	10,123,196
Montreal Fed.	10	10	21,719	14,313,893	851,838	12,635,276	2,068,568	24,964,127
Ont.[1]	749	696	197,284	43,479,877	26,965,541	12,243,063	35,849,163	152,849,163
Man.	164	159	41,277	8,383,197	5,040,470	2,647,186	6,677,896	31,166,203
Sask.	263	259	59,784	21,404,543	13,910,671	5,261,068	14,600,835	60,626,518
Alta.	204	192	30,472	6,246,225	5,142,626	572,601	4,686,203	26,398,632
B.C.	257	207	74,497	22,059,058	16,763,483	3,374,267	16,422,168	65,072,790
Totals, 1952	**3,335**	**3,161**	**1,249,665**	**424,564,711**	**101,905,941**	**293,654,229**	**154,270,776**	**976,935,358**
Totals, 1951	**3,121**	**2,952**	**1,137,931**	**358,646,757**	**81,252,414**	**252,811,029**	**125,088,949**	**900,228,873**

[1] Estimated.

Section 4.—Monetary Reserves

Bank of Canada Reserves.—The composition of Canadian gold reserves held by the Government is presented in the 1936 Year Book, p. 895, for the years 1905 to 1934. After March 1935 the gold reserves were held by the Bank of Canada, by authority of the Exchange Fund Act (1935, c. 60), effective in July 1935. Under the Exchange Fund Order of Apr. 30, 1940, the gold reserves of the Bank of Canada were transferred to the Exchange Fund Account and the requirement that the Bank should maintain a reserve of gold equal to not less than 25 p.c. of its total note and deposit liabilities in Canada was suspended.

Chartered Bank Cash Reserves.—Until March 1935, legal tender cash reserves in Canada were made up partly of Dominion notes, partly of gold coin and bullion, and subsidiary coin, including these forms of cash held by the banks and as deposits in the Central Gold Reserves. In so far as these reserves were in actual gold or were in Dominion notes backed by gold, they were subject, so long as Canada was on the gold standard, to the expanding or contracting influences of monetary gold imports or exports arising from Canada's balance of international payments.

When the Bank of Canada was established, the chartered banks turned over their reserves of gold in Canada and Dominion notes to the new bank in exchange for deposits with, and notes of, the Bank of Canada and it was provided that, henceforth, the chartered banks were to carry reserves in these forms amounting to at least 5 p.c. of their deposit liabilities in Canada.

26.—Annual Averages of Cash Reserves of the Chartered Banks, 1943-52

NOTE.—Figures, to nearest million, supplied by the Bank of Canada. Cash reserves include notes and deposits with the Bank of Canada. Figures for the years 1926-42 are given in the 1946 Year Book, p. 960.

Year	Annual Average of Daily Figures	Annual Average of Month-End Figures	Year	Annual Average of Daily Figures	Annual Average of Month-End Figures
	$	$		$	$
1943	423,000,000	413,000,000	1948	711,000,000	705,000,000
1944	538,000,000	527,000,000	1949	746,000,000	748,000,000
1945	603,000,000	593,000,000	1950	755,000,000	754,000,000
1946	672,000,000	673,000,000	1951	791,000,000	783,000,000
1947	670,000,000	665,000,000	1952	845,000,000	833,000,000

Section 5.—Foreign Exchange

Exchange Rates.—The Canadian dollar, adopted as Canada's currency in 1857, was equivalent to 15/73 of the pound sterling; in other words, the pound was equal to $4.866 in Canadian currency at par, and remained so, with minor variations between the import and export gold points representing the cost of shipping gold in either direction, until the outbreak of World War I. During the first 11 years after Confederation, the Canadian dollar was at a premium in the United States, as the United States dollar was not, after the Civil War, redeemable in gold until 1878. From the latter date to 1914, the dollar in the two countries was equivalent at par, and variation was only between the import and export gold points or under $2 per $1,000.

At the outbreak of World War I, the United Kingdom and Canada suspended the gold standard, and their currencies fell to a discount at New York. However, this discount was 'pegged', or kept at a moderate percentage, by sales of United States securities previously held in the United Kingdom, by borrowing in the United States and, after the United States entered the War, by arrangement with the United States Government. After the War, when the exchanges were 'unpegged', the British pound went as low as $3.18 and the Canadian dollar as low as 82 cents at New York. In the course of the next year or two, exchange returned practically to par and the United Kingdom resumed gold payments in April 1925 as did Canada on July 1, 1926. Until 1928, the exchanges were within the gold points but in 1929 the Canadian dollar again fell to a moderate discount at New York. The dislocation of exchange persisted, with the exception of a few months in the latter half of 1930, into 1931. Dollar rates were below the gold export points, however, only for a few scattered intervals. Immediately on the outbreak of World War II in September 1939, the United Kingdom and other sterling countries introduced foreign exchange control, involving fixed buying and selling rates which were $4.02½ and $4.03½, respectively, in terms of the U.S. dollar. Meanwhile, the Canadian dollar declined gradually until Sept. 16, 1939, when the Government established the Foreign Exchange Control Board.* Fixed buying and selling rates were provided for United States funds and sterling at the outset, being $1.10 and $1.11, and $4.43 and $4.47, respectively. The former rates fixed the value of the Canadian dollar at 90·09 cents to 90·91 cents in terms of the U.S. dollar; this was approximately the market rate to which the Canadian dollar had fallen just prior to exchange control and, in terms of devaluation, represented a level midway between the U.S. dollar and sterling.

Apart from a minor adjustment on Oct. 15, 1945, when selling rates for U.S. dollars and sterling were lowered to $1.10⅛ and $4.45, respectively, the Foreign Exchange Control Board's official rates remained unaltered until July 5, 1946. At this time, the rate on the U.S. dollar was restored to par with buying and selling rates for U.S. dollars at $1.00 and $1.00⅛ and sterling, $4.02 and $4.04. These rates continued in effect until Sept. 19, 1949, when, following a 30·5 p.c. reduction by the United Kingdom in the value of sterling to $2.80 U.S. (which action was paralleled in varying degrees by numerous other currencies), Canada returned to the former official rates of $1.10 and $1.10⅛ for United States funds; sterling was quoted at new rates of $3.07¼ and $3.08¾, based on the New York cross rate.

On Sept. 30, 1950, the Minister of Finance announced that official fixed foreign exchange rates, which had been in effect at varying levels since 1939, would be cancelled effective Oct. 2 and that rates of exchange would be determined by conditions of supply and demand for foreign currencies, i.e., by market trading within the framework of exchange control. Subsequently, the U.S. dollar fell to a level between $1.04 and $1.05 in terms of Canadian funds in early December 1950. After strengthening in the second quarter of 1951, it declined to between $1.01 and $1.04 in December 1951.

* The operations of the Foreign Exchange Control Board from the time of its establishment to the termination of exchange control in December 1951 are reviewed in previous editions of the Year Book.

On Dec. 14, 1951, the Foreign Exchange Control Regulations were revoked by the Governor in Council and new Regulations were passed which exempted all persons and transactions from the various declaration and permit requirements of the Foreign Exchange Control Act, thus terminating exchange control in Canada. During 1952, the U.S. dollar declined gradually to an average of $0.96 in Canadian funds in September and then rose slightly to an average of $0.97 in December.

27.—Canada's Holdings of Gold and United States Dollars, as at Dec. 31, 1939-52

(Millions of U.S. Dollars)

Year	Exchange Fund Account and Bank of Canada		Other Government of Canada Accounts	Total	Year	Exchange Fund Account and Bank of Canada		Other Government of Canada Accounts	Total
	Gold	U.S. Dollars	U.S. Dollars	Gold and U.S. Dollars		Gold	U.S. Dollars	U.S. Dollars	Gold and U.S. Dollars
1939.....	218·0	54·8	33·4	404·2[1]	1946....	536·0	686·3	22·6	1,244·9
1940.....	136·5	172·8	20·8	332·1[1]	1947....	286·6	171·8	43·3	501·7
1941.....	135·9	28·2	23·5	187·6	1948....	401·3	574·5	22·0	997·8
1942.....	154·9	88·0	75·6	318·5	1949....	486·4	594·1	36·6	1,117·1[2]
1943.....	224·4	348·8	76·4	649·6	1950....	580·0	1,144·9	16·6	1,741·5
1944.....	293·9	506·2	102·1	902·2	1951....	841·7	899·5	37·4	1,778·6
1945.....	353·9	922·0	232·1	1,508·0	1952....	885·0	961·7	13·5	1,860·2

[1] Includes private holdings, exclusive of working balances, of $98,000,000 at Dec. 31, 1939, and $2,000,000 at Dec. 31, 1940. [2] Excludes $18,200,000 borrowed in the United States in August 1949 and set aside for the retirement on Feb. 1, 1950, of a security issue guaranteed by the Federal Government and payable at the holder's option in U.S. dollars.

PART II.—MISCELLANEOUS COMMERCIAL FINANCE

Section 1.—Loan and Trust Companies*

An outline of the development of loan and trust companies in Canada from 1844 to 1913 is given in the 1934-35 Year Book, p. 903. The laws relating to loan and trust companies were revised by the Loan and Trust Companies Acts of 1914 (4-5 Geo. V, cc. 40 and 55), with the result that the statistics of provincially incorporated loan and trust companies ceased to be collected. However, summary statistics of provincial companies have been supplied by those companies since 1922 and summary figures for the years 1951 and 1952 are included in Table 1 in order to complete the statistics for loan and trust companies throughout Canada. It is estimated that more than 95 p.c. of the business of provincial companies is represented in the figures, so that they may be accepted as fairly inclusive and representative of the volume of business transacted as compared with the federally licensed companies.

* Revised under the direction of K. R. MacGregor, Superintendent of Insurance, Department of Insurance, Ottawa.

The statistics of Tables 2 and 3 refer both to those companies incorporated by the Government of Canada and by the provinces. Included in the statistics of federal companies, beginning with 1925, are data of loan and trust companies incorporated by the Province of Nova Scotia and brought by the laws of that Province under the examination of the Federal Department of Insurance, as well as data for trust companies in New Brunswick since 1934 and in Manitoba since 1938.

The progress of the aggregate of loan company business in Canada is indicated by the increase in the book value of the assets of all loan companies from $188,637,298 in 1922 to $303,306,362 in 1952. The assets of trust companies (not including estates, trust and agency funds, which cannot be regarded as assets in the same sense as company and guaranteed funds) increased from $154,202,165 in 1928 to $476,516,402 in 1952. In the former year, the total of estates, trust and agency funds administered amounted to $1,077,953,643 and in 1952 to $3,972,200,367.

Functions of Loan Companies.—The principal function of loan companies is the lending of funds on first-mortgage security, the money thus made available for development purposes being secured mainly by the sale of debentures to the investing public and by savings-department deposits. The extent of investments in mortgages by federal and provincial loan companies may be gauged by the following figures: total assets of such companies for the years 1951 and 1952 amounted to $292,095,485 and $303,306,362, respectively, which amounts include mortgage loans of $186,508,636 and $200,428,729, respectively, with resulting percentages of mortgages to total assets of approximately 64 p.c. and 66 p.c., respectively.

Functions of Trust Companies.—Trust companies act as executors, trustees and administrators under wills or by appointment, as trustees under marriage or other settlements, as agents or attorneys in the management of the estates of the living, as guardians of minor or incapable persons, as financial agents for municipalities and companies and, where so appointed, as authorized trustees in bankruptcy. Such companies receive deposits for investment, but the investing and lending of such deposits and of actual trust funds are restricted by law.

Statistics of Loan and Trust Companies.—A summary of operations of provincial and federal loan and trust companies is given in Table 1. As a result of the nature of the operations of the latter companies, which are intimately connected with the matter of probate, the larger trust companies usually choose to operate under provincial charters and the provincial figures represent much larger amounts than those of the federal companies.

The figures for federal loan companies include companies chartered by the Government of Nova Scotia which, by arrangement, come under inspection by the Federal Department of Insurance. The data for federal trust companies, likewise, cover companies chartered by the Governments of Nova Scotia, New Brunswick and Manitoba for the same reason.

1.—Operations of Provincial and Federal Loan and Trust Companies, as at Dec. 31, 1951 and 1952

Item	1951			1952		
	Provincial Companies[1]	Federal Companies	Total	Provincial Companies[1]	Federal Companies	Total
	$	$	$	$	$	$
Loan Companies—						
Assets (book values)	88,991,635	203,103,850	292,095,485	96,333,209	206,973,153	303,306,362
Liabilities to the public	63,699,805	165,768,886	229,468,691	70,406,200	175,107,452	245,513,652
Capital Stock—						
Authorized	23,994,745	56,250,000	80,244,745	22,869,225	51,250,000	74,119,225
Subscribed	13,816,150	21,582,700	35,398,850	13,682,230	19,048,700	32,730,930
Paid-up	10,374,952	18,419,587	28,794,539	10,314,409	15,981,759	26,296,168
Reserve and contingency funds	10,494,902	17,139,072	27,633,974	11,073,642	14,894,345	25,967,987
Other liabilities to shareholders	4,421,976	1,641,154	6,063,130	4,538,959	836,243	5,375,202
Total liabilities to shareholders	25,291,830	37,199,813	62,491,643	25,927,010	31,712,347	57,639,357
Net profits realized during year[2]	1,417,456	1,664,925	3,082,381	1,049,336	2,557,375	3,606,711
Trust Companies—						
Assets (book values)						
Company funds	74,399,405	28,446,331	102,845,736	75,097,721	28,731,666	103,829,387
Guaranteed funds	*258,413,136*	*93,565,917*	*351,979,053*	*265,257,222*	*107,429,793*	*372,687,015*
Totals, Assets	332,812,541	122,012,248	454,824,789	340,354,943	136,161,459	476,516,402
Estates, trust, and agency funds	*3,282,558,572*	*543,983,754*	*3,826,542,326*	*3,383,650,088*	*588,550,279*	*3,972,200,367*
Capital Stock—						
Authorized	53,275,000	34,650,000	87,925,000	53,155,000	33,150,000	86,305,000
Subscribed	28,877,360	15,473,600	44,350,960	29,135,160	15,100,850	44,236,010
Paid-up	28,813,610	15,132,221	43,945,831	28,804,860	14,862,123	43,666,983
Reserve and contingency funds	26,061,982	8,905,180	34,967,162	27,360,303	9,178,309	36,538,612
Unappropriated surpluses	5,422,648	1,508,437	6,931,085	5,717,204	1,672,975	7,390,179
Net profits realized during year[2]	3,395,841	−30,458	3,365,383	3,279,402	2,190,260	5,469,662

[1] Excludes one loan company incorporated under the laws of Quebec, the capital stock and debentures of which have been issued largely outside Canada. [2] In the case of provincial companies, net profits are after income taxes. In the case of federal companies, net profits for 1951 are after income taxes and for 1952 before income taxes.

2.—Assets and Liabilities of Loan Companies, 1947-52

Item	Chartered by Government of Canada[1]					
	1947	1948	1949	1950	1951	1952
	$	$	$	$	$	$
Assets						
Real estate[2]	4,935,971	4,943,594	5,266,696	5,604,342	6,571,189	6,148,146
Loans on real estate	79,292,340	93,301,864	111,574,957	124,199,351	136,720,021	146,071,337
Loans on securities	156,267	599,808	103,467	107,823	116,621	107,585
Bonds and debentures	47,527,308	43,902,301	39,797,131	33,877,064	33,674,081	34,938,078
Stocks	15,020,787	17,159,691	17,059,957	18,161,270	16,071,135	11,353,848
Cash	7,357,359	4,613,211	4,941,023	7,624,167	8,508,316	6,906,488
Totals, Assets[3]	**155,117,857**	**165,261,293**	**179,795,977**	**190,733,017**	**203,163,850**	**206,973,153**
Liabilities						
Liabilities to Shareholders—						
Capital paid-up	17,929,296	17,980,206	18,043,255	20,606,187	18,419,587	15,981,759
Reserves	14,639,710	15,114,978	16,344,790	15,973,533	17,139,072	14,894,345
Total Liabilities to Shareholders[4]	33,860,101	34,543,526	35,381,908	37,810,634	37,199,813	31,712,347

For footnotes, *see* end of table, p. 1152.

2.—Assets and Liabilities of Loan Companies, 1947-52—concluded

Item	Chartered by Government of Canada[1]					
	1947	1948	1949	1950	1951	1952
Liabilities—concluded	$	$	$	$	$	$
Liabilities to the Public—						
Debentures	60,201,118	62,008,012	69,075,197	71,803,927	86,603,723	91,492,226
Deposits	59,889,951	67,289,900	73,919,782	79,141,868	77,219,272	81,669,175
Total Liabilities to the Public[5]	121,257,756	130,573,614	144,414,068	152,825,545	165,768,886	175,107,452
Totals, Liabilities	155,117,857	165,117,140	179,795,976	190,636,179	202,968,699[6]	206,819,799

	Chartered by Provinces[6]		
	1950	1951	1952
Assets	$	$	$
Real estate[2]	1,867,485	1,292,186	1,268,099
Loans on real estate	45,744,265	49,788,615	54,357,392
Loans on securities	732,072	1,065,738	980,247
Bonds and debentures	30,861,995	31,461,663	33,506,617
Stocks	6,566,586	2,298,699	1,981,118
Cash	3,048,950	2,513,459	3,145,805
Totals, Assets[3]	89,504,876	88,991,635	96,333,209
Liabilities			
Liabilities to Shareholders—			
Capital paid up	16,081,176	10,374,952	10,314,409
Reserves	9,541,353	10,494,902	11,073,642
Total Liabilities to Shareholders[4]	29,611,517	25,291,830	25,927,000
Liabilities to the Public—			
Debentures	21,702,017	21,435,748	22,394,714
Deposits	37,245,966	41,229,595	46,505,919
Total Liabilities to the Public[5]	59,893,359	63,699,805	70,406,200
Totals, Liabilities	89,504,876	88,991,635	96,333,209

[1] Includes companies chartered by the Government of Nova Scotia, which by arrangement are inspected by the Federal Department of Insurance. [2] Book value of real estate for companies' use and other real estate. [3] Includes interest due and accrued and other assets. [4] Includes other liabilities to shareholders. [5] Includes other liabilities to the public. [6] Exclusive of Nova Scotia.

3.—Assets and Liabilities of Trust Companies, 1947-52

Item	Chartered by Government of Canada[1]					
	1947	1948	1949	1950	1951	1952
Assets	$	$	$	$	$	$
Company Funds—						
Real estate[2]	1,644,909	2,291,721	2,391,234	2,599,598	2,597,501	2,526,037
Loans on real estate	4,703,905	4,581,282	5,438,683	5,875,800	6,005,025	5,867,035
Loans on securities	706,629	884,638	928,800	856,911	864,615	763,618
Bonds and debentures	9,703,279	11,262,394	10,435,037	11,187,960	11,741,048	11,675,897
Stocks	3,606,580	3,758,464	4,062,907	4,054,756	4,356,787	4,632,875
Cash	1,724,039	1,743,905	1,756,057	1,946,129	1,710,349	2,060,423
Totals, Company Funds[3,4]	23,421,857	25,788,543	26,244,735	27,988,873	28,446,331	28,731,666

For footnotes, *see* end of table.

3.—Assets and Liabilities of Trust Companies, 1947-52—concluded

Item	1947	1948	1949	1950	1951	1952
	Chartered by Government of Canada [1]					
	$	$	$	$	$	$
Assets—concluded						
Guaranteed Funds—						
Loans on real estate	26,448,775	29,211,299	32,563,611	37,860,933	43,401,633	44,504,345
Loans on securities	4,631,540	5,805,425	6,245,398	3,891,278	3,719,861	4,151,541
Bonds and debentures	34,772,852	40,022,366	46,332,850	44,734,539	40,955,188	49,928,453
Stocks	1,478,014	1,860,454	1,395,790	1,267,316	1,078,284	1,236,757
Cash	3,755,198	4,291,127	2,972,809	4,594,867	3,723,589	6,760,472
Totals, Guaranteed Funds[3,4]	71,660,444	81,845,528	90,111,500	93,082,706	93,565,917	107,429,793
Liabilities						
Company Funds—						
Capital paid up	13,333,408	14,459,414	14,535,022	14,739,987	15,132,221	14,862,123
Reserves	7,754,554	7,994,585	8,483,617	9,671,504	8,905,180	9,178,309
Totals, Company Funds[5]	23,191,686	25,153,650	25,892,736	27,568,241	26,658,321	28,583,274
Guaranteed Funds—						
Principal	71,660,444	81,845,528	90,111,501	93,082,707	93,565,917	107,429,793
Totals, Guaranteed Funds	71,660,444	81,845,528	90,111,501	93,082,707	93,565,917	107,429,793
	Chartered by Provinces [6]					
	$	$	$	$	$	$
Assets						
Company Funds—						
Real estate[2,4]	5,982,330	6,662,666	6,959,057	5,372,046	5,745,326	5,263,529
Loans on real estate[4]	9,479,724	10,429,273	11,707,231	15,086,011	16,045,557	14,306,251
Loans on securities[4]	3,789,193	5,112,362	4,010,537	5,677,620	8,002,620	7,754,667
Bonds and debentures[4]	25,579,928	24,601,837	25,040,185	25,677,269	22,768,209	24,134,845
Stocks[4]	11,344,958	12,875,927	12,725,583	13,215,469	14,887,436	16,273,994
Cash	4,403,126	2,888,357	3,406,003	3,788,458	3,198,260	3,152,062
Totals, Company Funds[3]	64,100,014	65,639,018	68,188,785	72,736,140	74,399,404	75,097,721
Guaranteed Funds—						
Loans on real estate	36,281,680	43,391,744	48,414,936	55,235,907	63,050,583	72,005,308
Loans on securities	6,258,458	6,366,905	6,660,312	9,461,646	11,758,999	11,332,357
Bonds and debentures	117,895,259	128,182,839	144,713,565	166,622,452	166,796,191	159,557,075
Stocks	3,598,140	3,483,412	3,735,979	3,576,030	3,324,910	2,092,145
Cash	7,283,481	9,237,682	10,142,915	13,482,543	12,981,945	19,916,400
Totals, Guaranteed Funds[3]	171,354,194	190,678,903	213,671,444	251,832,240	258,413,136	265,257,222
Liabilities						
Company Funds—						
Capital paid up	22,855,250	22,855,251	24,027,500	28,701,960	28,813,610	28,804,860
Reserves	24,351,314	24,724,995	26,177,783	24,664,370	26,061,982	27,360,303
Totals, Company Funds[5]	64,103,013	65,639,021	68,188,784	72,333,416	74,399,405	75,097,721
Guaranteed Funds—						
Principal	171,354,194	190,678,903	213,671,444	247,480,875	258,413,136	265,257,222
Totals, Guaranteed Funds	171,354,194	190,678,903	213,671,444	247,480,875	258,413,136	265,257,222

[1] Includes companies chartered by the Governments of Nova Scotia, New Brunswick and Manitoba which, by arrangement, are inspected by the Federal Department of Insurance. [2] Book value of real estate for companies' use and other real estate. [3] Includes other assets. [4] Includes interest due and accrued. [5] Includes other company fund liabilities. [6] For the years 1947-49 chartered by the *Provinces of Ontario and Quebec* and for the years 1950-52 chartered by all provinces except Nova Scotia, New Brunswick and Manitoba.

1.—Estates, Trust and Agency Funds of Trust Companies, Chartered by or Supervised by the Federal Government and by Provincial Governments, as at Dec. 31, 1943-52.

Year	Federal Companies[1]	Provincial Companies[2]	Total	Year	Federal Companies[1]	Provincial Companies[2]	Total
	$	$	$		$	$	$
1943.....	313,457,551	2,528,566,545	2,842,024,096	1948.....	520,860,737	2,791,584,378	3,312,445,115
1944.....	338,978,141	2,593,730,389	2,932,708,530	1949.....	560,080,611	2,827,988,797	3,388,069,408
1945.....	363,332,677	2,754,475,732	3,117,808,409	1950.....	494,636,746	3,126,058,749	3,620,695,495
1946.....	392,430,578	2,758,442,016	3,150,872,594	1951.....	543,983,754	3,282,558,573	3,826,542,327
1947.....	480,931,822	2,735,930,892	3,216,862,714	1952.....	588,550,279	3,383,650,088	3,972,200,367

[1] Includes companies chartered by the Governments of Nova Scotia, New Brunswick and Manitoba which, by arrangement, are inspected by the Federal Department of Insurance. [2] Excludes provincial companies of Nova Scotia, New Brunswick and Manitoba which are included in federal companies.

Section 2.—Licensed Small Loans Companies and Licensed Money-Lenders

Incorporated by the Parliament of Canada are four companies that make small loans, usually not exceeding $500 each, on the promissory notes of the borrowers and secured additionally in most cases by indorsements or chattel mortgages. While these companies, under their original charter powers, were permitted to make loans on the security of real estate, that power was withdrawn by the Small Loans Act, 1939 (R.S.C. 1952, c. 251).

Under legislation that came into force on Jan. 1, 1940, small loans companies and money-lenders licensed thereunder, making personal loans of $500 or less, are limited to a rate of cost of loan not in excess of 2 p.c. per month on outstanding balances, and unlicensed lenders to a rate of 12 p.c. per annum, including interest and charges of every description.

5.—Assets and Liabilities of Small Loans Companies Chartered by the Federal Government, as at Dec. 31, 1946-51

NOTE.—Figures for 1928-32 are given in the 1942 Year Book, p. 838; for 1933-38 in the 1946 edition, p. 988; and for 1939-45 in the 1951 edition, p. 1062.

Assets and Liabilities	1946	1947	1948	1949	1950	1951
Assets	$	$	$	$	$	$
Loans receivable	20,307,530	24,425,312	36,533,501	43,718,071	51,864,421	61,133,863
Cash on hand and in banks	377,813	1,073,419	3,800,365	1,821,982	1,771,505	2,544,564
Other	4,232,126	7,144,612	2,331,969	3,381,895	7,571,915	10,301,641
Totals, Assets	**24,917,469**	**32,643,343**	**42,665,835**	**48,921,948**	**61,207,841**	**73,980,068**
Liabilities						
Liabilities to Shareholders—						
General reserve	18,000	18,000	18,000	18,000	18,000	18,000
Reserve for losses[1]	915,290	1,122,974	1,318,365	1,507,692	1,954,883	2,112,390
Capital paid up	4,155,000	4,555,000	4,565,000	4,565,000	4,565,000	4,570,000
Other liabilities	4,555,347	4,428,560	4,148,179	4,230,110	4,410,809	4,770,998
Totals, Liabilities to Shareholders	9,643,637	10,124,534	10,049,544	10,320,802	10,948,692	11,471,388
Liabilities to the Public—						
Borrowed money	15,007,689	22,003,002	31,938,137	37,658,423	49,019,667	60,341,489
Other liabilities[2]	260,629	510,292	672,639	937,207	1,233,966	2,154,621
Totals, Liabilities to the Public	15,268,318	22,513,294	32,610,776	38,595,630	50,253,633	62,496,110
Totals, Liabilities	**24,917,469**[3]	**32,643,343**[3]	**42,665,835**[3]	**48,921,948**[3]	**61,207,840**[3]	**73,980,068**[4]

[1] Includes business other than small loans. [2] Includes taxes. [3] Includes $5,515 premium on capital stock. [4] Includes $12,570 premium on capital stock.

The small loans companies chartered by the Federal Government showed a substantial increase in business for 1951 as compared with the previous year. The number of loans made to the public during the year increased from 521,701 to 606,468 or by 16 p.c. and the amount of such loans rose from $105,746,067 to $127,072,745. The average loan was approximately $210 in 1951 compared with $203 in 1950. At the end of 1951, loans outstanding numbered 389,630 for an amount of $61,133,863 or an average of $157 per loan.

Licensed Money-Lenders.*—In addition to the above-mentioned small loans companies, 57 licensed money-lenders furnished annual statements of their business showing, for 1951, total assets of $30,570,466 of which balances of small loans amounted to $8,126,043, other balances to $20,980,983, bonds, debentures and stocks to $316,702, real estate to $104,368, cash to $483,746 and other assets to $558,624. Liabilities amounted to $30,570,466, of which borrowed money accounted for $21,397,938 and paid shares and partnership capital for $3,952,842. Loans made during 1951 numbered 73,706 for an amount of $15,866,101, an average of $215 per loan. At the end of 1951 there were 53,329 loans outstanding with a value of $8,126,043. Of the loans made, 60 p.c. were between $100 and $300 and 13 p.c. were between $400 and $500.

Section 3.—Sales of Canadian Bonds†

Canadian borrowers, whether governments or corporations, sold $1,985,239,490 in new bond issues during the year 1952, which represented an increase of $335,028,253 over the total of $1,650,211,237 sold in 1951 but a decrease of $1,168,200,963 from the all-time total of $3,153,440,453 sold in 1950. Comparative totals for such sales can be traced in previous editions of the Year Book through the periods of two world wars and the post-war years to the conclusion of financing in 1951.

In relation to these totals, it should be noted that the 1952 aggregate includes sales of Canada Savings Loan, Series VII, to Nov. 30, 1952, only, the latest figure available at time of writing. On the other hand, figures for previous years include totals for the entire savings loans to the closing dates in the subsequent years (*see* Table 6). When complete figures are available for the Savings Loan of 1952, therefore, the total aggregate financing for that year will be somewhat larger.

For purposes of analysis, the 1952 total of $1,985,239,490 may be classified as follows: federal, $787,772,450; provincial and guaranteed, $426,973,000; municipal, $196,955,040; and corporation, $573,539,000. Of the provincial and guaranteed total at $426,973,000, the amount of $216,100,000 represented direct issues and the amount of $210,873,000 was for guaranteed financing, such as hydro bonds and municipal issues guaranteed by provincial governments. Of the municipal total at $196,955,040, the amount of $147,690,940 represented direct issues and the amount of $49,264,100 represented parochial and miscellaneous issues, borrowed mainly for educational and hospital purposes.

There was a noticeable decline in the volume of Canadian issues placed on the United States market in 1952. A total of $284,650,025 was sold in that year compared with $384,023,000 in 1951, a decline of $99,372,975. Reasons for this decline and a study of the relative merits of domestic and United States markets for Canadian

* Further details are given in the Department of Insurance report, *Small Loans Companies and Money-Lenders*, for the year ended Dec. 31, 1951.

† Prepared by E. C. Gould, Financial Editor, *The Monetary Times*.

issues were interesting aspects of bond sales during the period. Although borrowing could still be effected at lower rates in the United States, the initial exchange loss, effective after the first quarter of 1952, tended to reduce the amount of New York pay issues. In addition, financing of Canadian issues in the United States during the entire year was influenced by an indication of more expensive U.S. dollars during the repayment period.

From a study of Table 7, it will be noted that federal financing in 1952 increased by $193,130,050 over the previous year. This increase was caused principally by the federal borrowing of $450,000,000 in October which was purchased by the Bank of Canada. The one issue, plus the Savings Loan total of $337,772,450, accounted for the entire amount (exclusive of short-term financing) of $787,772,450 floated by the Federal Government in 1952.

Federal short-term financing of less than one year amounted to $3,875,000,000 in 1952 but is not included in Table 7 because of its limited distribution. Such financing included Treasury Bills, Treasury Notes and Deposit Certificates. If the total of short-term financing is added to the total of federal long-term financing, as is done in some reports of Canadian bond sales, the grand total of federal borrowing in 1952 amounted to $4,662,772,450 and the grand total of all bond financing in Canada amounted to $5,860,239,490.

In 1952, direct provincial flotations totalled $216,100,000, a decrease of $119,712,000 from the $335,812,000 total for the previous year. With the exception of the Province of Alberta, however, all provinces entered the bond market in 1952, as follows:—

Month	*Province*	*Amount*	*Month*	*Province*	*Amount*
January	Manitoba	$10,000,000	September	Manitoba	$ 5,000,000
February	British Columbia	30,000,000	September	Manitoba	10,000,000
February	Quebec	12,600,000	November	Prince Edward Island	1,500,000
February	Saskatchewan	20,000,000	November	Quebec	25,000,000
March	Nova Scotia	12,000,000	December	Quebec	15,000,000
April	New Brunswick	10,000,000			
June	Ontario	55,000,000	TOTAL		$216,100,000
July	Newfoundland	10,000,000			

In contrast to the decrease in direct provincial financing, the total of $210,873,000 for provincial guaranteed financing in 1952 represented a very considerable increase of $177,153,000 over the total of $33,720,000 for 1951. The increase was principally attributable to the flotation of three issues of The Hydro-Electric Power Commission of Ontario, totalling $125,000,000, and a $50,000,000 issue of the Hydro-Electric Commission of Quebec. In addition, however, the 1952 total was increased by a number of municipal issues that were guaranteed by the Provinces. Direct municipal bond financing totalled $147,690,940 in 1952, exclusive of a total of $49,264,100 for parochial and miscellaneous purposes. These two totals compared with $196,438,916 and $37,967,921, respectively, in 1951.

The largest single amount borrowed by any one municipality during 1952 was represented by a flotation of the City of Montreal for $15,859,000 in May and sold in the United States. Other municipal borrowings in excess of $3,000,000 were: the City of Montreal, $4,129,000 (February); the City of Vancouver, $7,000,000 (March); the City of Toronto, $10,774,000 (May); the City of Hamilton, $3,120,473 (May); the City of Montreal, $4,000,000 (June); and the City of Vancouver, $3,825,000 (November).

During 1952, corporate financing totalled $573,539,000, which was an increase of $121,909,000 from the $451,630,000 total of 1951. Such increase reflected the continued high value of new capital investment in plant and equipment that has characterized the Canadian economy in the post-war years. Many of the corporation issues were in the form of convertible debentures which were offered to the public and quickly subscribed.

The largest single corporate bond issue in 1952 was for $90,000,000 which the Aluminum Company of Canada sold in the United States market to help finance the Company's expansions in British Columbia and Quebec. Other large corporate borrowers were: the St. Lawrence Corporation, Simpsons Limited, General Motors Acceptance Corporation, Sherritt Gordon Mines, Noranda Mines, British American Oil, Royalite Oil and Canadian Oil.

The largest issue in 1952 of any concern engaged in the transportation industry was the $35,000,000, 17-year, 4 p.c., convertible trust bonds offered by the Canadian Pacific Railway in December. In addition, issues of equipment trust certificates were offered by the Provincial Transport Company and the Canadian General Transit Company at $1,800,000 and $1,500,000, respectively. Since the Canadian National Railways made an arrangement to have funds provided by the Government of Canada, it was not, as in the years prior to 1951, a large borrower in the open market.

The *Monetary Times* records indicate that two federal issues (excluding all short-term financing), 25 provincial and guaranteed issues, 589 municipal issues (including parochial and miscellaneous) and 77 corporation issues were placed in 1952. For 1951, the same records indicate the placement of two federal issues, 26 provincial and guaranteed issues, 564 municipal issues and 79 corporation issues. Thus, a grand total of 693 issues were sold in 1952 compared with 671 in 1951.

6.—Sales of and Applications for Federal Government Bonds, Feb. 1, 1940, to Nov. 1, 1952

Type and Date of Loan	Purchases by Individuals	Purchases by Corporations	Total Cash Sales	Applications
	$'000	$'000	$'000	No.
War Loans—				
Feb. 1, 1940	132,000	68,000	200,000	178,363
Oct. 1, 1940	113,000	187,000	300,000	150,890
Victory Loans—				
June 15, 1941	279,500	450,900	730,400	968,259
Mar. 1, 1942	335,600	507,500	843,100	1,681,267
Nov. 1, 1942	374,600	616,800	991,400	2,032,154
May 1, 1943	529,500	779,200	1,308,700	2,668,420
Nov. 1, 1943	599,700	775,300	1,375,000	3,033,051
May 1, 1944	641,500	763,500	1,405,000	3,077,123
Nov. 1, 1944	766,400	751,200	1,517,600	3,327,315
May 1, 1945	836,300	732,600	1,563,619[1]	3,178,275
Nov. 1, 1945	1,221,342	801,132	2,027,487[1]	2,947,636
Savings Loan—[2]				
Nov. 1, 1946	535,285,550	—	535,285,550	1,248,444
Nov. 1, 1947	287,733,100	—	287,733,100	910,742
Nov. 1, 1948	260,491,150	—	260,491,150	862,686
Nov. 1, 1949	320,200,000	—	320,200,000	1,015,579
Nov. 1, 1950	285,600,000	—	285,600,000	963,048
Nov. 1, 1951	394,642,400	—	394,642,400	986,900
Nov. 1, 1952[3]	337,772,450	—	337,772,450	911,270

[1] Department of Finance figures. [2] Total subscriptions were limited to $2,000 for any one individual for the 1946 issue, $1,000 for the issues of 1947-50, inclusive, and $5,000 for the issues of 1951 and 1952. Figures for the issues 1946-51 are for the entire loans, i.e., to the closing dates of subsequent years. [3] Dollar total is to Nov. 30, 1952.

7.—Sales of Canadian Bonds, by Class of Bond and Country of Sale, 1943-52

NOTE.—Figures for 1904-25 are given in the 1933 Year Book, p. 921, and for 1926-42 in the 1946 edition, pp. 990-991.

Year	Class of Bond					
	Federal[1]	Provincial	Municipal	Parochial and Miscellaneous	Corporation	Total
	$	$	$	$	$	$
1943	3,670,028,200	97,632,000	14,228,986	20,406,300	53,055,500	3,855,350,986
1944	3,400,963,900	67,153,500	113,225,635	10,612,100	92,063,900	3,684,019,035
1945	3,577,691,000	162,002,084	30,430,210	10,952,500	153,900,000	3,934,975,794
1946	985,285,550	114,296,800	140,815,491	43,155,800	581,499,188	1,865,052,829
1947	293,333,100	229,562,000	238,887,410	14,968,600	379,674,500	1,156,425,610
1948	445,491,150	312,619,500	84,014,291	21,010,000	310,506,000	1,173,640,941
1949	790,200,000	449,347,000	134,796,184	23,853,200	285,268,000	1,683,464,384
1950	2,167,600,000	373,824,500	150,369,281	30,466,369	431,180,303	3,153,440,453
1951	594,642,400	369,532,000	196,438,916	37,967,921	451,630,000	1,650,211,237
1952	787,772,450	426,973,000	147,690,940	49,264,100	573,539,000	1,985,239,490

Year	Country of Sale			
	Canada	United States	United Kingdom	Total
	$	$	$	$
1943	3,729,229,986	126,121,000	—	3,855,350,986
1944	3,629,004,035	55,015,000[2]	—	3,684,019,035
1945	3,854,957,794	80,018,000	—	3,934,975,794
1946	1,801,400,829	63,652,000	—	1,865,052,829
1947	1,068,114,610	88,311,000	—	1,156,425,610
1948	1,023,640,941	150,000,000	—	1,173,640,941
1949	1,543,464,384	140,000,000	—	1,683,464,384
1950	2,980,740,453	172,700,000	—	3,153,440,453
1951	1,233,745,837	384,023,000	—	1,617,768,837
1952	1,700,589,465	284,650,025	—	1,985,239,490

[1] Excludes treasury bills, deposit certificates and other financing for a term of less than one year.
[2] Excludes bonds purchased by Canadian dealers and later sold in the United States.

CHAPTER XXVI.—INSURANCE*

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Insurance, for the purpose of statistical analysis, is usually classified as fire, life and casualty. Most companies operate under Federal Government registration although some have provincial licences only. Also, many fraternal orders and societies are engaged in this kind of business. An extended treatment of the salient features of the legislation covering insurance in general and the fields of federal and provincial jurisdiction will be found in the 1941 Year Book at pp. 844-846. A special article in the 1942 Year Book, pp. 842-846, outlines the developments in fire and casualty insurance in Canada between 1931 and 1940, consequent upon the enactment of the three Insurance Acts of 1932, while another article on insurance as it affects the balance of international payments appears at pp. 870-871 of the same edition. The 1947 Year Book, at pp. 1064-1074, includes a special article entitled "Insurance in Canada during the Depression and War Periods"

Section 1.—Fire Insurance

In Canada, fire insurance began with the establishment of agencies by British fire insurance companies. These, situated usually at the seaports, were operated by local merchants. The oldest existing agency of such a company commenced business at Montreal in 1804. The first Canadian company dates from 1809 and the first United States company to operate in Canada commenced business in 1821. A short account of the inception of fire insurance in Canada is given in the 1941 Year Book, pp. 846-847.

The report of the Superintendent of Insurance for the year ended Dec. 31, 1952, shows that, at that date, there were 281 fire insurance companies under federal registration; of these, 69 were Canadian, 84 were British and 128 were foreign

* Material in this Chapter, except as otherwise indicated, has been revised under the direction of K. R. MacGregor, Superintendent of Insurance, Department of Insurance, Ottawa.

companies. In 1875, the first year for which authentic records were collected by the Department of Insurance, 27 companies operated in Canada—11 Canadian, 13 British and 3 United States. The proportionate increase in the number of British and foreign companies from 59 p.c. to 75 p.c. of the total number is a very marked point of difference between the fire and life insurance businesses in Canada, the latter being carried on very largely by Canadian companies.

Subsection 1.—Total Registered Fire Insurance in Force in Canada

Of the total amount of insurance effected in Canada during each year, a part is sold by the companies holding provincial licences and permits. Such companies generally confine their operations to the province of incorporation but may be allowed to sell insurance in other provinces. As shown in Table 1, companies under Federal registration account for approximately 92 p.c. of the insurance in force.

1.—Fire Insurance Transacted in Canada, 1950-52

Item		Gross Insurance Written	Net in Force at End of Year	Net Premiums Written	Net Claims Incurred
		$	$	$	$
Federal Government Registrations.	1950	27,512,042,537	28,957,395,702	115,648,449	58,524,685
	1951	32,903,960,900	33,490,653,184	134,496,218	52,086,541
	1952	35,371,554,787	37,317,499,723	139,777,732	61,124,918
Provincial Licensees—					
(a) Provincial companies within provinces by which they are incorporated	1950	1,630,890,154	2,278,457,679	9,134,097	5,384,254
	1951	1,911,928,015	2,638,121,340	10,374,025	5,501,009
	1952	1,908,809,507	2,574,996,679	10,782,628	5,322,188
(b) Provincial companies within provinces other than those by which they are incorporated..	1950	215,453,686	240,699,605	1,385,458	844,378
	1951	206,607,835	249,443,644	1,240,222	673,905
	1952	268,664,292	294,072,031	912,623	444,821
Totals, Provincial Licensees...	1950	1,846,343,840	2,519,157,284	10,519,555	6,228,632
	1951	2,118,535,850	2,887,564,984	11,614,247	6,174,914
	1952	2,177,473,799	2,869,068,710	11,695,251	5,767,009
Lloyds, London	1950	649,939,702	755,858,745	4,982,644	3,546,823
	1951	831,670,172	904,488,934	5,939,298	2,791,796
	1952	708,046,922	908,257,933	6,065,759	2,986,392
Grand Totals	**1950**	**30,008,326,079**	**32,232,411,731**	**131,150,648**	**68,300,140**
	1951	**35,854,166,922**	**37,282,707,102**	**152,049,763**	**61,053,251**
	1952	**38,257,075,508**	**41,094,826,366**	**157,538,742**	**69,878,319**

Subsection 2.—Operational Statistics of Fire Insurance Companies under Federal Registration

The trend in the average rate payable for fire insurance has been generally downward, although the increased fire losses have had the effect of checking that tendency in certain recent years. The increase in value of insurable buildings and their contents tends to increase fire insurance premiums despite the trend of the average rate.

2.—Fire Insurance, by Companies Operating under Federal Government Registration, Decennially 1880-1940 and 1941-52

NOTE.—Figures for 1869-1900 are given in the 1939 Year Book, p. 973, and for 1901-39 in the 1942 edition, pp. 847-848.

Year	Amount in Force at End of Year	Net Premiums Written During Year	Net Claims Incurred During Year	Percentage of Claims to Premiums	Gross Amount of Risks Taken During Year	Premiums Charged Thereon	Average Cost per $100 of Insurance
	$	$	$	p.c.	$	$	$
1880	411,563,271	3,479,577[1]	1,666,578[2]	47·90	384,051,861	3,958,437	1·03
1890	720,679,621	5,836,071[1]	3,266,567[2]	55·97	620,723,945	7,019,319	1·13
1900	992,332,360	8,331,948[1]	7,774,293[2]	93·31	803,428,654	10,031,735	1·25
1910	2,034,276,740	18,725,531[1]	10,292,393[2]	54·96	1,817,055,685	24,684,296	1·36
1920	5,969,872,278	50,527,937[1]	21,935,387[2]	43·41	6,790,670,610	71,143,917	1·05
1930	9,672,996,973	52,646,520	30,427,968	57·71	10,311,193,608	82,700,147	0·80
1940	10,737,568,226	41,922,312	15,444,927	36·84	12,072,174,014	72,682,679	0·60
1941	11,386,819,286	49,305,539	17,814,322	36·13	13,345,610,185	85,877,389	0·64
1942	12,565,212,694	47,272,440	20,360,534	43·07	12,759,419,939	84,168,663	0·66
1943	13,386,782,873	47,153,094	22,181,244	47·04	12,838,807,204	84,047,821	0·65
1944	14,174,130,630	55,027,051	28,921,930	52·56	14,572,876,024	96,065,279	0·66
1945	15,054,848,612	58,335,728	30,585,357	52·43	10,096,447,893[3]	72,872,125	0·72
1946	17,376,429,865	68,825,470	35,379,627	51·40	11,744,234,245[3]	82,696,662	0·70
1947	19,926,683,282	86,774,952	39,513,014	45·54	15,452,832,219[3]	106,427,978	0·69
1948	23,021,215,478	98,191,514	45,143,565	45·98	16,986,228,866[3]	119,222,396	0·70
1949	25,971,300,213[r]	103,955,183[r]	46,567,188[r]	44·80[r]	17,618,541,153[3]	129,711,596	0·74[r]
1950	28,957,395,702	115,648,449	58,524,685	50·61	19,870,295,002[3]	143,661,997	0·72
1951	33,490,653,184	134,496,218	52,086,541	38·73	23,569,483,733[3]	166,791,056	0·71
1952	37,317,499,723	139,777,732	61,124,918	43·73	24,754,216,365[3]	172,398,726	0·70

[1] Net premiums received. [2] Net claims paid. [3] Not comparable with 1944 and previous years since this figure indicates "Gross direct written", disregarding all reinsurance, assumed or ceded.

Premiums Written and Claims Incurred.—The relationship of claims incurred to premiums written is shown in Table 3 for Federal Government registered companies, by province.

3.—Net Premiums Written and Net Claims Incurred in Canada by Canadian, British and Foreign Companies Operating under Federal Government Registration, by Province, 1951 and 1952.

(Registered reinsurance deducted)

Year and Province	Canadian Companies		British Companies		Foreign Companies	
	Premiums	Claims	Premiums	Claims	Premiums	Claims
	$	$	$	$	$	$
1951						
Newfoundland	185,988	80,795	967,383	348,033	334,902	135,734
Prince Edward Island	141,048	71,628	343,570	233,333	186,593	93,600
Nova Scotia	1,434,634	419,638	2,572,556	1,108,057	1,496,841	378,300
New Brunswick	1,053,075	361,406	2,344,848	860,273	1,486,941	534,386
Quebec	9,171,860	4,164,293	14,660,394	6,641,356	16,177,434	5,662,097
Ontario	13,012,539	5,363,391	17,478,097	7,339,859	20,416,779	7,661,442
Manitoba	2,892,070	1,027,026	2,397,945	878,589	2,389,456	660,718
Saskatchewan	2,683,576	758,001	1,418,565	402,738	1,755,516	822,462
Alberta	2,840,539	1,256,671	3,337,828	1,608,604	3,351,822	1,332,705
British Columbia	3,057,413	956,002	5,625,153	1,706,213	6,358,776	1,486,605
All other Canada[1]	60,182	58,082	260,858	292,482	122,767	282,710
Canada, 1951	**36,532,924**	**14,516,933**	**51,407,197**	**21,419,537**	**54,077,827**	**19,050,759**
1952						
Newfoundland	239,084	125,246	1,110,177	562,530	365,723	273,113
Prince Edward Island	165,967	68,084	369,319	78,192	177,445	142,515
Nova Scotia	1,554,069	415,930	2,463,502	634,142	1,386,875	485,297
New Brunswick	1,155,555	415,455	2,358,220	1,016,918	1,499,794	877,345
Quebec	10,506,551	4,462,218	14,823,796	6,969,943	16,399,959	6,820,789
Ontario	14,535,164	6,276,489	17,744,222	10,233,831	20,114,885	10,239,868
Manitoba	3,063,851	1,194,840	2,171,545	875,724	2,285,497	712,746
Saskatchewan	2,903,620	1,004,589	1,464,729	552,852	1,862,022	621,837
Alberta	3,335,144	1,010,945	3,644,871	1,193,910	3,801,246	1,064,932
British Columbia	3,188,695	1,139,393	5,537,962	2,182,779	6,400,629	2,442,231
All other Canada[1]	236,095	—20,495	224,130	156,371	55,343	47,350
Canada, 1952	**40,883,795**	**16,092,694**	**51,912,473**	**24,457,192**	**54,349,418**	**23,728,023**

[1] Includes the Yukon and Northwest Territories, also certain 'floater' business that cannot be apportioned to any one province.

Classification of Fire Risks.—The Department of Insurance compiles, from information supplied by the fire insurance companies registered to transact business in Canada, tables of experience as to premiums and claims by 21 classes of risks. The experience of 1950 and 1951 is given in Table 4.

4.—Percentages of Claims Incurred to Premiums Written in Canada, by All Companies Operating under Federal Government Registration, by Class of Risk, 1950 and 1951.

(Excluding all reinsurance ceded or assumed)

Class of Risk	1950	1951	Class of Risk	1950	1951
	p.c.	p.c.		p.c.	p.c.
Dwellings, excluding farms—			Lumber yards, pulpwood and		
Protected brick	53·10	50·08	standing timber	56·09	17·73
Protected frame	47·11	35·00	Wood-working plants	39·22	40·41
Unprotected	57·86	39·47	Metal-working plants, garages and		
Farm buildings	62·74	48·26	hangars	65·48	45·83
Churches, public buildings, educational and social-service institutions	54·57	46·00	Mining risks	110·11	52·69
			Railway and public utility risks	43·03	33·10
			Miscellaneous manufacturing risks	67·23	48·63
Warehouses	45·50	33·25	Miscellaneous non-manufacturing		
Retail stores, office buildings, banks and hotels	52·46	52·23	risks	48·71	43·30
			Sprinklered risks of whatever		
Contents of above item	51·74	49·14	nature or occupancy	35·76	23·03
Foods, food and beverage plants	56·88	37·28	Use and occupancy and profits,		
Flour and cereal mills, grain elevators	38·58	28·54	excluding rental insurance	74·58	32·57
Oil risks of all kinds	40·59	34·27			
Saw and shingle mills	40·75	54·06	**Averages**	**51·54**	**40·24**

Subsection 3.—Finances of Fire Insurance Companies under Federal Registration

Tables 5 to 7 show the assets, liabilities, income and expenditure of registered companies transacting fire insurance in Canada from 1948 to 1952. The majority of fire insurance companies also transact casualty insurance dealt with in Section 3 of this Chapter. Totals only are given here because it is impossible for such companies to allocate their assets and liabilities and their general income and expenditure among the various types of business transacted. Table 28, p. 1182, gives similar information for registered companies whose transactions are confined to casualty insurance.

5.—Assets of Canadian, British and Foreign Companies Transacting Fire Insurance, or Fire and Casualty Insurance, under Federal Government Registration, 1948-52

Assets	1948	1949	1950	1951	1952
	$	$	$	$	$
Canadian Companies (In All Countries)					
Real estate	1,883,576	2,010,983	2,890,580	4,995,436	5,593,805
Loans on real estate	3,791,417	4,342,868	4,503,686	4,638,405	5,246,897
Bonds, debentures and stocks	119,677,619	134,327,602	146,468,315	156,851,549	170,943,515
Agents' balances and premiums outstanding	12,376,656	13,406,599	15,864,962	18,047,447	20,311,328
Cash	16,263,610	17,118,676	17,768,620	20,292,975	25,163,593
Interest and rents	820,922	924,946	1,011,235	1,166,123	1,307,241
Other assets	6,238,104	7,728,925	9,985,911	9,571,384	12,567,762
Totals, Canadian Companies	**161,051,904**	**179,860,599**	**198,493,309**	**215,563,319**	**241,134,141**

5.—Assets of Canadian, British and Foreign Companies Transacting Fire Insurance, or Fire and Casualty Insurance, under Federal Government Registration, 1948-52 —concluded.

Assets	1948	1949	1950	1951	1952
	$	$	$	$	$
British Companies (In Canada)					
Real estate	805,431	856,789	961,944	1,181,210	1,194,861
Loans on real estate	31,826	85,699	164,226	302,606	432,799
Bonds, debentures and stocks	73,417,851	87,688,448	97,514,151	104,060,718	116,251,691
Agents' balances and premiums outstanding	9,626,437	10,776,448	12,954,003	14,205,780	16,505,580
Cash	13,130,958	12,513,078	13,221,377	15,711,722	17,393,338
Interest and rents	259,163	347,294	392,966	455,366	578,566
Other assets in Canada	2,358,793	2,234,250	2,372,038	2,264,071	4,221,756
Totals, British Companies	**99,630,459**	**114,502,006**	**127,580,705**	**138,181,473**	**156,578,591**
Foreign Companies (In Canada)					
Real estate	—	—	—	—	—
Loans on real estate	—	—	—	2,500	9,620
Bonds, debentures and stocks	64,043,174	71,122,550	78,612,365	97,101,459	103,138,393
Agents' balances and premiums outstanding	7,153,174	7,513,224	8,825,587	10,778,167	11,939,796
Cash	17,957,749	19,102,039	19,236,339	20,275,628	19,343,848
Interest and rents	372,922	415,671	454,347	617,072	730,838
Other assets in Canada	803,510	854,642	1,036,804	978,455	995,483
Totals, Foreign Countries	**90,330,529**	**99,008,126**	**108,165,442**	**129,753,281**	**136,157,978**

6.—Liabilities of Canadian, British and Foreign Companies Transacting Fire Insurance, or Fire and Casualty Insurance, under Federal Government Registration, 1948-52.

Liabilities	1948	1949	1950	1951	1952
	$	$	$	$	$
Canadian Companies (In All Countries)					
Reserves for unsettled claims	21,190,575	24,392,136	28,705,334	33,587,225	39,243,044
Reserves of unearned premiums	42,256,644	48,652,678	54,957,195	61,181,368	72,835,541
Sundry items	22,623,329	26,801,982	30,700,595	34,251,492	38,447,531
Totals, Canadian Companies	**86,070,548**	**99,846,796**	**114,363,124**	**129,020,085**	**150,526,116**
Excess of assets over liabilities	74,981,356	80,013,803	84,130,185	86,543,234	90,608,025
Capital stock paid up	19,975,290	20,334,030	20,972,569	21,650,941	21,821,506
British Companies (In Canada)					
Reserves for unsettled claims	14,837,703	16,366,220	21,082,932	23,970,608	29,923,183
Reserves of unearned premiums	41,347,782	46,019,748	51,689,258	58,523,291	63,633,033
Sundry items	3,906,719	5,107,582	6,084,969	7,148,429	8,929,705
Totals, British Companies	**60,092,204**	**67,493,550**	**78,857,159**	**89,642,328**	**102,485,921**
Excess of assets over liabilities	39,538,255	47,008,456	48,723,546	48,539,145	54,092,670
Foreign Companies (In Canada)					
Reserves for unsettled claims	7,512,738	8,117,476	12,433,787	16,611,126	19,635,404
Reserves of unearned premiums	37,523,198	39,884,410	46,992,438	54,736,519	57,069,975
Sundry items	4,208,733	4,511,813	4,857,331	8,801,763	12,031,608
Totals, Foreign Companies	**49,244,669**	**52,513,699**	**64,283,556**	**80,149,408**	**88,736,987**
Excess of assets over liabilities, excluding capital	41,085,860	46,494,427	43,881,886	49,603,873	47,420,991

7.—Income and Expenditure of Canadian, British and Foreign Companies Transacting Fire Insurance, or Fire and Casualty Insurance, under Federal Government Registration, 1948-52.

Income and Expenditure	1948	1949	1950	1951	1952
	$	$	$	$	$
INCOME					
Canadian Companies (In All Countries)					
Net premiums written, fire and other insurance	74,535,604	85,967,103	94,957,384	108,123,353	130,971,373
Interest, dividends and rents earned	4,001,600	4,519,974	5,064,567	5,580,820	6,162,349
Sundry items	44,105	41,887r	176,657r	69,074	91,689
Totals, Canadian Companies	**78,581,309**	**90,528,964r**	**100,198,608r**	**113,773,247**	**137,225,411**
British Companies (In Canada)					
Net premiums written	67,350,314	75,168,266	84,262,573	95,563,249	104,718,151
Interest, dividends and rents earned	998,392	1,152,406	1,402,786	1,588,046	1,879,278
Sundry items	578	609	484	1,080	683
Totals, British Companies	**68,349,284**	**76,321,281**	**85,665,843**	**97,152,375**	**106,598,112**
Foreign Companies (In Canada)					
Net premiums written	54,116,615	55,433,534	65,299,390	88,814,365	96,400,962
Interest, dividends and rents earned	1,651,818	1,733,103	1,897,135	2,390,403	2,841,987
Sundry items	2,051	−12,727	15,541	1,858	306
Totals, Foreign Companies	**55,770,484**	**57,153,910**	**67,212,066**	**91,206,626**	**99,243,255**
EXPENDITURE					
Canadian Companies (In All Countries)					
Incurred for claims (fire)	13,068,129	12,981,810	15,862,354	15,234,667	16,838,349
General expenses (fire)	12,174,865	13,105,812	14,324,556	14,805,015	17,326,626
Incurred for claims (casualty)	22,181,197	26,516,804	30,978,046	39,134,232	46,145,163
General expenses (casualty)	17,858,019	19,489,615	21,840,069	26,733,771	31,377,886
Dividends or bonuses to shareholders	1,532,948	1,875,511	1,994,347	2,163,564	1,744,884
Premium taxes and fees	1,903,907	2,206,998	2,402,244	2,741,200	3,263,691
Income tax	1,014,953	1,621,510	1,573,799	2,666,768	3,023,178
Excess profits tax	1,687	−19,612	1,064	—	—
Provincial corporation income tax	59,488	87,374	90,506	158,832	3,539
Dividends to policyholders	199,191	411,938	238,828	337,463	423,210
British and foreign taxes	243,007	512,165	480,858	429,629	194,844
Totals, Canadian Companies	**70,237,391**	**78,789,925**	**89,786,671**	**104,405,141**	**120,341,370**
Excess of income over expenditure	8,343,918	11,739,039r	10,411,937r	9,368,106	16,884,041
British Companies (In Canada)					
Incurred for claims (fire)	16,926,631	18,484,144	24,094,197	21,419,537	24,457,192
General expenses (fire)	15,631,756	16,867,513	18,796,326	20,450,532	21,716,054
Incurred for claims (casualty)	14,929,786	16,071,566	19,016,349	24,491,516	28,222,840
General expenses (casualty)	11,308,613	12,874,637	14,634,521	17,565,922	19,924,643
Premium taxes and fees	1,722,769	1,981,533	2,165,783	2,456,255	2,645,281
Income tax	129,250	342,216	270,200	723,940	1,180,203
Excess profits tax	−32,943	15	−787	—	—
Provincial corporation income tax	24,458	12,555	8,569	23,725	−1,411
Totals, British Companies	**60,640,320**	**66,634,179**	**78,985,158**	**87,131,427**	**98,144,802**
Excess of income over expenditure	7,708,964	9,687,102	6,680,685	10,020,948	8,453,310

7.—Income and Expenditure of Canadian, British and Foreign Companies Transacting Fire Insurance, or Fire and Casualty Insurance, under Federal Government Registration, 1948-52—concluded.

Expenditure	1948	1949	1950	1951	1952
	$	$	$	$	$
Foreign Companies (In Canada)					
Incurred for claims (fire)	18,112,084	17,897,614	21,777,434	19,050,759	23,728,023
General expenses (fire)	13,740,336	13,899,819	16,120,209	18,385,823	19,317,717
Incurred for claims (casualty)	6,901,612	6,653,022	9,498,697	19,270,657	23,253,049
General expenses (casualty)	5,244,734	5,731,607	7,048,391	11,810,013	13,805,059
Premium taxes and fees	1,437,018	1,418,647	1,708,675	2,226,447	2,330,267
Income tax	563,500	797,193	444,131	1,184,098	1,237,088
Excess profits tax	−1,873	395	—	—	—
Provincial corporation income tax	45,541	50,471	41,079	39,303	−1,571
Dividends or savings credited to subscribers	3,821,021	3,527,772	3,435,151	5,269,798	5,264,013
Totals, Foreign Companies	**49,863,973**	**49,976,540**	**60,073,767**	**77,236,898**	**88,933,645**
Excess of income over expenditure	5,906,511	7,177,370	7,138,299	13,969,728	10,309,610

Subsection 4.—Fire Losses

Fire Losses.—The information in Tables 8 to 11, which deals with the loss of property and life caused by fire, has been summarized from the Statistical Bulletin of the Association of Canadian Fire Marshals and the Dominion Fire Prevention Association, prepared by the Dominion Fire Commissioner.

8.—Fire Losses in Canada, 1941-52

NOTE.—Figures for 1926-40 are given in the 1947 Year Book, p. 1078. Earlier figures from 1898 may be obtained from the Department of Insurance.

Year	Fires Reported	Property Loss[1]	Loss per Capita	Deaths by Fire	Year	Fires Reported	Property Loss[1]	Loss per Capita	Deaths by Fire
	No.	$	$	No.		No.	$	$	No.
1941	48,609	28,042,907	2·46	323	1947	52,931	57,050,461	4·53	390
1942	47,596	31,182,238	2·70	304	1948	53,048	67,144,473	5·21	493
1943	47,594	31,464,710	2·67	319	1949	54,500	65,159,044	4·94	542
1944	50,719	40,562,478	3·39	307	1950[2]	59,710	81,525,298	5·88	441
1945	52,173	41,903,020	3·46	391	1951	60,317	76,919,357	5·64	535
1946	55,400	49,413,363	4·01	408	1952	64,057	80,690,123	5·74	572

[1] Excludes federal jurisdiction losses, including forests, except for 1941 and 1942. [2] Includes Newfoundland.

9.—Fire Losses, by Province, 1948-52

Province or Territory	1948	1949	1950	1951	1952
	$	$	$	$	$
Newfoundland	...	...	660,100	..	..
Prince Edward Island	301,275	588,017	422,534	725,893	475,265
Nova Scotia	2,716,983	2,441,016	3,149,464	4,547,955	2,097,216
New Brunswick	2,819,962	2,850,007	3,016,191	2,865,881	3,320,340
Quebec	25,000,745	20,490,505	32,962,910	25,933,975	26,774,705
Ontario	20,557,149	20,237,896	22,619,343	23,241,177	27,615,682
Manitoba	2,693,868	2,243,589	3,636,631	2,377,092	2,667,303
Saskatchewan	2,105,561	2,997,610	2,640,021	2,776,614	3,525,799
Alberta	3,634,160	5,299,584	5,242,553	4,661,963	4,545,444
British Columbia	7,147,720	7,556,229	7,052,706	8,604,426	9,603,231
Yukon and N.W.T.	167,050	454,591	122,845	1,184,381	65,138
Canada[1]	**67,144,473**	**65,159,044**	**81,525,298**	**76,919,357**	**80,690,123**

[1] Excludes federal jurisdiction losses, including forests.

The provincial property losses for 1950-52 given in Table 9 include both insured and uninsured losses. The percentages of the provincial totals uninsured were as follows: Prince Edward Island, 36; Nova Scotia, 30; New Brunswick, 30; Quebec, 22; Ontario, 14; Manitoba, 20; Saskatchewan, 21; Alberta, 28; British Columbia, 40; and the Yukon and Northwest Territories, 15. Uninsured losses formed 22 p.c. of total losses for Canada.

10.—Fire Losses, by Type of Property, 1950-52

Type of Property	1950		1951[1]		1952[1]	
	Fires Reported	Property Loss	Fires Reported	Property Loss	Fires Reported	Property Loss
	No.	$	No.	$	No.	$
Residential	44,619	20,282,028	44,673	19,892,811	47,732	18,387,258
Mercantile	5,737	21,586,449	6,217	18,907,864	6,756	23,969,142
Farm	3,718	5,996,978	3,563	5,571,199	1,367	13,471,727
Manufacturing	1,794	18,442,577	1,818	16,538,095	3,685	6,036,451
Institutional and assembly	924	7,217,956	819	5,934,185	715	4,197,097
Miscellaneous	2,918	7,999,310	3,227	10,075,203	3,802	14,628,448
Totals	**59,710**	**81,525,298**	**60,317**	**76,919,357**	**64,057**	**80,690,123**

[1] Figures for Newfoundland not available.

11.—Value of Property Loss, by Reported Cause of Fire, 1950-52

Reported Cause	1950		1951[1]		1952[1]	
	Fires Reported	Property Loss	Fires Reported	Property Loss	Fires Reported	Property Loss
	No.	$	No.	$	No.	$
Smokers' carelessness	19,319	5,408,953	21,192	3,515,329	24,080	3,656,246
Stoves, furnaces, boilers and smoke pipes	7,326	5,232,863	6,652	5,135,132	6,221	4,404,263
Electrical wiring and appliances	5,609	17,246,407	5,513	8,284,017	5,585	10,772,833
Matches	2,636	732,611	2,532	711,121	2,466	957,104
Defective and overheated chimneys and flues	3,115	2,813,984	2,573	2,409,573	2,407	2,121,604
Hot ashes, coals and open fires	2,042	1,124,495	2,118	1,347,192	2,141	2,017,627
Petroleum and its products	2,070	2,744,417	2,124	2,548,450	1,357	3,017,787
Lights, other than electric	1,323	1,002,796	1,329	2,459,274	1,188	1,135,813
Lightning	1,426	707,087	1,344	1,116,786	1,403	913,653
Sparks on roofs	888	2,337,868	725	423,653	707	499,239
Exposure fires	651	1,115,374	587	2,084,081	608	1,236,021
Spontaneous ignition	362	2,533,890	386	1,594,857	416	2,233,477
Incendiarism	296	753,713	250	1,372,244	282	1,363,519
Miscellaneous known causes (explosions, fireworks, friction, hot grease or metal, steam and hot water pipes, etc.)	5,197	3,116,588	5,481	6,493,696	7,353	6,039,108
Unknown	7,450	34,654,252	7,511	37,423,952	7,843	40,321,829
Totals	**59,710**	**81,525,298**	**60,317**	**76,919,357**	**64,057**	**80,690,123**

[1] Figures for Newfoundland not available.

Section 2.—Life Insurance

Life insurance in force in Canada, in companies registered by the Federal Government, was over $19,090,000,000 at the end of 1952, an increase of over $1,855,000,000 during the year. There was not only an increase in new business, but

also a greater stability in business written compared with earlier years. The effect of these factors is reflected in the ratio of gain in business in force expressed as a percentage of the amount in force at the beginning of the same year.

Year	Net in Force at Beginning of Year	Net Increase in Force for the Year	Percentage Gain
	$	$	
1930	6,157,000,000	335,000,000	5·4
1935	6,221,000,000	38,000,000	0·6
1940	6,776,000,000	199,000,000	2·9
1945	9,139,000,000	612,000,000	6·7
1946	9,751,000,000	1,061,000,000	10·9
1947	10,812,000,000	1,088,000,000	10·1
1948	11,900,000,000	1,205,000,000	10·1
1949	13,105,000,000	1,303,000,000	9·9
1950	14,409,000,000	1,337,000,000	9·3
1951	15,746,000,000	1,490,000,000	9·5
1952p	17,236,000,000	1,855,000,000	10·8

Subsection 1.—Total Registered Life Insurance in Force in Canada

In addition to the business transacted by life insurance companies registered by the Federal Government, a considerable volume of business is also transacted by companies licensed by the provinces. Table 12 summarizes the volume of business transacted by Canadian, British and foreign life insurance companies and fraternal societies, whether registered by the Federal Government or licensed by the provinces.

12.—Life Insurance Transacted in Canada, 1952

Business Transacted by—	New Policies Effected (net)	Net Insurance in Force, Dec. 31	Net Premiums Received	Net Claims Paid
	$	$	$	$
Federal Government Registrations—				
Life companies	2,287,026,644	19,090,630,039	422,712,052	130,006,966
Fraternal societies	43,516,982	306,630,410	5,849,327	4,590,365
Totals, Federal Government Registrations	**2,330,543,626**	**19,397,260,449**	**428,561,379**	**134,597,331**
Provincial Registrations—				
Provincial Companies within Province by which they are Incorporated—				
Life companies	127,631,091	585,958,376	14,441,207	4,226,388
Fraternal societies	32,316,524	204,182,838	4,773,899	2,368,453
Provincial Companies in Provinces other than those by which they are Incorporated—				
Life companies	14,101,968	62,173,401	1,658,633	469,206
Fraternal societies	12,590,012	85,018,871	1,765,077	1,179,354
Totals, Provincial Registrations	**186,639,595**	**937,333,486**	**22,638,816**	**8,243,401**
Grand Totals	**2,517,183,221**	**20,334,593,935**	**451,200,195**	**142,840,732**
Canadian Life Companies—				
Federal	1,540,053,245	13,085,350,960	281,787,528	86,590,855
Provincial	141,733,059	648,131,777	16,099,840	4,695,594
Canadian Fraternal Societies—				
Federal	30,484,585	175,417,875	2,562,374	2,310,607
Provincial	44,906,536	289,201,709	6,538,976	3,547,807
British life companies	74,055,180	443,275,711	10,296,873	2,999,725
Foreign life companies	672,918,219	5,562,003,368	130,627,651	40,416,386
Foreign fraternal societies	13,032,397	131,212,535	3,286,953	2,279,758

Subsection 2.—Operational Statistics of Life Insurance Companies under Federal Registration

The net life insurance in force in all companies with federal registration was only $35,680,082 in 1869 while in 1952 it was $19,090,630,039.* The amount per capita of the estimated population of Canada has more than doubled since 1941—evidence of the general recognition of the value of life insurance for the adequate protection of dependants against misfortune. Notable also is the fact that in this field British companies, the leaders in 1869, have fallen far behind Canadian and foreign companies.

13.—Life Insurance in Force and Effected in Canada by Companies under Federal Government Registration, Decennially 1880-1940 and 1941-52

NOTE.—Figures for the years 1869-1900 are given at p. 958 of the 1938 Year Book, and for the years 1901-39 at p. 855 of the 1942 edition. Statistics of fraternal society insurance, excluded here, are given at pp. 1173-1175.

Year	Net Amount in Force				Insurance in Force per Capita[1]	Net Amount of New Insurance Effected during Year
	Canadian Companies	British Companies	Foreign Companies	Total		
	$	$	$	$	$	$
1880.....	37,838,518	19,789,863	33,643,745	91,272,126	21·45	13,906,887
1890.....	135,218,990	31,613,730	81,591,847	248,424,567	51·98	39,802,956
1900.....	267,151,086	39,485,344	124,433,416	431,069,846	81·32	67,729,115
1910.....	565,667,110	47,816,775	242,629,174	856,113,059	122·51	150,785,305
1920.....	1,664,348,605	76,883,090	915,793,798	2,657,025,493	310·55	630,110,900
1930.....	4,319,370,209	117,410,860	2,055,502,125	6,492,283,194	686·00	884,749,748
1940.....	4,609,213,977	145,603,299	2,220,505,184	6,975,322,460	612·89	590,205,536
1941.....	4,835,925,659	145,597,309	2,367,027,774	7,348,550,742	638·62	688,344,283
1942.....	5,184,568,369	152,289,487	2,538,897,449	7,875,755,305	675·80	818,558,946
1943.....	5,586,515,285	162,287,617	2,785,290,816	8,534,093,718	723·53	887,522,851
1944.....	6,001,984,634	171,997,834	2,965,501,763	9,139,484,231	765·07	900,501,491
1945.....	6,440,615,383	183,779,511	3,126,645,941	9,751,040,835	807·74	1,002,576,955
1946.....	7,201,285,815	205,626,216	3,405,480,833	10,812,392,864	879·63	1,393,522,667
1947.....	7,964,185,291	238,614,767	3,697,458,162	11,900,258,220	948·15	1,453,255,487
1948.....	8,830,952,866	270,105,626	4,004,294,358	13,105,352,850	1,022·02	1,504,248,947
1949.....	9,808,084,850	306,032,801	4,294,644,199	14,408,761,850	1,071·52	1,636,356,612
1950.....	10,756,249,942	342,878,530	4,646,707,595	15,745,836,067	1,148·33	1,798,864,211
1951.....	11,807,992,826	391,382,883	5,036,207,593	17,235,583,302	1,230·32	1,990,926,006
1952p.....	13,085,350,960	443,275,711	5,562,003,368	19,090,630,039	1,322·98	2,287,026,644

[1] Based on estimates of population given at p. 129.

Life insurance business was transacted in Canada, during 1952, by 60 active companies with federal registration, including 31 Canadian, six British and 23 foreign companies. In addition to these active companies, there were seven British and three foreign companies writing little or no new insurance, their business being confined largely to the policies already on their books, and two foreign companies which were registered in 1951 and 1952 but had written no business in Canada.

The operations analysed in the tables of this Subsection, with the exception of Table 17, include only those companies with federal registration and are exclusive of fraternal organizations and provincial licensees. However, as indicated in Table 12, operations of the companies included account for almost 94 p.c. of the life insurance in force in Canada.

* This total does not include fraternal insurance.

14.—Life Insurance Transacted in Canada by Companies under Federal Government Registration, 1950-52

Year and Nationality of Company	Policies Effected		Policies in Force		Net Premium Income	Net Claims Paid[1]
	No.	Net Amount	No.	Net Amount		
		$		$	$	$
1950						
Canadian	318,908	1,244,614,536	3,957,232	10,756,249,942	246,457,270	79,523,634
British	11,465	52,618,381	154,486	342,878,530	8,587,454	2,607,533
Foreign	363,903	501,631,294	4,899,259	4,646,707,595	115,046,510	40,163,833
Totals, 1950	**694,276**	**1,798,864,211**	**9,010,977**	**15,745,836,067**	**370,091,234**	**122,295,000**
1951						
Canadian	330,677	1,379,400,850	4,081,221	11,807,992,826	263,007,836	83,620,444
British	13,339	65,773,248	159,107	391,382,883	9,205,784	2,784,449
Foreign	368,400	545,751,908	4,932,225	5,036,207,593	121,805,759	42,084,191
Totals, 1951	**712,416**	**1,990,926,006**	**9,172,553**	**17,235,583,302**	**394,019,379**	**128,489,084**
1952p						
Canadian	339,308	1,540,053,245	4,213,176	13,085,350,960	281,787,528	86,590,855
British	15,729	74,055,180	165,664	443,275,711	10,296,873	2,999,725
Foreign	362,193	672,918,219	4,984,716	5,562,003,368	130,627,651	40,416,386
Totals, 1952	**717,230**	**2,287,026,644**	**9,363,556**	**19,090,630,039**	**422,712,052**	**130,006,966**

[1] Death claims, matured endowments, disability claims and guaranteed dividends.

15.—Progress of Life Insurance Transacted in Canada by Companies under Federal Government Registration, 1950-52

Item		1950	1951	1952p
Canadian Companies—				
Policies effected	No.	318,908	330,677	339,308
Policies in force at end of each year	"	3,957,232	4,081,221	4,213,176
Policies become claims	"	35,917	35,594	34,314
Net amounts of policies effected	$	1,244,614,536	1,379,400,850	1,540,053,245
Net amounts of policies in force	$	10,756,249,942	11,807,992,826	13,085,350,960
Net amounts of policies become claims	$	79,337,149	82,328,160	84,614,893
Net amounts of premiums	$	246,457,270	263,007,836	281,787,528
Net claims paid[1]	$	79,523,634	83,620,444	86,590,855
Net outstanding claims	$	19,578,986	20,640,198	21,004,646
British Companies—				
Policies effected	No.	11,465	13,339	15,729
Policies in force at end of each year	"	154,486	159,107	165,664
Policies become claims	"	2,131	2,178	2,474
Net amounts of policies effected	$	52,618,381	65,773,248	74,055,180
Net amounts of policies in force	$	342,878,530	391,382,883	443,275,711
Net amounts of policies become claims	$	2,712,482	2,614,524	3,075,399
Net amounts of premiums	$	8,587,454	9,205,784	10,296,873
Net claims paid[1]	$	2,607,533	2,784,449	2,999,725
Net outstanding claims	$	1,220,211	895,807	930,362
Foreign Companies—				
Policies effected	No.	363,903	368,400	362,193
Policies in force at end of each year	"	4,899,259	4,932,225	4,984,716
Policies become claims	"	74,662	77,492	59,666
Net amounts of policies effected	$	501,631,294	545,751,908	672,918,219
Net amounts of policies in force	$	4,646,707,595	5,036,207,593	5,562,003,368
Net amounts of policies become claims	$	38,455,730	39,473,379	37,657,765
Net amounts of premiums	$	115,046,510	121,805,759	130,627,651
Net claims paid[1]	$	40,163,833	42,084,191	40,416,386
Net outstanding claims	$	5,086,638	5,047,870	4,864,355
All Companies—				
Policies effected	No.	694,276	712,416	717,230
Policies in force at end of each year	"	9,010,977	9,172,553	9,363,556
Policies become claims	"	112,710	115,264	96,454
Net amounts of policies effected	$	1,798,864,211	1,990,926,006	2,287,026,644
Net amounts of policies in force	$	15,745,836,067	17,235,583,302	19,090,630,039
Net amounts of policies become claims	$	120,505,361	124,416,063	125,348,057
Net amounts of premiums	$	370,091,234	394,019,379	422,712,052
Net claims paid[1]	$	122,295,000	128,489,084	130,006,966
Net outstanding claims	$	25,885,835	26,583,875	26,799,363

[1] Death claims, matured endowments, disability claims and guaranteed dividends.

16.—Ordinary, Industrial and Group Life Insurance Policies in Force and Effected in Canada by Companies under Federal Government Registration, 1952

Type of Policy and Nationality of Company	New Policies Effected			Policies in Force		
	No.	Net Amount	Average Amount of a Policy	No.	Net Amount	Average Amount of a Policy
		$	$		$	$
Ordinary Policies						
Canadian	285,982	1,244,894,744	4,353	3,543,960	10,078,034,521	2,844
British	15,715	72,022,547	4,583	116,406	421,110,179	3,618
Foreign	144,713	398,047,715	2,751	1,695,411	3,117,450,014	1,839
Totals, Ordinary Policies	**446,410**	**1,714,965,006**	**3,842**	**5,355,777**	**13,616,594,714**	**2,542**
Industrial Policies						
Canadian	52,414	57,534,464	1,098	662,364	534,788,477	807
British	—	—	—	49,202	7,435,687	151
Foreign	216,710	99,246,393	458	3,284,981	1,083,213,457	330
Totals, Industrial Policies	**269,124**	**156,780,857**	**583**	**3,996,547**	**1,625,437,621**	**407**
Group Policies						
Canadian	912	237,624,037	260,553	6,852	2,472,527,962	360,848
British	14	2,032,633	145,188	56	14,729,845	263,033
Foreign	770	175,624,111	228,083	4,324	1,361,339,897	314,833
Totals, Group Policies	**1,696**	**415,280,781**	**244,859**	**11,232**	**3,848,597,704**	**342,646**

17.—Insurance Death Rates in Canada, 1950 and 1951

Type of Insurer	1950			1951		
	Policies Exposed to Risk	Policies Terminated by Death	Death Rate per 1,000	Policies Exposed to Risk	Policies Terminated by Death	Death Rate per 1,000
	No.	No.		No.	No.	
All companies, ordinary	4,886,980	25,792	5·3	5,076,773	26,704	5·3
All companies, industrial	4,072,625	30,407	7·5	4,040,181	29,952	7·4
Fraternal benefit societies	308,766	3,798	12·3	318,539	3,772	11·8
Totals	**9,268,371**	**59,997**	**6·5**	**9,435,493**	**60,428**	**6·4**

Subsection 3.—Finances of Life Insurance Companies under Federal Registration

The financial statistics of Tables **18**, **19** and **20** cover only life insurance companies with federal registration and do not include fraternal organizations and provincial licensees. In the case of British and foreign companies, the figures apply to their assets, liabilities and operations in Canada only but, in the case of Canadian companies, assets and liabilities, income and expenditure arise, in part, from business abroad.

18.—Total Assets of Canadian Life Companies under Federal Government Registration and Assets in Canada of British and Foreign Life Companies, 1950-52

Assets	1950	1951	1952[p]
	$	$	$
Canadian Companies[1]			
Real estate	56,408,675	78,887,302	97,674,684
Real estate held under agreements of sale	6,274,589	6,657,216	5,510,182
Loans on real estate	836,405,087	995,049,083	1,131,090,247
Loans on collaterals	1,775,374	1,187,430	781,977
Policy loans	207,711,778	231,364,171	251,369,119
Bonds, debentures and stocks	3,332,584,885	3,376,145,802	3,513,591,304
Cash	48,079,664	68,727,248	64,532,802
Interest and rent due and accrued	37,691,873	41,164,995	44,912,368
Outstanding and deferred premiums	79,729,948	84,836,661	92,577,687
Other assets	5,001,754	4,630,090	4,933,537
Totals, Canadian Companies[2]	**4,611,663,627**	**4,888,649,998**	**5,206,973,907**
British Companies			
Real estate	2,153,923	2,364,590	2,641,780
Real estate held under agreements of sale	7,671	—	—
Loans on real estate	9,203,763	14,757,989	21,971,458
Loans on collaterals	—	—	—
Policy loans	2,787,525	3,194,625	3,632,317
Bonds, debentures and stocks	126,335,850	131,039,519	137,348,592
Cash	2,758,207	1,918,508	2,538,989
Interest and rent due and accrued	535,412	587,291	648,691
Outstanding and deferred premiums	852,205	1,110,502	1,043,095
Other assets	2,094	35,595	2,469
Totals, British Companies	**144,636,650**	**155,008,619**	**169,827,391**
Foreign Companies			
Real estate	1,535,256	1,430,226	1,409,635
Real estate held under agreements of sale	—	—	—
Loans on real estate	36,581,219	92,858,051	122,090,945
Loans on collaterals	—	—	—
Policy loans	45,117,221	49,083,364	51,486,848
Bonds, debentures and stocks	853,640,862	821,687,427	841,270,281
Cash	24,516,991	20,053,139	22,395,355
Interest and rent due and accrued	9,383,943	10,089,425	11,007,229
Outstanding and deferred premiums	18,161,137	19,887,488	20,529,924
Other assets	57,594	71,473	60,391
Totals, Foreign Companies	**988,994,223**	**1,015,160,593**	**1,070,250,608**

[1] A detailed classification of assets showing investments of Canadian companies and giving the percentage of the total in each group and sub-group will be found in the *Report of the Superintendent of Insurance, Vol. II.* [2] Book values, any excess of book over market values being covered by a reserve in the liabilities. (Since 1950, the amortized values of certain government securities have been used for this purpose, instead of their market values.)

19.—Total Liabilities of Canadian Life Companies under Federal Government Registration and Liabilities in Canada of British and Foreign Life Companies, 1950-52

Liabilities	1950	1951	1952[p]
	$	$	$
Canadian Companies			
Outstanding claims	37,308,632	39,069,264	37,535,145
Reserve under contracts in force	3,665,143,408	3,902,777,768	4,163,932,974
Sundry liabilities	690,127,168	712,846,092	754,388,329
Totals, Canadian Companies[1]	**4,392,579,208**	**4,654,693,124**	**4,955,856,448**
Surpluses of assets excluding capital	219,084,419	233,956,874	251,117,459
Capital stock paid up	12,697,825	13,522,230	13,624,050

[1] Excludes capital.

19.—Total Liabilities of Canadian Life Companies under Federal Government Registration and Liabilities in Canada of British and Foreign Life Companies, 1950-52—concluded

Liabilities	1950	1951	1952p
	$	$	$
British Companies			
Outstanding claims	1,220,212	895,807	930,363
Reserve under contracts in force	112,023,922	127,804,218	144,476,130
Sundry liabilities	1,832,980	1,853,835	2,117,798
Totals, British Companies	**115,077,114**	**130,553,860**	**147,524,291**
Surpluses of assets in Canada	29,559,536	24,454,759	22,303,100
Foreign Companies			
Outstanding claims	5,086,637	5,047,872	4,864,355
Reserve under contracts in force	819,972,190	859,855,285	909,623,397
Sundry liabilities	59,014,494	61,228,373	66,882,855
Totals, Foreign Companies	**884,073,321**	**926,131,530**	**981,370,607**
Surpluses of assets in Canada	104,920,902	89,029,063	88,880,001

20.—Total Cash Income and Expenditure of Canadian Life Companies under Federal Government Registration and Cash Income and Expenditure in Canada of British and Foreign Life Companies, 1950-52

Principal Items	1950	1951	1952p
	$	$	$
INCOME			
Canadian Companies			
Net premium income	424,489,515	450,736,233	480,538,327
Consideration for annuities	74,401,273	102,418,595	92,987,615
Interest, dividends and rents	161,338,430	173,407,735	190,056,768
Sundry items	120,531,220	112,888,925	102,764,906
Totals, Canadian Companies	**780,760,438**	**839,451,488**	**866,347,616**
British Companies			
Net premium income	8,587,454	9,205,784	10,296,873
Consideration for annuities	11,941,195	12,786,710	15,018,904
Interest, dividends and rents	4,063,962	4,800,862	5,476,078
Sundry items	530,266	482,270	633,069
Totals, British Companies	**25,122,877**	**27,275,626**	**31,424,924**
Foreign Companies			
Net premium income	115,046,510	121,805,759	130,627,651
Consideration for annuities	6,794,354	6,594,265	6,668,312
Interest, dividends and rents	29,398,785	33,112,287	36,506,371
Sundry items	8,620,732	8,173,173	7,766,670
Totals, Foreign Companies	**159,860,381**	**169,685,484**	**181,569,004**
EXPENDITURE			
Canadian Companies			
Payments to policyholders	294,268,703	309,637,914	314,843,692
General expenses	123,748,044	152,528,929	144,876,396
Dividends to shareholders	1,866,309	3,098,473	2,333,499
Other disbursements	68,646,466	84,500,358	83,823,039
Totals, Canadian Companies	**488,529,522**	**549,765,674**	**545,876,626**
Excess of income over expenditure	292,230,916	289,685,814	320,470,990

20.—Total Cash Income and Expenditure of Canadian Life Companies, under Federal Government Registration and Cash Income and Expenditure in Canada of British and Foreign Life Companies, 1950-52—concluded.

Principal Items	1950	1951	1952p
EXPENDITURE—concluded	$	$	$
British Companies			
Payments to policyholders	6,424,693	7,196,181	7,515,462
General expenses	3,709,431	4,103,989	4,780,470
Other disbursements	376,643	313,746	454,206
Totals, British Companies	**10,510,767**	**11,613,916**	**12,750,138**
Excess of income over expenditure	14,612,110	15,661,710	18,674,786
Foreign Companies			
Payments to policyholders	73,164,112	77,740,819	76,704,308
General expenses	29,078,880	32,555,983	34,785,648
Other disbursements	6,360,672	7,140,568	7,284,750
Totals, Foreign Companies	**108,603,664**	**117,437,370**	**118,774,706**
Excess of income over expenditure	51,256,717	52,248,114	62,794,298

Subsection 4.—Life Insurance Effected through Fraternal Benefit Societies

In addition to life insurance, some fraternal benefit societies grant other insurance benefits to members, notably sickness benefits, but these are relatively unimportant. Table 21 gives statistics of life insurance effected through fraternal benefit societies by Canadian members, together with statistics of assets, liabilities, income and expenditure relating to all business of Canadian societies and to the business in Canada of foreign societies. The rates charged by these societies are computed to be sufficient to provide the benefits granted, having regard for actuarial principles. The benefit funds of each society must be valued annually by a qualified actuary (Fellow, by examination, of the Institute of Actuaries of Great Britain, of the Faculty of Actuaries in Scotland, or of the Society of Actuaries) and a readjustment of rates or benefits must be made, unless the actuary certifies to the solvency of each fund. The statistics of Table 21, at pp 1174-75, relate to the 16 Canadian societies reporting to the Department of Insurance of the Federal Government, of which only one does not grant life insurance benefits.

Under an amendment to the Insurance Act, effective Jan. 1, 1920, all foreign fraternal benefit societies were required to obtain authority from the Federal Government prior to transacting business in Canada. However, any such societies which at that date were transacting business under provincial licences, while forbidden to accept new members, were permitted to continue all necessary transactions in respect of insurance already in force. Most of these societies and some foreign societies that had not previously been licensed by the provinces have since obtained federal authority to transact business. Of both classes of societies, 32 transacted business in Canada during 1952; two of the societies do not grant life insurance benefits.

21.—Life Insurance in Canada of Fraternal Benefit Societies reporting to the Federal Department of Insurance, 1950-52

Item	1950	1951	1952[p]
	No.	No.	No.
CANADIAN SOCIETIES			
Net certificates effected	22,898	22,414	24,241
Net certificates become claims	2,979	2,919	2,879
	$	$	$
Net premium income	2,073,356	2,217,423	2,562,374
Net amounts of certificates effected	23,849,288	26,781,072	30,484,585
Net amounts in force	150,028,077	161,384,596	175,417,875
Net amounts of certificates become claims	2,503,960	2,427,850	2,412,301
Net benefits paid	2,937,547	2,927,899	2,972,357
Net outstanding claims	319,492	290,245	331,491
Gross Amounts Terminated by—			
Death	1,965,756	1,898,901	1,963,533
Surrender, expiry, lapse, etc.	15,530,908	17,906,855	19,626,693
Totals, Terminated	17,496,664	19,805,756	21,590,226
Assets[1]			
Real estate	996,913	2,049,648	2,869,521
Real estate held under agreements of sale	949,218	842,537	1,316,075
Loans on real estate	10,472,395	10,387,061	9,674,176
Policy loans	3,845,729	3,850,314	3,876,709
Bonds, debentures and stocks	74,893,139	76,839,620	78,340,864
Cash	1,399,083	1,254,727	1,876,967
Interest and rent due and accrued	685,987	701,043	703,967
Dues from members	554,739	662,982	724,847
Other assets	211,861	217,788	229,851
Totals, Assets	**94,009,064**	**96,805,720**	**99,612,977**
Liabilities[1]			
Outstanding claims	427,681	377,295	415,509
Reserves under contracts in force	74,911,139	78,038,742	80,057,978
Other liabilities	10,340,025	10,484,943	11,218,715
Totals, Liabilities	**85,678,845**	**88,900,980**	**91,692,202**
Income			
Premiums (for benefits)	4,085,963	4,444,648	5,211,215
Fees and dues (for expenses)	3,548,315	4,121,563	4,498,989
Interest and rents	3,316,342	3,426,374	3,481,126
Other receipts	1,223,580	599,208	727,859
Totals, Income	**12,174,200**	**12,591,793**	**13,919,189**
Expenditure			
Paid to members	5,859,172	5,975,390	5,992,153
General expenses	3,764,292	4,209,878	4,581,285
Other disbursements	126,645	116,566	129,401
Totals, Expenditure[1]	**9,750,109**	**10,301,834**	**10,702,839**
Excess of income over expenditure	2,424,091	2,289,959	3,216,350

[1] Includes business outside Canada.

21.—Life Insurance in Canada of Fraternal Benefit Societies reporting to the Federal Department of Insurance, 1950-52—concluded

Item	1950	1951	1952[p]
	No.	No.	No.
FOREIGN SOCIETIES			
Net certificates effected	9,971	9,394	8,974
Net certificates become claims	1,295	1,346	1,791
	$	$	$
Net premium income	3,135,678	3,223,052	3,286,953
Net amounts of certificates effected	13,398,587	12,876,327	13,032,397
Net amounts in force	124,513,850	128,048,146	131,212,535
Net amounts of certificates become claims	1,355,999	1,481,335	2,137,651
Net benefits paid	2,064,888	2,078,487	2,939,549
Net outstanding claims	242,387	307,599	268,971
Gross Amounts Terminated by—			
Death	1,181,687	1,272,246	1,269,362
Surrender, expiry, lapse, etc.	10,203,369	9,842,881	11,219,221
Totals, Terminated	11,385,056	11,115,127	12,488,583
Assets			
Real estate	—	—	—
Loans on real estate	247,030	244,676	334,183
Policy loans	1,575,917	1,712,467	1,831,232
Bonds, debentures and stocks	26,289,555	27,687,896	29,164,768
Cash	1,499,276	1,315,554	1,179,622
Interest and rent due and accrued	227,381	247,227	283,524
Dues from members	211,948	216,730	211,983
Other assets	13,723	16,273	13,730
Totals, Assets	**30,064,830**	**31,440,823**	**33,019,042**
Liabilities			
Outstanding claims	381,951	449,059	455,718
Reserve under contracts in force	24,772,047	26,618,537	27,745,027
Other liabilities	1,711,138	1,944,487	2,140,024
Totals, Liabilities	**26,865,136**	**29,012,083**	**30,340,769**
Income			
Premiums (for benefits)	4,178,069	4,335,985	4,558,966
Fees and dues (for expenses)	1,113,572	1,147,873	1,205,117
Interest and rents	862,298	948,359	1,025,736
Other receipts	415,851	424,067	895,939
Totals, Income	**6,569,790**	**6,856,284**	**7,685,758**
Expenditure			
Paid to members	2,725,812	2,748,024	3,683,519
General expenses	728,694	703,486	870,765
Other expenditure	310,095	333,078	472,489
Totals, Expenditure	**3,764,601**	**3,784,588**	**5,026,773**
Excess of income over expenditure	2,805,189	3,071,696	2,658,985

Subsection 5.—Life Insurance in Force Outside Canada by Registered Canadian Companies

Tables 22 and 23 give summary statistics of insurance in force as at Dec. 31, 1951, in currencies other than Canadian, classified by companies and by the currencies in which business was written. The data given here are in Canadian dollars, mainly at par rates of exchange for the countries concerned, but there are several exceptions where, for purposes of account, certain companies have converted foreign currencies at rates other than par, particularly where the current rate differs substantially from the par rate. Approximately 65 p.c. of all such business in force was written in United States currency and 20 p.c. in sterling. From another standpoint, approximately 29 p.c. was written in currencies of Commonwealth countries outside Canada, and 71 p.c. in currencies of foreign countries.

Canadian life insurance companies, operating under Federal Government registration, at Dec. 31, 1951 had life insurance in force amounting to $5,528,942,066 in countries outside Canada. Insurance in force in currencies other than Canadian amounted to $5,471,556,442 and the difference between these figures is, presumably, the net amount of non-Canadian business transacted in Canadian currency. As against the total non-Canadian business, including annuity business, the Commonwealth and foreign investments of Canadian life insurance companies as at Dec. 31, 1951, amounted to $1,748,300,352. Since the business in force in Canada of these companies at Dec. 31, 1951, amounted to $11,807,786,335, the total business on their books, Canadian and non-Canadian, amounted to $17,336,728,401. Thus, over 31 p.c. of the total business in force was outside Canada.

22.—Life Insurance Effected and in Force and Liabilities of Canadian Companies (excluding Fraternal Societies) operating under Federal Government Registration, in Currencies other than Canadian, by Company, 1951.

Company	Insurance Effected			Insurance in Force		
	Commonwealth Currencies	Foreign Currencies	Total	Commonwealth Currencies	Foreign Currencies	Total
	$	$	$	$	$	$
Alliance Nationale	—	—	—	—	3,780,514	3,780,514
Canada	18,722,012	25,973,593	44,695,605	147,055,535	288,601,094	435,656,629
Commercial	—	—	—	—	35,000	35,000
Confederation	18,877,166	29,717,454	48,594,620	132,243,213	181,120,650	313,363,863
Continental	—	—	—	33,542	117,284	150,826
Crown	11,056,314	44,472,961	55,529,275	65,548,604	233,543,380	299,091,984
Dominion	1,270,173	13,458,060	14,728,233	9,910,443	77,187,608	87,098,051
Dom. of Canada General	179,914	—	179,914	2,936,040	7,500	2,943,540
T. Eaton	—	—	—	12,500	3,333	15,833
Equitable	—	—	—	—	180,900	180,900
Great-West	—	88,765,113	88,765,113	192,212	506,246,571	506,438,783
Imperial	13,668,119	3,881,823	17,549,942	62,579,332	44,403,266	106,982,598
London	—	1,027,202	1,027,202	—	6,527,297	6,527,297
Manufacturers	41,103,191	68,212,824	109,316,015	255,654,247	430,441,807	686,096,054
Maritime	195,679	10,826	206,505	2,106,472	35,348	2,141,820
Monarch	—	—	—	—	206,652	206,652
Montreal	—	38,830	38,830	265,703	423,058	688,761
Mutual	—	1,420,427	1,420,427	1,021,983	15,727,594	16,749,577
National	1,015,259	417,985	1,433,244	5,784,175	2,073,413	7,857,588
North American	1,612,616	13,615,463	15,228,079	7,759,426	56,699,636	64,459,062
Northern	14,800	1,913,195	1,927,995	63,650	15,509,897	15,573,547
Sauvegarde	—	—	—	—	5,000	5,000
Sun	98,550,619	182,057,270	280,607,889	891,619,938	2,023,828,689	2,915,448,627
Western	—	—	—	—	63,936	63,936
Totals	**206,265,862**	**474,983,026**	**681,248,888**	**1,584,787,015**	**3,886,769,427**	**5,471,556,442**

22.—Life Insurance Effected and in Force and Liabilities of Canadian Companies (excluding Fraternal Societies) operating under Federal Government Registration, in Currencies other than Canadian, by Company, 1951—concluded.

Company	Liabilities		
	Commonwealth Currencies	Foreign Currencies	Total
	$	$	$
Alliance Nationale	—	1,066,472	1,066,472
Canada	59,147,930	100,732,762	159,880,692
Commercial	—	17,970	17,970
Confederation	45,774,476	40,045,657	85,820,133
Continental	20,175	46,523	66,698
Crown	18,738,461	38,628,651	57,367,112
Dominion	2,056,754	18,806,019	20,862,773
Dominion of Canada General	778,579	2,095	780,674
T. Eaton	7,609	1,094	8,703
Equitable	—	51,605	51,605
Great-West	193,365	135,631,128	135,824,493
Imperial	14,148,364	13,730,819	27,879,183
London	—	472,981	472,981
Manufacturers	84,290,921	138,940,723	223,231,644
Maritime	734,229	13,174	747,403
Monarch	—	458,770	458,770
Montreal	445	137,498	137,943
Mutual	506,288	4,410,993	4,917,281
National	1,117,842	406,888	1,524,730
North American	1,774,900	13,863,124	15,638,024
Northern	18,982	1,869,333	1,888,315
Sauvegarde	—	750	750
Sun	358,852,383	690,233,635	1,049,086,018
Western	—	21,197	21,197
Totals	**588,161,703**	**1,199,589,861**	**1,787,751,564**

23.—Life Insurance Effected and in Force and Liabilities of Canadian Companies (excluding Fraternal Societies) operating under Federal Government Registration, in Currencies other than Canadian, 1951.

Currency	Insurance Effected	Insurance in Force	Liabilities
	$	$	$
Commonwealth Currencies—			
Pounds—			
Sterling	131,815,984	1,080,563,995	437,171,721
Australia	—	31,368	22,427
British West Indies and Bermuda	7,675,993	46,499,819	10,851,504
South Africa	24,131,141	183,790,985	46,750,101
Southern Rhodesia	1,855,129	6,106,504	992,485
Dollars—			
British Honduras	51,190	752,439	275,526
British West Indies and Bermuda[1]	10,489,994	69,990,034	21,678,605
Hong Kong	1,147,672	9,560,177	2,334,901
Malaya, Singapore or Straits	6,185,235	22,085,488	4,281,654
Rupees—			
Ceylon	5,530,276	30,965,002	8,452,034
India	14,310,714	123,624,869	52,973,028
Pakistan	—	2,362,520	1,574,121
Shillings—			
East Africa	3,072,534	8,453,815	803,596
Totals, Commonwealth Currencies	**206,265,862**	**1,584,787,015**	**588,161,703**

[1] Includes British Guiana which Crown Life and North American Life Insurance Companies did not separate from British West Indies.

23.—Life Insurance Effected and in Force and Liabilities of Canadian Companies (excluding Fraternal Societies) operating under Federal Government Registration, in Currencies other than Canadian, 1951—concluded.

Currency	Insurance Effected	Insurance in Force	Liabilities
	$	$	$
Foreign Currencies—			
Bahts (Thailand)	—	224,165	158,306
Bolivares (Venezuela)	7,099,828	33,859,297	3,125,473
Cordobas (Nicaragua)	—	16,976	11,087
Dollars (United States of America)	422,964,162	3,537,560,716	1,123,404,930
Francs (France)	—	21,076	21,186
Francs (Switzerland)	—	7,280	15,065
Guilders (Netherlands Antilles)	799,123	12,216,635	3,700,120
Pesos (Argentina)	1,022,453	16,654,997	5,340,353
Pesos (Chile)	—	196,754	133,385
Pesos (Colombia)	5,068,385	14,852,974	1,830,158
Pesos (Cuba)	20,214,646	155,649,390	36,091,534
Pesos (Dominican Republic)	—	7,000	24,014
Pesos (Mexico)	2,245,512	10,165,227	1,708,834
Pesos (Philippines)	8,516,798	50,357,512	8,348,828
Pounds (Egypt)	2,894,916	35,608,862	9,500,436
Pounds (Israel)	2,655,680	10,211,661	1,436,373
Quetzales (Guatemala)	—	—	15,127
Rupees (Burma)	—	1,405,325	1,188,261
Rupiahs (Indonesia)	1,501,523	7,440,995	3,296,051
Soles (Peru)	—	276,341	170,514
Yen (Japan)	—	36,244	65,872
Miscellaneous	—	—	3,954
Totals, Foreign Currencies	**474,983,026**	**3,886,769,427**	**1,199,589,861**
Grand Totals	**681,248,888**	**5,471,556,442**	**1,787,751,564**

Subsection 6.—Total Registered Life Insurance in Canada and Business of Canadian Organizations Abroad

Table 24 summarizes the business outside Canada of Canadian life companies and fraternal benefit societies. If to these figures is added the business in Canada of these organizations, as shown in Table **12**, p. 1167, total business, internal and external, of all Canadian life insurance companies and fraternal societies may be obtained. Again, adding the business in Canada of British and foreign companies and fraternal societies, a grand total is obtained of all life insurance in Canada and of the life insurance business abroad of Canadian organizations; this total is shown in Table **25**.

24.—Business of Registered Canadian Life Companies and Fraternal Societies Abroad, 1952[p]

NOTE.—Figures for business in Canada will be found in Table **12**, p. 1167.

Item	New Policies Effected (net)	Net Insurance in Force Dec. 31	Net Premiums Received	Net Claims Paid
	$	$	$	$
Canadian Life Companies—				
Federal	753,788,193	6,012,282,592	198,750,801	74,883,073
Provincial	[1]	[1]	[1]	[1]
Canadian Fraternal Societies—				
Federal	17,062,737	120,521,900	1,589,381	2,018,557
Provincial	[1]	[1]	[1]	[1]
Totals	**770,850,930**	**6,132,804,492**	**200,340,182**	**76,901,630**

[1] None reported.

25.—Total Registered Life Insurance Business in Canada and of Canadian Organizations Abroad, 1952[p]

Item	New Policies Effected (net)	Net Insurance in Force Dec. 31	Net Premiums Received	Net Claims Paid
	$	$	$	$
Canadian Life Companies—				
Federal	2,293,841,438	19,097,633,552	480,538,329	161,473,928
Provincial	141,733,059	648,131,777	16,099,840	4,695,594
Canadian Fraternal Societies—				
Federal	47,547,322	295,939,775	4,151,755	4,329,164
Provincial	44,906,536	289,201,709	6,538,976	3,547,807
British life companies	74,055,180	443,275,711	10,296,873	2,999,725
Foreign life companies	672,918,219	5,562,003,368	130,627,651	40,416,386
Foreign fraternal societies	13,032,397	131,212,535	3,286,953	2,279,758
Grand Totals	**3,288,034,151**	**26,467,398,427**	**651,540,377**	**219,742,362**

Section 3.—Casualty Insurance

The growth of casualty insurance business has been steady since 1875. The report of the Superintendent of Insurance for the calendar year 1880 shows that the number of companies licensed for the transaction of accident, guarantee, plate glass and steam-boiler insurance—the only four classes of casualty insurance then transacted—was 5, 3, 1 and 1, respectively. The report for the year 1952 shows that casualty insurance in Canada now includes various forms of accident and 25 other classes of insurance transacted by companies with Federal Government registration. In 1880, 10 companies transacted casualty insurance but, in 1952, such insurance was issued by 302 companies, of which 75 were Canadian, 79 British and 148 foreign; of these, 215 companies also transacted fire insurance. In addition, 19 fraternal orders or societies conducted accident and sickness insurance as well as life insurance business and three fraternal orders or societies carried on accident or sickness insurance only.

Table **27** shows the division of business in this field between Federal Government registrations and provincial licensees and indicates that, as in the cases of fire and life insurance, the bulk of the business (about 90 p.c. in this case) is transacted by companies with Federal Government registration.

Since, as indicated above, most of the companies carrying on casualty insurance in Canada also transact fire insurance, their assets, liabilities, income and expenditure are included in the financial statistics of fire insurance companies given in Section 1, Subsection 3, of this Chapter. Table **28**, p. 1182, gives corresponding figures for total casualty business of Canadian companies, and the casualty business in Canada of British and foreign companies, whose transactions are confined to insurance other than fire and life. In 1952, there were 18 Canadian, 5 British and 64 foreign companies whose operations were limited to the same field.

During the war years, automobile insurance showed a favourable experience with a loss ratio of around 45 p.c. This ratio was slightly lower than for the pre-war years, the result of lessened traffic but, since the end of the War, the trend has been less favourable; in 1952 the ratio stood at about 55 p.c.

Hail insurance in 1951 showed a loss ratio of 41 p.c. and in 1952 this had increased to 54 p.c.

Marine insurance showed a very large increase in Canada during the war years and substantial profits resulted. The results for 1941 to 1952 were as follows:—

Year	Premiums	Claims Incurred	Underwriting Profits
	$	$	$
1941	6,011,922	2,781,190	1,694,470
1942	14,295,543	7,983,963	3,855,415
1943	10,061,059	4,931,286	3,449,873
1944	6,754,361	2,172,418	3,243,889
1945	5,978,274	2,995,704	1,704,367
1946	5,655,392	2,232,701	2,084,412
1947	7,932,404	4,529,161	1,031,313
1948	7,986,658	3,468,045	2,466,397
1949	7,715,671	4,327,555	1,342,088
1950	7,592,558	3,098,086	2,394,336
1951	8,908,639	4,670,972	1,716,201
1952	9,201,477	5,627,211	1,130,828

This class of insurance will, no doubt, continue to figure more largely in the business of companies in post-war years than it did before 1939.

26.—Casualty Insurance Transacted in Canada by Companies under Federal Government Registration, 1952

Class of Business	Number of Companies			Years Transacted	Aggregate Experience during Period Transacted	
	Canadian	British	Foreign		Premiums Written	Claims Incurred
				No.	$	$
Accident	—	—	—	50	92,299,497	43,476,664
Accident—						
(*a*) Personal	43	45	35	28	111,676,494	42,994,129
(*b*) Public Liability ('Other' until 1941)	46	46	39	28	96,208,538	35,937,852
(*c*) Employers' Liability (Employers' Liability and Workmen's Compensation until 1941)	40	40	31	28	56,846,638	29,868,588
Combined accident and sickness	20	12	30	39	314,818,104	209,443,026
Aircraft (Aviation until 1941)	3	7	23	25	9,821,563	5,896,604
Automobile	50	64	85	43	925,671,359	496,880,251
Boiler—						
(*a*) Boiler (Steam Boiler until 1941)	9	7	6	76	27,637,055	2,997,263
(*b*) Machinery (Electrical Machinery until 1941)	3	7	6	31	11,019,956	2,969,762
Credit	—	—	4	33	8,487,870	2,145,830
Crop	—	—	—	1	12,268	40,091
Earthquake	15	26	34	28	417,978	15,098
Explosion	—	—	—	9	1,195,107	12,189
Explosion (Riot and C.C. until 1941)	11	16	25	20	1,899,724	36,978
Falling aircraft	—	—	2	21	22,119	8,550
Forgery	19	6	12	34	1,623,123	365,598
Fraud	—	—	—	18	315,992	99,688
Guarantee (not separated into Fidelity and Surety prior to 1921)	—	—	—	47	13,452,616	3,811,867
Fidelity (since 1921)	42	29	31	31	41,123,014	11,347,828
Surety (since 1921)	41	26	27	31	33,952,633	4,629,700
Hail	5	3	24	43	111,516,449	66,978,403
Impact by vehicles	—	—	1	4	53	—
Inland transportation	37	55	64	56	49,245,217	18,921,772
Live stock	1	1	2	45	2,835,293	1,724,357
Personal property	45	59	71	23	121,859,463	64,605,330
Plate glass	40	42	31	78	27,815,574	12,682,333
Real property (Property prior to 1941)	15	24	25	16	4,969,058	1,605,519
Sickness	30	26	14	57	103,499,545	56,869,560
Sprinkler leakage	—	—	—	14	844,301	427,673
Sprinkler leakage [1]	7	15	15	29	389,343	115,621
Theft (Burglary prior to 1941)	45	39	39	60	55,704,411	20,715,090
Title (1907–1916)	—	—	—	10	11,252	—
Water damage	—	—	2	4	39,778	11,840
Weather	1	—	3	38	788,752	468,245
Windstorm (Tornado prior to 1941)	23	20	31	45	6,284,000	3,663,170
Totals	...	...	...	...	**2,234,304,137**	**1,141,766,469**

[1] Sprinkler leakage business of fire companies was grouped with fire business from 1923 to 1940, but has been shown separately from their fire business since 1940 when written under a separate policy.

27.—Casualty Insurance Premiums and Claims in Canada, by Class of Business, 1952

NOTE.—Less all reinsurance for Canadian companies and registered or licensed reinsurance only for British and foreign companies.

Class of Business	Federal Registered Companies	Provincial Licensees			Lloyds	Grand Total
		Within Provinces by which they are Incorporated	In Provinces other than those by which Incorporated	Total Provincial Licensees		
	NET PREMIUMS WRITTEN					
	$	$	$	$	$	$
Accident—						
Personal	7,213,092	465,062	—	465,062	780,848	8,459,002
Public liability	11,481,484	256,148	106	256,254	841,675	12,579,413
Employers' liability	3,275,785	152	—	152	248,779	3,524,716
Accident and sickness combined	59,541,100	338,232	225,395	563,627	33,879	60,138,606
Aircraft	1,381,743	—	—	—	656,651	2,038,394
Automobile	137,769,156	5,334,397	147,009	5,481,406	9,109,274	152,359,836
Boiler—(a) Boiler	2,143,438	44,885	—	44,885	12,711	2,201,034
(b) Machinery	1,063,444				97,375	1,160,819
Credit	493,159	—	—	—	—	493,159
Earthquake	45,669	18	53	71	24,067	69,807
Explosion	16,933	—	—	—	72,548	89,481
Falling aircraft	72	—	—	—	—	72
Forgery	60,405	—	—	—	76	60,481
Guarantee fidelity	2,395,839	108,694	222	108,916	637,470	3,142,225
Guarantee surety	3,170,709				6,932	3,177,641
Hail	3,922,807	2,362,485	152,279	2,514,764	8,027	6,445,598
Impact by vehicles	−708	—	—	—	—	−708
Inland transportation	4,303,284	36,933	6,692	43,625	1,254,897	5,601,806
Live stock	72,755	6,721	—	6,721	138,447	217,923
Personal property	18,774,181	23,914	23,521	47,435	251,864	19,073,480
Plate glass	1,495,720	83,536	175	83,711	1,449	1,580,880
Real property	586,941	1,361	—	1,361	161,007	749,309
Sickness	8,652,544	—	—	—	79,701	8,732,245
Sprinkler leakage	8,537	—	—	—	8,355	16,892
Theft	4,250,835	52,254	136	52,390	313,123	4,616,348
Water damage	6,772	—	—	—	—	6,772
Weather	16,515	84,519	—	84,519	525	101,559
Windstorm	267,978	268,726	62	268,788	369	537,135
Totals	**272,410,189**	**9,468,037**	**555,650**	**10,023,687**	**14,740,049**	**297,173,925**
	NET CLAIMS INCURRED					
	$	$	$	$	$	$
Accident—						
Personal	2,569,297	175,021	—	175,021	249,037	2,993,355
Public liability	4,844,606	88,281	—	88,281	350,990	5,283,877
Employers' liability	1,296,175	—	—	—	108,983	1,405,158
Accident and sickness combined	44,089,340	150,468	54,445	204,913	−575	44,293,678
Aircraft	776,283	—	—	—	577,736	1,354,019
Automobile	76,466,235	3,027,099	67,641	3,094,740	5,811,915	85,372,890
Boiler—(a) Boiler	358,526	16,650	—	16,650	−54,239	320,937
(b) Machinery	373,942				643,498	1,017,440
Credit	46,378	—	—	—	—	46,378
Earthquake	−131	—	—	—	—	−131
Explosion	1,292	—	—	—	1,619	2,911
Forgery	25,284	—	—	—	−111	25,173
Guarantee fidelity	732,553	24,101	—	24,101	222,830	979,484
Guarantee surety	259,410				27,901	287,311
Hail	2,107,307	1,049,453	77,944	1,127,397	258	3,234,962
Inland transportation	2,013,970	11,094	4,229	15,323	1,112,343	3,141,636
Live stock	23,392	3,796	—	3,796	85,087	112,275
Personal property	8,098,061	7,974	3,783	11,757	64,056	8,173,874
Plate glass	731,380	40,777	—	40,777	365	772,522
Real property	271,240	24	—	24	31,943	303,207
Sickness	3,705,782	—	—	—	7,838	3,713,620
Sprinkler leakage	4,968	—	—	—	—	4,968
Theft	1,736,940	19,520	—	19,520	328,935	2,085,395
Water damage	−4,900	—	—	—	—	−4,900
Weather	8,737	9,582	—	9,582	—	18,319
Windstorm	126,743	47,538	—	47,538	—	174,281
Totals	**150,662,810**	**4,671,378**	**208,042**	**4,879,420**	**9,570,409**	**165,112,639**

28.—Assets and Liabilities, Income and Expenditure of Canadian, British and Foreign Casualty Insurance Companies, 1951 and 1952

Companies	Assets	Liabilities	Excess of Assets Over Liabilities	Income	Expenditure	Excess of Income Over Expenditure
	$	$	$	$	$	$
1951						
Canadian (in all countries)..	23,885,086	14,843,042[1]	9,042,044	25,157,814	23,371,507	1,786,307
British (in Canada).....	1,545,122	712,076	833,046	647,029	622,204	24,825
Foreign (in Canada).....	64,212,962	43,047,829	21,165,133	64,581,888	58,648,037	5,933,851
Totals.....	**89,643,170**	**58,602,947**	**31,040,223**	**90,386,731**	**82,641,748**	**7,744,983**
1952						
Canadian (in all countries)..	27,064,412	17,680,659	9,383,753	31,234,812	29,236,222	1,998,590
British (in Canada).....	1,320,309	726,834	593,475	709,855	505,451	204,404
Foreign (in Canada).....	74,138,073	49,933,596	24,204,477	77,516,606	65,964,990	11,551,616
Totals.....	**102,522,794**	**68,341,089**	**34,181,705**	**109,461,273**	**95,706,663**	**13,754,610**

[1] Excludes capital stock.

Section 4.—Government Insurance

In addition to the insurance provided by private insurance companies, various types of government insurance schemes have been adopted in recent years by the Federal and Provincial Governments.

Information on unemployment insurance, health insurance, export credits insurance, etc., will be found in the Chapters on Labour, Health and Welfare, Foreign Trade, etc.

Veterans Insurance.*—The Veterans Insurance Act which came into force on Feb. 20, 1945, provides that the following persons may contract with the Government of Canada for life insurance, usually without medical examination, during the periods of eligibility shown:—

Eligibility arising out of Service in World War II:	*Applications must be approved by:*
(a) Veterans, and others deemed by Statute to be veterans.	Dec. 31, 1954 or 10 years after discharge, whichever is later.
(b) Members of the regular Forces who served during the War and were not discharged; Merchant Seamen if eligible to receive a Special Bonus or War Service Bonus; widows of veterans or widowers who did not have Veterans Insurance.	Dec. 31, 1954.
Eligibility arising out of Service in the Special Force since July 5, 1950:	
(c) Persons who served on the strength of the Special Force in a Theatre of Operations and who have been discharged; persons who were awarded pensions under the Pension Act as a result of service in the Special Force.	3 years after discharge.
(d) Widows of persons who were on service in a Theatre of Operations and who died during Special Force Service.	Dec. 31, 1954.

* Revised by C. F. Black, Superintendent, Veterans Insurance, Department of Veterans Affairs, Ottawa.

The amount of insurance may be any multiple of $500 up to a maximum of $10,000. The plans of insurance available are 10-payment life, 15-payment life, 20-payment life, and life with premiums payable until age 65 or age 85. The policies are non-participating.

Premiums on veteran's insurance may be paid monthly, quarterly, semi-annually or annually. They may be paid in cash or from re-establishment credit or by deduction from any pension granted under the Pension Act. The policy contracts include a waiver-of-premium disability provision. No extra premiums are charged for residence, travel or occupational hazards.

At the end of the second policy year a liberal cash value is available. It may be used alternatively to provide reduced paid-up insurance or extended term insurance. A veteran's insurance policy is not assignable, nor is a loan value granted.

The maximum amount of insurance money that will be paid in a lump sum at death is $2,000; the balance must be paid to the beneficiary as an annuity certain or as a life annuity with or without a guaranteed period.

29.—Summary Statistics of Veterans Insurance, Years Ended Mar. 31, 1949-53

Year Ended Mar. 31—	Insurance Issued During Year		Insurance in Force at End of Year		Death Claims Approved During Year	
	No.	$	No.	$	No.	$
1949	4,615	14,074,500	22,293	63,836,743	91	245,500
1950	2,316	7,448,500	23,722	68,016,514	111	340,080
1951	3,247	10,718,000	25,917	75,020,885	130	400,500
1952	2,302	8,322,500	26,985	79,115,734	158	346,500
1953	2,167	7,849,000	27,731	81,826,281	186	530,000

Provincial Insurance Schemes.—The Province of Saskatchewan conducts fire, fidelity and surety insurance but not life insurance. This is effected under the terms of the Saskatchewan Government Insurance Act, 1944.

In the Province of Alberta, life insurance is provided through the Life Insurance Company of Alberta, a Crown company that is not an emanation from the Provincial Government. Similarly, another Crown company, the Alberta General Insurance Company, provides all other kinds of insurance except life, accident and sickness. The Alberta Hail Board provides farmers with insurance for their crops against damage by hail. Additional information may be obtained from:—

(a) The Superintendent of Insurance,
Insurance Branch,
Department of the Provincial Secretary for Saskatchewan,
Regina, Saskatchewan.

(b) The Superintendent of Insurance,
Department of the Provincial Secretary for Alberta,
Edmonton, Alberta.

CHAPTER XXVII.—DEFENCE OF CANADA

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—THE ARMED SERVICES AND DEFENCE RESEARCH*

Section 1.—The Department of National Defence

The Minister of National Defence exercises control over and management of the Canadian Armed Forces, the Defence Research Board and other matters relating to National Defence. Under his direction, the Services are commanded by their respective Chiefs of Staff and the Defence Research Board by its Chairman. A Chairman of the Chiefs of Staff Committee, appointed in 1951, is responsible for the co-ordination of the training and operation of the Canadian Armed Forces.

The civilian administrative organization, headed by the Deputy Minister, is constituted on a functional basis. The Deputy Minister maintains a continuing review and control over the financial aspects of operational policy, logistics and personnel and administration.

To achieve a common approach to problems, a number of committees within the Department meet at regular intervals to consider and advise on joint issues:—

(1) **Defence Council.**—Composed of the Minister of National Defence (Chairman), the Parliamentary Assistant to the Minister, the Deputy Minister, the three Chiefs of Staff and the Chairman of the Defence Research Board, the purpose of the Defence Council is to advise the Minister on administrative matters.

(2) **Chiefs of Staff Committee.**—This Committee is composed of the Chairman of Chiefs of Staff, the three Chiefs of Staff of the Services, and the Chairman of the Defence Research Board; the Deputy Minister, the Secretary to the Cabinet and the Under Secretary of State for External Affairs attend when required. Its purpose is to maintain a continuous review of all operational problems. A number of subcommittees consider various aspects of operational problems and report to the parent committee.

* Revised under the direction of C. M. Drury, C.B.E., D.S.O., Deputy Minister, Department of National Defence, Ottawa.

(3) **Personnel Members Committee.**—Composed of the Chief of Naval Personnel, Adjutant-General, Air Member for Personnel, Assistant Deputy Minister (Personnel and Administration), Assistant Deputy Minister (Finance), and a representative of the Chairman of the Defence Research Board, the purpose of this Committee is to examine personnel problems of the three Services with the general aim of achieving uniform personnel policies. Various aspects of personnel problems are considered by subcommittees which report to the parent committee.

(4) **Principal Supply Officers Committee.**—This Committee is composed of the Chief of Naval Technical Services, the Quartermaster General, the Air Member for Technical Services, Assistant Deputy Minister (Requirements) and a representative of the Chairman of the Defence Research Board. Its purpose is to consider all logistical problems, various aspects of which are considered by subcommittees that report to the parent committee.

(5) **Defence Supply Panels.**—Twelve panels, composed of a representative from each of the Services as well as representatives of the Deputy Minister, of Inspection Services and of the Department of Defence Production, maintain a continuous review of procurement problems and consider various aspects of the procurement of equipment such as ammunition, armament, aircraft, etc., for the Department of National Defence by the Department of Defence Production.

Liaison Abroad.—The Chairman of Chiefs of Staff, the Canadian Military Representative in the North Atlantic Treaty Organization, is responsible for co-ordinating all military NATO matters and acts as military adviser to Canadian NATO delegations. For purposes of liaison and the furtherance of international co-operation on defence, Canada also maintains: (1) Canadian Joint Staff (Washington) representing the three Services and the Defence Research Board; (2) Canadian Joint Staff (London) representing the three Services and the Defence Research Board; and (3) Service Attachés in various countries throughout the world. In addition, a number of defence matters of concern to both Canada and the United States are considered by the Permanent Joint Board on Defence which is composed of representatives from the two countries.

Total Strength and Rates of Pay and Allowances.—The strengths of the active forces of the three Services have been increased to keep pace with defence objectives and commitments. At Mar. 31, 1953, the total active force strength was 104,427 composed of: Navy, 15,546; Army, 48,458; and Air Force, 40,423. The strength of the reserve elements of the three Services was 58,071.

The entire pay structure for comparable ranks in the different Services is on a uniform basis. Monthly rates of pay and allowances are given in Table 1, p. 1186.

The Regular Officer-Training Plan (ROTP).—The object of the Regular Officer-Training Plan is to train selected high-school and university students for regular commissions in a branch of the active forces. Students are enrolled as officer cadets and subsidized at one of the Canadian Services Colleges or at a university for a period not exceeding four years. A fifth year is provided for students who take the preparatory year at the Collège Militaire Royal de Saint-Jean. Practical training is given during the summer months.

1.—Monthly Rates of Pay and Allowances for Members of the Active Forces, as at May 1, 1953

Royal Canadian Navy	Canadian Army	Royal Canadian Air Force	Basic Pay	Subsistence Allowance		Ration Allowance	Marriage Allowance	Separated Family's Allowance (with children)	
				Personnel not in Receipt of Marriage Allowance	Personnel in Receipt of Marriage Allowance			Personnel in Receipt of Subsistence Allowance	Personnel not in Receipt of Subsistence Allowance
			$	$	$	$	$	$	$
Ordinary Seaman (under 17 years).	Private (under 17 years).	Aircraftman 2 (under 17 years).	44	61	—	30	—	—	—
Ordinary Seaman (entry).	Private (entry).	Aircraftman 2.	87	61	91	30	30	61	91
Ordinary Seaman (trained)	Private (trained).	Aircraftman 1.	91	61	91	30	30	61	91
Able Seaman.	Private.	Leading Aircraftman.	98	61	91	30	30	61	91
Leading Seaman.	Corporal.	Corporal.	112	61	91	30	30	61	91
Petty Officer 2.	Sergeant.	Sergeant.	129	72	91	30	30	72	91
Petty Officer 1.	Staff Sergeant.	Flight Sergeant.	150	81	91	30	30	81	91
Chief Petty Officer 2.	Warrant Officer 2.	Warrant Officer 2.	174	81	91	30	30	81	91
Chief Petty Officer 1.	Warrant Officer 1.	Warrant Officer 1.	193	92	102	30	30	92	102
Midshipman.	—	—	102	61	91	30	40	61	91
Acting Sub-Lieutenant.	Second Lieutenant.	Pilot Officer.	170	65	91	30	40	65	91
Sub-Lieutenant.	Lieutenant.	Flight Officer.	210	89	110	30	40	89	110
Commanding Officer.	—	—	253	94	110	30	40	94	110
Lieutenant.	Captain.	Flight Lieutenant.	255	94	110	30	40	94	110
Lieutenant-Commander.	Major.	Squadron Leader.	335	113	113	30	40	113	113
Commander.	Lieutenant-Colonel.	Wing Commander.	395	126	126	30	40	126	126
Captain.	Colonel.	Group Captain.	555	139	139	30	40	139	139
Commodore.	Brigadier.	Air Commodore.	737	153	153	30	40	153	153
Rear-Admiral.	Major-General.	Air Vice-Marshal.	881	165	165	30	40	165	165

Subsection 1.—The Royal Canadian Navy

Organization.—Naval Headquarters at Ottawa conducts the planning and policy for administration and training of the regular and reserve forces of the Royal Canadian Navy. Subject to this authority, the flag officers on each coast and the Commanding Officer, Naval Divisions at Hamilton, Ont., exercise control in their respective Commands. Ships of the Royal Canadian Navy are based at the Atlantic and Pacific stations. Subsidiary units are the 22 Naval Divisions in cities across the country which serve as shore-training establishments for the naval reserve.

At the end of the fiscal year (March 1953), a light fleet aircraft carrier, two six-inch gun cruisers, eight destroyers, three frigates, four Algerine escorts, an apprentice trades training ship, two gate vessels and a number of smaller craft were in commission, while 54 major war vessels were in reserve. There were 2,173 officers and 13,373 men in the regular force of the Navy and 1,378 officers and 3,947 men and women in the reserve force.

Considerable progress was also made by the NATO navies in moulding the organization for the defence of the North Atlantic Ocean under a Supreme Allied Naval Commander; Canadian naval officers appointed to his staff work side by side with naval officers of other NATO countries. Ships of the Royal Canadian Navy continue to participate in combined NATO training exercises.

Operations at Sea, 1952-53.—During the fiscal year, the Atlantic Command gradually undertook the major share of the Royal Canadian Navy commitment to maintain three destroyers in Korean waters. Of the ships in the Atlantic Command, *Nootka* completed her second tour, *Huron* and *Iroquois* completed their first, while *Haida* commenced her first. In the Pacific Command, *Athabaskan* commenced her third tour, *Crusader* her first, and *Cayuga* completed her second.

These ships continued to be employed both as part of a carrier screening force and in blockading the enemy coast. The latter involved the bombardment of enemy concentrations and installations in addition to the interception of enemy junk traffic. Enemy resistance increased during the year and the Royal Canadian Navy suffered its first casualties in the Korean theatre when *Iroquois* was hit by a shore battery.

Magnificent participated in three NATO exercises, *Castinets* and *Mainbrace* in United Kingdom and North Sea waters and *Emigrant* in the Atlantic, during the period June to October 1952. During the same period, *Emigrant* also joined the British Mediterranean Fleet for exercises and visits to Mediterranean ports. *Quebec* also assisted in exercises, after completing training cruises to St. Lawrence River ports and to the United Kingdom. *Crescent, La Hulloise* and *Swansea* in the Atlantic and *Beacon Hill* and *Antigonish* in the Pacific carried out training cruises from May to September 1952. Visits to United Kingdom, European and Mediterranean ports were made by ships of the Atlantic Command, while the ships in the Pacific visited West Coast ports and Hawaii.

Extensive anti-submarine training was afforded to East and West Coast ships throughout the year by United Kingdom and United States submarines.

Training Ashore.—Two major shore establishments, *Stadacona* at Halifax and *Naden* at Esquimalt, are maintained by the Royal Canadian Navy to serve as drafting depots, training schools and centres, and to provide the accommodation facilities required by the fleets based on both coasts. In each of these establishments, schools and training centres afford instruction for both officers and men of the RCN and RCN(R) in communications, gunnery, torpedo, anti-submarine, navigation direction, electrics and electronics, marine engineering, seamanship, naval ordnance, supply and secretariat duties, diving, damage control and fire-fighting.

A third major shore establishment is the RCN Air Station *Shearwater*, at Dartmouth, N.S., which provides training facilities, shore accommodation and storage for naval aviation.

H.M.C.S. *Cornwallis* at Cornwallis, N.S., is devoted exclusively to training and its organization and program are arranged accordingly. The course for new entries extends over 19 weeks. During this period a new entry receives basic instruction in naval subjects, studies mathematics and English, and participates in an extensive program of physical training, sports and recreation.

In February 1952, the first draft of French-speaking recruits arrived at the Basic Training School, H.M.C.S. *Montcalm*, at Quebec, Que., for initial training prior to commencing courses in H.M.C.S. *Cornwallis*. All regular-force recruits whose mother tongue is French will undergo preliminary training at this school in professional naval subjects including seamanship, boatwork, organization, parade training, supply duties, torpedo anti-submarine, engineering, communications and naval history. Instruction is given in French and in English, with emphasis on the use of naval terminology. The program is designed to enable new entries from the Basic Training School to join classes in H.M.C.S. *Cornwallis* at an appropriate stage in their training.

In August 1952, the Navy began a program to train naval apprentices between the ages of 16 and 19. The apprentices enrol for seven years. The total training program lasts for 39 months. The first group began technical training in January 1953 aboard H.M.C.S. *Cape Breton*, an escort maintenance vessel, at Halifax, N.S. Apprentices are trained as engine-room artificers, shipwrights, electrical technicians, air artificers and armourers. Upon graduation, apprentices join the fleet as Petty Officers second class.

Officers of the Royal Canadian Navy come from four main sources: (1) Canadian Services colleges; (2) universities; (3) commissioning from the ranks of the active force; and (4) short-service appointments.

Ship Construction, Refit and Modernization.—Work is progressing on the construction of anti-submarine escort vessels; three vessels will be completed late in 1954 and others are in various stages of construction. Four coastal minesweepers were scheduled for completion during 1953 and others are under construction. Work continues on other miscellaneous and harbour craft. The extensive conversion of one destroyer as a prototype for conversion of other destroyer escorts has been completed and the conversion of another destroyer has commenced. Rearmament has been completed on four destroyers and two others will be modernized by early 1954. Work on the 16 frigates, 18 Bangor class minesweepers and two diesel minesweepers brought out of strategic reserve for refitting and modernization continues and is expected to be completed by the spring of 1954.

Royal Canadian Navy (Reserve).—Naval Divisions are established in the following centres:—

St. John's, N'f'ld., H.M.C.S. *Cabot*
Cornerbrook, N'f'ld., H.M.C.S. *Caribou*
Charlottetown, P.E.I., H.M.C.S. *Queen Charlotte*
Halifax, N.S., H.M.C.S. *Scotian*
Saint John, N.B., H.M.C.S. *Brunswicker*
Quebec, Que., H.M.C.S. *Montcalm*
Montreal, Que., H.M.C.S. *Donnacona*
Ottawa, Ont., H.M.C.S. *Carleton*
Toronto, Ont., H.M.C.S. *York*
Kingston, Ont., H.M.C.S. *Cataraqui*
Hamilton, Ont., H.M.C.S. *Star*
Windsor, Ont., H.M.C.S. *Hunter*
London, Ont., H.M.C.S. *Prevost*
Port Arthur, Ont., H.M.C.S. *Griffin*
Winnipeg, Man., H.M.C.S. *Chippawa*
Regina, Sask., H.M.C.S. *Queen*
Saskatoon, Sask., H.M.C.S. *Unicorn*
Calgary, Alta., H.M.C.S. *Tecumseh*
Edmonton, Alta., H.M.C.S. *Nonsuch*
Vancouver, B.C., H.M.C.S. *Discovery*
Victoria, B.C., H.M.C.S. *Malahat*
Prince Rupert, B.C., H.M.C.S. *Chatham*

Each division, commanded by a reserve officer, is responsible for specialized training in one of the various phases of naval activity—gunnery, harbour defence, aviation, communications, etc.; Royal Canadian Navy officers and men assist with instruction.

During 1952-53, the headquarters of naval divisions was relocated at Hamilton, Ont. Technical and professional training continued in the naval divisions, with 1,043 persons receiving specialized instruction. A number of officers and men of the reserve performed continuous naval duty in the place of regular force officers and men where vacancies existed in complement.

University Naval Training Divisions.—The university naval training program is designed to give instruction to students in attendance at universities across Canada with the object of providing well-trained junior officers for the Royal Canadian Navy and the Royal Canadian Navy (Reserve). Twenty-six UNTD drawing on the students of 41 universities and colleges have been established for this purpose. The total strength as at Mar. 31, 1953, was 1,109 cadets, the number of applicants considerably exceeding the existing vacancies in nearly every instance. The training period is three years; cadets are required to complete three winter training periods, two summer periods and all required courses. Nineteen UNTD officers entered the Royal Canadian Navy and 291 obtained commissions in the RCN (Reserve).

Training is taken at naval divisions and at universities during the academic year. Summer vacation training is taken both at the East and West Coast schools and at H.M.C. ships.

The Royal Canadian Sea Cadets.—The Royal Canadian Sea Cadets consists of 105 authorized corps sponsored by the Navy League of Canada and administered, trained and supervised by the Royal Canadian Navy. Enrolments as at Mar. 31, 1953, were approximately 5,853 cadets between the ages of 14 and 18 years. In 1952, 391 sea cadets, about 30 p.c. of those eligible, joined the Navy.

Subsection 2.—The Canadian Army

Organization.—Army Headquarters at Ottawa, organized as the General Staff Branch, the Adjutant-General Branch and the Quartermaster-General Branch, conducts the planning and policy for the administration and training of the active and reserve forces of the Canadian Army. Public relations, cadet services, military intelligence, chaplain services, provost and associated activities are directed through Commands by Army Headquarters.

The five Commands and seven areas are located as follows:—

Commands	*Headquarters*	*Areas and Headquarters*
Western Command.....	Edmonton, Alta....	(1) British Columbia Area, Vancouver, B.C.
Prairie Command.....	Winnipeg, Man.....	(2) Saskatchewan Area, Regina, Sask.
Central Command.....	Oakville, Ont.....	(3) Western Ontario Area, London, Ont.
		(4) Eastern Ontario Area, Kingston, Ont.
Quebec Command.....	Montreal, Que.....	(5) Eastern Quebec Area, Quebec, Que.
Eastern Command.....	Halifax, N.S.....	(6) New Brunswick Area, Fredericton, N.B.
		(7) Newfoundland Area, St. John's, N'f'ld.

The components of the Canadian Army are the active force, the reserve force, the supplementary reserve, the Canadian Officers' Training Corps (COTC), the cadet services and the reserve militia. Additional to, but not an integral part of, the Canadian Army are the Services Colleges (*see* pp. 1197-1199), officially authorized cadet corps, rifle associations and clubs.

At the end of March 1953, there were 5,220 officers in the Canadian Army active force and 43,238 men; the strength of the Canadian Army reserve force was 7,629 officers and 39,243 men.

Operations, 1952-53.—The 25th Canadian Infantry Brigade, part of the First (Commonwealth) Division, continued to serve with United Nations Forces in Korea; during the period under review, no major offensives were launched by either side. During the year, the first complete program of rotation went into effect; the first battalions of the Royal Canadian Regiment and the Royal 22nd Regiment relieved the second battalions of those Regiments, the 1st Regiment Royal Canadian Horse Artillery relieved the 2nd Regiment and "C" Squadron Lord Strathcona's Horse relieved "B" Squadron. Brigadier M. P. Bogert took command of the Brigade from Brigadier J. M. Rockingham.

The 27th Canadian Infantry Brigade, stationed at Hanover, Germany, continued to fulfill obligations assumed under the North Atlantic Treaty. The Brigade is training as a part of the integrated force of the Supreme Allied Commander Europe. During the fiscal year 1952-53, the Brigade took part in four exercises in conjunction with the British Army of the Rhine and other NATO forces.

The Army component of the Mobile Striking Force contains the portion of the Canadian Army active force that has been given the task, in conjunction with the RCAF component, of dealing with surprise enemy airborne assaults on Canada in the event of war. This force is composed of infantry with supporting arms and services. Parachute, northern operational and Arctic training is conducted each year. It is intended that, ultimately, all operational troops of the Mobile Striking Force will be parachute-trained and will be capable of living and fighting under severe climatic conditions.

Training.—Actual training of active and reserve force personnel is under the General Officers Commanding the five Commands as directed by the appropriate branch of Army Headquarters.

The military training policy for the year 1952-53 was: (1) to improve the standard of individual and collective training, instructional ability and general efficiency of both active and reserve units; (2) to bring active force units to the highest standard of operational training; and (3) to allow collective training in reserve-force units where standard of individual training was sufficiently advanced.

In January 1953, the Army began a program to train soldier apprentices between the ages of 16 and 17; 125 apprentices were enrolled in the first intake. An apprentice enrolls for seven years; two years after enrolment he becomes a regular active service soldier and tradesman; at the conclusion of five years of service he has the option of leaving the Army. Apprentice training will cover basic and corps military training, trades training in selected trades and academic training in mathematics, science and English.

The corps training of officers and men and the basic training of 9,600 recruits was carried out both within units and at various corps schools. In addition, 7,735 personnel attended other courses at schools of instruction.

Basic and advanced training for recruits, as well as refresher courses for all ranks, is conducted in Army Corps Schools organized on a permanent peacetime basis and located as follows:—

Royal Canadian Armoured Corps School, Camp Borden, Ont.
Royal Canadian School of Artillery, Camp Shilo, Man.
Royal Canadian School of Artillery (Anti-Aircraft), Picton, Ont.
Royal Canadian School of Military Engineering, Chilliwack, B.C.
Royal Canadian School of Signals, Barriefield, Ont.
Royal Canadian School of Infantry, Camp Borden, Ont.
Royal Canadian Army Service Corps School, Camp Borden, Ont.
Royal Canadian Army Medical Corps School, Camp Borden, Ont.
Royal Canadian Dental Corps School, Ottawa, Ont.
Royal Canadian Ordnance Corps School, Montreal, Que.
Royal Canadian Electrical and Mechanical Engineers School, Barriefield, Ont.
Canadian Provost Corps School, Camp Borden, Ont.
Canadian School of Military Intelligence, Camp Borden, Ont.

Equipment.—The Canadian Army equipment development program has continued to concentrate on the fields particularly suited to Canadian capabilities and on those in which there are special Canadian needs.

For industrial and strategic reasons, the Canadian Army is adopting, with some exceptions, American-type armament and vehicles. As far as possible, these new equipments will be produced in Canada. The importance of standardization has been increased by the adoption of North American equipment and an important contribution to standardization has been the influencing by Canada of selected developments in other countries. Interest continues to be displayed by the United States and the United Kingdom in Canadian development of combat clothing, a new flame thrower and a number of vehicles.

The Reserve Force.—The reserve force provides the basis for expansion of the field force in the event of an emergency. It is employed on a part-time basis and is subject to annual military training.

Training in 1952-53 was devoted to improving individual skill in handling weapons, fieldcraft, technical ability and physical fitness as well as improving the qualities of leadership, professional ability and instructional techniques of officers and NCO's.

A training period of 45 days at local headquarters was authorized for all ranks of the reserve force with an additional 15 days training at annual camps for 18,000 all ranks. During the year ended Mar. 31, 1953, a total of 3,908 officers and 9,865 other ranks attended summer camps.

The Canadian Officers' Training Corps.—The Canadian Officers' Training Corps comprises in its membership the reserve force command contingents and the university contingents.

Command contingents provide the means whereby potential reserve-force officers who are unable to attend the Canadian Services Colleges or to join a university contingent of the Canadian Officers' Training Corps can qualify for a commission in the reserve force. Candidates are enrolled as officer cadets and may choose methods of training varying from a complete 26-week course at a corps school to a three-year course consisting of training at local headquarters and at summer camps; 1,780 officer candidates were enrolled in this training on Mar. 31, 1953.

In 1952, 1,939 officer cadets (students at universities or service colleges) reported for summer training. Of these, 1,847 passed their courses; 399 qualified as lieutenants and 625 as second-lieutenants in the reserve force; and 35 officer cadets were commissioned in the active force during the period under review.

The Cadet Services of Canada.—The Royal Canadian Army Cadets are formed into 547 cadet corps with a total enrolment of 57,300. This organization affords youths of 14 to 18 years of age an opportunity to receive fundamental training as soldiers and junior leaders. The training program was revised in 1951. Summer-camp training consists of seven-week courses conducted at Aldershot, N.S., Valcartier, Que., Ipperwash, Ont., Dundurn, Sask., and Vernon, B.C. These courses teach such military trades as driver mechanics, radio-telephone operators, wireless and line operators and basic-training instructors. The National Cadet Camp at Banff National Park, Alta., is conducted in August as an award for outstanding proficiency in cadet work for 156 carefully selected master and first-class army cadets.

Subsection 3.—The Royal Canadian Air Force

Organization.—Air Force Headquarters at Ottawa conducts the planning and policy for administration and training of the active and reserve forces of the Royal Canadian Air Force. The organization of the RCAF is divided into three categories—personnel, logistics, and plans and operations. This functional division is reflected in the Air Force Headquarters organization.

During the year ended Mar. 31, 1953, No. 1 Air Division was established with temporary headquarters at Paris, France; in 1953-54 the Air Division headquarters will move to Metz.

Higher formations of the RCAF, with location of headquarters, are as follows:—

Formation	*Headquarters*
Air Materiel Command	Ottawa and Rockcliffe, Ont.
Air Defence Command	St. Hubert, Que.
Air Transport Command	Lachine, Que.
Training Command	Trenton, Ont.
Maritime Air Command	Halifax, N.S.
1 Tactical Air Command	Edmonton, Alta.
12 Air Defence Group	Vancouver, B.C.
14 Training Group	Winnipeg, Man.
1 Air Division	Paris, France.

The expansion of the Air Defence and NATO forces continued and Air Transport Command commitments increased because of a requirement for additional flights to support forces overseas. The contribution to the Korean airlift was maintained.

At the end of March 1953, the strength of the RCAF regular force was 8,071 officers and 32,352 men; the strength of the reserve auxiliary was 1,647 officers and 4,227 men.

Operations, 1952-53.—*Air Defence.*—Air Defence Command's resources were augmented by the activation of a number of units of the Early Warning System and the formation of additional fighter squadrons.

NATO.—Canada's contribution to the air forces placed under the command of Supreme Headquarters Allied Powers Europe (SHAPE) consists of 12 jet fighter squadrons organized in four wings. One wing of three squadrons is stationed at North Luffenham, England, one wing of three squadrons at Zweibrucken, Germany, and one wing of three squadrons at Gros Tenquin, France. When the fourth wing of three Sabre squadrons arrived at Baden-Soellingen, Germany, in September 1953, Canada's NATO commitment was completed well ahead of schedule.

No. 30 Air Materiel Base was formed at Langar, England, to provide logistic support for all RCAF forces in Europe.

Maritime Operations.—Maritime Air Command continued to expand during the year. No. 404 and No. 405 Maritime Squadrons expanded crews and aircraft and No. 407 Maritime Squadron was formed and moved to the West Coast. Maritime aircrews were sent to the United Kingdom on advanced anti-submarine warfare courses at the Joint Anti-Submarine School. The RCAF staff of the Canadian Joint Maritime Warfare School was expanded and the school commenced advanced junior and senior joint tactical courses for staff officers.

Air Transport Operations.—The squadrons of Air Transport Command continued to provide logistical support for units of the defence forces and provided similar services for other government departments when no commercial air facilities were available. Two squadrons were employed in Canada solely on air-transport work; one of these squadrons was converted from Dakotas to C-119 Fairchild aircraft which has a greater cargo-carrying capacity.

Air Transport Command expanded its activities to include transatlantic flights in support of the Air Division in Europe.

Other.—Air photography and survey work continued for the large mapping operation that has been undertaken. Station photographic sections were established at newly opened units to provide service for the maintenance of air cameras and for the processing of films used in air-to-air and air-to-ground aircrew training exercises.

Twenty-three RCAF forecast offices provide meteorological services in Canada in conjunction with the Department of Transport.

Training and Equipment.—Aircrew training courses were organized for potential aircrew of the RCAF regular, reserve university and Canadian Services Colleges flight cadets and the RCN, and for cadets from countries in the North Atlantic Treaty Organization. During the year ended Mar. 31, 1953, 2,106 NATO

and RCAF personnel were trained as pilots, navigators and radio officers. Since the initiation of the NATO aircrew training plan in 1950, 768 pilots and 947 navigators have been graduated from RCAF schools. At Mar. 31, 1953, 1,200 NATO aircrew were training in Canada.

Development courses for officers and flight cadets were conducted at the Officers School, London, Ont. Service indoctrination training of airmen was carried out at No. 2 Manning Depot, St. Johns, Que. Basic flying training courses were conducted at the four flying training schools at Centralia, Ont., Gimli, Man., Claresholm, Alta., and Calgary, Alta., and at advanced flying schools at Saskatoon, Sask., and Portage la Prairie, Man.; weapons training for pilots was given by the school at MacDonald, Man. Navigation training was conducted at two air navigation schools at Winnipeg, Man., and Summerside, P.E.I. The air radio officers school at Clinton, Ont., is the basic training centre for potential radio officers.

Formal trade courses for newly commissioned non-flying list officers were conducted at RCAF schools in aeronautical engineering, armament, supply and telecommunications. Courses were provided to qualify officers in flying control.

RCAF trade specifications have been revised to an approved tri-service standard and the majority of trades have been converted to the new trades structure as represented by these specifications; approximately 85 p.c. of personnel were reclassified accordingly. Trade training has been changed, as required, in accordance with the new trade specifications. During the fiscal year 1952-53, 7,350 groundcrew were given basic training.

Equipment.—Canadair continued quantity production of the F-86E Sabre jet fighter for the RCAF and it has been possible to provide Sabres to the Royal Air Force as part of Canada's Mutual Aid contribution. A. V. Roe Canada Limited is now producing the Orenda jet engine for use in both the Sabre and the CF-100 all-weather jet fighter. The same firm is producing the CF-100 in quantity and some operational squadrons have already been formed. Canadian-produced Silver Star (T33) two-seat jet trainers, powered by Rolls Royce Nene engines, are used to convert pilots from conventional to jet aircraft.

As part of the radar defence of the North American Continent, installation of equipment has been completed at some sites and is well advanced at the remainder.

RCAF Reserve.—The sub-components of the RCAF reserves are designated as follows: (1) the Auxiliary; (2) the Primary Reserve; and (3) the Supplementary Reserve.

During 1952-53, no major changes were made in the RCAF reserves. To bring all RCAF personnel—whether regular or primary reserve—attending Canadian universities under the same control, reserve university squadrons were reorganized and all personnel are now administered by the same squadron headquarters. Six new university squadrons were established during the year as well as two new auxiliary medical units.

During the summer of 1952, 182 pilots, 57 navigators and 18 radio officer trainees from universities and the Canadian Services Colleges underwent training. Pilots complete the regular syllabus of training in three summers; navigators and radio officers graduate in two summers and are employed in their trade the third summer.

Cadets in non-flying categories from Canadian Services Colleges and universities who were participating in their first summer program proceeded from indoctrination training at the reserve officers' school to their respective basic courses in aeronautical engineering, supply, telecommunications, and armament. Second-year cadets completed the final phases of their basic courses and, if successful, were commissioned. Cadets who successfully completed training in 1951 returned as reserve officers and were employed in their trade during the summer of 1952.

Considerable emphasis was placed on improving the means of manning the RCAF auxiliary with trained, young, aircraft tradesmen. In 1952, the summer training program for high-school students interested in auxiliary service trained approximately 1,100 recruits, of whom 46 transferred to the RCAF regular force, 847 remained with the auxiliary and 207 were released. The reserve tradesmen training plan was introduced in December 1952, superseding the high-school student plan, incorporating both students and air cadets, and consolidating under one plan the majority of aircraft tradesmen in training. This program involves a winter and summer phase with a target quota of 2,250 trainees to reach Group I standard by the end of the summer of 1953. Winter training for air cadets enrolled in this primary reserve scheme is to be conducted within air cadet squadrons. The RCAF continued to offer vacancies for auxiliary tradesmen on regular force courses, but very few are able to take advantage of this opportunity because of the requirements of their civilian occupations.

Royal Canadian Air Cadets.—The Royal Canadian Air Cadets are closely associated with the RCAF. There are 239 squadrons located across Canada with an enrolment of 18,300 cadets, administered by the Air Cadet League of Canada, a voluntary civil organization. The value of this training is confirmed by the fact that, during 1952-53, 1,142 ex-air cadets joined the RCAF regular squadrons and several hundred signed on with the reserve. Summer camps were held at RCAF Stations, Abbotsford, B.C., Aylmer, Ont., and Greenwood, N.S., and were attended by 3,808 cadets and 436 officers and instructors. During the year, 218 senior air cadets, who were awarded flying training scholarships, successfully completed the course of 17 hours flying and 60 hours ground school; 167 air cadets continued instruction at their own expense and received private pilot's licences.

The highly successful international exchange visits program, sponsored jointly by the RCAF and Air Cadet League, was further extended in 1952-53. Twenty-five cadets were exchanged with the United Kingdom, 25 with the United States, and two each with Norway, Sweden, Denmark and Holland.

Subsection 4.—The Defence Research Board

The Defence Research Board was established on Apr. 1, 1947, by an amendment to the National Defence Act.

The Board consists of a full-time chairman and vice-chairman, six ex officio and six or more appointed members. The ex officio members are the Chiefs of Staff for the three Armed Services, the President of the National Research Council, the Deputy Minister of National Defence and a representative of the Department of Defence Production. The remaining members, appointed by the Governor General in Council, are drawn from the universities and industry because of their scientific and technical backgrounds. Their appointments are for three-year terms.

The organization consists of a headquarters staff and field research stations known collectively as the Defence Scientific Service. Advisory committees composed of leading Canadian scientists, through consideration of a variety of problems, provide invaluable assistance to the Defence Scientific Service.

In planning this organization, the Government considered the vital need for continuity in research and planned the Defence Research Board as a fully integrated and permanent part of the defences of the country. To assist co-ordination at the highest level, the Chairman of the Board has the status of a Chief of Staff and is a member of the Chiefs of Staff Committee and of the Defence Council.

An essential part of the defence of Canada, the Defence Research Board has been described as a fourth Service. Its fundamental purpose is to correlate the special scientific requirements of the Armed Forces with the general research activities of the scientific community at large. This task is the main function of the headquarters staff and its work is strengthened by the expert counsel of comprehensive advisory committees.

The Board's policy is to select and concentrate its efforts upon defence problems of particular importance to Canada or for which Canada has unique resources or facilities. Existing research facilities (such as the National Research Council) are used wherever possible to meet the needs of the Armed Forces. The Board has built up new facilities only in those fields that have little or no civilian interest.

From the policy of specialization it follows that close collaboration must be maintained with Canada's larger partners. Specialization is made possible only through the willingness of the United Kingdom and the United States to exchange the results of their broader programs for the less numerous but, nonetheless, valuable benefits of Canadian research.

An important and logical field of specialization for Canada is Arctic research. This interest in Arctic problems is reflected in nearly all the Board's activities. An outstanding example is a program of ionospheric research carried on jointly with the Department of Transport. The north magnetic pole is located on the northern edge of Canada's mainland and the auroral belt, in which ionospheric disturbances make radio communication difficult, is centred around the north magnetic pole and extends well down into the inhabited areas of Canada. This means that Canada has radio communications problems duplicated only in northern Siberia, and which are of vital importance not only to defence but to civil aviation and communications. It is, therefore, appropriate that Canada should put special effort into this field of research and that the latter should be supported by Government civil and military agencies.

The Board's Radio Physics Laboratory has designed and supplied the special equipment and operator training for a chain of Department of Transport ionospheric observatories scattered across the auroral belt. The results of the observations from these stations are analysed at the Radio Physics Laboratory and are used not only to issue current forecasts of the most effective radio transmission frequencies but also in more fundamental research aimed at improving northern communications. The results are passed to the Central Radio Propagation Laboratory at Washington, U.S.A., for use in the compilation of world-wide frequency prediction tables. The whole program is an example of logical specialization and of effective interdepartmental and international co-operation.

Pursuing its established policy, the Defence Scientific Service continues to make available to the scientific community at large those results of its work that have other than purely military importance.

Close liaison is maintained between the Defence Research Board and the Department of Defence Production to ensure that research and development activities are closely integrated with production.

Section 2.—Services Colleges and Staff Training

Canadian Services Colleges.—The Royal Military College of Canada was founded in 1876 at Kingston, Ont. Royal Roads was established in 1941, near Victoria, B.C., as a school for naval officers. In September 1948, both colleges were constituted as the Canadian Services Colleges to provide a joint educational and training program that would produce officers for the three Armed Services of Canada. To these has been added the Collège Militaire Royal de Saint-Jean located at St. Johns, Que.; established principally to satisfy the requirements of French-speaking candidates, it was formally opened by the Governor General in the autumn of 1952.

The course for technical officer candidates at the Colleges is of four years duration. Cadets of the Collège Militaire Royal take a preparatory year. The first two years of the course run concurrently at all three of the colleges. Cadets who have taken the first two years at Royal Roads or cadets who have taken the preparatory and first two years at the Collège Militaire Royal, if they are selected to take the full course, proceed for the last two years of the general or engineering courses to the Royal Military College.

Autumn, winter and summer terms make up the college year of 11 months, with the exception of the fourth year at RMC which has no summer term. From September to May, the autumn and winter terms, 85 p.c. of the instructional time is allotted to academic subjects and the remainder to military subjects including drill and physical training. May to mid-August, the summer term, is devoted to practical service training at navy, army or air force establishments.

Cadets may enter the Canadian Services Colleges either as reserve cadets or as regular force cadets under the terms of the Regular Officer Training Plan introduced during the summer of 1952. Cadets who have entered as reserve cadets may transfer at any time during their course to the regular force. The Regular Officer Training Plan enrols cadets in the branch of the Armed Forces of their choice and provides a university education, with pay, at one of the Services Colleges or at a Canadian university; on successful completion of their academic and military training, cadets are granted a commission in the regular force.

On completion of Canadian Services College training, reserve cadets may enter the regular or reserve force as commissioned officers in the branch for which they have been trained. Completion of Services College training qualifies cadets for commission in the non-technical branches of the three Services. Regular force cadets of the technical branches of the three Services, upon completion of the four-year Service College course, are sent to specified universities at public expense for further training to degree standard.

For admission to the colleges a candidate must be a Canadian citizen or other British subject, normally resident in Canada. Candidates for admission to the Royal Military College or Royal Roads must have reached their sixteenth but

not their twentieth birthday on Jan. 1 of the year of entry. A specified standard of physical fitness is required of all applicants. The academic requirements for admission are:—

> University senior matriculation (or equivalent) in the following subjects: English, physics, mathematics (algebra, geometry and trigonometry) chemistry, and either history or a language (French for English-speaking candidates and English for French-speaking candidates).

The academic requirement for the Collège Militaire Royal is university junior matriculation including chemistry and a language (French for English-speaking candidates and English for French-speaking candidates).

At one of the six regional centres, candidates are medically examined and take education tests. In addition, each candidate appears before a Board composed of a member of the directing staff of one of the Colleges and a representative of each of the three Services.

One-half of the cadets entered in the Canadian Services Colleges are selected on provincial quotas determined by population; the other, in open competition. Academic standing and the recommendations of the service boards as to the physical and personal characteristics of the candidates are the bases for selection with the final selection of the candidates qualified for admission being made by a board of senior officers appointed by the Minister of National Defence.

Up to 15 Dominion Cadetships, five to each Service, are provided by the Federal Government to sons of ex-service and service personnel. Each Cadetship, valued at $580, covers the total cost of lodging, uniform clothing, tuition, etc., in the first year. A small number of scholarships are also provided in each province.

In addition, the following associations award annual scholarships:—

The Navy League of Canada:	Up to 10 scholarships to Royal Canadian Sea Cadets eligible for entry to the Canadian Services Colleges, valued at $580 each.
The Naval Officers' Association of British Columbia:	One or more scholarships valued at $580 each.
Air Cadet League of Canada:	Sixteen scholarships to serving or ex-members of Air Cadets Squadrons, valued at $600 each.
The RCAF Benevolent Fund Scholarships:	One scholarship to ex-members of the RCAF or their dependants, valued at $655.
The Duchess of Connaught Scholarship founded by the Laurentian Chapter of the Imperial Order of the Daughters of the Empire:	One scholarship valued at $350.
Ontario Canteen Fund Scholarships:	Four scholarships valued at $580 each.
Royal Canadian Artillery Memorial Scholarships:	Four scholarships valued at $300 each.

The Leonard Foundation, the Royal Canadian Artillery Officers' Regimental Fund Committee and Dominion-Provincial Student Air Bursaries provide bursary assistance to cadets.

Cadets attending the Colleges as members of the regular force are not eligible for cadetships, scholarships or bursaries, as the cost of their education is fully met from public funds.

At Mar. 31, 1953, the Royal Military College had 108 cadets in first year, 71 in second, 91 in third and 109 in fourth. Royal Roads had 78 cadets in first year and 70 in second. The Collège Militaire Royal had 129 in first year.

Advanced Training Colleges.—The Canadian Army and the Royal Canadian Air Force operate colleges for giving staff and command training while the National Defence College provides facilities for advanced study of defence problems.

The National Defence College, Kingston, Ont., opened on Jan. 5, 1948, is a senior Canadian defence college providing an 11-month course of study designed to cover the economic, political and military aspects of the defence of Canada. Senior officers and civil servants from the Armed Forces and government departments attend as well as one or two representatives from industry. An extensive lecture course is provided, with lecturers chosen from leaders in various fields in Canada, the United States, the United Kingdom and other countries. In addition, educational tours and visits to parts of Canada, the United States, Europe and the Middle East are made to give students more knowledge of conditions and influences in their own and other countries.

The Canadian Army Staff College, Kingston, Ont., is a military staff college operating on a permanent basis to train officers for positions of staff and command. The course extends over 10 months. A joint instructional staff includes faculty members from the three Canadian Services, the United States and the British armies. The student body is comprised of members from the three Services and from five different nations. Aside from purely military subjects, the curriculum provides for study of current world affairs and lectures by prominent guest speakers in this field. Graduates are qualified for Grade II Staff appointments or Commands in the Service.

The Royal Canadian Air Force Staff College, Toronto, Ont., is a permanent Air Force staff college providing a training program designed to give officers of Squadron Leader to Group Captain rank the necessary background and knowledge to fit them for Staff and Command positions. The Directing Staff includes officers from the Royal Canadian Air Force, the Canadian Army and the Royal Air Force, while the student body consists of officers from the Royal Canadian Navy, the Canadian Army, the Royal Air Force, the United States Air Force, as well as the Royal Canadian Air Force. Besides the normal organizational and administrative subjects, the curriculum includes an advanced study of the three aspects of air power; air strategy and its relation to ground and sea forces; current world affairs and their effect on the Canadian strategic position; and the industrial potential of the country. Subjects are presented and discussed under the guidance of the Directing Staff or guest speakers, many of whom are prominent in Canadian and United States diplomatic, university and industrial life.

PART II.—DEFENCE PRODUCTION*

Department of Defence Production.—This Department was set up on Apr. 1, 1951, to handle defence procurement previously carried out by the Minister of Trade and Commerce acting through the Canadian Commercial Corporation. The Department also undertook responsibility for the control and allocation of essential materials and for encouraging the development of Canada's strategic resources.

It has three main units concerned with procurement. (1) The Production Branch deals with commodities other than aircraft which require special facilities for their production. These include ships, guns, ammunition, electronic equipment,

* Prepared in the Economics and Statistics Branch of the Department of Defence Production, Ottawa.

military vehicles, machine tools and defence construction. (2) The Aircraft Division is responsible for the purchase of aircraft. (3) The General Purchasing Branch procures commodities which are either of standard commercial types or of specifications not greatly different from commercial ones; for instance, clothing, food, fuels and barrack stores.

The Materials Division, which was concerned with ensuring that essential materials were available for defence purposes and essential civilian uses, steadily reduced the number of controls it was administering during 1953. At the end of the year, most of its residual functions were transferred to the Department of Trade and Commerce, and the unit ceased to be a Division.

Defence Orders Placed.—Table 1 shows defence orders, excluding those for stockpiling and capital assistance, by programs from Apr. 1, 1949, to Mar. 31, 1953. The increase since the outbreak of hostilities in Korea during the summer of 1950 is apparent. Orders placed in the fiscal year 1950-51 were over three times as great as those of the previous year, and orders in 1951-52 were over seven times the pre-Korean level. The peak period for orders was from July to September 1951. In 1952-53, the rate of placing orders decreased.

The aircraft program has been the largest and, although the balance of the programs will alter as time goes on, it is likely to remain the largest because of the importance of airpower to Canada.

1.—Federal Government Defence Orders, by Program, Years Ended Mar. 31, 1950-53

NOTE.—Figures exclude stockpiling and capital assistance. Figures for the first three fiscal years have been revised since the publication of the 1952-53 Year Book.

Program	1949-50	1950-51	1951-52	1952-53
	$'000	$'000	$'000	$'000
Aircraft	70,641	321,519	579,289	533,224
Shipbuilding	4,144	77,232	114,898	59,565
Tank—Automotive	12,372	29,474	65,110	102,364
Weapons	672	13,566	106,344	23,711
Ammunition and explosives	2,412	17,242	137,483	75,846
Electronics and communications equipment	16,580	86,908	98,954	96,419
Fuels and lubricants	26,073	20,128	34,701	43,561
Clothing and equipage	16,711	33,332	149,499	31,783
Building supplies and equipment	13,179	22,906	29,289	3,853
Construction	28,672	67,645	187,011	153,919
Miscellaneous programs	33,326	51,395	99,781	83,988
Domestic district office orders	[1]	[1]	68,294	55,109
Totals	**224,782**	**741,347**	**1,670,653**	**1,263,342**

[1] Until Apr. 1, 1951, orders placed by the domestic district offices were allocated according to program.

Table 2 shows defence procurement orders according to the countries in which they were placed. Large government orders were placed in the United States as the expanded defence program got under way, and were especially large during the first half of the fiscal year 1951-52. In the second half of that year, orders to the United States declined rapidly. Orders placed in the United Kingdom were small at the beginning of the defence program but increased rapidly during the latest two fiscal years; the 1952-53 orders were larger than those placed in the United States.

Heavy initial orders were placed in the United States as a result of the decision to standardize on North American rather than on British types of army weapons. While Canadian plants were being tooled up to produce the new types of equipment, interim requirements had to be met from the United States. Furthermore, the decision to produce, in Canada, certain aircraft of existing United States types also led to placing heavy orders in that country for components, particularly engines and electronic equipment.

The main items ordered from the United Kingdom have been Centurion tanks, an aircraft carrier and Nene jet engines.

Canada is buying certain defence equipment in other countries but, at the same time, is exporting large quantities. Among the aircraft being exported to the United States are the F-86E Sabre jet fighter, the Harvard trainer and the Beaver. Guns are also being produced in Canada for the United States, both the 3-inch 50-calibre naval gun and the 120-mm. gun. Other items ordered by the United States Government include explosives, ammunition components and mobile radar equipment. Canada is producing a number of items that will be sent to NATO as mutual aid. These include Sabre jet fighters, aero engines, artillery ammunition, machine guns and electronic equipment.

2.—Distribution of Canadian Government Defence Orders, by Countries in which Placed, Years Ended Mar. 31, 1950-53

NOTE.—Figures exclude stockpiling and capital assistance.

Country	1949-50	1950-51	1951-52	1952-53
	VALUES			
	$'000	$'000	$'000	$'000
Canada	204,291	636,344r	1,335,864	1,116,424
United States	15,229	96,776	296,761	68,852
United Kingdom	5,205	8,220r	37,982	71,685
Other countries	57	7r	46	6,381
Totals	**224,782**	**741,347r**	**1,670,653**	**1,263,342**
	PERCENTAGES			
	p.c.	p.c.	p.c.	p.c.
Canada	90·9	85·8r	79·9	88·4
United States	6·8	13·1r	17·8	5·4
United Kingdom	2·3	1·1	2·3	5·7
Other countries	1	1	1	0·5
Totals	**100·0**	**100·0**	**100·0**	**100·0**

[1] Less than 0·05 p.c.

Production Programs.—A new stage in the development of the Canadian aircraft industry was reached in the autumn of 1951 with the delivery to the Royal Canadian Air Force of the first pre-production model of the CF-100 all-weather jet fighter. This is the first all-Canadian jet aircraft, the airframe and the Orenda engines that power it being designed and produced in Canada. Deliveries under the main production contract began in 1952 and the aircraft is now in squadron service. The F-86E Sabre jet fighter, of United States design, has been in volume production since the autumn of 1951 and a number have gone to the United Kingdom and to the United States. An improved model of this aircraft is now being produced, powered by the Orenda engine; the earlier version used engines purchased from the United States.

The Harvard primary trainer aircraft, also of United States design, began to come off the Canadian production line during the autumn of 1951. Engines were at first imported from the United States, but were later produced in a new plant near Montreal, Que., which also supplies spare engines for the large number of Harvards now flying in many parts of the world. The Beaver aircraft is being manufactured to meet large United States orders as well as domestic civilian requirements. This is a Canadian-designed aircraft for general-purpose use in rugged territory. The Otter, a larger aircraft developed by the same company, has also proved very successful and a number of them have been purchased for the RCAF. Full-scale production began during 1952 of the T33-A Shooting Star jet trainer for the RCAF.

A number of aircraft stored since World War II have been reconditioned and equipped to serve new purposes. Some bombers were converted for use by the Maritime squadrons of the RCAF and other aircraft were converted for training purposes.

The above development required a considerable expansion in the capacity of the Canadian aircraft industry, much of the new plant and equipment required being provided by the Government as capital assistance.

Canada has built up an aero-engine industry as well as expanded the output of airframes. The Orenda engine, entirely of Canadian design, was the first jet engine to be built in Canada. The factory was owned by the Crown and operated by the firm that developed the engine, but was in 1953 sold to that firm. The plant supplying radial engines for the Harvard is Crown-owned. Another plant has been provided for the overhaul of jet engines. In addition, the production of components for jet engines, such as fuel systems, magnesium castings, and blades for compressors and turbines, has been introduced into Canada in plants established with government aid. Further development of Canada's aero-engine capacity will take place when the jet engines now being imported from the United Kingdom begin to be assembled in Canada.

Extension of industrial capacity is also taking place in the field of aircraft instruments. Artificial horizons, formerly imported from the United Kingdom, are now being produced in this country, as are a number of instruments formerly imported from the United States. Engine and instrument bearings are also now being produced in Canada.

Electronic devices are very important in defence, especially in the field of communication by radio, in the interception of aircraft and ships by radar, in fire control and in the exploding of missiles near their target. The Canadian electronics

industry has increased its military capacity. Facilities have been established to produce items new to Canada's economy, including sub-miniature tubes and components, and crystals.

A large quantity of radar and communications equipment for the northern screen of the air defence of this Continent is being produced in Canada, together with anti-aircraft and other types of radar for use by the Armed Services. One type of early-warning radar used by anti-aircraft artillery, the No. 4 Mk. VI, is being supplied as Mutual Aid to NATO and is being used as well in the air defence of Canada. A certain number have also been delivered to the United States. Radar proximity fuses are now being produced in Canada for the first time.

A new type of pack radio for use by the infantry was developed in Canada and came into production during 1952. It has a range of one mile and is believed to be the best of its type in existence. It will be used extensively by the Canadian Army and by other North Atlantic Treaty countries, to which it is being supplied as Mutual Aid. Other production includes telephone, microwave and radio equipment for the communications network behind the radar screen.

A new development is the design and production in Canada of a flight simulator, which is an electronic device for reproducing the conditions of flight so that pilots may receive training on the ground.

Canadian shipyards are working on orders for escort vessels and minesweepers, as well as a number of harbour craft. In addition to the new ships, the reconversion of a "Mothball Fleet" of 36 minesweepers and frigates is being completed. The escort vessels, designed in Canada except for the propulsion machinery, are the most modern of their kind, equipped with all the latest devices and weapons; the first was launched in November 1951. To reduce their magnetism the minesweepers are being built of aluminum, with the hulls sheathed in wood. Five gate vessels, for duty at harbour entrances, have been completed and delivered to the Royal Canadian Navy and an icebreaker has also been completed for the Department of Transport.

The construction of these vessels calls for work elsewhere than in the shipyards, for instance the manufacture of boilers, turbines, auxiliary engines, deck gear and other components. Most of the contracts for such items have been let in Canada.

An aircraft carrier has been ordered from the United Kingdom to replace the *Magnificent*, which is on loan from the Royal Navy.

Under the weapons program, the major production project has been the 3-inch 50-calibre naval guns and mountings. The first of these equipments was delivered to the United States but the requirements of the Royal Canadian Navy will be met as they arise. Browning 0·5-inch machine guns were produced for use in the Sabre and CF-100 jet fighters, and 3·5-inch rocket launchers for use by the Canadian Army. Arrangements have been made to produce 155-mm. and 105-mm. howitzers, the 105-mm. recoilless rifle, and 81-mm. and 60-mm. mortars. Contracts placed for small arms were limited, partly because these weapons have not yet been standardized.

Ammunition requirements altered with the change-over to United States types of equipment. It was decided to produce in Canada ammunition for the Army's 155-mm., 105-mm. and 90-mm. artillery equipments. Naval requirements to be met from domestic sources include rounds for 3-inch 50-calibre and 40-mm. Bofors

guns, depth charges and other types of anti-submarine projectiles. Deliveries to the RCAF include rockets and machine-gun ammunition. Explosives for the ammunition are being produced in two plants, one of which manufactures picrite and the other a number of explosives including RDX/TNT and rifle powder. Phosphorus and hexachlorethane are also being made in Canada to government specifications.

Automobile manufacturers are producing military trucks to North American specifications. Because of the large capacity of these plants, the output of trucks can be expanded quickly to meet any foreseeable demands from the Armed Services. Other types of military vehicles are being produced in smaller quantities and a number of civilian types of vehicles have been purchased for military use. As already mentioned, Centurion tanks are purchased from the United Kingdom as it was decided that the establishment of facilities for manufacturing tanks in Canada would not be justified.

The construction program has involved heavy outlays for barracks and other types of accommodation, buildings for the radar screen, air-strips and other works. These were made necessary by the long-term problems of defence and by increases in the size of the Armed Forces.

Other requirements of the Armed Forces have included food, fuel and lubricants, chemicals, medical supplies, photographic stores, laboratory, scientific and other instruments, barrack-room stores, furniture and furnishings, office equipment, and a wide variety of textile products.

In some cases, defence production has involved the setting up of facilities that will have small residual value after the emergency is over, and capital assistance has been granted in the form either of machinery and equipment or of new buildings or extensions. Everything so provided remains the property of the Crown. Recently, however, since the more specialized types of defence production capacity have been established, there has been less need of capital assistance. Firms are now encouraged to install their own plant, a part of which they may be permitted to write off at a special, faster, rate for income-tax purposes. Some facilities set up as capital assistance have been sold to private firms which will ensure that they will be available to meet defence needs.

Controls and Priorities.—In the early stages of increased defence production it was necessary to direct the use of certain essential materials produced in Canada and elsewhere. The Defence Production Act, Sect. 30, provides that "The Governor in Council may, from time to time, designate as an essential material any material or substance, the control of the supply and use of which is in his opinion essential to ensure the availability of adequate defence supplies or for the construction or operation of defence projects". Orders in Council have designated as essential a number of chemicals and chemical compounds (later reduced to sulphur only), wood-pulp and newsprint (no longer so designated), certain forms of non-ferrous metals and non-metallic minerals, certain forms of iron and steel, and aviation gasoline. After a material has been declared essential, the Minister of Defence Production may regulate its production, supply, distribution and use.

In the case of non-ferrous metals, control was effected by an order approval system whereby purchase orders placed by manufacturers were screened in the Department of Defence Production. These systems were established for primary and wrought aluminum, primary copper and certain copper products, primary nickel and certain nickel products, cadmium, lead and zinc. Sulphur was also controlled under a

similar system. Cadmium, lead and zinc were decontrolled in May 1952 and sulphur in November 1952. Controls on certain copper and aluminum products were cancelled in November 1952, the remaining controls on orders of these metals being removed in March 1953. Controls on nickel and certain of its products were relaxed in June and July 1953 and abolished in October 1953.

In the case of steel, supplies were diverted as necessary to defence and defence-supporting purposes by the direction of individual requirements at the mill, warehousing or fabricating levels. In addition, the use of structural steel for a wide variety of less essential purposes such as places of amusement, liquor stores, hotels, banks and service establishments was placed on a permit basis in February 1951, the system being revised in January 1952. A Ministerial Order of January 1952 prevented the accumulation of excessive inventories of steel and ensured that steel would be used for the purpose for which it was acquired. These controls were abolished on Jan. 1, 1953, from which date end-use certificates were required on purchase orders for steel and the power also remained to direct steel to defence uses. Controls on steel were revoked in October 1953.

In addition to the above controls on specific materials, the Minister of Defence Production has general powers for establishing a priority system for any type of essential supplies, under Order in Council P.C. 2399 of May 16, 1951. It has not been necessary to exercise these powers formally to any great degree, and priorities in Canada have been dealt with largely by informal consultation between the Government and representatives of industry.

Since Canadian firms are dependent on the United States for a considerable proportion of their requirements of materials and semi-finished and finished goods, the system of controls in that country has an important effect in Canada. Under the United States Controlled Materials Plan, which governed the distribution of steel, copper and aluminum, quarterly estimates of Canada's future requirements were made by the Department of Defence Production and considered at Washington, D.C., along with claims from all segments of the United States economy. An allocation was then made to Canada and distribution to Canadian industry was carried out through the Department. The CMP was succeeded on June 30, 1953, by the Defence Materials System, under which a similar approach was adopted towards Canadian requirements.

With respect to the general United States priorities system, the Department screens applications from Canadian firms and assists them in obtaining their approved requirements on a basis generally comparable to that accorded to United States concerns. Similarly, United States procurement agencies or firms that have defence requirements in Canada are given any necessary assistance by the Canadian Department of Defence Production. By agreement, the Department gives such United States orders treatment comparable to that given to orders for the Canadian defence program.

By the end of 1953, the Department's interest in the materials field had ceased, except with respect to materials in short supply in the United States. Its remaining activities, so far as the commercial and general economic aspects of strategic materials were concerned, were therefore transferred to the Department of Trade and Commerce. A priorities and expediting group was retained to assist Canadian firms in obtaining their requirements of items under control in the United States, and to assist Canadian defence contractors with any supply difficulties that they might meet in Canada or the United Kingdom.

Strategic Resources.—The raw materials that Canada produces are essential not only for its own defence effort but also for that of friendly countries, as in the case of nickel, of which Canada produces about four-fifths of the world supply. Table 3 gives statistics for the leading strategic minerals; the high proportion of output exported is apparent.

3.—Canadian Production, Exports and Imports of Principal Non-Ferrous Metals, 1952

(Thousands of short tons)

Primary Metal	Domestic Production	Exports to—			Imports	Domestic Supply
		United States	United Kingdom	Other Countries		
Aluminum	499·8	116·0	256·4	40·2	—	87·2
Copper, refined	196·9	52·6	41·6	19·4	13·0	96·3
Lead, refined[1]	177·4	100·5	26·7	2·5	—	47·7
Nickel, refined	76·8	73·9	2·6	0·6	—	—
Zinc, refined	223·1	71·0	87·2	8·8	—	56·1

[1] Includes lead smelted from imported ore.

Canadian output of strategic materials, on the whole, increased rapidly between 1950 and 1952, thus strengthening the base of the defence effort. Table 4 compares the output of a number of strategic commodities in 1952 with that of the two previous years. Of special interest are the increases in petroleum and natural gas owing to the development of the western oil fields and the extension of oil pipelines.

4.—Production of Selected Strategic Commodities, 1950-52

Material	Unit	Production			P.C. Change 1950-52
		1950	1951	1952	
Iron ore	'000 short tons	3,605	4,680	5,272	46·2
Pig iron	"	2,317	2,553	2,682	15·8
Steel ingots	"	3,298	3,446	3,578	8·5
Petroleum, crude	'000 bbl. per day	80	131	168	110·0
Natural gas	'000 M cu. ft.	67,822	79,461	88,686	30·8
Aluminum, primary	'000 short tons	397	447	500	25·9
Copper, mine	"	264	270	258	−2·3
Lead, mine	"	166	158	169	1·8
Nickel, mine	"	124	138	141	13·7
Zinc, mine	"	313	341	372	18·8
Ilmenite, mine	"	152	392	266	75·0
Cobalt, mine	short tons	292	476	711	143·5
Wood-pulp	'000 short tons	8,473	9,314	8,968	5·8

PART III.—CIVIL DEFENCE*

The accelerating threat of aggression that began shortly after the completion of demobilization following World War II made necessary the reorganization of military strength. It also made apparent the need for the development of a plan of civil defence as part of Canada's program of defence against direct attack. Thus, in October 1948, the Minister of National Defence appointed a Co-ordinator of Civil Defence whose task it was to prepare such a plan. To assist in the co-ordination of the planning, an interdepartmental committee—the Federal Civil Defence

* Prepared from information supplied by Major-General F. F. Worthington, Civil Defence Co-ordinator, Department of National Health and Welfare, Ottawa.

Planning Committee—was established, as well as a Federal-Provincial Advisory Committee composed of the Federal Minister responsible for civil defence as chairman and each Provincial Minister responsible for civil defence as a member. In February 1951, the administration of civil defence was transferred from the Department of National Defence to the Department of National Health and Welfare.

The Canadian plan was developed after study of similar organizations in the United Kingdom, Western Europe and the United States. It was agreed that civil defence organization should be incorporated within the framework of civil government at each level—federal, provincial and local—each with its own sphere of responsibility. The country is divided into a number of target areas, around each of which is a mutual aid area for immediate support. The territory outside these areas is organized on a mobile support and reception area basis. The channel of communication is from the federal authority to provincial authority and thence to local authority.

The Federal Office of Civil Defence consists of the Civil Defence Co-ordinator and the following services: operations and training, administration and supply, health planning, welfare planning, communications and transportation. A number of other departments are involved in planning, such as the Royal Canadian Mounted Police, the Department of Agriculture, Department of Transport and the Defence Research Board.

In co-operation with the Royal Canadian Air Force, an attack-warning system has been established in all target areas and sirens have been provided by the Federal Government. In co-operation with the Departments of National Defence and Veterans Affairs, a program of stockpiling medical supplies and equipment is in progress across Canada.

The Federal Civil Defence Technical Training School has been operating continuously since January 1951, conducting staff courses for organizers, instructors courses (general and rescue), welfare courses and radiological monitoring courses, while courses on damage control and tactical operations are being added. In addition, the Federal Government has sponsored a number of specialist courses for medical personnel. During the autumn of 1951, a special medical team traversed Canada conducting training for nurses in atomic, biological and chemical warfare. Also, an agreement is in effect with the St. John Ambulance Association to undertake a large-scale program of first-aid training of civil defence workers for which the Federal Government pays a per capita grant.

Federal assistance to the provinces by way of meeting the costs of administration and purchasing operational requirements consists of an annual grant amounting to eight cents per capita (based on 1951 Census figures) plus an additional six cents per capita in the main target areas. These federal grants must be equalled by provincial contributions. Also, the Federal Government has offered to bear one-third of the cost of standardizing fire-hose couplings. By mid-1952, Ontario and Alberta had accepted the offer and were proceeding with a standardization program and British Columbia expected to follow. Large quantities of training equipment

including rescue vehicles and fire-fighting pumps have been provided by the Federal Government to the provinces in order to foster their training programs. Draft agreements have also been forwarded to all provinces stating that the Federal Government will share with the provinces, on an equal basis, in paying workmen's compensation, where necessary, to a civil defence worker; an agreement to this effect has been signed with the Province of Ontario.

During the year ended Mar. 31, 1953, 15 civil defence manuals were published by the Federal Government to assist in the organization, training and general education of civil defence personnel, in addition to which a considerable amount of guiding literature was issued to assist provincial and local governments.

Each province has developed its own civil defence organization, patterned on that of the Federal Government. Certain provinces have conducted civil defence training courses similar to those of the Federal Government with the object of training local instructors and key personnel.

Civil defence organization at local level consists of the following services: police, fire, health, ambulance, welfare, rescue, engineer, public utilities, communication, transportation and information. Many of the main centres of population have made considerable advances in organization and training. An estimated 128,000 civil defence workers were reported on strength as at Mar. 31, 1953.

During 1951, an agreement was made between Canada and the United States whereby each country pledged itself to go to the assistance of the other in event of attack. A number of working groups have been formed to carry out specific tasks in the development of ways and means of carrying out this agreement. The Provinces of Canada, too, have discussed with adjoining States of the United States the working out of their mutual problems. Close liaison has also been kept with the United Kingdom and other NATO countries.

CHAPTER XXVIII.—SOURCES OF OFFICIAL INFORMATION AND MISCELLANEOUS DATA

CONSPECTUS

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PART I.—SOURCES OF OFFICIAL INFORMATION

Section 1.—Federal Government Information Services

The chief source of statistical information on all phases of the economy of Canada is the Dominion Bureau of Statistics where the decennial and quinquennial censuses are planned and statistical information of all kinds—federal and provincial—is centralized. In regard to information that is not mainly statistical, the individual Department concerned with the particular subject should be contacted as indicated in the Directory at pp. 1214-1238. Certain Government bodies and national agencies, because of the nature of their work and the appeal it has to broad sections of the population, are organized primarily as information or publicity agencies. Among these are: the Information Division, Department of External Affairs, which deals with questions about external affairs originating in Canada and with general requests originating abroad for information on Canada and Canadian affairs; the Information Branch, Department of Trade and Commerce; the Information Services Division, Department of National Health and Welfare; the Canadian Broadcasting Corporation; and the National Film Board. (*See* Index.) The Departments of Agriculture, Resources and Development, and Mines and Technical Surveys, while not thus classed, are interested in the dissemination of information to a greater extent than most other Government Departments, though several of them have publicity branches or public relations divisions.

Government Departments, with few exceptions, issue their own lists of reports and publications. Departments are required by statute to publish annual reports, which are tabled each year in the House of Commons by their respective Ministers. However, for the purpose of this Section, only the services of the six information agencies mentioned above are described.

Section 2 has been prepared for the purpose of presenting to the reader a directory of all sources of information, federal and provincial, thereby directing him to the proper channels from which he may draw material relating to any particular subject.

The Dominion Bureau of Statistics.—The Dominion Bureau of Statistics was set up by statute in 1918 as a central statistical department for Canada (8-9 Geo. V, c. 43). In 1948, this statute, which had been consolidated as the Statistics Act (R.S.C. 1927, c. 190), was repealed and replaced by the Statistics Act (R.S.C. 1952, c. 257), subsequently amended in March, 1953 by 1-2 Eliz. II, c. 18.

The chief aims of the Dominion Bureau of Statistics are : (1) to furnish statistical data, bearing on Canada, for government and administration, whether municipal, provincial, national or international; and (2) to assist in meeting the needs of non-governmental users of statistics, arising from a growing awareness of the value of statistics to business efficiency and social security.

Inquiries.—Hundreds of individual requests for information are received in the Bureau each day, routed through the appropriate divisions and answered as expeditiously as possible. Since the field of effort, from the statistical side, deals with all phases of the national economy, there is scarcely a subject upon which the Bureau is not able to give some information. Nevertheless, only inquiries of a statistical nature should be directed to the Dominion Bureau of Statistics.

Publications.—The Dominion Bureau of Statistics is the principal publication agency of the Federal Government; the subjects of its reports cover all aspects of the national economy.

The policy with regard to the distribution of publications is to extend the service to the public as widely as possible at a minimum cost. A special subscription rate of $30 per annum entitles a subscriber to receive, as issued, a copy of each report, including the daily News Bulletin. Statistical information not of general interest is published in the form of Reference Papers or Memoranda for which additional annual subscription rates of $5 and $15, respectively, are charged. A discount of 25 p.c. is allowed on the excess over $5 of single purchases totalling between $5 and $20; on single purchases of between $20 and $50, the discount is 50 p.c. of the excess over $20.

A complete list of DBS publications is available from the Dominion Statistician. Orders for reports should be sent to the Dominion Bureau of Statistics, Ottawa, giving the correct title or titles of the publication or series of reports in which the applicant is interested and should include the necessary remittance in the form of a cheque or money-order made payable to the Receiver General of Canada.

Information Division, Department of External Affairs.—The Information Division has two functions: to promote within Canada interest in and knowledge of international affairs, and to make Canada and Canadian policies better known and understood abroad.

To perform the first function, the Division produces and distributes various documents on external affairs—statements of government policy and reports on related developments abroad and on the work of the Department generally. The Division also answers inquiries from Canadian sources on these subjects (except for inquiries from the press which are handled by the Department's Press Office) as well as requests for information about Canada made by Diplomatic Missions at Ottawa, by Canadian posts abroad, and by individuals and organizations in other countries.

Most of the information work abroad is done, however, by officials at Canadian posts. The Information Division assists by formulating and advising on information policy abroad, in an effort to ensure that this policy is related to the general objectives of Canadian foreign policy, and by producing and procuring material to keep Missions informed of developments within Canada. Journalists, and others who visit Canada to write of Canadian affairs, are given assistance from time to time by the Division; its responsibilities also include the co-ordination of the Government's activities in the field of cultural relations.

Information Branch, Department of Trade and Commerce.—For details *see* p. 1031.

Information Services Division, Department of National Health and Welfare.—The reponsibility of this Division, in co-operation with other divisions of the Department of National Health and Welfare and provincial authorities, is the production and distribution of educational material on health, welfare, social security and civil defence, for use throughout the country. This information, issued in the English and French languages, includes books, pamphlets, periodicals, posters, exhibits, displays, radio dramatizations, press and magazine features and releases, as well as films and film-strips prepared in co-operation with the National Film Board. Books, pamphlets, posters and displays are distributed in Canada through provincial authorities. The most important periodicals published by the Division are *Canada's Health and Welfare* (monthly), *Canadian Nutrition Notes* (monthly), *Occupational Health Bulletin* (monthly), *Industrial Health Review* (semi-annually) and *Nutrition Bulletin* (annually).

Canadian Broadcasting Corporation.*—Radio broadcasting is an important medium of information to the public along with newspapers, films and other means of communication. Radio broadcasting in Canada is a combination of a publicly owned national system and privately owned local community stations, many of which are affiliated with the Canadian Broadcasting Corporation's networks.

Since its establishment in 1936, the Canadian Broadcasting Corporation has become one of the most effective channels through which information, official and unofficial, is broadcast to the people of Canada. Radio is relatively more important in Canada than in most other countries, because of the widely distributed population and the number of sparsely peopled areas, and the CBC has gradually bridged the gaps with high-powered transmitters designed to serve rural as well as urban areas. The CBC has also pioneered in the development of low-powered repeater stations, attached to the network lines, that serve areas unable, because of topographical conditions, to receive an adequate signal from any existing station.

News broadcasts and information programs occupy a considerable proportion of national and regional network time and include news, drama, informative talks, children's programs, school broadcasts, public-service broadcasts, sports, women's activities, etc. Listeners have a very wide range of radio fare, since the CBC not only produces its own programs in the various production centres across Canada, but brings in selected programs from the networks in the United States, the British Broadcasting Corporation, and other national radio systems. The CBC maintains a bureau at London, England, and at United Nations Headquarters, New York, and is credited with having done more to inform listeners of the United Nations' activities than any other broadcasting system.

Through the International Shortwave Service, operated by the CBC on behalf of the Canadian Government, programs are broadcast in sixteen languages: English, French, German, Dutch, Danish, Norwegian, Swedish, Finnish, Italian, Spanish, Portuguese, Czech, Slovak, Russian, Ukrainian and Polish. The CBC International Service broadcasts information abroad on life and economic conditions in Canada as part of the general information plan for promoting a better understanding of Canada in other countries. The CBC shortwave transmitters at Sackville, N.B., transmit a signal unequalled in Europe by any other transmitted from the North American Continent.

* *See* also pp. 335-337 and pp. 887-894.

The National Film Board.—The National Film Board provides information on a great variety of subjects in the form of films, film-strips and still photos. In keeping with its terms of reference, the Board's products are both informative and interpretative and are widely distributed, theatrically and non-theatrically. (*See* also Educational and Cultural Functions of the National Film Board, pp. 334-335.)

As a service to government departments, the Board maintains a film preview library of 4,000 prints where films may be screened with a view to purchase or for informational purposes. Some 500 film-strips are catalogued. The Board also maintains libraries of films on specialized subjects such as health, sociology, medicine and industry.

The Board has over 25,000 prints on deposit in more than 300 local libraries across the country. Additions to the libraries are circulated in preview blocks to film councils and circuit users before being deposited in a central library. Approximately 20,000 prints have been made available in libraries abroad, both in posts of the Departments of External Affairs and Trade and Commerce and in universities and other loan agencies. Libraries of films and film-strips are maintained in the Board's offices at New York and Chicago, U.S.A., and at London, England.

The Board's library of approximately 100,000 still photos serves government departments, commercial photographers and newspapers and periodicals in Canada and abroad.

Section 2.—Directory of Sources of Official Information (Federal and Provincial)

To make the best use of the Directory of Sources of Government Official Information, it is necessary that the reader understands the broad differences in function between federal and provincial departments and their separate fields of work.

Certain fields of effort, such as trade and commerce, customs and excise, currency and banking, navigation, transportation, radio, census of population, national defence, etc., are constitutionally federal affairs and, in such fields, the respective Departments at Ottawa are the proper sources with which to communicate. Other fields of effort, such as the administration of lands and natural resources, education, roads and highways, and health and hospitals, are the responsibility of the provinces under the British North America Act, but certain Federal Departments are also concerned with specific aspects of these subjects and, as is the case of the Dominion Bureau of Statistics, in the co-ordination and presentation of the material for Canada as a whole.

As a general guide to the public, it may be pointed out that questions relating to the actual development and administration of resources should be forwarded to the particular provinces concerned. The Federal Government, while not administering the resources within provincial boundaries, co-operates closely with the provinces and is in a position to furnish material for Canada, especially production data, on a national basis, marketing data on international, national and provincial bases, research work and experimental station data on a national basis, and also on a provincial basis from Federal Government stations located within particular provinces. In agriculture, for instance, data on the breeding of live stock and the improvement of strains, on agricultural marketing and on crop yields are cases in

point; in forestry, questions of forest research, forest-fire protection and reforestation offer good examples. Inquiries directed to federal sources for information not of a statistical nature should, as a general rule, be sent to the individual Departments listed in the Directory; in the case of statistical information, inquiries should be addressed to the Dominion Bureau of Statistics, Ottawa.

Under the provisions of the Public Printing and Stationery Act, the Queen's Printer and Controller of Stationery has charge of the sale of all official publications of Parliament and the Government of Canada that are issued for sale, as well as of the free distribution of all public documents and papers to persons and institutions (libraries) entitled by statutory provisions to receive them without payment.

The Queen's Printer and Controller of Stationery issues the *Daily Checklist of Government Publications*, published mainly for administrative convenience. It records all Federal Government publications immediately upon release, for the information of the public service, libraries, etc. All those who are authorized by law or regulation to receive free copies of government publications receive the *Daily Checklist* automatically and without charge. Other persons desiring the service may purchase an annual subscription to the *Daily Checklist*, to be forwarded daily or in weekly batches, as requested.

The Monthly Catalogue of Canadian Government Publications, also issued by the Queen's Printer and Controller of Stationery, is a comprehensive listing of all official publications, public documents and papers, not of a confidential nature, printed or "processed" at government expense.

An *Annual Catalogue* comprising all publications listed in the *Monthly Catalogue* will be issued Jan. 15, 1954. This will be a consolidation by departments of all active titles (older publications still available and not superseded by later editions) issued during 1953 and in previous years. Separate prints of departmental lists of publications included in the *Annual Catalogue* will also be available at the same time.

The Queen's Printer and Controller of Stationery publishes subject catalogues and special bulletins advertising new government publications. The titles of some publications available for free distribution, and obtainable from the issuing federal departments, are listed in the *Daily Checklist* and *Monthly Catalogue*. Lists of publications are in some cases available from Government Departments.

Most provincial government printed publications may be obtained from the Queen's Printer of the province concerned. Inquiries should be addressed to the provincial capital cities:—

Newfoundland	St. John's	Ontario	Toronto
Prince Edward Island	Charlottetown	Manitoba	Winnipeg
Nova Scotia	Halifax	Saskatchewan	Regina
New Brunswick	Fredericton	Alberta	Edmonton
Quebec	Quebec	British Columbia	Victoria

Inquiries about the Yukon and Northwest Territories should be addressed to the Northern Administration and Lands Branch, Department of Resources and Development, Ottawa.

DIRECTORY OF SOURCES OF OFFICIAL INFORMATION

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Trade and Commerce Information Branch Dominion Bureau of Statistics Dept. of Mines and Technical Surveys *Editorial and Information Division* Dept. of National Health and Welfare Information Services Dept. of Resources and Development *Editorial and Information Division* Dept. of External Affairs Information Division (general requests originating in all countries outside Canada) Dept. of Citizenship and Immigration Editorial and Information Division Dept. of Fisheries, Information and Educational Services National Film Board (films, filmstrips, photographs on all subjects) Dept. of Transport *Information Bureau*		For broad general information in regard to particular provinces application should be made to: **N'f'ld.**, Dept. of Provincial Affairs; **P.E.I.**, Tourist and Information Bureau; **N.S.**, Dept. of Trade and Industry; **N.B.**, Dept. of Industry and Development or Dept. of Provincial Secretary-Treasurer or N.B. Travel Bureau; **Que.**, Bureau of Statistics; **Ont.**, Bureau of Statistics and Research or Dept. of Travel and Publicity; **Man.**, Dept. of Industry and Commerce and Dept. of Provincial Secretary; **Sask.**, Bureau of Publications; **Alta.**, Publicity Bureau, Dept. of Economic Affairs; **B.C.**, Bureau of Economics and Statistics.
Dept. of Agriculture Information Service *Experimental Farms Service* (stations and farms throughout Canada) Dept. of Resources and Development (*Yukon and Northwest Territories*) Dept. of Citizenship and Immigration Indian Affairs Branch Dept. of Veterans Affairs (veterans *only*) Dept. of Finance (farm improvement loans) Canadian Farm Loan Board (long-*term mortgage loans*) Central Mortgage and Housing Corporation (long-term mortgage loans) *National Film Board (films, photographs)* Dominion Bureau of Statistics	AGRICULTURE General and Farming	**P.E.I., N.S., N.B., Sask.**:—Depts. of Agriculture **N'f'ld.**:—*Dept. of Mines and Resources* **Que.**:—Dept. of Agriculture, Information and Research Branch Dept. of *Trade and Commerce* Bureau of Statistics **Ont.**:—Dept. of Agriculture, Statistics and Publication Branch **Man.**:—*Dept. of Agriculture and Immigration*, Publications Branch and Extension Service **Alta.**:—Dept. of Agriculture *Dept. of Industries and Labour* Provincial Bureau of Statistics **B.C.**:—Dept. of Agriculture, Dept. of Trade and Industry, Bureau of *Economics* and Statistics Dominion Bureau of Statistics (summaries of provincial data)
National Film Board (films, film-strips and photographs) Dept. of Citizenship and Immigration Indian Affairs Branch *Dept. of Mines and Technical Surveys* Editorial and Information Division Geological Survey of Canada Surveys and Mapping Branch *Geographical Branch* Dept. of Resources and Development Editorial and Information Division Northern Administration Division *Dept. of Transport (Arctic navigation)*	ARCTIC	
Dept. of Mines and Technical Surveys Dominion Astrophysical Observatory, Victoria, B.C. Dominion Observatory, Ottawa, Ont.	ASTRONOMY	
Dept. of Mines and Technical Surveys Geological Survey of Canada, Mines Branch Atomic Energy Control Board (policy, regulations) Atomic Energy of Canada Limited (research studies, sale of radio-isotopes) Eldorado Mining and Refining Limited National Film Board (films)	ATOMIC ENERGY	

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Transport Civil Aviation Division (controls, licences and facilities, such as radio aids and licences) Air Transport Board (licensing of commercial air services and the economic regulation of such air services) Bureau of Transportation Economics Trans-Canada Air Lines Dept. of National Defence Directorate of Public Relations (Air Force) Dept. of National Health and Welfare Civil Aviation Medicine Division Dept. of Defence Production Aircraft Division National Film Board (films and photographs) National Research Council Division of Mechanical Engineering (aeronautical research) Dominion Bureau of Statistics	AVIATION	Ont.:—Dept. of Lands and Forests, Air Service Man.:—Manitoba Government Air Services Sask.:—Saskatchewan Government Airways
Bank of Canada Industrial Development Bank Dept. of Finance Dept. of Insurance (for trust and loan business, administers also the Small Loans Act) Central Mortgage and Housing Corporation Post Office Department, Savings Branch Dominion Bureau of Statistics (summary statistics)	BANKING Trust and Loan Companies	N'f'ld.:—Dept. of Finance Supreme Court, Registry of Deeds P.E.I.:—Dept. of Provincial Secretary Que.:—Dept. of Finance, Insurance Branch Dept. of Trade and Commerce Bureau of Statistics Ont.:—Province of Ontario Savings Office Attorney-General, Dept. of Insurance Sask.:—Registrar of Securities Alta.:—Government of Alberta Treasury Branches B.C.:—Dept. of Finance, Inspector of Trust Companies
Dept. of Justice Superintendent of Bankruptcy Dominion Bureau of Statistics	BANKRUPTCY	
National Library (Public Archives), Ottawa National Library will give information on libraries in various federal departments and branches.	BIBLIOGRAPHY: BOOKS	N'f'ld.:—Dept. of Education Public Libraries Board P.E.I.:—Dept. of Education Superintendent of Libraries and Director of Adult Education N.S.:—Dept. of Education N.B., Man.:—Dept. of Education Provincial Librarian Que.:—Office of Provincial Secretary Provincial Archives Ont.:—Dept. of Education Director of Public Library Service Sask.:—Provincial Librarian, Legislative Building Alta.:—Dept. of Economic Affairs Library Board B.C.:—Dept. of Education Public Library Commission
	BIRTHS See "Vital Statistics"	
Dept. of National Health and Welfare Blindness Control Division Old Age Assistance Division	BLINDNESS ALLOWANCES	Sources same as for "Old Age Assistance" excepting: P.E.I.:—Director of Blind Persons' Allowances B.C.:—Blind Persons Allowance Board

Sources for Federal Data	Subject	Sources for Provincial Data
	BROADCASTING See "Radio"	
Dept. of Public Works Chief Architect's Branch Dept. of Resources and Development Engineering and Water Resources Branch Central Mortgage and Housing Corporation National Research Council. Division of Building Research (materials of construction, building codes, soil and snow mechanics) Dept. of National Health and Welfare Hospital Design Division Dept. of Defence Production Defence Construction (1951) Limited Dominion Bureau of Statistics	BUILDING CONSTRUCTION	N'f'ld.:—Dept. of Public Works P.E.I.:—Dept. of Industry and Natural Resources Ont.:—Dept. of Labour, Factory Inspection Branch Dept. of Planning and Development Community Planning Branch Man., Sask.:—Dept. of Labour Alta.:—Dept. of Industries and Labour Provincial Bureau of Statistics B.C.:—Dept. of Finance, Public Housing Dept. of Labour, Factory Inspection Branch Dept. of Trade and Industry Bureau of Economics and Statistics
Department of Transport Canal Services Dominion Bureau of Statistics	CANALS	
Dept. of Citizenship and Immigration Canadian Citizenship Registration Branch Canadian Citizenship Branch National Film Board (films, filmstrips, photographs)	CITIZENSHIP See also "Population"	
	CIVIL AVIATION See "Aviation"	
Dept. of National Health and Welfare Civil Defence Division	CIVIL DEFENCE	N'f'ld.:—Dept. of Provincial Affairs N.S.:—Chairman, Civil Defence, Province House Ont.:—Chairman, Civil Defence Committee Man.:—Dept. of Attorney-General Sask.:—Director of Civil Defence, Dept. of Social Welfare and Rehabilitation Alta.:—Co-ordinator of Civil Defence, Dept. of Municipal Affairs B.C.:—Dept. of Provincial Secretary
Dept. of Transport Meteorological Division, Toronto	CLIMATE	Que.:—Dept. of Lands and Forests Meteorological Bureau Dept. of Trade and Commerce Bureau of Statistics B.C.:—Dept. of Agriculture

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Mines and Technical Surveys Geological Survey of Canada Mines Branch Dominion Coal Board Dominion Bureau of Statistics National Film Board (films, filmstrips, photographs)	COAL	N.S., Que., Ont.:—Depts. of Mines N.B.:—Dept. of Lands and Mines Man.:—Dept. of Mines and Natural Resources, Mines Branch Sask.:—Dept. of Mineral Resources Alta.:—Dept. of Mines and Minerals B.C.:—Dept. of Lands and Forests Dept. of Mines
Dept. of Justice Director of Investigation and Research Restrictive Trade Practices Commission	COMBINES	
Dept. of Resources and Development Northern Administration and Lands Branch (wireless communication in the Yukon and Northwest Territories) National Parks Branch (telephones in National Parks) Board of Transport Commissioners (regulation of certain telegraph and telephone companies) Dept. of Transport Telecommunication Division—radio communications; aviation radio and marine radio; Government telegraph and telephone services (telegraph and telephone services in remote areas) Canadian Overseas Telecommunication Corporation Canadian Broadcasting Corporation (network broadcasting, television, and international short-wave service) Dominion Bureau of Statistics	COMMUNICATIONS *For 'Post Office' and 'Mail' See "Post Office"*	N'f'ld.:—Dept. of Economic Development P.E.I.:—Tourist and Information Bureau N.B.:—N.B. Travel Bureau Que.:—Public Service Board Transportation Board Ont.:—Municipal Board and Bureau of Statistics and Research Man.:—Manitoba Telephone System Sask.:—Dept. of Telephones Alta.:—Dept. of Railways and Telephones B.C.:—Dept. of Railways R.C.M.P. Provincial Headquarters
Dept. of National Health and Welfare Physical Fitness Division (recreational layouts and facility suggestions) Federal District Commission National Capital Planning Committee, Information Office (general information on the Plan for the National Capital of Canada) National Film Board (films, photographs) Central Mortgage and Housing Corporation Community Planning Association of Canada	COMMUNITY PLANNING	P.E.I.:—Dept. of Industry and Natural Resources N.S., Que., Sask.:—Depts. of Municipal Affairs N.B.:—Dept. of Education, Physical Education and Recreational Branch Ont.:—Dept. of Planning and Development, Community Planning Branch Man.:—Depts. of Municipal Commissioner and Mines and Natural Resources, Surveys Branch Dept. of Health and Public Welfare, Physical Fitness and Recreation Division Alta.:—Dept. of Municipal Affairs, Town and Rural Planning Branch Dept. of Education, Health and Recreation Branch B.C.:—Dept. of Trade and Industry, Bureau of Economics and Statistics Dept. of Municipal Affairs Regional Planning Division *Additional*:—P.E.I., N.S.:—Depts. of Education, Physical Fitness Divisions Ont., B.C.:—Depts. of Education, Community Programs Branches Sask.:—Dept. of Education, Fitness and Recreation Division

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Resources and Development National Parks Branch, Canadian Wildlife Service Northern Administration and Lands Branch Forestry Branch Federal District Commission Dept. of Agriculture Experimental Farms Service Economics Division Prairie Farm Rehabilitation Administration Maritime Marshlands Rehabilitation Administration Dept. of Fisheries Conservation and Development Services National Film Board (films, photographs)	CONSERVATION	**N'f'ld.**:—Dept. of Mines and Resources **P.E.I.**:—Dept. of Industry and Natural Resources **N.S., Alta., B.C.**:—Depts. of Lands and Forests **N.B.**:—Dept. of Lands and Mines **Que.**:—Dept. of Lands and Forests Dept. of Game and Fisheries Dept. of Hydraulic Resources **Ont.**:—Dept. of Lands and Forests Dept. of Planning and Development, Conservation Branch Ontario Agricultural College, Guelph **Man.**:—Dept. of Mines and Natural Resources **Sask.**:—Dept. of Natural Resources Dept. of Agriculture
Privy Council Office Dept. of Secretary of State Dept. of Justice Public Archives	CONSTITUTION	**All Provinces except B.C.**:—Depts. of Attorney General **B.C.**:—Provincial Secretary
Dominion Bureau of Statistics	CONSUMER PRICE INDEX *See also* "Cost of Living"	
Dept. of Defence Production	CONTROLS AND PRIORITIES	
Dept. of Agriculture Economics Division Dept. of Fisheries Market and Economic Services Central Mortgage and Housing Corporation (mortgage lending activities) Dept. of Secretary of State (for incorporation)	CO-OPERATIVES (including Credit Unions)	**N'f'ld.**:—Dept. of Fisheries and Co-operatives **P.E.I.**:—Dept. of Agriculture **N.S.**:—Dept. of Provincial Secretary **N.B.**:—Dept. of Agriculture **Que.**:—Dept. of Agriculture Dept. of Trade and Commerce, Bureau of Statistics **Ont.**:—Dept. of Agriculture Co-operation and Markets Branch **Man.**:—Dept. of Agriculture and Immigration, Co-operative Services Branch **Sask.**:—Dept. of Co-operatives and Co-operative Development **Alta.**:—Dept. of Industries and Labour **B.C.**:—Attorney-General's Dept., Registrar of Companies
Dominion Bureau of Statistics	COST OF LIVING	**N'f'ld.**:—Dept. of Municipal Affairs and Supply **Alta.**:—Dept. of Industries and Labour Provincial Bureau of Statistics **B.C.**:—Dept. of Trade and Industry Bureau of Economics and Statistics

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Resources and Development Northern Administration and Lands Branch National Parks Branch National Museum of Canada Dept. of Citizenship and Immigration Indian Affairs Branch (Indian handicrafts) National Gallery of Canada National Film Board (films, filmstrips, photographs) Dept. of Veterans Affairs (veterans only) Public Archives Dept. of National Health and Welfare Physical Fitness Division (theatre arts and handicrafts)	CREATIVE ARTS AND HANDICRAFTS	N'f'ld.:—Dept. of Education P.E.I.:—Tourist and Information Branch N.S.:—Dept. of Trade and Industry, Handicrafts Division Nova Scotia College of Art N.B.:—Dept. of Industry and Development, Handicraft Division The New Brunswick Museum, Saint John Dept. of Education, Physical Education and Recreation Branch Que.:—Dept. of Agriculture (rural handicrafts) Ont.:—Royal Ontario Museum Dept. of Education Man.:—Dept. of Agriculture and Immigration (handicrafts) Dept. of Health and Public Welfare, Physical Fitness and Recreation Division Sask.:—Dept. of Education, Adult Education Division Fitness and Recreation Division Alta.:—Dept. of Economic Affairs (cultural activities) Dept. of Education, Health and Recreation Branch B.C.:—Provincial Museum (Indian handicrafts) *Additional*:—P.E.I., N.S.:—Depts. of Education, Physical Fitness Divisions Ont., B.C.:—Depts. of Education, Community Programs Branches
Dept. of Justice Clemency Branch The Penitentiary Commission Dept. of National Health and Welfare Research Division National Film Board (films, photographs) Dominion Bureau of Statistics	CRIME AND DELINQUENCY	**All Provinces:**—Depts. of Attorney General *Additional*— N'f'ld., N.S., Alta.:—Depts. of Public Welfare P.E.I., B.C.:—Depts. of Health and Welfare Que.:—Dept. of Social Welfare and Youth Dept. of Trade and Commerce Bureau of Statistics. Ont.:—Dept. of Reform Institutions Man.:—Dept. of Health and Public Welfare Sask.:—Dept. of Social Welfare and Rehabilitation
See pp. 82-86 of this volume for a list of Crown corporations giving in each case the Cabinet Minister through which that particular corporation reports to Parliament.	CROWN CORPORATIONS	For information with regard to individual Crown Corporations apply as follows: N'f'ld.:—Dept. of Economic Development P.E.I.:—Dept. of Industry and Natural Resources Ont.:—Dept. of Provincial Secretary Man.:—Treasury Dept. Sask.:—Government Finance Office B.C.:—Attorney-General's Dept.
Bank of Canada Dept. of Finance Royal Canadian Mint Dominion Bureau of Statistics	CURRENCY	
	CUSTOMS AND EXCISE See "Taxation"	

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Agriculture Animal Husbandry Division Dairy Products Division Bacteriology and Dairy Research Division National Film Board (films, photographs in co-operation with the Dept. of Agriculture) Dominion Bureau of Statistics	DAIRYING	N'f'ld.:—Dept. of Mines and Resources P.E.I., N.S.:—Depts. of Agriculture N.B., Ont., Alta., B.C.:—Depts. of Agriculture, Dairy Branches (also Milk Control Board for Ont. and B.C.) Que.:—Dept. of Agriculture, Dairy Commission Dept. of Trade and Commerce Bureau of Statistics Man.:—Dept. of Agriculture and Immigration, Milk Control Board, Dairy Branch Sask.:—Dept. of Agriculture, Dairy Commission
	DEATHS See "Vital Statistics"	
Dept. of National Defence Director of Public Relations Directorates of Naval Information Public Relations (Army) Public Relations (RCAF) Public Relations (Defence Research Board) Dept. of Defence Production Canadian Commercial Corporation Defence Construction (1951) Limited Canadian Arsenals Limited Dept. of National Health and Welfare Civil Defence Division	DEFENCE See also "Civil Defence"	
Dept. of Defence Production	DEFENCE PRODUCTION	
Bank of Canada Dept. of Trade and Commerce Economics Division Dept. of Labour Economics and Research Branch Legislation Branch Dept. of Mines and Technical Surveys Dept. of Resources and Development Administration Branch Engineering and Water Resources Branch Forestry Branch Northern Administration and Lands Branch (for Eskimos) Dept. of National Health and Welfare Research Division Dept. of Agriculture Economics Division Board of Transport Commissioners Bureau of Transportation Economics Dept. of Fisheries Market and Economic Services Central Mortgage and Housing Corporation Dept. of Defence Production Economics and Statistics Branch Dominion Bureau of Statistics	ECONOMIC AND SOCIAL RESEARCH	N'f'ld.:—Dept. of Economic Development P.E.I.:—Dept. of Industry and Natural Resources N.S.:—Dept. of Trade and Industry, Nova Scotia Research Foundation N.B.:—Dept. of Industry and Development Que.:—Dept. of Trade and Commerce, Economic Research Bureau Ont.:—Bureau of Statistics and Research Man.:—Dept. of Industry and Commerce Executive Council, Economic Advisor Sask.:—Economic Advisory and Planning Board Alta.:—Director of Industrial Development and Economic Research Dept. of Economic Affairs B.C.:—Dept. of Trade and Industry Bureau of Economics and Statistics

Sources for Federal Data	Subject	Sources for Provincial Data
Canadian Broadcasting Corporation (school broadcasts) Dept. of Resources and Development Northern Administration and Lands Branch (N.W.T.) Dept. of National Health and Welfare Dept. of Citizenship and Immigration Canadian Citizenship Branch Indian Affairs Branch Dept. of Veterans Affairs (veterans and children of war dead) Dept. of Labour Canadian Vocational Training Branch Dept. of Fisheries Information and Educational Services National Gallery of Canada Dominion Bureau of Statistics	EDUCATION *See also* "Motion Pictures" *and* "Photographic Material"	**All Provinces:**—Depts. of Education (technical, visual, audio and all other phases of education) *Additional*:—**Que.**:—Dept. of Trade and Commerce, Bureau of Statistics
Chief Electoral Officer, Chief Electoral Office	ELECTIONS	**P.E.I., N.S.**:—Depts. of Provincial Secretary **N.B.**:—Dept. of Provincial Secretary-Treasurer **Que.**:—Chief Returning-Officer **Ont.**:—Provincial Secretary's Dept., Chief Election Officer **Man., B.C.**:—Chief Electoral Officers **Sask., Alta.**:—Clerks of the Executive Councils
Dept. of Resources and Development Engineering and Water Resources Branch Northwest Territories Power Commission National Film Board (films, filmstrips, photographs) Dominion Bureau of Statistics (central electric stations)	ELECTRIC POWER	**N'f'ld.**:—Dept. of Economic Development **P.E.I.**:—Public Utility Commission **N.S., Sask., Alta., B.C.**:—Power Commissions **N.B.**:—New Brunswick Electric Power Commission **Que.**:—Hydro-Electric Commission Dept. of Hydraulic Resources **Ont.**:—The Hydro-Electric Power Commission of Ontario **Man.**:—Manitoba Hydro Electric Board Dept. of Public Utilities *Additional*:—**B.C.**:—Dept. of Lands and Forests
Dept. of Labour National Employment Service Economics and Research Branch Civil Service Commission (opportunities for, and conditions of, employment in the Federal Civil Service) Dominion Bureau of Statistics	EMPLOYMENT	**All Provinces:**—Depts. of Agriculture (farm labour) *Additional:*—**N'f'ld., N.S., Man.**:—Depts. of Labour **Que.**:—Dept. of Labour, Provincial Employment Bureau **Ont.**:—Dept. of Labour Bureau of Statistics and Research **Alta.**:—Dept. of Industries and Labour **B.C.**:—Dept. of Labour Bureau of Economics and Statistics
Dept. of Trade and Commerce Canadian Government Exhibition Commission Dept. of Agriculture Information Service National Film Board (films, photographs) National Gallery of Canada Dept. of Resources and Development Canadian Government Travel Bureau (sportsmen's shows)	EXHIBITIONS	**N'f'ld.**:—Dept. of Economic Development **N.B.**:—Dept. of Agriculture **Que.**:—Dept. of Agriculture Dept. of Trade and Commerce **Ont.**:—Most Ontario Departments organize exhibitions **Man.**:—Dept. of Agriculture and Immigration, Extension Service Dept. of Industry and Commerce **Alta.**:—Dept. of Economic Affairs **B.C.**:—Depts. of Agriculture, Trade and Industry

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Mines and Technical Surveys Explosives Division National Research Council	EXPLOSIVES	B.C.:—Dept. of Mines
Dept. of External Affairs Information Division Press Office	EXTERNAL AFFAIRS	
Dept. of National Health and Welfare Family Allowances Division	FAMILY ALLOWANCES	
Dept. of Agriculture Field Husbandry Division Forage Crops Division Economic Fibre Division Plant Products Division National Film Board (films, photographs) Dominion Bureau of Statistics	FIELD CROPS	N'f'ld.:—Dept. of Mines and Resources P.E.I., N.S., N.B.:—Depts. of Agriculture Que.:—Dept. of Agriculture Dept. of Trade and Commerce Bureau of Statistics Ont.:—Dept. of Agriculture, Crops, Seeds and Weeds Branch Man.:—Dept. of Agriculture and Immigration Sask., Alta., B.C.:—Depts. of Agriculture, *Field Crop Branches*
Dept. of Finance Bank of Canada Dominion Bureau of Statistics	FINANCE *See also* "Taxation"	N'f'ld., B.C.:—Depts. of Finance P.E.I.:—Provincial Treasurer N.S.:—Dept. of Provincial Treasurer N.B.:—Dept. of Provincial Secretary-Treasurer Que.:—Dept. of Finance Dept. of Trade and Commerce Bureau of Statistics Ont.:—*Provincial Treasurer's* Dept. Man., Sask., Alta.:—Provincial Treasury Depts.
Dept. of Insurance Fire Prevention Branch (fire loss statistics) Dept. of Resources and Development *Forestry Branch* Board of Transport Commissioners (forest-fire protection along railway lines) National Film Board (films, photographs, in relation to government prevention and conservation programs) National Research Council Division of Building Research, Fire Research Section	FIRE PREVENTION	**All Provinces:**—Provincial Fire Marshals (for urban and rural fire losses) *Additional:*—N'f'ld.:—Dept. of Mines and Resources N.S., Alta., B.C.:—Depts. of Lands and Forests N.B.:—Dept. of Lands and Mines Que.:—Dept. of Lands and Forests Forest Protection Service Dept. of Public Works, Fire Commissioner Ont.:—Dept. of Lands and Forests, Forest Protection Division Man.:—Dept. of Mines and Natural Resources Dept. of Labour, Fire Commissioner Sask.:—Dept. of Natural Resources Dept. of Labour, Fire Commissioner

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Fisheries Information and Educational Services Fisheries Research Board of Canada National Film Board (films, photographs) Dominion Bureau of Statistics	FISHERIES	N'f'ld.:—Dept. of Fisheries and Co-operatives P.E.I.:—Dept. of Industry and Natural Resources N.S.:—Dept. of Trade and Industry Fisheries Division N.B.:—Dept. of Industry and Development, Fisheries Branch Que.:—Dept. of Game and Fisheries Dept. of Trade and Commerce, Bureau of Statistics Ont.:—Dept. of Lands and Forests Fish and Wildlife Division Man.:—Dept. of Mines and Natural Resources, Game and Fisheries Branch Sask.:—Dept. of Natural Resources, Fisheries Branch Alta.:—Dept. of Lands and Forests, Fish and Game Branch B.C.:—Dept. of Fisheries Provincial Game Commission
	FOOD AND DRUGS *See* "Standards" *and* "Nutrition"	
Bank of Canada	FOREIGN EXCHANGE	
Dept. of Resources and Development Forestry Branch National Film Board (films, filmstrips, photographs) Dept. of Agriculture Forest Biology Division Dominion Bureau of Statistics	FOREST RESOURCES	N'f'ld.:—Dept. of Mines and Resources P.E.I.:—Dept. of Industry and Natural Resources N.S., Que., Ont., Alta., B.C.:—Depts. of Lands and Forests N.B.:—Dept. of Lands and Mines Man.:—Dept. of Mines and Natural Resources, Forestry Branch Sask.:—Dept. of Natural Resources
	FRUIT *See* "Horticulture"	
	FUEL *See* "Coal", "Oil", "Forest Resources"	
Dept. of Agriculture Marketing Service (fur grading) Experimental Farms Service (ranch fur production) National Film Board (photographs) Dominion Bureau of Statistics (general fur products statistics)	FUR FARMING *See also* "Trapping"	N'f'ld.:—Dept. of Mines and Resources P.E.I., N.B., Alta., B.C.:—Depts. of Agriculture N.S., Ont.:—Depts. of Lands and Forests Que.:—Dept. of Agriculture Dept. of Trade and Commerce Bureau of Statistics Man.:—Dept. of Mines and Natural Resources, Game and Fisheries Branch Sask.:—Dept. of Natural Resources

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Mines and Technical Surveys Geographical Branch Canadian Board on Geographical Names Dept. of Agriculture Field Husbandry Division (soil surveys) Public Archives	GEOGRAPHY	N'f'ld.:—Dept. of Mines and Resources N.B.:—Dept. of Lands and Mines Man.:—Dept. of Mines and Natural Resources Sask.:—Dept. of Natural Resources B.C.:—Dept. of Lands and Forests
Dept. of Mines and Technical Surveys Geological Survey of Canada	GEOLOGY	N'f'ld.:—Dept. of Mines and Resources N.S., B.C.:—Depts. of Mines N.B.:—Dept. of Lands and Mines Que.:—Dept. of Mines Geological Surveys Branch Ont.:—Dept. of Mines Geological Branch Man.:—Dept. of Mines and Natural Resources, Mines Branch Sask.:—Dept. of Mineral Resources Alta.:—Dept. of Mines and Minerals
Dept. of Secretary of State (Federal-Provincial channel of communication) Chief Electoral Office (Electoral Act and Voters Lists) Clerk of the Privy Council (appointments, orders in council, statutory orders and regulations) Dept. of Citizenship and Immigration Canadian Citizenship Branch Dept. of Resources and Development (for Yukon and N.W.T.)	GOVERNMENT For 'Senate of Canada', 'House of Commons' and 'Library of Parliament' See "Parliament"	N'f'ld.:—Dept. of Provincial Affairs P.E.I., N.S., Ont., Man., Sask., Alta., B.C.:—Depts. of Provincial Secretary N.B.:—Dept. of Provincial Secretary-Treasurer Que.:—Office of Provincial Secretary
Dept. of National Health and Welfare Health Branch Dept. of Resources and Development (for N.W.T.) Dominion Bureau of Statistics (hospital statistics) National Film Board (films, filmstrips, photographs)	HEALTH For 'Health of Veterans' See "Veterans Affairs"	N'f'ld., Que., Ont.:—Depts. of Health P.E.I.:—Dept. of Health and Welfare N.S., Sask., Alta.:—Depts. of Public Health N.B.:—Dept. of Health and Social Services Man.:—Dept. of Health and Public Welfare B.C.:—Dept. of Health and Welfare (general) Dept. of Provincial Secretary (mental hospitals) British Columbia Hospital Insurance Commission
	HIGHWAYS See "Transportation"	
Public Archives Dept. of Resources and Development National Parks Branch (historic sites and monuments) Dept. of National Defence Directorate of Public Relations (war histories, official war summaries, etc.) Dept. of Citizenship and Immigration Canadian Citizenship Branch Dominion Bureau of Statistics	HISTORY	N'f'ld.:—Legislative Library Gosling Memorial Library N.S.:—Public Archives N.B.:—Legislative Library Que.:—The Archives Ont.:—Legislative Library Bureau of Statistics and Research Provincial Archivist Man.:—Provincial Library and Archives Sask.:—Archives Board Alta.:—Archives, Provincial Library B.C.:—Dept. of Education Provincial Archivist

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Agriculture Marketing Service, Fruit and Vegetable Division Experimental Farms Service, Horticulture Division Dominion Bureau of Statistics	HORTICULTURE	N'f'ld.:—Dept. of Mines and Resources P.E.I.:—Dept. of Agriculture N.S., N.B., Sask., Alta., B.C.:—Depts. of Agriculture, Horticultural Branches Que.:—Dept. of Agriculture, Fruit Branch Ont.:—Dept. of Agriculture, Agriculture and Horticulture Branches Man.:—Dept. of Agriculture and Immigration
	HOUSE OF COMMONS See "Parliament"	
	HOUSING See "Building Construction"	
Dept. of Citizenship and Immigration Immigration Branch District Superintendents of Immigration, Halifax, Montreal, Toronto, Winnipeg and Vancouver Dept. of Labour Special Services Branch Dept. of National Health and Welfare Quarantine, Immigration Medical and Sick Mariners Division National Film Board (films, photographs) Dominion Bureau of Statistics	IMMIGRATION	P.E.I.:—Dept. of Industry and Natural Resources Ont.:—Dept. of Planning and Development Bureau of Statistics and Research Man.:—Dept. of Agriculture and Immigration Sask.:—Dept. of Social Welfare and Rehabilitation Alta.:—Dept. of Economic Affairs B.C.:—Dept. of Trade and Industry
	INCOME TAX See "Taxation"	
	INDUSTRIAL DEVELOPMENT See "Manufacturing"	
Dept. of Insurance (Dominion. British and foreign companies. Federal Civil Service insurance) Dept. of Labour Annuities Branch Dept. of Veterans Affairs Veterans Insurance Branch Dept. of Trade and Commerce Export Credits Insurance Corporation Dominion Bureau of Statistics (summary statistics of all types of insurance)	INSURANCE—LIFE, FIRE, ETC. For 'Unemployment Insurance' See "Labour"	N'f'ld. (for Provincial Companies):—Dept. of Finance P.E.I., N.S., N.B., Man., Sask., Alta., B.C. (for Provincial Companies):—Superintendents of Insurance Que. (for Provincial Companies):—Finance Dept., Insurance Branch Ont. (for Provincial Companies):—Dept. of Insurance

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Mines and Technical Surveys Dept. of Defence Production National Film Board (films, photographs) Dominion Bureau of Statistics	**IRON AND STEEL**	**N'f'ld.:**—Dept. of Mines and Resources **N.S.:**—Dept. of Mines Research Foundation **N.B.:**—Dept. of Lands and Mines **Ont.:**—Dept. of Planning and Development, Trade and Industry Branch Bureau of Statistics and Research **Man.:**—Dept. of Industry and Commerce **B.C.:**—Dept. of Mines Bureau of Economics and Statistics
Dept. of Justice Dominion Bureau of Statistics	**JUSTICE**	**All Provinces:**—Depts. of Attorney General
Dept. of Labour Information and Publicity Branch Annuities Branch Legislation Branch Unemployment Insurance Commission Economics and Research Branch Canada Labour Relations Board Canadian Vocational Training Branch Industrial Relations Branch (conciliation of labour disputes, payment of fair wages on government contracts, promotion of labour-management production committees, fair employment practices) International Labour Organization Branch National Employment Service National Advisory Council on Manpower National Advisory Committee on the Rehabilitation of Disabled Persons Dept. of Secretary of State (registration of trade unions) National Film Board (films, photographs) Dominion Bureau of Statistics	**LABOUR** *See also* "Workmen's Compensation"	**N'f'ld., N.S., N.B., Que., Ont., Man., Sask., B.C.:**—Depts. of Labour **Alta.:**—Dept. of Industries and Labour *Additional:*—**Que., Ont., Alta., B.C.:**—Provincial Bureaus of Statistics
Dept. of Resources and Development Northern Administration and Lands Branch (Yukon and N.W.T.) Dept. of Veterans Affairs Dept. of Citizenship and Immigration Immigration Branch (for land settlement) Dept. of Transport Lands Branch	**LANDS AND LAND SETTLEMENT**	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I.:**—Commissioner of Public Lands **N.S.:**—Dept. of Agriculture, Land Settlement Board **N.B.:**—Dept. of Lands and Mines **Que.:**—Dept. of Lands and Forests Dept. of Colonization **Ont., Alta., B.C.:**—Depts. of Lands and Forests **Man.:**—Dept. of Mines and Natural Resources, Lands Branch **Sask.:**—Dept. of Agriculture *Additional:*—**B.C.:**—Dept. of Agriculture, Land Clearing
Royal Canadian Mounted Police *(Enforces Federal Statutes in all parts of Canada; also carries out, on behalf of Attorneys General and under contract, enforcement of the Criminal Code and Provincial Statutes in all provinces except Quebec and Ontario; is the only law-enforcement body in the Yukon and Northwest Territories and assists in the welfare of Eskimos and Indians in these territories. The Minister in control of the Force is the Minister of Justice.)*	**LAW ENFORCEMENT**	**All Provinces:**—Depts. of the Attorney General

Sources for Federal Data	Subject	Sources for Provincial Data
Clerk of the Senate of Canada Clerk of the House of Commons Dept. of Resources and Development (for Yukon and Northwest Territories)	LEGISLATION *For 'Statutory Orders and Regulations' See "Government"*	**All Provinces except Man. and B.C.:**—Depts. of Attorney General **Man.:**—Legislative Counsel **B.C.:**—Dept. of Provincial Secretary
	LIBRARIES *See "Bibliography: Books"*	
Dept. of Resources and Development Northern Administration and Lands Branch (Yukon and Northwest Territories) Dept. of Secretary of State (administration of Canada Temperance Act) Dominion Bureau of Statistics (statistical report covering Canada)	LIQUOR CONTROL	**N'f'ld.:**—Dept. of Finance **P.E.I.:**—Temperance Commission **N.S., Que., Sask.:**—Liquor Commissions **N.B., Ont., Alta., B.C.:**—Liquor Control Boards **Man.:**—Liquor Control Commission
Dept. of Agriculture Live Stock and Live-stock Products Division (for marketing data) Live-stock and Poultry Division (for breeding programs and testing data) Health of Animals Division (for administration of disease control regulations, meat inspection, etc.) Animal Husbandry Division (for general information) Animal Pathology Division (research in animal diseases) Dept. of Trade and Commerce Agricultural Commodities Branch National Film Board (films, photographs, in relation to Dept. of Agriculture) Dominion Bureau of Statistics	LIVE STOCK	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I., N.B., Ont., Sask., Alta., B.C.:**—Depts. of Agriculture, Live-stock Branches **N.S., Que.:**—Depts. of Agriculture, Animal Husbandry Branches **Man.:**—Dept. of Agriculture and Immigration, Live Stock Branch *Additional:*—**Que., Alta., B.C.:**—Provincial Bureaus of Statistics
Dept. of Resources and Development Forestry Branch National Film Board (films, filmstrips, photographs, in relation to departmental conservation and development programs) Dominion Bureau of Statistics	LUMBERING	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I.:**—Dept. of Industry and Natural Resources **N.S., Que., Ont., Alta.:**—Depts. of Lands and Forests **N.B.:**—Dept. of Lands and Mines **Man.:**—Dept. of Mines and Natural Resources, Forestry Branch **Sask.:**—Dept. of Natural Resources **B.C.:**—Dept of Lands and Forests Dept. of Trade and Industry Bureau of Economics and Statistics
Dept. of Secretary of State (for incorporation of companies and Companies Act) Dept. of Trade and Commerce Industrial Development Division Dept. of Defence Production (for defence items) Bank of Canada Industrial Development Bank National Research Council Canadian Patents and Development Limited (utilization of new scientific processes) National Film Board (films, filmstrips and photographs) National Gallery of Canada (for industrial designs) Dominion Bureau of Statistics	MANUFACTURING *See also "Crown Corporations"*	**N'f'ld.:**—Dept. of Economic Development **P.E.I.:**—Dept. of Industry and Natural Resources **N.S., B.C.:**—Depts. of Trade and Industry **N.B.:**—Dept. of Industry and Development **Que.:**—Dept. of Trade and Commerce, Bureau of Statistics **Ont.:**—Dept. of Planning and Development, Trade and Industry Branch **Man.:**—Dept. of Industry and Commerce **Sask.:**—Economic Advisory and Planning Board **Alta.:**—Dept. of Economic Affairs *Additional:*—**Ont., Alta., B.C.:**—Bureaus of Statistics

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Mines and Technical Surveys Geological Survey of Canada. Surveys and Mapping Branch (geological, topographical and general maps; aeronautical and marine navigation charts) Dept. of Agriculture (soil survey and economic survey maps) Public Archives (maps relating to history and cartography) Dept. of Fisheries Information and Educational Services (fisheries maps) Dept. of Transport (meteorological maps) Dominion Bureau of Statistics (economic and census maps)	MAPS AND CHARTS	N'f'ld.:—Dept. of Mines and Resources P.E.I.:—Dept. of Public Works and Highways N.S.:—Dept. of Mines, Research Foundation N.B.:—Dept. of Lands and Mines Que., Alta., B.C.:—Depts. of Lands and Forests Ont.:—Dept. of Lands and Forests Dept. of Mines Man.:—Dept. of Mines and Natural Resources, Surveys Branch Sask.:—Dept. of Public Works Dept. of Natural Resources
	MARRIAGES See "Vital Statistics"	
Dominion Bureau of Statistics	MERCHANDISING	Man.:—Dept. of Industry and Commerce Alta.:—Dept. of Industries and Labour B.C.:—Dept. of Trade and Industry Bureau of Economics and Statistics
Dept. of Mines and Technical Surveys Mines Branch Geological Survey Dept. of Defence Production Dominion Bureau of Statistics (for production data)	METALS (*other than* Iron *and* Steel)	N'f'ld.:—Dept. of Mines and Resources N.S., Que., Ont., B.C.:—Depts. of Mines N.B.:—Dept. of Lands and Mines Man.:—Dept. of Mines and Natural Resources, Mines Branch Sask.:—Dept. of Mineral Resources Alta.:—Dept. of Mines and Minerals *Additional:*—B.C.:—Bureau of Economics and Statistics
	METEOROLOGY See "Weather"	
Dept. of Mines and Technical Surveys Dept. of Resources and Development (for Yukon and Northwest Territories) Dept. of Defence Production Dominion Bureau of Statistics (for production data)	MINING AND MINERALS	N'f'ld.:—Dept. of Mines and Resources N.S., Que., Ont., B.C.:—Depts. of Mines N.B.:—Dept. of Lands and Mines Man.:—Dept. of Mines and Natural Resources, Mines Branch Sask.:—Dept. of Mineral Resources Alta.:—Dept. of Mines and Minerals
National Film Board (*Produces documentary films, newsreels and short subjects for theatrical, non-theatrical and television distribution: film-strips and photographs for informational, educational and archival purposes and other visual materials devoted to the interpretation of the Canadian scene to audiences both at home and abroad; and maintains a large film preview library for the benefit of government departments and other official bodies.*) Dept. of National Health and Welfare Information Services Division Physical Fitness Division National Gallery of Canada (*Maintains a library of art films.*)	MOTION PICTURES	N.S., Que., Alta. and B.C. produce educational or informational films N'f'ld., P.E.I., N.B., Ont. and Man. buy such films but do not produce them Sask.:—Saskatchewan Film Board Alta.:—Dept. of Economic Affairs, Photographic Branch B.C.:—Dept. of Trade and Industry Photographic Branch *All provinces have Motion Pictures Censorship Boards. Details may be obtained by application to the province concerned: Depts. of Education and Travel, Provincial Censorship Boards and Regional National Film Board Offices.*

Sources for Federal Data	Subject	Sources for Provincial Data
Dominion Bureau of Statistics Public Finance and Transportation Division	MUNICIPAL AFFAIRS	N'f'ld.:—Dept. of Municipal Affairs and Supply P.E.I.:—Dept. of Industry and Natural Resources N.S., N.B., Que., Ont., Sask., Alta., B.C.:—Depts. of Municipal Affairs Man.:—Dept. of Municipal Commissioner
National Gallery of Canada Public Archives (and Canadian War Museum) Dept. of Resources and Development National Parks Branch National Museum of Canada Historic Parks Museums	MUSEUMS	Not including provincial universities in Sask., Alta. and B.C. N'f'ld.:—Dept. of Provincial Affairs N.S.:—Nova Scotia Museum of Fine Arts, Public Archives of Nova Scotia, Provincial Museum of Nova Scotia, Halifax N.B.:—New Brunswick Museum, Saint John Que.:—The Archives, Musée de la Province de Québec, Quebec; Commercial and Industrial Museum of Montreal Ont.:—Royal Ontario Museum (including Archæology, Geology, Mineralogy, Palæontology and Zoology); Ontario Archives, Toronto Man.:—Manitoba Museum, Winnipeg Sask.:—Provincial Museum of Natural History, Regina B.C.:—Provincial Museum of Natural History and Anthropology, Provincial Archives (including Helmcken House), Victoria
Dominion Bureau of Statistics	NATIONAL ACCOUNTS	
Dept. of Citizenship and Immigration Canadian Citizenship Registration Branch	NATURALIZATION *See also* "Population"	
Dept. of Public Works (construction and operation of graving docks), Chief Engineer's Branch (for Marine works construction) Dept. of Transport Marine and Canal Services (aids to marine navigation) Telecommunication Division (radio aids to navigation) National Research Council Division of Radio and Electrical Engineering (applications of radar to navigation) Dept. of Mines and Technical Surveys Hydrographic Service National Harbours Board Canadian Maritime Commission	NAVIGATION	
Dept. of National Health and Welfare Nutrition Division Dept. of Agriculture Dept. of Fisheries Inspection and Consumer Services	NUTRITION	N'f'ld., Que., Ont.:—Depts. of Health P.E.I., B.C.:—Depts. of Health and Welfare N.S., Alta.:—Depts. of Public Health N.B.:—Dept. of Health and Social Services Man.:—Dept. of Health and Public Welfare Sask.:—Dept. of Public Health Nutrition Division

Sources for Federal Data	Subject	Sources for Provincial Data
	OCCUPATIONAL INFORMATION See "Employment"	
Dept. of Resources and Development (for Yukon and Northwest Territories) Dept. of Mines and Technical Surveys Geological Survey of Canada, Mines Branch Dept. of Defence Production National Film Board (films, filmstrips, photographs) Dominion Bureau of Statistics	OIL	N'f'ld.:—Dept. of Mines and Resources N.S., Ont.:—Depts. of Mines N.B.:—Dept. of Lands and Mines Man.:—Dept. of Mines and Natural Resources, Mines Branch Sask.:—Dept. of Mineral Resources Alta.:—Dept. of Mines and Minerals B.C.:—Dept. of Lands and Forests
Dept. of National Health and Welfare Old Age Assistance Division Dept. of Resources and Development Northern Administration and Lands Branch (for N.W.T.)	OLD AGE ASSISTANCE	N'f'ld., N.S., B.C.:—The Old Age Assistance Board P.E.I., Ont.:—Director of Old Age Assistance N.B.:—The Old Age and Blind Assistance Board Que.:—Quebec Social Allowance Commission Man.:—The Old Age Assistance and Blind Persons' Allowance Board Sask.:—*Social Welfare Board* Alta.:—Old Age Pension Board
Dept. of National Health and Welfare Old Age Security Division	OLD AGE SECURITY PENSIONS	
Dept. of Resources and Development National Parks Branch National Film Board (films, photographs) Federal District Commission	PARKS	N.S., Ont., Alta., B.C.:—Depts. of Lands and Forests N.B.:—Dept. of Lands and Mines Que.:—Dept. of Game and Fisheries Man.:—Dept. of Mines and Natural Resources, Forestry Branch Sask.:—Dept. of Provincial Secretary Parks Branch
Senate of Canada House of Commons Library of Parliament	PARLIAMENT	N'f'ld.:—Dept. of Provincial Affairs P.E.I., N.B., Man., Sask., Alta., B.C.:—Legislative Assemblies N.S., Ont.:—Houses of Assembly Que.:—Legislative Council Legislative Assembly
Dept. of Secretary of State Canadian Patents and Development Limited	PATENTS, COPYRIGHTS AND TRADE MARKS	
Dept. of Mines and Technical Surveys The National Air Photographic Library National Film Board Public Archives (historical)	PHOTOGRAPHIC MATERIAL *See also* "Motion Pictures" *and* "Tourist Trade"	*Photographs are available from many provincial government departments in all provinces. See under "Motion Pictures".*

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of National Health and Welfare Physical Fitness Division National Council on Physical Fitness Dept. of Resources and Development National Parks Branch Canadian Government Travel Bureau Northern Administration and Lands Branch (for N.W.T.) National Film Board (films, filmstrips, photographs, in connection with the Dept of National Health and Welfare) Dept. of Citizenship and Immigration Indian Affairs Branch (for Indians)	PHYSICAL FITNESS AND RECREATION *See also* "Health"	P.E.I., N.S., N.B., Ont., Sask., Alta., B.C.:—Depts. of Education Man.:—Dept. of Health and Public Welfare
Dominion Bureau of Statistics (for all census population statistics) Dept. of Resources and Development Northern Administration and Lands Branch (for Eskimos) Dept. of Citizenship and Immigration Canadian Citizenship Branch Citizenship Registration Branch Indian Affairs Branch (for Indians) Public Archives (early census and settlement records)	POPULATION	N'f'ld.:—Dept. of Health Que.:—Dept. of Health, Vital Statistics Branch Dept. of Trade and Commerce Bureau of Statistics Ont.:—Bureau of Statistics and Research Man.:—Dept. of Industry and Commerce Alta.:—Dept. of Industries and Labour, Provincial Statistician B.C.:—Dept. of Health and Welfare Vital Statistics Dept. of Trade and Industry Bureau of Economics and Statistics
Post Office Department Administration Branch (general postal information, postage rates, both domestic and foreign, etc.) Transportation Branch (air, land and railway mail services) Financial Branch (information regarding money orders, savings bank, philatelic services, etc.) Operations Branch (information regarding postal service to the public and hours of service) Personnel Branch (personnel, training, employee services)	POST OFFICE	
Dept. of Agriculture Poultry Division, Experimental Farms Service (for general information) Live Stock and Live-stock Products Division (marketing information) Live-stock and Poultry Division (breeding programs, hatchery regulations, etc.) Animal Pathology Division (for poultry diseases) National Film Board (films and photographs) Dominion Bureau of Statistics	POULTRY	N'f'ld.:—Dept. of Mines and Resources P.E.I., N.S.:—Depts. of Agriculture N.B., Sask., Alta., B.C.:—Depts. of Agriculture, Poultry Branches Que.:—Dept. of Agriculture, Poultry Division Dept. of Trade and Commerce Bureau of Statistics Ont.:—Ontario Agricultural College (Guelph), Poultry Division Man.:—Dept. of Agriculture and Immigration
	POWER See "Electric Power"	
Dept. of Agriculture Marketing Service (prices of farm products) Agricultural Prices Support Board Dept. of Fisheries Fisheries Prices Support Board Dominion Bureau of Statistics	PRICES	B.C.:—Bureau of Economics and Statistics

Sources for Federal Data	Subject	Sources for Provincial Data
	PUBLIC HEALTH See "Health"	
Dominion Bureau of Statistics	PUBLIC UTILITIES See also "Electric Power"	N'f'ld., P.E.I.:—Public Utilities Boards N.S., N.B.:—Boards of Commissioners of Public Utilities B.C.:—Public Utilities Commission Que.:—Public Service Board Ont.:—Ontario Municipal Board Man.:—Dept. of Public Utilities Sask.:—Government Finance Office Alta.:—Board of Public Utilities Commissioners Natural Gas Utilities Board
	PUBLIC WELFARE See "Welfare"	
Dept. of Labour Industrial Relations Branch (fair wages) Dept. of Public Works Dept. of Transport Marine, Canal and Air Services	PUBLIC WORKS	All Provinces except N.S.:—Depts. of Public Works N.S.:—Dept. of Highways and Public Works
Dept. of Transport Telecommunications Division (all matters affecting licences and facilities) Canadian Broadcasting Corporation (national broadcasting in Canada, television in Canada, regulations for control of programs, international shortwave service) National Research Council Division of Radio and Electrical Engineering (radio science and its application to industry) Dominion Bureau of Statistics (national radio)	RADIO	
	RAILWAYS See "Transportation"	
Dept. of Resources and Development Engineering and Water Resources Branch Central Mortgage and Housing Corporation	RECONSTRUCTION	N'f'ld.:—Dept. of Economic Development P.E.I.:—Dept. of Industry and Natural Resources N.S.:—Depts. of Agriculture and Marketing, and Trade and Industry N.B.:—Dept. of Industry and Development Que.:—Depts. of Lands and Forests, Labour, Roads, Trade and Commerce, Social Welfare and Youth Ont.:—Dept. of Planning and Development Man.:—Dept. of Industry and Commerce Sask.:—Dept. of Social Welfare and Rehabilitation, Reconstruction Division B.C.:—Dept. of Trade and Industry Bureau of Economics and Statistics Dept. of Finance, Public Housing

Sources for Federal Data	Subject	Sources for Provincial Data
	RECREATION *See* "Physical Fitness"	
Dept. of Veterans Affairs Dept. of Labour Civilian Rehabilitation Branch Dept. of National Health and Welfare	**REHABILITATION**	
	RESEARCH See "Economic and Social Research" *and* "Scientific Research"	
National Research Council Laboratory Divisions (for investigations in applied biology, building research, pure and applied chemistry, mechanical engineering, including aeronautics and hydraulics, physics, radio and electrical engineering, medical research, etc.) (Scholarships and grants-in-aid for graduate research in the universities) *Inquiries for general research information should be addressed to the Technical Information Service.* Dept. of Mines and Technical Surveys Dept. of Resources and Development Forestry Branch National Parks Branch, Canadian Wildlife Services, National Museum of Canada Dept. of Agriculture Science Service (for research in animal and plant pathology, bacteriology, chemistry, entomology, etc.) Experimental Farms Service (for research in agricultural engineering, crop production, breeding and genetics, plant and animal nutrition, etc.) Dept. of Transport (aviation, radio, meteorology, navigation) Dept. of National Defence Defence Research Board, Directorate of Public Relations Dept. of Fisheries Fisheries Research Board of Canada Dept. of National Health and Welfare	**SCIENTIFIC RESEARCH**	N'f'ld.:—Dept. of Economic Development N.S.:—Nova Scotia Research Foundation Que.:—Dept. of Trade and Commerce, Scientific Research Bureau Ont.:—Research Council of Ontario Ontario Research Foundation Man.:—Various Depts. such as Health and Welfare, Mines and Natural Resources, Agriculture and Immigration, Industry and Commerce Sask.:—Research Council Alta.:—Alberta Research Council B.C.:—Dept. of Trade and Industry Research Council
	SENATE See "Parliament"	

Sources for Federal Data	Subject	Sources for Provincial Data
	SOCIAL SECURITY See "Family Allowances" "Blindness Allowances" "Old Age Assistance" "Old Age Security" "Workmen's Compensation" "Labour" "Unemployment" "Veterans Affairs" "Economic and Social Research"	
	SOCIAL WELFARE See "Welfare"	
Dept. of Trade and Commerce Standards Branch (for inquiries *on electricity and gas inspection*, weights and measures, precious metals marking, commodity standards and national trade mark matters) Dept. of National Health and Welfare (for standards and method of control of quality or potency of food and drugs) Dept. of Agriculture (for inquiries *on standards for meat* and canned food, fruit, honey, maple products, vegetables, dairy products, poultry, etc.) Dept. of Transport (standards in *radio frequencies, standards in* steamship inspection) National Research Council (fundamental physical and electrical standards Canadian Government *Specifications Board* — specifications for purchasing) Dept. of Fisheries Inspection and Consumer Services (standards of fish products)	STANDARDS	
	STEAMSHIPS See "Transportation"	

Sources for Federal Data	Subject	Sources for Provincial Data
	SUCCESSION DUTIES See "Taxation"	
Dept. of National Revenue Taxation Division (Income Tax and Succession Duties statistics and information) Customs and Excise Division (Customs, Excise and Sales Tax statistics and information) Dept. of Finance (Budget papers reviewing taxation policy, changes in rates, revenue forecasts) Dept. of Mines and Technical Surveys (*re* Emergency Gold Mining Assistance Act)	TAXATION	N'f'ld., Que.:—Depts. of Finance P.E.I.:—Provincial Treasurer N.S.:—Dept. of Provincial Secretary N.B.:—Dept. of Provincial Secretary-Treasurer Ont.:—Provincial Treasurer's Dept. Man., Sask., Alta.:—Provincial Treasury Depts. B.C.:—Dept. of Finance, Surveyor of Taxes *Additional:* — Alta.: — Provincial Secretary
	TELEGRAPHS AND TELEPHONES See "Communications"	
Canadian Broadcasting Corporation	TELEVISION	
Dept. of Mines and Technical Surveys Surveys and Mapping Branch	TOPOGRAPHY	N'f'ld.:—Dept. of Mines and Resources N.S.:—Dept. of Mines, Nova Scotia Research Foundation N.B.:—Dept. of Lands and Mines Que.:—Dept. of Lands and Forests Dept. of Trade and Commerce Cartography Service Ont.:—Dept of Lands and Forests, Surveys Branch Man.:—Dept. of Mines and Natural Resources Sask.:—Dept. of Natural Resources Alta., B.C.:—Depts. of Lands and Forests
Dept. of Resources and Development National Parks Branch Canadian Government Travel Bureau Dept. of Trade and Commerce Canadian Government Exhibition Commission (displays) National Film Board (films, photographs) Dominion Bureau of Statistics	TOURIST TRADE	N'f'ld.:—Dept. of Economic Development P.E.I.:—Tourist and Information Branch N.S.:—Dept. of Public Health, Publicity Bureau N.B.:—New Brunswick Travel Bureau Que.:—Provincial Tourist Bureau Ont.:—Dept. of Travel and Publicity Man.:—Dept. of Industry and Commerce Sask.:—Bureau of Publications, Tourist Branch Alta.:—Dept. of Economic Affairs, Alberta Travel Bureau B.C.:—Dept. of Trade and Industry, Government Travel Bureau

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Trade and Commerce Trade Commissioner Service Commodities Branch (for exports, imports, transportation, etc.) Agriculture and Fisheries Branch Economics Division Industrial Development Division Information Branch International Trade Relations Branch Canadian Government Exhibition Commission Export Credits Insurance Corporation Standards Branch (weights and measures) International Economic and Technical Co-operation Division (Colombo Plan) Dept. of Resources and Development Canadian Government Travel Bureau Dept. of Secretary of State (for Companies Act and incorporation of companies and of boards of trade) National Film Board (films, filmstrips, photographs, for exhibition publicity purposes) Dominion Bureau of Statistics	TRADE	For incorporation of companies under provincial law, address Provincial Secretaries except B.C. where Attorney-General's Department is the authority. N'f'ld.:—Dept. of Economic Development P.E.I.:—Dept. of Industry and Natural Resources N.S., B.C.:—Depts. of Trade and Industry N.B.:—Dept. of Industry and Development Que.:—Dept. of Trade and Commerce Ont.:—Dept. of Planning and Development, Trade and Industry Branch Man.:—Dept. of Industry and Commerce Sask.:—Dept. of Co-operatives and Co-operative Development Trade Services Division Alta.:—Dept. of Industries and Labour
Dept. of Resources and Development National Parks Branch (for highways in National Parks) Engineering and Water Resources Branch Trans-Canada Highway Division Engineering and Architectural Division Board of Transport Commissioners (regulations *re* construction and operation of railways; construction and protection of highway crossings; rates of railways, express companies and certain inland water carriers; rates with respect to communications, international bridges and tunnels; issuing of licences to certain inland water carriers; regulations *re* construction of oil and gas pipe lines; statistics pertaining to transportation) Air Transport Board (regulation of commercial air services) Dept. of Transport (railways, civil aviation, marine services, steamship inspection, canals, etc.) Canadian Maritime Commission National Harbours Board Trans-Canada Air Lines Dept. of Defence Production Northern Transportation Company Limited Dept. of National Health and Welfare Civil Aviation Medicine Division National Film Board (films, filmstrips, photographs) Dominion Bureau of Statistics (statistics of transportation, including highways, motor-vehicles)	TRANSPORTATION	N'f'ld.:—Dept. of Public Works P.E.I.:—Dept. of Public Works and Highways N.S.:—Dept. of Highways and Public Works N.B.:—Dept. of Public Works Highway Branch Que.:—Dept. of Roads, Transportation Board Ont.:—Dept. of Highways, Ontario Northland Transportation Commission Man.:—Dept. of Public Works Highways Branch Dept. of Mines and Natural Resources Dept. of Public Utilities Dept. of Industry and Commerce Sask.:—Dept. of Highways and Transportation Saskatchewan Transportation Company Alta.:—Dept. of Railways and Telephones Dept. of Highways, Highway Traffic Board B.C.:—Dept. of Railways Public Utility Commission Dept. of Public Works Bureau of Economics and Statistics

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Resources and Development Northern Administration and Lands Branch (Yukon and Northwest Territories) National Parks Branch Dept. of Citizenship and Immigration Indian Affairs Branch National Film Board (films, photographs) Dominion Bureau of Statistics (for general trapping statistics)	**TRAPPING** *See also* "Fur Farming"	N'f'ld.:—Dept. of Mines and Resources P.E.I.:—Dept. of Industry and Natural Resources N.S., Ont., Alta.:—Depts. of Lands and Forests N.B.:—Dept. of Lands and Mines Que.:—Dept. of Game and Fish Man.:—Dept. of Mines and Natural Resources Sask.:—Dept. of Natural Resources B.C.:—Attorney - General's Dept. Provincial Game Commissioner
	TRUST AND LOAN COMPANIES See "Banking"	
Dept. of Labour Economics and Research Branch Unemployment Insurance Commission Dominion Bureau of Statistics	**UNEMPLOYMENT**	N'f'ld.:—Dept. of Labour Ont.:—Dept. of Public Welfare Bureau of Statistics and Research B.C.:—Bureau of Economics and Statistics
Dept. of Veterans Affairs (general information, rehabilitation, veterans' welfare, training, treatment, land settlement, gratuities, re-establishment credit, education of children of war dead, veterans' insurance, business and professional loans, records of service, war graves and medals) Canadian Pension Commission (The Pension Act) War Veterans Allowance Board (The War Veterans' Allowance Act) Dept. of Labour (unemployment insurance and war veteran allowances, vocational training) Dept. of Finance (veterans business and professional loans) National Film Board (films, photographs) Dept. of Citizenship and Immigration Indian Affairs Branch (for Indian veterans)	**VETERANS AFFAIRS**	P.E.I.:—Provincial Secretary N.S.:—Dept. of Public Welfare N.B.:—Dept. of Health and Social Services Que.:—Dept. of Social Welfare and Youth Ont.:—Dept. of Public Welfare, Soldiers Aid Commission Sask.:—Dept. of Social Welfare and Rehabilitation Rehabilitation Division Alta.:—Veterans Welfare Advisory Commission B.C.:—Dept. of Provincial Secretary
Dominion Bureau of Statistics Dept. of Resources and Development Northern Administration and Lands Branch (for Yukon and Northwest Territories) Public Archives (early census records)	**VITAL STATISTICS**	N'f'ld., B.C.:—Depts. of Health P.E.I.:—Registrar of Births, Deaths and Marriages N.S., Sask., Alta.:—Depts. of Public Health Registrars General N.B.:—Dept. of Health and Social Service Que.:—Dept. of Health Vital Statistics Branch Ont.:—Dept. of Municipal Affairs Vital Statistics Branch Man.:—Dept. of Health and Public Welfare
Dept. of Labour Industrial Relations Branch (fair wages) Economics and Research Branch Legislation Branch Dominion Bureau of Statistics	**WAGES (including Working Conditions)**	All Provinces except Alta.:—Depts. of Labour Alta.:—Dept. of Industries and Labour *Additional:*—B.C.:—Dept. of Trade and Industry, Bureau of Economics and Statistics

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Resources and Development Engineering and Water Resources Branch Dept. of Fisheries (where fishery resources are affected) Dept. of Agriculture Prairie Farm Rehabilitation Administration	WATER RESOURCES	N'f'ld.:—Dept. of Mines and Resources N.S.:—Nova Scotia Power Commission N.B.:—Dept. of Lands and Mines Que.:—Dept. of Hydraulic Resources Ont.:—Depts. of Planning and Development; Lands and Forests Man.:—Dept. of Mines and Natural Resources, Water Resources Branch Sask., Alta.:—Depts. of Agriculture B.C.:—Dept. of Lands and Forests
Dept. of Transport Meteorological Division, Toronto	WEATHER	
Dept. of National Health and Welfare Welfare Branch, Research Division Dept. of Labour Unemployment Insurance Commission Annuities Branch National Advisory Committee on the Rehabilitation of Disabled Persons Dept. of Resources and Development Northern Administration and Lands Branch (for Eskimos) Dept. of Citizenship and Immigration Indian Affairs Branch (for Indians) National Film Board (films, photographs)	WELFARE For 'Welfare of Veterans' *See* "Veterans Affairs"	N'f'ld., N.S., Ont., Alta.:—Depts. of Public Welfare P.E.I., B.C.:—Depts. of Health and Welfare N.B.:—Dept. of Health and Social Services Que.:—Dept. of Social Welfare and Youth Man.:—Dept. of Health and Public Welfare Sask.:—Dept. of Social Welfare and Rehabilitation Yukon:—Yukon Territorial Council, Dawson N.W.T.:—Northwest Territories Council, Ottawa.
Dept. of Resources and Development National Parks Branch Canadian Wildlife Service National Museum of Canada National Film Board (films, photographs)	WILDLIFE	N'f'ld.:—Dept. of Mines and Resources P.E.I.:—Dept. of Industry and Natural Resources N.S., Ont., Alta.:—Depts. of Lands and Forests N.B.:—Dept. of Lands and Mines Que.:—Dept. of Game and Fish Man.:—Dept. of Mines and Natural Resources Sask.:—Dept. of Natural Resources B.C.:—Attorney General's Dept. Provincial Game Commissioner
Dept. of Labour Government Employees' Compensation Branch Merchant Seamen Compensation Board	WORKMEN'S COMPENSATION	Provincial Workmen's Compensation Boards at: N'f'ld.:—St. John's P.E.I.:—Charlottetown N.S.:—Halifax; N.B.:—Saint John Ont.:—Toronto; Man.:—Winnipeg Sask.:—Regina; Alta.:—Edmonton B.C.:—Vancouver Que.:—Workmen's Compensation Commission

PART II.—SPECIAL MATERIAL PUBLISHED IN FORMER EDITIONS OF THE CANADA YEAR BOOK

It is not possible to include in any single edition of the Year Book all articles and descriptive text of previous editions. Therefore, the following list has been compiled as an index to such miscellaneous material and special articles as are not repeated in the present edition. This list links up the 1954 Year Book with its predecessors in respect of matters that have not been subject to wide change. Those Sections of Chapters, such as "Population", which are automatically revived when later Census material is made available and to which adequate references are made in the text, are not listed unless they are in the nature of special contributions. The latest published article on each subject is shown, except when an earlier article includes material not repeated in the later one. When an article covers more than one subject it is listed under each appropriate heading.

The articles marked with an asterisk (*) are available in reprint form from the Dominion Statistician at the price quoted.

Subject and Article	Contributor	Edition	Page
Agriculture—			
The Development of Agriculture in Canada	J. H. GRISDALE, D.Sc.A.	1924	186–191
Prairie Farm Rehabilitation Program	WILLIAM DICKSON.	1938	223–230
Historical Background of Canadian Agriculture	G. S. H. BARTON, C.M.G., B.S.A., D.Sc.A.	1939	187–190
The War and Canadian Agriculture	—	1945	188–191
Agricultural Marketing Legislation, 1939	—	1940	181–185
Canadian Agriculture during the War and Post-War Periods	G. S. H. BARTON, C.M.G., B.S.A., D.Sc.A.	1946	200–211
The 1946-47 National Agricultural Program and Policy	—	1947	324–328
*Irrigation in Western Canada (10 cts.)	W. J. JACOBSON. J. E. LANE.	1947	375–382
*The Canadian Wheat Board, 1939–46 (15 cts.)	C. B. DAVIDSON. T. W. GRINDLEY. W. G. MALAHER. C. V. PARKER.	1947	778–813
The Major Soil Zones and Regions of Canada	P. C. STOBBE.	1951	352–356
Agricultural Irrigation and Land Conservation	—	1951	367–379
Grain Trade—Marketing Problems and Policies, 1949–52	—	1952–53	865–869
Art, Literature and the Press—			
Art in Canada	—	1924	886–888
The Development of the Fine Arts in Canada	NEWTON MACTAVISH, M.A., D. Litt.	1931	995–1009
A Bibliography of Canadian History	GUSTAVE LANCTOT, LL.M., D.Litt., LL.D., K.C., F.R.S.C.	1939	36–40
The Development of the Press in Canada	A. E. MILLWARD, B.A., B. Com.	1939	737–773

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Art, Literature and the Press—concluded			
*The Democratic Functioning of the Press (10 cts.)	Senator, the Hon. W. A. Buchanan.	1945	744–748
Royal Commission on National Development in the Arts, Letters and Sciences	—	1951	315–316
Report of the Royal Commission on National Development in the Arts, Letters and Sciences	—	1952–53	342–345
Banking and Finance—			
Life Insurance—A Historical Sketch	A. D. Watson.	1925	860–864
Banking Legislation	—	1931	891–896
The Bank of Canada and its Relation to the Financial System	—	1937	881–885
Historical Sketch of Currency and Banking	—	1938	900–906
The Royal Canadian Mint	H. E. Ewart.	1940	888–892
The Wartime Functions of a Central Bank	—	1942	803–806
Wartime Control under the Foreign Exchange Control Board	R. H. Tarr.	1941 1942	833–835 830–833
*The Underwriting and Distribution of Investments; their Influence on the Capital Market (10 cts.).	Investment Dealers Association of Canada.	1950	1088–1095
Citizenship—			
Early Naturalization Procedure and Events Leading up to the Canadian Citizenship Act	—	1951	153–155
Climate and Meteorology—			
The Meteorological Service of Canada	Sir Frederick Stupart, F.R.S.C.	1922–23	43–48
Factors which Control Canadian Weather	Sir Frederick Stupart, F.R.S.C.	1925	36–40
Temperature and Precipitation in Northern Canada	A. J. Connor, M.A.	1930	41–56
Droughts in Western Canada	A. J. Connor, M.A.	1933	47–59
*Meteorology Related to the Science of Aviation (10 cts.)	J. Patterson, O.B.E., LL.D.	1943–44	24–29
The Climate of Canada (textual article)	A. J. Connor, M.A.	1948–49	41–62
The Climate of Canada (tabular material)	A. J. Connor, M.A.	1950	33–70
Constitution and Government—			
Provincial and Local Government in—			
Maritime Provinces	Thomas Flint, M.A., LL.B., D.C.L.	1922–23	102–105
Quebec	G. E. Marquis.	1922–23	105–107
Ontario	S. A. Cudmore, B.A. (Tor.), M.A. (Oxon.), F.S.S., F.R. Econ. Soc.	1922–23	107–109
Prairie Provinces	Rev. E. H. Oliver, Ph.D., F.R.S.C.	1922–23	110–113
British Columbia	John Hosie.	1922–23	113–115
Canada and the League of Nations	N. A. Robertson.	1931	115–122
The Government of Canada's Arctic Territory	R. A. Gibson.	1938	92–93

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Constitution and Government—concl.			
The Evolution of the Constitution of Canada down to Confederation	S. A. CUDMORE, B.A. (Tor.), M.A. (Oxon.), F.S.S., F.R. Econ. Soc., and E. H. COLEMAN, K.C., LL.D.	1942	34–40
The British North America Act, 1867	—	1942	40–59
Canada's Present Status in the British Commonwealth of Nations	W. P. J. O'MEARA, K.C., B.A.	1943–44	41–47
Canada's Growth in External Status	F. H. SOWARD.	1945	74–79
*Canada's Part in the Relief and Rehabilitation of the Occupied Territories (10 cts.)	—	1945	79–85
*Constitution and Government (15 cts.)	—	1948–49	78–122
The Constitutional Development of Newfoundland prior to Union with Canada, 1949	—	1950	85–92
*The Organization of the Government of Canada (25 cts.)	—	1950	93–133
Canada and the United Nations, 1948	—	1950	134–139
Federal-Provincial Relations	—	1951	102–105
The Terms of Union of Newfoundland with Canada, 1949	—	1951	56–57
Construction—			
The Effects of Government Wartime Expenditures on the Construction Industry	H. CARL GOLDENBERG.	1941	366–368
Crime and Delinquency—			
A Historical Sketch of Criminal Law and Procedure	R. E. WATTS.	1932	897–899
*The Influence of the Royal Canadian Mounted Police in the Building of Canada (25 cts.)	S. T. WOOD, C.M.G.	1950	317–331
Education—			
Recent Advances in the Field of Education in Canada	J. E. ROBBINS, Ph.D.	1941	876–883
Canada and UNESCO	J. E. ROBBINS, Ph.D.	1947	313–315
Royal Commission on National Development in the Arts, Letters and Sciences	—	1951	315–316
Report of the Royal Commission on National Development in the Arts, Letters and Sciences	—	1952–53	342–345
Fauna and Flora—			
Faunas of Canada	P. A. TAVERNER.	1922–23	32–36
Faunas of Canada	R. M. ANDERSON, Ph.D.	1937	29–52
Flora of Canada	JOHN ADAMS, M.A. (Cantab.)	1938	29–58
The Canadian Government's Reindeer Experiment	—	1943–44	17–23
*Migratory Bird Protection in Canada (10 cts.)	—	1951	38–43
Fisheries—			
The Fish Canning and Curing Industry	D. B. FINN, Ph.D.	1941	225–226
The Effects of the War on Canadian Fisheries	D. B. FINN, Ph.D.	1943–44	277–279
*The Fisheries of Canada (10 cts.)	—	1951	472–479
Game Fish in Canada's National Parks	V. E. F. SOLMAN, Ph.D.	1952–53	34–36

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Forestry—			
A Sketch of the Canadian Lumber Trade	A. R. M. Lower, M.A.	1925	318-323
Physiography, Geology and Climate as Affecting the Forests	—	1934-35	311-313
The War and the Demand for Forest Products	—	1942	249-252
The Influence of the War on the Pulp and Paper Industry	—	1943-44	264-265
The Influence of the War on Forestry	—	1945	266-268
*Noxious Forest Insects and Their Control (10 cts.)	J. J. de Gryse.	1947	389-400
Canada's Forest Economy	—	1951	425-437
*The Pulp and Paper Industry in Canada (10 cts.)	—	1952-53	467-475
Fur Trade—			
Fur Farming	W. M. Ritchie.	1942	254-259
The Development of Marshlands in Relation to Fur Production and the Rehabilitation of Fur-Bearers	D. J. Allan.	1943-44	267-269
Geology—			
Geology in Relation to Agriculture	Wyatt Malcolm, M.A., F.R.S.C.	1921	68-72
Geology and Economic Minerals	George Hanson, Ph.D.	1942	3-14
*Geology (10 cts.)	F. J. Alcock, Ph.D.	1951	14-26
Harbours—			
National Harbours Board	R. O. Campney, K.C.	1940	679-681
Health and Welfare—			
Development of Public Health, Welfare and Social Security in Canada	Dr. G. F. Davidson.	1952-53	224-229
History—			
The Story of Confederation	Sir Joseph Pope, K.C.M.G., C.V.O., I.S.O.	1918	1-13
History of the Great War (1914-18)	E. A. Cruikshank, LL.D., F.R.S.C.	1919	1-65
History of Canada	Arthur Doughty, C.M.G., LL.D.	1922-23	60-80
Select Bibliography of the History of Canada	Adam Shortt, C.M.G., LL.D., F.R.S.C.	1925	53-55
Canada on Vimy Ridge	A. F. Duguid, D.S.O. B.Sc., R.C.A.	1936	50-60
*Historic Sites and Monuments (15 cts.)	W. D. Cromarty.	1938	78-90
The Relationship of the Public Archives to the Historical Records of Canada and a Bibliography of Canadian History	Gustave Lanctot, LL.M., D.Litt., LL.D., K.C., F.R.S.C.	1939	34-40
*The Influence of the Royal Canadian Mounted Police in the Building of Canada (25 cts.)	S. T. Wood, C.M.G.	1950	317-331
Hospitals and Institutions—			
Historical Review of Hospitals and Other Institutions	J. C. Brady, M.A.	1936	1006-1009

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Insurance—			
The Growth and Development of Life Insurance in Canada	A. D. Watson.	1933	937–944
Fire and Casualty Insurance	G. D. Finlayson.	1942	842–846
*Insurance in Canada during the Depression and War Periods (10 cts.)	G. D. Finlayson, C.M.G.	1947	1064–1074
Labour—			
Legislation Respecting Combinations in Restraint of Trade	F. A. McGregor.	1927–28	765–770
The National Employment Commission	—	1938	778–779
Labour Legislation in Canada	Miss M. Mackintosh, M.A.	1938	787–796
Manufactures—			
The Iron and Steel Industry	—	1922–23	452–456
The Influence of the Present War on Manufacturing	—	1943–44	354–362
Changes in Canadian Manufacturing Production from Peace to War, 1939–44	—	1945	364–381
*The Automobile Industry in Canada (10 cts.)	H. McLeod.	1947	521–525
*The Chemical Industries in Canada (10 cts.)	H. McLeod.	1948–49	532–550
*The Pulp and Paper Industry in Canada (10 cts.)	—	1952–53	467–475
Mining—			
Mining—A Historical Sketch	—	1939	309–310
Geology and Economic Minerals	George Hanson, Ph.D.	1942	3–14
Government Control of Non-Ferrous Metals and Fuels in Wartime	—	1942	279–282
The Outlook for the Mineral Industry in Relation to the Economic Development of Canada	G. H. Murray.	1946	302–314
The Coal Deposits and Coal Resources of Canada	B. R. MacKay, B.Sc., Ph.D.	1946	337–347
The Iron-Ore Resources of the Quebec-Labrador Region	W. M. Goodwin.	1950	505–512
Titanium—The Basis of a New Industry in Quebec	W. M. Goodwin.	1950	512–513
*Post-War Expansion in Canada's Mineral Industry (25 cts.)	G. H. Murray and Mrs. M. J. Giroux.	1952–53	476–495
*Canadian Crude Petroleum Situation (10 cts.)	Dr. G. S. Hume.	1952–53	524–527
National Defence—			
The Royal Canadian Naval College	—	1946	1081–1082
The Royal Military College	—	1946	1087–1088
The British Commonwealth Air Training Plan—A Summary of the RCAF's Major Role in the War of 1939–45	—	1946	1090–1099
Natural Resources—			
A Sketch of the Canadian Lumber Trade	A. R. M. Lower, M.A.	1925	318–323
Fur Trade—A Historical Sketch	—	1934–35	343–344
Mining—A Historical Sketch	—	1939	309–310
The Water-Power Resources of Canada and their Utilization	J. T. Johnston.	1940	353–364
Geology and Economic Minerals	George Hanson, Ph.D.	1942	3–14
The Development of Marshlands in Relation to Fur Production and the Rehabilitation of Fur-Bearers	D. J. Allan.	1943–44	267–269
Game Fish in Canada's National Parks	V. E. F. Solman, Ph.D.	1952–53	34–36

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Northwest Territories—			
The Canadian Government's Reindeer Experiment	R. A. GIBSON.	1943–44	17–23
Physiography—			
Physical Geography of the Canadian Eastern Arctic	R. A. GIBSON.	1945	12–19
The Relation of Hydrography to Navigation and the War Record of the Hydrographic and Map Service	F. G. SMITH.	1946	14–18
*Physical Geography of the Canadian Western Arctic (10 cts.)	R. A. GIBSON.	1948–49	9–18
Population—			
Immigration Policy	R. J. C. STEAD.	1931	189–192
Colonization Activities	—	1936	201–202
Occupational Trends in Canada, 1891–1931.	A. H. LENEVEU, M.A.	1939	774–778
Nuptiality and Fertility in Canada	ENID CHARLES, Ph.D.	1942	100–115
Areas and Populations of Countries of the British Empire, 1941	—	1943–44	141–142
The Indians of Canada	—	1951	1125–1132
Power Resources—			
*The Water-Power Resources of Canada and Their Utilization (10 cts.)	J. T. JOHNSTON.	1940	353–364
*Conversion Program to 60-cycle Power in Southern Ontario (10 cts.)	—	1951	540–548
Prices—			
The Nutrition and Family Living Expenditures Investigation	H. F. GREENWAY, M.A.	1940	819–821
The Activities of the Wartime Prices and Trade Board in Controlling Prices, Rents and Supplies	—	1943–44	776–783
Activities of the Wartime Prices and Trade Board, 1945–46	—	1946	851–858
Activities of the Wartime Prices and Trade Board, 1946–47	—	1947	916–924
Activities of the Wartime Prices and Trade Board, 1947–48	—	1948–49	945–950
The Royal Commission on Prices	—	1950	978–982
Activities of the Wartime Prices and Trade Board, 1948–49	—	1950	983–985
Radio—			
A Historical Sketch of Radio Communications	C. P. EDWARDS, O.B.E.	1932	607–610
The Canadian Radio Broadcasting Commission	HECTOR CHARLESWORTH.	1933	731–733
*History and Development of the Canadian Broadcasting Corporation (10 cts.)	DR. AUGUSTIN FRIGON, C.M.G.	1947	737–740
Research—			
Honorary Advisory Council for Scientific Research	—	1920	53–57
Royal Canadian Institute	PROF. MCMURRICH, M.A., Ph.D., LL.D., F.R.S.C.	1924	885
Royal Society of Canada	PROF. MCMURRICH, M.A., Ph.D., LL.D., F.R.S.C.	1924	884
The National Research Council	F. E. LATHE, M.Sc.	1932	867–870

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Research—concluded			
*Scientific and Industrial Research in Canada (15 cts.)	—	1940	979–1012
*Geophysics (10 cts.)	—	1948–49	18–27
*The Contribution to Science made by the Dominion Astrophysical Observatory (10 cts.)	DR. J. A. PEARCE.	1948–49	63–71
Seismology—			
Seismology in Canada	E. A. HODGSON, Ph.D.	1938	27–30
Time and Time Zones—			
Standard Time and Time Zones in Canada	C. C. SMITH.	1934–35	50–53
Times of Sunrise and Sunset	—	1938	66–68
Trade, Domestic—			
Co-operation in Canada	J. E. O'MEARA and LUCIENNE M. LALONDE.	1942	543–546
Wartime Controls Affecting Distribution and Trade, 1945–46	—	1946	574–578
*The Royal Commission on Co-operatives (10 cts.)	W. F. CHOWN.	1946	618–624
*The Canadian Wheat Board, 1939–46 (15 cts.)	C. B. DAVIDSON. T. W. GRINDLEY. W. G. MALAHER. C. V. PARKER.	1947	778–813
Grain Trade—Marketing Problems and Policies, 1949–52	—	1952–53	865–869
Trade, Foreign—			
Advisory Board on Tariff and Taxation	—	1930	1018
Preferential Tariff and Trade Treaties	W. GILCHRIST.	1934–35	520–526
Transportation—			
The Development of Aviation in Canada	J. A. WILSON.	1938	710–712
The Trans-Canada Airway	J. A. WILSON.	1938	713–715
Pre-War Civil Aviation and the Defence Program	J. A. WILSON.	1941	608–612
Wartime Control of Transportation	—	1943–44	567–575
International Air Conferences	—	1945	642–644
The Wartime Role of the Steam Railways of Canada	C. P. EDWARDS, O.B.E.	1945	648–651
Canada's Northern Airfields	A. D. MCLEAN.	1945	705–712
The Trans-Canada Highway	—	1951	631–634
*International Civil Aviation Organization and Canada's Participation Therein (10 cts.)	BRIG. C. S. BOOTH.	1952–53	820–827
United Nations—			
Canada and the United Nations	C. S. A. RITCHIE.	1946	82–86
Canada and the United Nations	—	1948–49	122–125
Canada and the United Nations	—	1950	134–139

PART III.—REGISTER OF OFFICIAL APPOINTMENTS

The following list of official appointments continues, up to Dec. 31, 1953, that published in the 1952-53 Year Book, pp. 1218-1223.

Governor General's Staff.—1953. May 4, The following persons to be Deputies of His Excellency the Governor General: Hon. John R. Cartwright, a Puisne Judge of the Supreme Court of Canada; Hon. Gerald Fauteux, a Puisne Judge of the Supreme Court of Canada; Hon. Charles Holland Locke, a Puisne Judge of the Supreme Court of Canada. Aug. 14, To be Honorary Aides-de-Camp to His Excellency the Governor General, effective Sept. 1, 1953: Superintendent Donald Anthony McKinnon, of the Royal Canadian Mounted Police, St. John's, N'f'ld.; Inspector Jacob Arthur Francis Young, of the Royal Canadian Mounted Police, Truro, N.S.; Inspector William Harrison Graham Nevin, of the Royal Canadian Mounted Police, Charlottetown, P.E.I.; Inspector John Archibald Stevenson, O.B.E., of the Royal Canadian Mounted Police, Moncton, N.B.; Inspector Philip Barry Cox, of the Royal Canadian Mounted Police, Dauphin, Man.; Inspector Henry Christopher Forbes, M.B.E., of the Royal Canadian Mounted Police, Yorkton, Sask.; Inspector Kenneth Shakespeare, of the Royal Canadian Mounted Police, Peace River, Alta.; Inspector Herbert John Spanton, of the Royal Canadian Mounted Police, Kamloops, B.C.; Inspector Weldon Jack Fitzsimmons, of the Royal Canadian Mounted Police, Fort Smith, N.W.T.; Inspector John Richard Steinhauer, of the Royal Canadian Mounted Police, Whitehorse, Y.T. Aug. 18, Lieut.-Col. L. F. Trudeau, D.S.O., O.B.E., C.D.: to be Honorary Aide-de-Camp, effective July 28, 1953. Nov. 10, Acting Commander W. Haggeth, R.C.N.(R) to be Honorary Aide-de-Camp, effective Nov. 10, 1953.

Administrator of the Government of Canada.—1953. June 16, Hon. James Wilfred Estey and Joseph François Delaute: to be Deputies to the Administrator.

Lieutenant-Governors.—1953. July 6, Hon. John Stewart McDiarmid: to be Lieutenant-Governor of the Province of Manitoba, effective Aug. 1, 1953.

Privy Councillors.—1952. Oct. 15, James Sinclair, North Vancouver, B.C., and Ralph Osborne Campney, Vancouver, B.C.: to be Members of the Queen's Privy Council for Canada. **1953.** May 11, Rt. Hon. Thibaudeau Rinfret, Chief Justice of Canada: to be a Member of the Queen's Privy Council for Canada. Hon. Elie Beauregard, Speaker of the Senate: to be a Member of the Queen's Privy Council for Canada. Hon. William Ross Macdonald, Speaker of the House of Commons: to be a Member of the Queen's Privy Council for Canada. George Alexander Drew, Leader of the Opposition: to be a Member of the Queen's Privy Council for Canada. June 12, John Whitney Pickersgill: to be a Member of the Queen's Privy Council for Canada. Sept. 17, Jean Lesage: to be a Member of the Queen's Privy Council for Canada.

Cabinet Ministers.—1953. June 12, Hon. John Whitney Pickersgill, a Member of the Queen's Privy Council for Canada: to be Secretary of State of Canada. Sept. 17, Hon. Jean Lesage, a Member of the Queen's Privy Council for Canada: to be Minister of Resources and Development. Hon. Robert Henry Winters, a Member of the Queen's Privy Council for Canada: to be Minister of Public Works. Oct. 14, Hon. William Ross Macdonald, a Member of the Queen's Privy Council for Canada and Leader of the Government in the Senate: to be a Member of the

Administration. Dec. 23, Hon. Jean Lesage, a Member of the Queen's Privy Council for Canada: to be Minister of Northern Affairs and National Resources, effective Dec. 16, 1953.

Associate Minister of National Defence.—1953. Feb. 12, Hon. Ralph Osborne Campney, a Member of the Queen's Privy Council for Canada: to be Associate Minister of National Defence.

Clerk of the Privy Council and Secretary to the Cabinet.—1953. Sept. 17, Robert Broughton Bryce, Assistant Deputy Minister of Finance: to be Clerk of the Privy Council and Secretary to the Cabinet, effective Jan. 1, 1954.

Senators.—1953. May 19, Mrs. Marianna Beauchamp Jodoin, Montreal, Que.: to be a Member of the Senate and a Senator for the Division of Sorel, Province of Quebec. Mrs. Muriel McQueen Fergusson, Fredericton, N.B.: to be a Member of the Senate and a Senator for the Province of New Brunswick. Hon. J. Walter Jones: to be a Member of the Senate and a Senator for the Province of Prince Edward Island. Allan L. Woodrow, Toronto, Ont.: to be a Member of the Senate and a Senator for the Province of Ontario. June 12, Hon. Frederick Gordon Bradley, Bonavista, N'f'ld.: to be a Member of the Senate and a Senator for the Province of Newfoundland. Hon. William Ross Macdonald, Brantford, Ont.: to be a Member of the Senate and a Senator for the Province of Ontario. Joseph Arthur Bradette, Cochrane, Ont.: to be a Member of the Senate and a Senator for the Province of Ontario. Leonard David Sweezey Tremblay, St. Malachie, Que.: to be a Member of the Senate and a Senator for the Division of Lauzon in the Province of Quebec. Sarto Fournier, Montreal, Que.: to be a Member of the Senate and a Senator for the Division of DeLanaudière in the Province of Quebec. Aurel D. Leger, Grande Digue, N.B.: to be a Member of the Senate and a Senator for the Province of New Brunswick. John J. Connolly, Ottawa, Ont.: to be a Member of the Senate and a Senator for the Province of Ontario. Oct. 14, Hon. Wishart McLea Robertson, a Member of the Senate: to be Speaker of the Senate. Nov. 5, Mrs. Nancy Hodges: to be a Member of the Senate and a Senator for the Province of British Columbia.

Deputy Ministers.—1952. Dec. 31, Kenneth Wiffin Taylor: to be Deputy Minister of Finance and Receiver General. **1953.** Sept. 17, Major-General Hugh A. Young, Deputy Minister of Resources and Development: to be Deputy Minister of Public Works, effective Nov. 15, 1953. Robert Gordon Robertson, Assistant Secretary to the Cabinet: to be Deputy Minister of Resources and Development, effective Nov. 15, 1953. Dec. 29, Robert Gordon Robertson: to be Deputy Minister of Northern Affairs and National Resources, effective Dec. 16, 1953.

Superintendent of Insurance.—1953. Feb. 26, Kenneth Robert MacGregor: to be Superintendent, effective Feb. 8, 1953.

Parliamentary Assistants.—1953. Sept. 9, Paul Emile Côté, M.P.: to be Parliamentary Assistant to the Minister of Labour, effective Aug. 24, 1953. Robert McCubbin, M.P.: to be Parliamentary Assistant to the Minister of Agriculture, effective Aug. 26, 1953. John Watson MacNaught, M.P.: to be Parliamentary Assistant to the Minister of Fisheries, effective Aug. 24, 1953. Joseph Adeodat Blanchette, M.P.: to be Parliamentary Assistant to the Minister of National Defence, effective Aug. 24, 1953. William Moore Benidickson, M.P.: to be Parliamentary Assistant to the Minister of Transport, effective Aug. 31, 1953

J. G. Leopold Langlois, M.P.: to be Parliamentary Assistant to the Postmaster General, effective Sept. 1, 1953. John Horace Dickey, M.P.: to be Parliamentary Assistant to the Minister of Defence Production, effective Aug. 27, 1953. Jean Lesage, M.P.: to be Parliamentary Assistant to the Minister of Finance, effective Aug. 24, 1953. William Gilbert Weir, M.P.: to be Parliamentary Assistant to the Prime Minister, effective Aug. 25, 1953. Oct. 14, William Moore Benidickson, M.P.: to be Parliamentary Assistant to the Minister of Finance. J. G. Leopold Langlois, M.P.: to be Parliamentary Assistant to the Minister of Transport. Colin Emerson Bennett, M.P.: to be Parliamentary Assistant to the Minister of Veterans Affairs. Roch Pinard, M.P.: to be Parliamentary Assistant to the Secretary of State for External Affairs. Dr. Frederick G. Robertson, M.P.: to be Parliamentary Assistant to the Minister of National Health and Welfare. Maurice Bourget, M.P.: to be Parliamentary Assistant to the Minister of Public Works. Thomas Andrew Murray Kirk, M.P.: to be Parliamentary Assistant to the Postmaster General.

Diplomatic Appointments.—1953. Feb. 19, Egerton Herbert Norman: as High Commissioner for Canada in New Zealand. James Joseph Hurley: as High Commissioner for Canada in Ceylon. . Mar. 2, George Robert Cawdron Heasman: as Ambassador Extraordinary and Plenipotentiary of Canada to Indonesia. Mar. 19, William Arthur Irwin: as High Commissioner for Canada in Australia. May 13, Victor Doré, C.M.G.: as Ambassador Extraordinary and Plenipotentiary of Canada to Switzerland, effective Mar. 18, 1953. June 9, Leolyn Dana Wilgress: as Ambassador and Permanent Representative of Canada to the North Atlantic Council and concurrently as Representative of Canada to the Organization for European Economic Co-operation, Paris, France. Arnold Danford Patrick Heeney, Q.C.: as Ambassador Extraordinary and Plenipotentiary of Canada to the United States of America. July 6, Sidney David Pierce, O.B.E.: as Ambassador Extraordinary and Plenipotentiary of Canada to Brazil.

Judicial Appointments

Higher Courts.—**1952.** Aug. 27, Hon. Joseph Thomas Beaubien, a Judge of the Court of Queen's Bench for Manitoba: to be a Judge of the Court of Appeal for Manitoba and ex officio a Judge of the Court of Queen's Bench for Manitoba, effective Oct. 1, 1952. G. E. Tritschler, Q.C.: to be a Judge of the Court of Queen's Bench for Manitoba, effective Oct. 1, 1952. F. G. MacKay, Q.C.: to be a Judge of the Supreme Court of Ontario, and a Member of the Court of Appeal for Ontario, and ex officio a Member of the High Court of Justice for Ontario. Sept. 24, John Wellington Pickup, Q.C.: to be a Judge of the Supreme Court of Ontario and Chief Justice of the Court of Appeal for Ontario, with the style and title of Chief Justice of Ontario, and ex officio a Member of the High Court of Justice for Ontario. Nov. 5, Bryant Harding Balcom: to be Registrar of the Exchequer Court of Canada on its Admiralty side for the Admiralty District of the Province of Nova Scotia. Nov. 13, William B. Scott, Q.C.: to be Associate Chief Justice of the Superior Court of the Province of Quebec and to perform the duties of Chief Justice of the Superior Court in the District of Montreal as it is constituted for the Court of Queen's Bench sitting in appeal. His Honour René Alexandre Danis, Judge of the District Court of the District of Cochrane, in the Province of Ontario: to be a Judge of the Supreme Court of Ontario and a Member of the High Court of Justice for Ontario, and ex officio a Member of the Court of Appeal for Ontario. Nov. 17, Claude Prevost, Q.C.: to be a Puisne Judge of the Superior Court for the District of Montreal in the Province of Quebec. **1953.** Jan. 14, Stuart B. Ralston: to be a Puisne Judge

of the Superior Court for the District of Montreal, in the Province of Quebec, effective Feb. 1, 1953. Mar. 5, Herbert W. Davey: to be a Judge of the Supreme Court of British Columbia. June 12, Hon. Alphonse Fournier, Q.C.: to be a Puisne Judge of the Exchequer Court of Canada. Sept. 9, Robert J. Kent and Clarence Stirling, Clerks of the Supreme Court of Newfoundland: to be Deputy Registrars of the Exchequer Court of Canada. Sept. 29, W. P. Potter, Q.C.: to be Puisne Judge of the Exchequer Court of Canada. Dec. 10, Hon. Edgar Rodolphe Eugene Chevrier, a Judge of the Supreme Court of Ontario and a Member of the High Court of Justice for Ontario: to be a Member of the Court of Appeal for Ontario, and ex officio a Member of the High Court of Justice for Ontario. Eric G. Moorhouse: to be a Judge of the Supreme Court of Ontario and a Member of the High Court of Justice for Ontario, and ex officio a Member of the Court of Appeal for Ontario. Dec. 22, Paul Emile Côté: to be a Puisne Judge of the Superior Court for the District of Montreal in the Province of Quebec, effective Jan. 1, 1954. Dec. 29, Hon. James Boyd McBride, a Puisne Judge of Her Majesty's Supreme Court of Alberta, Trial Division, Edmonton: to be a Stipendiary Magistrate for the Northwest Territories. John P. Abel, District Registrar of the Supreme Court of British Columbia at Victoria: to be Registrar of the Exchequer Court of Canada on its Admiralty side for the Admiralty District of the Province of British Columbia, *vice* Cleeve G. White, resigned. Gaston Desmarais, Q.C.: to be a Puisne Judge of the Superior Court for the District of St. Francis in the Province of Quebec.

County and District Courts.—**1952.** Aug. 27, George Hebert, Q.C.: to be a Judge of the District Court of the Judicial District of Gravelbourg in the Province of Saskatchewan. Sept. 24, A. B. Gerein: to be Judge of the District Court of the Judicial District of Humboldt in the Province of Saskatchewan. Oct. 9, Joseph B. Clearihue: to be a Judge of the County Court of Victoria in the Province of British Columbia, also a Local Judge of the Supreme Court of British Columbia during his tenure of office as a Judge of the said County Court. Nov. 13, J. A. A. Duranceau, Q.C.: to be a Judge of the District Court of the District of Cochrane in the Province of Ontario, and a Local Judge of the High Court of Justice for Ontario during his tenure of office as Judge of the said District Court. Nov. 28, D. C. Thomas: to be a Judge of the District Court for the District of Muskoka in the Province of Ontario, effective Jan. 1, 1953; also a Local Judge of the High Court of Justice for Ontario. **1953.** Feb. 13, Laurence Hudson Phinney, Stipendiary Magistrate in and for the Northwest Territories: to act as Juvenile Court Judge in and for each of the under-mentioned settlements and within a radius of ten miles thereof—Fort Smith, Fort Resolution, Taltson River, Fort Simpson, Aklavik, Arctic Red River, Fort Norman and Fort McPherson. Feb. 26, Andrew Harold Gibson, Police Magistrate for Yukon Territory: to be designated to act as Juvenile Court Judge for the Mining District of Whitehorse, Yukon Territory. John Kerr, a Justice of the Peace for Yukon Territory: to be designated to act as Juvenile Court Judge for the Mining District of Mayo south of the sixty-sixth parallel of north latitude. Mar. 26, Laurence Hudson Phinney, Stipendiary Magistrate in and for the Northwest Territories, Yellowknife: to act as Juvenile Court Judge at each of the following settlements in the Northwest Territories and within a radius of thirty miles therefrom—Bathurst Inlet, Coppermine, Fort Franklin, Fort Good Hope, Fort Providence, Fort Rae, Kittigazuit, Norman Wells, Paulatuk, Port Radium, Reindeer Station, Stanton and Wrigley; also to act as Juvenile Court Judge at Hay River, Northwest Territories, and within

a radius of ten miles therefrom. Mar. 31, John Kerr, a Justice of the Peace for Yukon Territory and Juvenile Court Judge for the Mining District of Mayo, south of the sixty-sixth parallel of north latitude: to act as Juvenile Court Judge for the Mining District of Dawson, Yukon Territory, south of the sixty-sixth parallel of north latitude. May 11, D.S. Charlton, Q.C.: to be a Judge of the County Court for the County of Waterloo in the Province of Ontario, effective June 1, 1953; also a Local Judge of the High Court of Justice for Ontario during his tenure of office as Judge of the said County Court. July 6, William Richard Kent, Q.C.: to be a Judge of the District Court of the Judicial District of Humber-St. George's in the Province of Newfoundland. W. Loyola Whelan, Q.C.: to be a Judge of the District Court of the Judicial District of St. John's East, in the Province of Newfoundland. Sept. 29, A. H. Young, Q.C.: to be a Junior Judge of the County Court for the County of York in the Province of Ontario; also a Local Judge of the High Court of Justice for Ontario during his tenure of office as Junior Judge of the said County Court. H. E. Hazelwood: to be a Junior Judge of the County Court for the County of Welland in the Province of Ontario; also a Local Judge of the High Court of Justice for Ontario during his tenure of office as Junior Judge of the said County Court. Oct. 14, His Honour Nelles Victor Buchanan, a Judge of the District Court of the District of Northern Alberta: to be Chief Judge of the said Court. P. Greschuk: to be a Judge of the District Court of the District of Northern Alberta in the Province of Alberta; also a Local Judge of the Supreme Court of Alberta during his tenure of office as a Judge of the said District Court. Donald A. Ross, Q.C.: to be a Judge of the County Court of the Dauphin Judicial District in the Province of Manitoba; also a Local Judge of the Court of Queen's Bench for Manitoba during his tenure of office as Judge of the County Court for the said Judicial District. Oct. 21, His Honour Farquhar John MacRae, Judge of the County Court of the County of Ontario in the Province of Ontario: to be a Junior Judge of the County Court of the County of York in the said Province. Nov. 4, Peter J. Macdonald: to be a Junior Judge of the County Court of the County of Carleton in the Province of Ontario; also a Local Judge of the High Court of Justice for Ontario. Dec. 10, Pierre Mercier: to be chairman of the Courts of Referees for the Ontario Regional Division and more particularly for the District of Ottawa. Hon. A. H. McKinnon, Q.C.: to be a Judge of the County Court of District No. 6 in the Province of Nova Scotia, effective Jan. 1, 1954.

Government Appointments to Miscellaneous Boards, Commissions, etc.

Alberta-British Columbia Boundary Commission.—**1953.** Nov. 26, Robert Thistlethwaite, D.L.S., B.C., L.S., A.L.S., Surveyor General of Canada: to be Chairman, effective Sept. 24, 1954.

Bank of Canada.—**1953.** Nov. 26, Harold B. Schurman: to be a Director for a term expiring Feb. 28, 1954.

Board of Steamship Inspection.—**1953.** Dec. 10, Alan Cumyn: to be Chairman.

Board of Transport Commissioners for Canada.—**1952.** Oct. 30, Overton A. Matthews: to be a Member, effective Jan. 1, 1953.

Canadian Commercial Corporation.—**1953.** Nov. 26, Douglas Mather Erskine, Director, General Purchasing Branch, Department of Defence Production: to be a Director, *vice* Cyril Robert Snell, resigned. Dec. 10, Finlay Smith Sim, Comptroller-Secretary, Department of Trade and Commerce: to be a Director.

Canadian Farm Loan Board.—**1953.** Jan. 7, Kenneth W. Taylor, Deputy Minister of Finance: to be a Member for a term of five years, effective Jan. 2, 1953. Dec. 17, Arnold Darroch: to be a Member for a term of five years. Dec. 29, Frank L. Chester: to be a Member, also Canadian Farm Loan Commissioner for a period of five years from Jan. 25, 1954.

Canadian Labour Relations Board.—**1952.** Oct. 30, Allan C. Ross: to be a Member, representing employees, effective as of the date hereof, *vice* A. Deschamps, resigned. Aug. 5, C. Rhodes Smith, Q.C.: to be a Member and Chairman, *vice* Hon. Chief Justice G. B. O'Connor, resigned.

Canadian Maritime Commission.—**1952.** Oct. 1, Jean-Claude Lessard, Deputy Minister of Transport: to be again a Member and Chairman, for a term of five years from Nov. 1, 1952.

Canadian Pension Commission.—**1952.** Nov. 13, William Lawrence Coke, O.B.E., C.D., M.D.: to be a Commissioner for a period of ten years commencing Nov. 17, 1952. Dec. 10, The following persons to be *ad hoc* Members for a further period of one year from Feb. 1, 1953: John Murray Foreman, D.F.C., Norman Loris Pickersgill, V.R.D. **1953.** Joseph René Painchaud: to be again a Member for a further period of ten years from June 17, 1953. Howard Lorne Conn, M.C.: to be a Commissioner and Deputy Chairman from Apr. 1, 1953, to June 30, 1953; also an *ad hoc* Commissioner from July 1, 1953, to Dec. 31, 1953. June 12, Laurence Wilmott Brown, M.D., C.M., Department of Veterans Affairs, Ottawa, Ont.: to be an *ad hoc* Commissioner, effective July 1, 1953.

Canadian Wheat Board.—**1953.** Nov. 4, Walter Earle Robertson: to be a Commissioner, effective Nov. 1, 1953.

Court Martial Appeal Board.—**1952.** Oct. 30, The following persons to be additional Members: His Honour Judge Alan Gordon McDougall, Leonard W. Brockington, Q.C., LL.D., Brigadier Melville B. Gordon, Q.C., George Addy.

Defence Research Board.—**1953.** Mar. 26, Robert Dickson Harkness, Harold Duncan Smith and Robert Charles Wallace: to be Members, effective from Apr. 1, 1953, to Mar. 31, 1956.

Dominion Council of Health.—**1952.** Oct. 23, The following persons to be Members for a further term of three years: Dr Robert D. Defries, Director, School of Hygiene, University of Toronto, Toronto, effective July 1, 1952; C. E. Gillmore, effective Sept. 1, 1952; Madame Louis Berger, effective Oct. 1, 1952.

Federal District Commission.—**1952.** Nov. 5, Major-General Howard Kennedy: to be a Member and Chairman thereof, for a period of five years, *vice* Duncan Kenneth MacTavish, Q.C., resigned.

Fisheries Prices Support Board.—**1953.** Feb. 6, Francis Millerd: to be a Member, *vice* Col. J. W. Nicholls, resigned. May 11, Ian S. McArthur: to be Chairman, effective May 1, 1953.

Grain Commission.—**1953.** Dec. 18, Walter Spence Frazer: to be Assistant Grain Commissioner for the Province of Manitoba, effective Jan. 15, 1954.

Historic Sites and Monuments Board of Canada.—**1953.** May 18, The following persons to be Members: for a period of five years, Prof. Fred Landon, M.A., LL.D., D.Litt., F.R.S.C., who is hereby designated as Chairman, representing the Province

of Ontario, Prof. D. C. Harvey, M.A., LL.D., F.R.S.C., representing the Province of Nova Scotia, Prof. W. N. Sage, M.A., Ph.D., F.R.S.C., F.R.Hist.S., representing the Province of British Columbia, C. E. A. Jeffery, M.B.E., representing the Province of Newfoundland; for a period of three years, Prof. A. G. Bailey, M.A., Ph.D., F.R.S.C., representing the Province of New Brunswick, Campbell Innes, M.A., representing the Province of Saskatchewan, Rev. A. d'Eschambault, D.S.T., D.J.C., representing the Province of Manitoba; for a period of one year, Hon. Thane A. Campbell, M.A., LL.D., representing the Province of Prince Edward Island, Hon. A. Fabre-Surveyer, LL.M., B.C.L., LL.D., F.R.S.C., representing the Province of Quebec, Prof. H. M. Long, M.A., F.R.S.C., representing the Province of Alberta.

International Commission for the Northwest Atlantic Fisheries.—**1953.** Dec. 29, The following persons to be Commissioners for a term of two years, effective Mar. 8, 1953: Stewart Bates, Deputy Minister of Fisheries, Ottawa, Ont.; J. Howard MacKichan, General Manager, United Maritime Fishermen Limited, Halifax, N.S.; Louis S. Bradbury, Chairman, Newfoundland Fisheries Board, St. John's, N'f'ld.

International North Pacific Fisheries Commission for Canada.—**1953.** June 24, The following persons to be Members for a period of two years, effective July 1, 1953: Stewart Bates, Deputy Minister of Fisheries, Ottawa; John Murdock Buchanan, President, British Columbia Packers Limited; Roger Thompson Hager, Vice-President, The Canadian Fishing Company Limited; James Cameron, Fisherman.

International Pacific Halibut Commission.—**1953.** July 6, The following persons to be the Canadian Members for a term of two years: George R. Clark, Assistant Deputy Minister of Fisheries, Ottawa; Richard Nelson, President, Nelson Brothers Fisheries Ltd., Vancouver, B.C.; Harold Helland, Prince Rupert, B.C.

Medical Council of Canada.—**1952.** Dec. 17, The following persons to be Members for a further term of four years, commencing Nov. 7, 1952: Dr. D. A. Carmichael, Dr. E. A. McCusker, Dr. P. A. McLennan.

National Film Board.—**1952.** Nov. 13, Dr. Leon Lortie: to be a Member for a period of three years commencing Nov. 14, 1952. **1953.** May 18, Dr. Albert William Trueman: to be Government Film Commissioner for a period of five years from July 1, 1953.

National Gallery of Canada.—**1953.** Mar. 19, Charles Percy Fell, a Member of the Board of Trustees: to be Chairman of the said Board of Trustees, *vice* Harry S. Southam, resigned.

National Library.—**1952.** Dec. 22, Dr. W. Kaye Lamb, Dominion Archivist: to be National Librarian, effective Jan. 1, 1953; Raymond Tanghe: to be Assistant National Librarian, effective June 1, 1953. The following persons to be Members of the Advisory Council, to advise and assist the National Librarian in connection with the organization and development of the National Library: for a period of four years, Miss Isabel Cummings, H. Newell, Canon Stanley Walker; for a period of three years, Miss Elizabeth Dafoe, Rev. A. M. Morisset, Hon. Thane A. Campbell; for a period of two years, Abbé Arthur Maheux, Edgar S. Robinson, W. Stewart Wallace; for a period of one year, Paul Houde, Mrs. Frank Conroy, Alfred G. Bailey.

National Research Council.—**1953.** Apr. 9, The following persons to be Members for a period of three years, expiring Mar. 31, 1956: C. W. Argue, C.B.E., Dean of Science and Professor of Biology, University of New Brunswick, Fredericton, N.B.; A. G. McCalla, Dean of Agriculture, University of Alberta, Edmonton, Alta.; G. M. Shrum, O.B.E., Professor and Head of the Department of Physics, University of British Columbia, Vancouver, B.C.; R. F. Farquharson, M.B.E., Head of the Department of Medicine, The Sir John and Lady Eaton Professor of Medicine, University of Toronto, Toronto, Ont.; E. G. D. Murray, O.B.E., Head of the Department of Bacteriology and Immunology, Faculty of Medicine, McGill University, Montreal, Que.; David L. Thompson, Head of the Department of Organic and Biological Chemistry, McGill University, Montreal, Que.

Newfoundland Fisheries Board.—**1952.** Oct. 23, Louis S. Bradbury, Director of Newfoundland Fisheries, Department of Fisheries: to be a Member and Chairman, effective from noon of Oct. 10, 1952; also the said Louis S. Bradbury to perform in the Province of Newfoundland the duties of Chief Supervisor of Fisheries.

North Atlantic Council.—**1953.** June 9, Leolyn Dana Wilgress: as Ambassador and Permanent Representative of Canada to the North Atlantic Council, and concurrently as Representative of Canada to the Organization for European Economic Co-operation, Paris, France.

Northwest Territories.—**1953.** Nov. 19, Robert Gordon Robertson, Deputy Minister of Resources and Development: to be Commissioner of the Northwest Territories, effective Nov. 15, 1953. Jean Boucher, Assistant to the Deputy Minister of Citizenship and Immigration: to be a Member of the Council of the Northwest Territories.

Northwest Territories Power Commission.—**1952.** Oct. 15, George E. Lowe: to be a Member. **1953.** Nov. 19, Robert Gordon Robertson, Deputy Minister of Resources and Development: to be Commissioner and Chairman, effective Nov. 15, 1953.

Organization for European Economic Co-operation.—**1953.** June 9, Leolyn Dana Wilgress: as Ambassador and Permanent Representative of Canada to the North Atlantic Council, and concurrently as Representative of Canada to the Organization for European Economic Co-operation, Paris, France.

Restrictive Trade Practices Commission.—**1952.** Aug. 27, C. Rhodes Smith, Q.C.: to be Chairman, effective Nov. 1, 1952. Guy Favreau and A. S. Whiteley: to be Members, effective Nov. 1, 1952. Thomas D. MacDonald, Q.C : to be Director of Investigation and Research.

St. Lawrence River Joint Board of Engineers.—**1953.** Nov. 10, The following persons to be representatives of Canada: Hon. Lionel Chevrier, Q.C., Minister of Transport, Ottawa, to be Chairman of the Canadian Section; R. A. C. Henry, Consulting Engineer. Alternates: Brig. Maurice Archer, Vice-Chairman of the National Harbours Board, M.V. Sauer, Consulting Engineer.

Toronto Harbour Commissioners.—**1952.** Dec. 17, Frederick Douglas Tolchard: to be a Commissioner for a term of three years, effective Nov. 15, 1952.

Trans-Canada Air Lines.—**1953.** July 6, Frank MacKenzie Ross: to be a Director.

Under-Secretary of State for External Affairs.—**1953.** June 9, Humphrey Hume Wrong: to be Under-Secretary of State for External Affairs, effective Aug. 1, 1953.

Unemployment Insurance Advisory Committee.—**1952.** Oct. 1, H. Shoobridge: to be a Member for the balance of the term of T. H. Cooper, which term expires June 18, 1957.

Vocational Training Advisory Council.—**1953.** Feb. 19, The following persons to be Members for a period of three years from Dec. 1, 1952: Gustave Poisson, Deputy Minister, Dept. of Youth and Social Welfare, Province of Quebec, Quebec, Que.; Mrs. Allan Turner Bone, President, The National Council of Women of Canada, Montreal, Que.; Miss Yolande Valois, Vice-President, Canadian and Catholic Confederation of Labour, Sorel, Que.; W. Elliott Wilson, Deputy Minister of Labour, Province of Manitoba, Winnipeg, Man.; C. B. C. Scott, General Personnel Manager, Massey-Harris Co. Ltd., Toronto, Ont. Mar. 5, T. H. Robinson, Manager, Industrial Relations Department, Canadian International Paper Co., Montreal, Que.: to be a Member, for the period ending Dec. 1, 1955. Nov. 19, H. C. Campbell, Deputy Minister of Education for British Columbia: to be a Member from Nov. 10, 1953, to Nov. 30, 1954.

Yukon Territory.—**1952.** Nov. 5, Wilfrid George Brown: to be Commissioner, effective Dec. 15, 1952.

Miscellaneous.—**1952.** Oct. 9, A. H. Ketcheson and Herbert McCabe: to be Commissioners of the Bellville Harbour Commissioners for a term of three years, effective Nov. 1, 1952. Oct. 23, Hon. Thane A. Campbell, Chief Justice of the Supreme Court of Judicature of Prince Edward Island: to be a Commissioner (to be called the Chief War Claims Commissioner) to inquire into and report upon claims made by Canadians arising out of World War II. Nov. 13, William Lionel Hicklin, Director of Investigations, Customs and Excise: to be a Commissioner under Part II of the Inquiries Act. **1953.** Jan. 14, Hon. Thane A. Campbell, Chief War Claims Commissioner, authorizes and deputes His Honour Camille Wilfred Arthur Marion to inquire into such war claims made by Canadians arising out of World War II, as shall be referred to him by the Chief War Claims Commissioner. Jan. 16, Henry Dolomount, Dr. Charles L. Legrow and Isaac E. Davis: to be Commissioners of Pilots for the port and harbour of Port aux Basques, N'f'ld. Feb. 26, His Honour Charles St. Clair Trainor, Judge of the County Court for Queens County, P.E.I.: to be a qualified person to report on Canadian War Claims arising out of World War II, as may be referred to him by the Hon. Thane A. Campbell. Apr. 30, Dr. W. G. Henry, of the Division of Applied Chemistry, National Research Council, Dr. W. Michel, of the Division of Physics, National Research Council, and W. R. Inman, of the Mines Branch, Dept. of Mines and Technical Surveys: to be Assay Commissioners. Apr. 30, The following persons to be receivers of wrecks for certain districts established for the purposes of Part VIII of the Canada Shipping Act, 1934: J. H. Decker, Cape Onion, N'f'ld., Samuel Burton, La Scie, N'f'ld., Lewis James Porter, Gander Bay, N'f'ld., Herbert Randell, Williamsport, N'f'ld., Chesley Bertram Evans, Codroy, N'f'ld., and Patrick J. Murphy. July 2, Hon. Thane A. Campbell,

Chief War Claims Commissioner, authorizes and deputes Hon. Henry Ian Bird, Judge of the Court of Appeal for British Columbia; Hon. Fernand Choquette, Judge of the Superior Court of the Province of Quebec; Hon. James D. Hyndman, retired Judge of Appeal of the Supreme Court of Alberta; and James Francis, Q.C., Senior Advisory Counsel, Department of Justice, Ottawa, to inquire into such war claims made by Canadians arising out of World War II, as shall be referred to them by the Chief War Claims Commissioner. July 17, The following persons to be a Commission for the purpose of holding inquiries under Section 19 of the Canadian Citizenship Act: His Honour Wilfred Slater Lane, County and Surrogate Court Judge for Prince Edward County, in the Province of Ontario; Hon. Paul Ste-Marie, a Judge of the Superior Court of the Province of Quebec, of the City of Hull, Que.; Lee A. Kelley, Q.C., Robert Alexander Hoey, and Clarence C. Baker, Q.C., Ottawa, Ont.; and Jacques Bertrand, Q.C., Hull, Que. The said Commission to be presided over by His Honour Judge Wilfred Slater Lane, and in his absence by Hon. Paul Ste-Marie. Sept. 9, The under-mentioned officers of the Department of Justice to be Commissioners to administer oaths and to take and receive affidavits, declarations and affirmations: Paul Fontaine, Q.C., Assistant Deputy Minister; Elmer A. Driedger, Q.C., Parliamentary Counsel; Allan J. MacLeod and Jean Desrochers, Senior Advisory Counsel; Keith E. Eaton, Luc A. Couture, H. Peterson, John T. Gray, S. Samuels, Miss M. E. Ritchie, G. V. LaForest, P. M. Ollivier and P. G. Carrier, Advisory Counsel. Nov. 10, The following persons to be receivers of wrecks for the following districts: Henry Genge for the district of St. Barbe to West Point, N'f'ld., Wilbert Farwell for the district of Port Saunders to St. Barbe, N'f'ld., Fred Guinchard for the district of Port Saunders to Parsons Pond, N'f'ld., Augustus Olford for the district of Salvage to Cottels Island, N'f'ld.

PART IV.—FEDERAL LEGISLATION, 1952-53

This classified list of federal legislation has been compiled from the Statutes. Naturally, in summarizing material of this kind it is not always easy to convey the full implication of the legislation. The reader who is interested in any specific Act is, therefore, referred to the Statutes of Canada at the given volume and chapter.

Legislation of the Seventh Session of the Twenty-First Parliament, Nov. 20, 1952, to May 14, 1953

Subject, Chapter and Date of Assent	Synopsis
1-2 Eliz. II	
Agriculture—	
26 May 14	*An Act to amend the Canadian Wheat Board Act, 1935*, extends until Aug. 1, 1957, certain vital sections of the Act that would otherwise expire at the end of the current crop year.
36 May 14	*An Act to amend the Farm Improvement Loans Act, 1944*, provides for the closing out on Mar. 31, 1953, instead of Feb. 28, 1954, the three-year pool of loans guaranteed by the Government under the Act and provides for a new three-year pool commencing Apr. 1, 1953. The maximum amount of bank loans made in the new period that will be guaranteed under the Act will be $300,000,000.
46 May 14	*An Act to amend the Prairie Farm Assistance Act, 1939*, provides that certain designated Crown lands in Manitoba and Saskatchewan be made eligible with respect to the assistance provided under the Act.

Legislation of the Seventh Session of the Twenty-First Parliament, Nov. 20, 1952, to May 14, 1953—continued

Subject, Chapter and Date of Assent	Synopsis
Constitution and Government—	
8 Feb. 11	*An Act to amend the Representation Act, 1952*, changes the name of Swift Current constituency to Swift Current-Maple Creek.
9 Feb. 11	*An Act respecting the Royal Style and Titles* expresses the assent of the Parliament of Canada to an exercise of the Royal Prerogative to establish the Royal Style and Titles for Canada as part of a general establishment of the Royal Titles in countries of the Commonwealth. Effect of the Bill is to designate Queen Elizabeth II as "Queen of Canada".
33 May 11	*An Act to amend the Emergency Powers Act* provides for the continuation of the Act for a further period of one year, i.e., from May 31, 1953, to May 31, 1954.
53 May 14	*The Yukon Act* replaces former legislation providing for the government of the Yukon Territory; it provides for the appointment of a Commissioner and the election of a Council, defines the legislative powers of the Commissioner in Council, provides for the administration of justice, the beneficial use of certain lands, etc.
Finance—	
11 Mar. 31	*Appropriation Act, No. 1, 1953*, grants certain sums of money to be paid out of the Consolidated Revenue Fund for defraying stated expenses of the public service for the year ending Mar. 31, 1954.
12 Mar. 31	*Appropriation Act, No. 2, 1953*, grants the payment of $77,680,383 out of the Consolidated Revenue Fund for defraying stated expenses of the public service for the year ending Mar. 31, 1953.
31 May 14	*An Act to amend the Customs Tariff*, implements Budget resolutions relating to the Customs Tariff.
34 May 14	*An Act to amend the Excise Act, 1934*, amends the schedule to the Excise Act respecting excise duty and customs duty on cigarettes.
35 May 14	*An Act to amend the Excise Tax Act* gives effect to Budget resolutions.
40 May 14	*An Act to amend the Income Tax Act* gives effect to Budget resolutions.
47 May 14	*The Public Service Superannuation Act* revises the Civil Service superannuation legislation.
54 May 14	*Appropriation Act, No. 3, 1953*, grants certain sums of money to be paid out of the Consolidated Revenue Fund for defraying stated expenses of the public service for the year ending Mar. 31, 1954.
Fisheries—	
15 Mar. 31	*The Coastal Fisheries Protection Act* revises completely the Customs and Fisheries Protection Act enacted in 1868 and brings the legislation into line with present-day conditions and practice.
37 May 14	*An Act to amend the Fisheries Research Board Act* increases the membership of the Board from 15 to 19 and provides for the appointment of a permanent chairman.
43 May 14	*The Northern Pacific Halibut Fishery Convention Act* ratifies the Convention between Canada and the United States for the preservation of the halibut fishery of the Northern Pacific Ocean and Bering Sea, signed Mar. 2, 1953, replacing the 1937 Convention, and provides the necessary legislation to implement the new Convention.
44 May 14	*The North Pacific Fisheries Convention Act* approves and confirms the International Convention for the High Seas Fisheries of the North Pacific Ocean, signed by Canada, the United States and Japan in Tokyo on May 9, 1953, and provides legislation for carrying out Canada's obligation under the Convention.
Justice—	
2 Feb. 11	*An Act to amend the Canada Evidence Act* permits an affidavit with respect to the photographic copy of a document to be sworn before a commissioner for oaths.
4 Feb. 11	*An Act to amend the Judges Act, 1946*, authorizes payment of salary to an additional judge of the Supreme Court of British Columbia.

Legislation of the Seventh Session of the Twenty-First Parliament, Nov. 20, 1952, to May 14, 1953—continued

Subject, Chapter and Date of Assent	Synopsis
Justice—concluded	
7 Feb. 11	*An Act to amend the Prisons and Reformatories Act* revises the Act with respect to the imprisonment of young male offenders in the Young Offenders Unit of Oakalla Prison Farm, B.C., and the transfer of such offenders from that Unit or New Haven to the common gaol or among these institutions as deemed expedient.
29 May 14	*An Act to amend the Criminal Code* continues the provision that, until other arrangements are made, the penitentiary operated by the Province of Newfoundland will continue to be the place of confinement for persons who, in that Province, are sentenced to a term of under two years.
30 May 14	*The Crown Liability Act* makes the Crown liable for damages in respect to wrongdoing by servants of the Crown.
Labour—	
16 Mar. 31	*An Act to amend the Merchant Seamen Compensation Act* provides for an upward revision in the scale of benefits payable under the Act.
19 May 14	*The Canada Fair Employment Practices Act* is designed to prevent discrimination in regard to employment and membership in trade unions by reason of race, national origin, colour or religion.
51 May 14	*An Act to amend the Unemployment Insurance Act, 1940*, provides for the payment of unemployment insurance benefit to insured persons who, while otherwise unemployed and entitled to benefit, become incapacitated for work by reason of illness or injury.
National Defence and Veterans Affairs—	
6 Feb. 11	*An Act to amend the National Defence Act* provides for the appointment of an Associate Minister of National Defence.
24 May 14	*The Canadian Forces Act, 1953*, makes certain amendments concerning the Armed Forces to the National Defence Act, the Defence Services Pension Act, and the Canada Elections Act.
27 May 14	*The Children of War Dead (Education Assistance) Act* provides assistance for the higher education of children of certain deceased members of the Armed Forces and of other persons.
52 May 14	*An Act to amend the Veterans Benefit Act, 1951*, extends until the last day of the first session of Parliament 1954 the date of the expiration of the Act.
Trade and Commerce—	
3 Feb. 11	*An Act to amend the Companies' Creditors Arrangement Act, 1953*, limits the application of the Act to companies that have outstanding issues of bonds or other evidence of indebtedness issued under a trust deed running in favour of a trustee.
5 Feb. 11	*An Act to amend the Loan Companies Act* allows companies to which the Act applies to invest in bonds issued by the International Bank for Reconstruction and Development.
10 Feb. 11	*An Act to amend the Trust Companies Act* allows companies to which the Act applies to invest in bonds issued by the International Bank for Reconstruction and Development.
28 May 14	*The Co-operative Credit Associations Act* provides for the organization, specifies the powers and provides for the supervision of central co-operative credit associations that may be incorporated by Parliament.
49 May 14	*The Trade Marks Act* relates to trade marks and unfair competition and revises and consolidates the law in that respect.
Transportation and Communications—	
1 Feb. 11	*An Act respecting the appointment of Auditors for National Railways* appoints independent auditors for 1953 to make a continuous audit of the national railway accounts.
13 Mar. 31	*An Act to amend the Canadian Overseas Telecommunication Corporation Act* permits the Corporation to accumulate a surplus to be used for capital development and expansion purposes, provide a surplus for contingencies, etc.

Legislation of the Seventh Session of the Twenty-First Parliament, Nov. 20, 1952, to May 14, 1953—concluded

Subject, Chapter and Date of Assent	Synopsis
Transportation and Communications—concl.	
14 Mar. 31	*An Act to amend the Canadian Vessel Construction Assistance Act* permits ship-owners to include an aggregate amount of certain deductions permitted (reserves for expenses to be incurred in connection with special surveys required under the Shipping Act) in computing income for the taxation year in which the survey is completed, or in which the vessel is sold, lost or destroyed as the case may be, or where circumstances are such that the survey will not likely be completed.
17 Mar. 31	*An Act respecting the Saint John Bridge and Railway Extension Company* provides that, upon repayment of a loan to the Government, the title to the above properties shall pass to the Canadian Pacific Railway Company.
20 May 14	*An Act to amend the Canada Shipping Act, 1934*, makes certain technical changes found necessary because of the advance of science in relation to the operation of ships.
22 May 14	*An Act to amend the Canadian Broadcasting Act, 1936*, implements the Budget announcement with respect to the transfer to the Canadian Broadcasting Corporation of the revenue derived under the Excise Tax Act on radio and television sets and equipment.
25 May 14	*The Canadian National Railways Financing and Guarantee Act, 1953*, authorizes the provision of money for certain capital expenditures of the C.N.R. during the year 1953, and authorizes the guarantee of certain securities to be issued by the company.
45 May 14	*An Act to amend the Post Office Act* authorizes the Postmaster General to increase amounts payable under contracts for conveying mail.
48 May 14	*An Act to amend the Radio Act, 1938*, implements the Budget announcement respecting the elimination of the licence fee for private radio receiving stations.
50 May 14	*An Act to amend the Trans-Canada Air Lines Act, 1937*, provides for the enlargement of the Board of Directors, increases the powers of the Corporation and adjusts the capital structure of the Corporation in such a way as to conform to normal commercial practice. Under the provisions of this Act, Trans-Canada Air Lines (Atlantic) Limited ceased to exist.
Miscellaneous—	
18 Mar. 31	*An Act to amend the Statistics Act* makes certain changes regarding the secrecy section of the Act, items to be covered by the census of population and agriculture, preparation of reports on shipping on inland waterways, and collection of criminal statistics.
21 May 14	*The Canada Water Conservation Assistance Act* provides for federal contributions up to 37·5 p.c. of the cost of major water conservation projects, the remaining portion to be borne by the provincial government concerned or jointly by the provincial government and local government affected.
23 May 14	*An Act to amend the Canadian Citizenship Act*, among other changes, co-ordinates the Canadian Citizenship Act in some respects with the Immigration Act in order that the two may be administered without conflict by the same officials.
32 May 14	*An Act to amend the Emergency Gold Mining Assistance Act* provides greater assistance to the gold-mining industry in meeting its special difficulties.
38 May 14	*The Food and Drugs Act* revises and consolidates legislation concerning food, drugs, cosmetics and therapeutic devices.
39 May 14	*The Historic Sites and Monuments Act* places the Historic Sites and Monuments Board of Canada on a statutory basis; the composition, powers and duties of the Board are laid down.
41 May 14	*An Act to amend the Indian Act* makes the real and personal property of an Indian subject to attachment, levy, seizure, distress or execution.
42 May 14	*An Act to amend the National Housing Act, 1944*, increases appropriation for home ownership loans from $300,000,000 to $500,000,000; increases appropriation for rental housing loans from $150,000,000 to $250,000,000; and makes certain changes in the slum clearance provisions of the Act.

PART V.—CANADIAN CHRONOLOGY, 1867-1953

Events in the General Chronology from 1497 to 1866 are given in the 1951 Year Book, pp. 46-49. References regarding federal or provincial elections or changes in legislatures or ministries are not included in the following chronology since such information is given in Chapter II on Constitution and Government and in Appendices I and II.

1867. Mar. 29, Royal Assent given to the British North America Act. July 1, The Act came into force; Union of the Province of Canada, Nova Scotia and New Brunswick as the Dominion of Canada; Upper and Lower Canada made separate provinces named Ontario and Quebec; Viscount Monck, first Governor General; Sir John A. Macdonald, Prime Minister. Nov. 6, Meeting of the first Dominion Parliament.

1868. July 31, The Rupert's Land Act authorizing the acquisition by Canada of the Northwest Territories.

1869. First negotiations for union of Newfoundland with Canada end in failure. June 22, Act providing for the government of the Northwest Territories. Nov. 19, Deed of surrender to the Crown of the Hudson's Bay Company's territorial rights in the Northwest. Outbreak of the Red River Rebellion under Riel.

1870. May 12, Act to establish the Province of Manitoba. July 15, Northwest Territories transferred to Canada and Manitoba admitted into Confederation. Aug. 24, End of Red River Rebellion.

1871. Apr. 2, First Dominion Census: population 3,689,257. Apr. 14, Act establishing uniform currency in Canada. May 8, Treaty of Washington signed. July 20, British Columbia entered Confederation. The Canadian Government undertook to begin construction of a transcontinental railway within two years and to complete it within ten years.

1872. June 14, Canadian Pacific Railway general charter passed by the Canadian Parliament authorizing construction of a transcontinental line by a private company.

1873. May 23, Act establishing the North West Mounted Police (RCMP). July 1, Prince Edward Island entered Confederation.

1874. May 26, The Dominion Elections Act. Population of Newfoundland and Labrador, 161,374.

1875. Apr. 8, The Northwest Territories Act establishing a Lieutenant-Governor and a Northwest Territories Council. April-May, Work on the Canadian Pacific Railway as a Government line begun at Fort William.

1876. June 1, Opening of the Royal Military College, Kingston. June 5, First sitting of the Supreme Court of Canada. July 3, Opening of the Intercolonial Railway from Quebec to Halifax.

1877. October, First wheat exported from Manitoba to the United Kingdom.

1878. July 1, Canada joined the International Postal Union.

1879. May 15, Adoption of a protective tariff ("The National Policy").

1880. May 6, First meeting and exhibition of the Royal Canadian Academy of Arts. May 11, Sir A. T. Galt appointed first Canadian High Commissioner at London. Sept.1, All British possessions in North America and adjacent islands (except Newfoundland and its dependencies) annexed to Canada by Imperial Order in Council of July 31. Oct. 21, Signing of contract with the present Canadian Pacific Railway Company for the completion of the Canadian Pacific Railway.

1881. Apr. 4, Second Dominion Census: population 4,324,810. May 2, First sod turned for Canadian Pacific Railway as a company line.

1882. May 8, Provisional Districts of Assiniboia, Saskatchewan, Athabasca and Alberta formed. May 25, First meeting of the Royal Society of Canada. Aug. 23, Regina established as seat of government of the Northwest Territories.

1884. Aug. 11, Settlement of the boundary of Ontario and Manitoba.

1885. Mar. 26 - May 16, Riel's second rebellion in the Northwest. Apr. 24, Engagement At Fish Creek. May 2, Engagement at Cut Knife. May 12, Taking of Batoche. May 16, Surrender of Riel. July 20, The Electoral Franchise Act. Nov. 7, Last spike of Canadian Pacific Railway main line driven at Craigellachie, B.C. Nov. 16, Execution of Riel.

1886. June 13, Vancouver destroyed by fire. June 28, First through train of the Canadian Pacific Railway left Montreal for Port Moody. July 31, Census of Manitoba: population 108,640.

1887. Interprovincial Conference at Quebec. Apr. 4, First Colonial Conference at London. Apr. 16, Welland Canal opened for navigation.

1890. Mar. 31, The Manitoba School Act abolishing separate schools.

1891. Apr. 5, Third Dominion Census: population 4,833,239. June 6, Death of Sir John A. Macdonald.

1892. Feb. 29, Washington Treaty, providing for arbitration of the Bering Sea Seal Fisheries question. July 22, Boundary Convention between Canada and United States. Fire destroyed the greater part of St. John's, Newfoundland; $20,000,000 damage.

1894. June 28, Second Colonial Conference at Ottawa.

1895. Sept. 10, Opening of new Sault Ste. Marie Canal. Second confederation talks of Canada and Newfoundland fail.

1896. August, Gold discovered in the Klondyke. Railroad completed across Newfoundland from St. John's to Port aux Basques.

1897. June 22, Diamond Jubilee of Queen Victoria. July, Third Colonial Conference at London. Dec. 17, Award of Bering Sea Arbitration Court.

1898. June 13, The Yukon District established as a separate Territory. Aug. 1, British Preferential Tariff came into force. Aug. 23, Meeting at Quebec of the Joint High Commission between Canada and the United States. Dec. 25, Imperial penny (2-cent) postage introduced.

1899. Oct. 11, Outbreak of the South African War. Oct. 29, First Canadian Contingent left Quebec for South Africa.

1900. Feb. 27, Battle of Paardeberg. Apr. 26, Great fire at Ottawa and Hull.

1901. Jan. 22, Death of Queen Victoria and accession of King Edward VII. Apr. 1, Fourth Dominion Census: population 5,371,315. Sept. 16 - Oct. 21, Visit to Canada of the Duke and Duchess of Cornwall and York. Dec. 12, First transatlantic wireless signal received by Marconi at St. John's, Newfoundland. Population of Newfoundland and Labrador, 220,984.

1902. May 31, Peace signed at Vereeniging ending the South African War. June 30, Fourth Colonial Conference at London. December, First message sent by wireless from Canada to the United Kingdom via Cape Breton, N.S.

1903. Jan. 24, Signing of the Alaskan Boundary Convention. Oct. 20, Award of the Alaskan Boundary Commission.

1904. Feb. 1, Dominion Railway Commission established. Apr. 19, Great fire at Toronto. Oct. 8, Incorporation of Edmonton. An Anglo - French Convention settled the question of shore rights for French fishermen. France surrendered these rights in return for cash indemnities and territorial concessions in Africa.

1905. Sept. 1, Creation of the Provinces of Alberta and Saskatchewan.

1906. Roald Amundsen, in the schooner *Gjoa*, arrived at Nome, Alaska, the first completed traverse of the North - West Passage. June 24, First separate census of the three Prairie Provinces: population 808,646. Oct. 8, Interprovincial Conference at Ottawa.

1907. Apr. 15-May 14, Fifth Colonial Conference at London. Oct. 17, Transatlantic wireless opened for public service. Dec. 6, First recorded passenger flight in Canada of a heavier - than - air machine (Dr. Graham Bell's tetrahedral kite, *Cygnet*).

1908. Jan. 2, Establishment at Ottawa of a branch of the Royal Mint. July 20-31, Quebec tercentenary celebrations. Visit of George, Prince of Wales, to Quebec.

1909. Jan. 11, Signing of International Boundary Waters Convention between Canada and United States. Feb. 23, First flight in British Empire of a heavier - than - air machine under its own power piloted by a British subject (McCurdy's *Silver Dart* at Braddock's Bay, N.S.).

1910. May 6, Death of King Edward VII. Accession of King George V. Sept. 7, North Atlantic Coast Fisheries Arbitration Award of The Hague Tribunal defining United States fishing rights. Trade agreements made with Germany, Belgium, Holland and Italy. Oct. 11, Inauguration at Berlin (now Kitchener) of Ontario Hydro-Electric Power Commission's transmission system.

1911. May 23 - June 20, Imperial Conference at London. June 1, Fifth Dominion Census: population 7,206,643. Population of Newfoundland and Labrador, 242,619.

1912. Mar. 29 - Apr. 9, First Canada-West Indies Trade Conference held at Ottawa. Appointment of Dominions Royal Commission. May 15, Boundaries Extension Act settling boundaries of Quebec, Ontario and Manitoba.

1914. Aug. 4, War with Germany; Aug. 12, with Austria - Hungary; Nov. 5, with Turkey. Aug. 18-22, Special war session of Canadian Parliament. Oct. 16, First Canadian Contingent of over 33,000 troops landed at Plymouth, England.

1915. February, First Canadian Contingent landed in France and proceeded to Flanders.

1916. Jan. 12, Number of Canadian troops increased to 500,000. Feb. 3, Destruction by fire of the Houses of Parliament at Ottawa. June 1, Census of Prairie Provinces: population 1,698,137. Sept. 1, Corner-stone of new Houses of Parliament laid by Duke of Connaught.

1917. Feb. 12 - May 15, Imperial Conference. Mar. 20 - May 2, Meetings at London of Imperial War Cabinet. Mar. 21-Apr. 27, Imperial War Conference. Sept. 20, Parliamentary franchise in Federal elections extended to women. Dec. 6, Serious explosion at Halifax, N.S.

1918. June-July, Imperial War Conference held at London. Sept. 30, Bulgaria surrendered and signed armistice. Oct. 31, Turkey surrendered and signed armistice. Nov. 4, Austria - Hungary surrendered and signed armistice. Nov. 11, Capture of Mons. Germany surrendered. Armistice signed.

1919. Feb. 17, Death of Sir Wilfrid Laurier. June 28, Signing at Versailles of Peace Treaty and Protocol. Aug. 22, Formal opening of Quebec Bridge by Edward, Prince of Wales. Sept 1, The Prince of Wales laid foundation stone of Peace Tower, Parliament Buildings, Ottawa. Dec. 20, Organization of Canadian National Railways.

1920. Jan. 10, Ratification of the Treaty of Versailles. May 31 - June 18, Trade Conference at Ottawa between Canadian and West Indian Governments. July 16, Ratification of the Treaty of St. Germain-en-Laye. Aug. 9, Ratification of the Treaty of Neuilly-sur-Seine. Nov. 15, First meeting of League of Nations Assembly began at Geneva, Switzerland.

1921. May 10, Preferential tariff arrangement with British West Indies became effective. June 1, Sixth Dominion Census: population 8,787,949. June 20-Aug. 5, Imperial Conference. Nov. 11, Opening of Conference on Limitation of Armament at Washington. Population of Newfoundland and Labrador, 263,033.

1922. Feb. 1, Arms Conference at Washington approved five-power treaty limiting capital ships and disapproving unrestricted submarine warfare and use of poison gas. Apr. 10, General Economic Conference at Genoa, Italy. July 13, Conference between Canada and the United States *re* perpetuating the Rush-Bagot Treaty regarding armament on the Great Lakes. Aug. 7, Allied Conference on war debts and reparations opened at London. Dec. 9, Reparations Conference opened at London.

1923. Oct. 1, Imperial Conference and Economic Conference at London. Newfoundland railway and subsidiaries taken over by the Government of Newfoundland.

1926. June 1, Census of Prairie Provinces: population 2,067,393. Oct. 19-Nov. 23, Imperial Conference at London. Nov. 26, Hon. C. Vincent Massey appointed first Canadian Envoy Extraordinary and Minister Plenipotentiary to the United States.

1927. Mar. 1, Labrador Boundary Award by the Privy Council. June 1, Hon. Wm. Phillips, first U.S. Minister to Canada, reached Ottawa. July 1-3, Diamond Jubilee of Confederation celebrated throughout Canada. Oct. 4, First air-mail service in Canada. November, Dominion-Provincial Conference at Ottawa.

1928. Apr. 25, Sir Wm. H. Clark appointed first British High Commissioner to Canada. May 31, Legislative Council of Nova Scotia ceased to exist, leaving Quebec the only province with a bicameral legislature.

1929. Dec. 14, Transfer of natural resources by Federal Government to Manitoba and Alberta.

1930. Feb. 20, Transfer of natural resources to British Columbia. Mar. 20, Transfer of natural resources to Saskatchewan. Oct. 1, Imperial Conference at London.

1931. June 1, Seventh Dominion Census: population 10,376,786. Dec. 12, Statute of Westminster became effective, establishing complete legislative equality of the Parliament of Canada with that of the United Kingdom and exempting Canada and the Provinces from the operation of the Colonial Laws Validity Act and the Merchant Shipping Act.

1932. July 21 - Aug. 20, Imperial Economic Conference at Ottawa. Aug. 6, Official opening of the Welland Ship Canal.

1933. Jan. 17-19, Dominion-Provincial Conference. Newfoundland in financial straits owing to the depression; British Government asked to appoint a Royal Commission to investigate and make recommendations.

1934. Jan. 30, Newfoundland constitution suspended; a Commission of Government took office Feb. 16. August, Celebration at Gaspe of the 400th anniversary of the first landing of Jacques Cartier.

1935. Mar. 11, Bank of Canada commenced business. Dec. 9, Dominion - Provincial Conference at Ottawa; Naval Limitation Conference at London.

1936. Jan. 20, Death of King George V. Accession of King Edward VIII. June 1, Census of Prairie Provinces: population 2,415,545. July 26, Unveiling of Vimy Memorial in France by King Edward VIII. Dec. 11, Abdication of King Edward VIII and accession of King George VI.

1937. May 12, Coronation of King George VI. July 8, Imperial Airways flying boat *Caledonia* arrived at Montreal from Southampton, inaugurating the experimental phase of the Transatlantic Airways.

1938. Mar. 4, Unanimous judgments of the Supreme Court of Canada in favour of the Federal Government on the Alberta constitutional references. (*See* 1941 Year Book, p. 19, for further references to this subject.) Oct. 1, Occupation of Sudeten areas of Czechoslovakia by Germany. Nov. 17, Trade Agreement between Canada and United States signed at Washington.

1939. Mar. 14, Invasion of Czechoslovakia by Germany. May 17 - June 15, Visit of Their Majesties King George VI and Queen Elizabeth to Canada and the United States. Aug. 24, German-Soviet Russia mutual non-aggression treaty signed. Sept. 1, Poland invaded by Germany. Sept. 3, War with Germany declared by the United Kingdom and France. Sept. 10, Canada declared war upon Germany. Dec. 17, Canadian troops landed in United Kingdom. British Commonwealth Air Training Plan Agreement signed at Ottawa by United Kingdom, Canada, Australia and New Zealand.

1940. Jan. 1, First municipal government in the Northwest Territories inaugurated at Yellowknife. Apr. 9, Germany invaded Denmark and Norway. Apr. 25, Quebec women granted franchise in provincial elections and enabled to qualify as candidates for the Legislature. June 22, Armistice signed between France and Germany. Aug. 17-18, Conference on defences of the northern half of the Western Hemisphere held at Ogdensburg, N.Y.; Permanent joint Board on Defence created.

1941. Canada and the United States acquired bases in Newfoundland by 99-year lease. Jan. 14-15, Dominion-Provincial Conference, called to consider findings of Royal Commission on Dominion-Provincial Relations, terminated without agreement. June 11, Eighth Dominion Census: population 11,506,655. June 22, Germany attacked Russia. July 13, Canada approved Anglo-Soviet treaty. Dec. 7, Japanese attack on Pearl Harbour. Canada declared state of war with Roumania, Hungary, Finland and Japan. Dec. 8, Britain and United States declared war on Japan. Dec. 11, Germany, Italy and United States formally declared war.

1942. Jan. 2, Signing at Washington of joint declaration by 26 nations (including Canada), binding each to employ its full resources against the Axis Powers. July 3, Formation of Canada-United States joint naval, military and air staff at Washington. Aug. 19, Raid on Dieppe by Canadian troops supported by British, United States and Fighting French troops; Canadian casualties 3,350 out of 5,000 engaged. Nov. 9, Canada broke off relations with Vichy, France.

1943. Jan. 14-24, Prime Minister Churchill and President Roosevelt met at Casablanca to draft United Nations' war plans. May 12, Fighting ended in North Africa. July 10, British, Canadian and United States forces invaded Sicily. Aug. 10-24, Anglo-American War Conference held at Quebec city. Aug. 15, Canada and United States troops occupied Kiska Island in the Aleutians. Aug. 25, President Roosevelt visited Ottawa, the first official visit by a United States President to Canada's capital. Sept. 8, Unconditional surrender of Italy. Nov. 9, Canada signed UNRRA Agreement. Dec. 24, Gen. Dwight D. Eisenhower named Commander-in-Chief of Allied Forces for invasion of Europe.

1944. Mar. 20, Lt.-Gen. H. D. G. Crerar appointed to command the First Canadian Army. May 1-16, Conference of British Commonwealth countries at London, England. June 6, Allied invasion of Western Europe commenced. July 1-22, United Nations monetary and financial conference of 44 nations held at Bretton Woods, N.H., U.S.A. July 23, The 1st Canadian Army commenced operations in Normandy as a separate force. Sept. 11-16, Second Quebec Conference attended by Prime Minister Churchill and President Roosevelt. Sept. 16, Siegfried Line broken by Allied troops. The Government of Canada recognized the Provisional Government of the French Republic. Nov. 1-Dec. 7, International Civil Aviation Conference of 54 nations, including Canada, held at Chicago, U.S.A.

1945. Apr. 25-June 26, United Nations World Security Conference met at San Francisco to prepare a charter for a general international organization. May 2, The war in Italy and part of Austria ended. May 7, Unconditional surrender of the

German Armed Forces. June 6, Establishment of Provisional International Civil Aviation Organization (PICAO) by 26 nations, including Canada. July 4, Canadian military troops entered Berlin as part of the British garrison force. July 26, The Potsdam Declaration issued by the Allied Powers. Aug. 6, First atomic bomb dropped at Hiroshima, Japan. Aug. 6-10, Dominion-Provincial Conference at Ottawa. Aug. 8, U.S.S.R. declared war against Japan. Aug. 9, Second atomic bomb dropped on the naval base of Nagasaki, Japan. Sept. 1, Japanese officials signed the terms of unconditional surrender. Oct. 16-Nov. 1, United Nations Food and Agriculture Organization Conference of 29 countries, including Canada, held at Quebec city. Dec. 17-28, U.K., U.S., and U.S.S.R. announced agreements on the United Nations control of atomic power.

1946. Jan. 10-Feb. 15, First General Assembly of the United Nations held at London, England. Jan. 24, Establishment of Atomic Energy Commission upon which Canada was represented. Feb. 6, Judge John E. Read of Canada elected a Judge of the International Court of Justice for three-year term. Apr. 29, The Dominion-Provincial Conference (adjourned Aug. 10, 1945) resumed its sittings and adjourned without an agreement. June 1, Census of Prairie Provinces: population 2,362,941. June 9, The Rt. Hon. W. L. Mackenzie King established record for length of service as Prime Minister of Canada. June 21, A National Convention elected in the Island of Newfoundland to consider the economic situation and future form of government. June-Sept., The National Convention delegation at Ottawa discussed the basis for federal Union of Newfoundland with Canada. July 29 - Oct. 15, Peace Conference at Luxembourg Palace, Paris, France, to study texts of treaty agreements drafted by Allied Foreign Ministers Council.

1947. Jan. 14, Canada elected to Economic and Social Council of United Nations. June, A delegation from the National Convention went to Ottawa to discuss union between Newfoundland and Canada. June 10-12, U.S. President Truman visited Ottawa. July 31, Canada represented at Imperial Privy Council meeting at London, England, for approval of marriage of Princess Elizabeth to Lieutenant Philip Mountbatten. Sept. 30, Canada elected to United Nations Security Council for two-year term. Nov. 20, Marriage of Her Royal Highness the Princess Elizabeth, and His Royal Highness the Duke of Edinburgh at Westminster Abbey.

1948. Jan. 8, Gen. A. G. L. McNaughton appointed permanent delegate of Canada to the United Nations and Representative of Canada on the Security Council. The Rt. Hon. W. L. Mackenzie King established length-of-service record for any Prime Minister of the Commonwealth. July 22, Referendum in Newfoundland favoured confederation. Oct. 6-27, Representatives of Canada and Newfoundland met at Ottawa to discuss final arrangements for Newfoundland's entry into Confederation. Oct. 22, Judge John F. Read re-elected to International Court of Justice for nine-year term. Nov. 14, A son (Prince Charles Philip Arthur George) born to Princess Elizabeth and the Duke of Edinburgh. Nov. 15, Governor General Viscount Alexander accepted the resignation of retiring Prime Minister, The Rt. Hon. W. L. Mackenzie King. The Rt. Hon. Louis S. St. Laurent became Prime Minister of Canada. Dec. 11, Agreement signed under which Newfoundland was to enter Confederation.

1949. Mar. 23, Royal Assent given to the British North America Bill passed by the British Parliament for the union of Canada and Newfoundland. Mar. 31, Newfoundland became the tenth Province of Canada. Apr. 4, Canada signed the North Atlantic Treaty at Washington, D.C. Apr. 18, Ireland (Eire) became the Republic of Ireland. Apr. 28, India became a sovereign independent republic within the Commonwealth. May 17, Canadian Government granted full recognition to Israel. May 27, First general election in Newfoundland as a Province of Canada. July 13, Opening of first Provincial Legislature of Newfoundland at St. John's. Aug. 24, Formal proclamation of North Atlantic Pact at Washington, D.C. Dec. 10, An amendment to the Supreme Court Act received Royal Assent, giving final authority in judicial matters to the Supreme Court of Canada. Dec. 12, Mrs. Nancy Hodges named Speaker of the British Columbia Legislature, the first woman to hold the office of Speaker in a Commonwealth legislature. Dec. 16, British North America Act amended by vesting in the Parliament of Canada the power to make amendments to the Constitution of Canada in federal matters.

1950. Jan. 9-14, Canada represented at Commonwealth Conference on Foreign Affairs at Colombo, Ceylon. Jan. 10-12, Federal - Provincial Conference held at Ottawa; Premiers of the ten provinces met with Prime Minister St. Laurent to discuss the question of constitutional amendments. Mar. 27, Formal agreement signed transferring to Ontario the Canadian water rights in the Niagara River. Apr. 1-3, Defence Ministers of 12 Atlantic Treaty powers at The Hague, The Netherlands, approved a collective plan of self-defence against aggression. April-May, Red River flood. May 6, Disastrous fire at Rimouski, Que. May 9, Fire destroyed one-third of the village of Cabano, Que. May 29, The RCMP Supply Ship *St. Roch*, the first vessel to circumnavigate the Continent of North America, reached Halifax, N.S., completing the voyage. June 25, Invasion of the Republic of Korea by North Korean forces. July 6, United Nations Security Council set up a United Nations Command. July 8, Gen. Douglas MacArthur appointed as Supreme Commander of the United Nations Security Council Forces. July 12, Three Canadian destroyers, H.M.C.S. *Cayuga*, *Athabaskan* and *Sioux*, arrived at Pearl Harbour with orders to proceed to Korea under operational command of Gen. MacArthur. July 19, A non-combatant RCAF transport squadron ordered to join the United States air-lift in Korea. Navy, Army and Air Force regular strength ordered brought up to operational strength. July 22, The Rt. Hon. William Lyon Mackenzie King died at Kingsmere, Que., at the age of 75 years. Aug. 1, RCMP took over policing of New-

foundland. Aug. 7, Decision announced to create a special Canadian armed force for the United Nations. Aug. 8, Agreement reached *re* emergency industrial mobilization at meeting of Joint United States - Canada Industrial Mobilization Planning Committee at Ottawa. Aug. 9, Brig. J. M. Rockingham, C.B.E., D.S.O., of Victoria, B.C., to head Canada's United Nations brigade. Aug. 15, A daughter (Princess Anne Elizabeth Alice Louise) born to Princess Elizabeth and the Duke of Edinburgh. RCMP took over policing of British Columbia. Air Service Pact signed by Canada and New Zealand, providing for direct carriage of traffic between the two countries. Aug. 22-30, First country-wide railway strike in Canada. Sept. 25-28, The Constitutional Conference of Federal and Provincial Governments continued its meetings at Quebec city. Sept. 30, Exchange rate of the Canadian dollar freed. Oct. 10, Canada-United States power treaty *re* hydro developments at Niagara Falls ratified after approval by the Canadian Parliament (June 19, 1950) and United States Senate (Aug. 9, 1950). Oct. 26, Canada and United States signed an agreement *re* joint défence production. Oct. 31, Completion of 1,100-mile oil pipeline from Edmonton, Alta., to the Great Lakes. Nov. 1, Restrictions placed on consumer credit. Nov. 28, "Colombo Plan" to raise the living standards of Asiatic peoples and for development of south and southeast Asia during next six years announced; Canada one of the seven participating countries. Dec. 4-7, Federal-Provincial Conference met at Ottawa to discuss questions of common concern to the Federal and Provincial Governments. Dec. 18, The 2nd Battalion of the Princess Patricia's Canadian Light Infantry landed at Pusan, Korea. Dec. 18-19, Joint meetings of the North Atlantic Treaty Defence Committee and Council held at Brussels, Belgium.

1951. Jan. 4-12, Prime Ministers and Leaders of the Commonwealth countries met at London to discuss defence policy of the Commonwealth: Canada represented by Prime Minister The Rt. Hon. Louis S. St. Laurent. Jan. 22, The destroyer H.M.C.S. *Huron* placed under United Nations command. Feb. 5, A three-year $5,000,000,000 defence program for the Armed Forces and the establishment of a National Advisory Council on manpower announced. Feb. 19, Canadian Government contribution of $25,000,000 approved for the first year of the six-year Colombo Plan. Feb. 20, The 2nd Battalion of the Princess Patricia's Canadian Light Infantry in front-line action in Korea. Feb. 27, Army officer posted with Supreme Allied Commander's staff, the first step in providing Canadian ground troops for Europe. Mar. 2, Federal Government announced $65,000,000 payment to western farmers on United Kingdom wheat agreement of 1946-50. Mar. 9, Federal Parliament approved incorporation of Trans-Canada Pipe Line to build 3,100-mile natural gas pipeline from Alberta to Montreal. Mar. 15, Report of the Royal Commission on Transportation tabled in the House of Commons. Mar. 20, Field Marshal Viscount Montgomery named Deputy Commander of Atlantic Treaty Army. Mar. 27, Agreement ratified between Canada and the United States providing for co-ordinated civil defence planning and action. Apr. 1, Department of Defence Production established with the Rt. Hon. C. D. Howe as Minister. Apr. 2, Gen. Eisenhower took command of NATO forces in Europe. Apr. 11, Lt.-Gen. Matthew B. Ridgway given Supreme Command of United Nations Forces in Korea, *vice* Gen. Douglas MacArthur. Apr. 24, First shipment of oil from Alberta by pipeline and freighter flowed into storage tanks at Sarnia. May 1, Minister of National Defence announced that the 25th Canadian Infantry Brigade Group would join other Commonwealth forces in Korea as "The First (Commonwealth) Division, United Nations Forces". May 4, Minister of National Defence announced formation of 27th Canadian Infantry Brigade Group to serve in Europe with the NATO defence forces. Vanguard of 25th Canadian Infantry Brigade landed at Pusan, Korea. May 8, Trade agreements between Canada and 16 countries, resulting from the Torquay meeting of the parties to the General Agreement on Tariffs and Trade in 1950-51, signed at U.N. headquarters. June 1, Report of the Royal Commission on National Development in the Arts, Letters and Sciences tabled in the House of Commons. Ninth decennial Census of Canada taken. June 15, An amendment to the Northwest Territories Act provided for a partially elective council. July 10, Canada formally ended state of war with Germany by Royal Proclamation. Sept. 8, Japanese Peace Treaty signed by 48 nations at San Francisco. Sept. 10, Canada and Pakistan signed a technical assistance pact. Sept. 15-20, Meeting of the Council of NATO held at Ottawa. Sept. 17, First election held in the Northwest Territories. Sept. 26, David M. Johnson appointed Canada's permanent representative to United Nations *vice* Gen. A. G. L. McNaughton. Sept. 28, International Monetary Fund lifted restrictions on the selling of gold. Oct. 8-Nov. 12, Her Royal Highness the Princess Elizabeth and His Royal Highness the Duke of Edinburgh toured Canada. Nov. 15, First units of 27th Canadian Brigade arrived at Hanover, Germany. Dec. 3, Agreement between Government of Canada and Government of Ontario signed *re* St. Lawrence power development; approved by Federal Parliament Dec. 8. Dec. 10, First session of the partially elected Council of the Northwest Territories opened at Yellowknife, N.W.T. Dec. 12, St. Lawrence Seaway Authority established by Act of Parliament. Dec. 14, Federal Government abolished all foreign exchange control regulations.

1952. Jan. 1, Old Age Security Act 1951 and Old Age Assistance Act 1951 became operative. Jan. 11-15, The Rt. Hon. Winston S. Churchill visited Ottawa. Jan. 28, Viscount Alexander's appointment as Governor General of Canada terminated. Feb. 6, His Majesty King George VI died; Her Majesty Queen Elizabeth II proclaimed Sovereign Ruler —Canada issued proclamation. Feb. 21, Treaty signed by Canada and the United States providing for greater safety and convenience for shipping on the Great Lakes by the use of radio. Feb. 28, The

Rt. Hon. Vincent Massey sworn in as Governor General of Canada, first native-born Canadian to hold that post. Apr. 28, Gen. Matthew Ridgway appointed Supreme Allied Commander in Europe. Gen. Mark W. Clark appointed United Nations Commander in Korea and Commander-in-Chief of the United States Armed Forces in the Far East. Treaty of Peace concluded at San Francisco between the Allied Powers and Japan (Sept. 8, 1951) came into force with respect to Canada. Full diplomatic relations resumed between Canada and Japan. Aug. 11-Sept. 13, Sixth British Commonwealth Forestry Conference held at Ottawa. Sept. 6, Canada's first television station officially opened at Montreal. Oct. 14, Seventh Session of the United Nations General Assembly opened at New York; Hon. L. B. Pearson, Canada's Secretary of State for External Affairs, elected President. Oct. 29, International Joint Commission approved joint Canada-United States application for permission to develop St. Lawrence River power. Oct. 30, The 3rd Battalion of the Princess Patricia's Canadian Light Infantry arrived in Korea to replace the 2nd Battalion. Nov. 27-Dec. 11, British Commonwealth Conference of Prime Ministers and their deputies met at London; Rt. Hon. Louis S. St. Laurent represented Canada. Dec. 15-18, Council of Ministers of the North Atlantic Treaty Organization (NATO) held a Conference at Paris; Hon. Brooke Claxton, Minister of National Defence, was Canada's delegate. Dec. 16, Admiral Earl Mountbatten appointed NATO Commander-in-Chief in the Mediterranean. Dec. 22, The establishment of a National Library announced.

1953. Jan. 5 - Feb. 10, Canadian Government Goodwill Trade Mission visited nine Latin-American countries. Jan. 6, Removal of Gut Dam in St. Lawrence River, a project of the International Joint Commission, completed. Feb. 12, First Canadian-built T-33 jet trainer, *Silver Star No. 1*, turned over to Defence Minister by Canadair. Feb. 24 - Apr. 23, Second part of Seventh Session of the United Nations General Assembly held at New York. Mar. 1, United States embargo, placed on Canadian shipments of live stock as a result of the outbreak of foot-and-mouth disease (Feb. 23, 1952), removed. Mar. 5, Joseph V. Stalin, Prime Minister of Russia, died. Mar. 24, Her Majesty Queen Mary died. Mar. 27, Canada's gift of seven main doors for the United Nations building at New York presented. Mar. 31, Bill incorporating a Netherlands-controlled bank—the Mercantile Bank of Canada — given Royal Assent. Apr. 11, Agreement signed between the Allies and communists for exchange of sick and wounded war prisoners in Korean war; first Canadian released Apr. 20. Apr. 23-25, Session of NATO held at Paris; Canadian delegation was Hon. D. Abbott, Hon. B. Claxton, Hon. L. B. Pearson and Mr. A. D. P. Heeney. May 7-9, Canada's Prime Minister made an official visit to the United States. May 14, Official inauguration of television network between Toronto and Montreal. May 21, Tornado hit Sarnia, Ont., and crossed southwestern Ontario causing five deaths and damage estimated at $4,000,000. June 1, Her Majesty's Coronation Honours List contained names of 36 members of Canadian Armed Forces and 8 civilians. British expedition reached peak of Mount Everest. June 2, Her Majesty Queen Elizabeth II crowned at Westminster Abbey. Official ceremonies held at Ottawa and other Canadian centres to honour the Queen on her Coronation Day. June 3-9, Commonwealth Prime Ministers met at London; the Rt. Hon. Louis St. Laurent represented Canada. July 13-Aug. 22, Shakespearean Festival held at Stratford, Ont. July 26, United Nations and communist delegates signed Korean armistice at Panmunjom (9 p.m., E.D.T.). July 27, Korean war hostilities ceased at 9 a.m., E.D.T. Aug. 4, First Allied war prisoners returned to freedom at Freedom Village, Korea; one Canadian included. Aug. 17-28, United Nations General Assembly held a session on the question of peaceful settlement of Korean problems and aid to Korean people; Hon. L. B. Pearson presided. Sept. 6, Final exchange of prisoners in Korea; 30 Canadians freed. Sept. 15-Dec. 9, Eighth session of United Nations General Assembly; Madam Vijaya Pandit of India elected president. Sept. 30, McGill University announced development of a radar early-warning system for North American protection against air attack. Oct. 9, Defence Minister announced formation of the 1st Canadian Division — the Army's first peacetime division. Oct. 15, Trans Mountain oil pipeline from Edmonton to Vancouver completed. Oct. 16-18, Big Three (U.K., U.S. and France) Conference at London, England, to discuss Trieste situation. Oct. 20, Canada's first privately owned television station in operation at Sudbury, Ont. Nov. 5, The power authority of New York State designated by President Eisenhower as the United States partner with Ontario in the construction of the St. Lawrence River power project. Nov. 12, U.K. Parliament passed Regency Act making Duke of Edinburgh regent in the event of Queen Elizabeth's death or incapacity. Nov. 12, Agreement between U.S. and Canadian Governments *re* establishment of the St. Lawrence River Joint Board of Engineers announced; formed to plan construction of power works in the international rapids section of the St. Lawrence River Nov. 13-14, U.S. President Eisenhower and Mrs. Eisenhower visited Ottawa. Nov. 23, Queen Elizabeth II and the Duke of Edinburgh started on tour of eastern Commonwealth countries. Dec. 4-7, Conference of U.K. Prime Minister Churchill, U.S. President Eisenhower and France's Premier Laniel in Bermuda. Dec. 7, Mercantile Bank of Canada commenced business; head office at Montreal. Dec. 8, U.S. President Eisenhower addressed United Nations General Assembly on atomic proposals. Dec. 9, U.K., U.S. and France notified U.S.S.R. of their desire for a conference of foreign ministers of the four countries. Dec. 14-16, NATO Council session held at Paris; Hon. L. B. Pearson addressed gathering. Dec. 16, Royal Assent given to Bill respecting formation of the Department of Northern Affairs and National Resources.

PART VI.—STATISTICAL SUMMARY OF THE PROGRESS OF CANADA, 1871-1952

In the following summary, the statistics of foreign trade, shipping, the Post Office, the public debt, revenue and expenditure, and the Post Office and Government savings banks relate to the fiscal years ended June 30 up to 1901; subsequently to years ended Mar. 31, except in the case of trade, where calendar-year figures are given for 1931 and later years. Agriculture, dairying, mineral, manufacturing, banking, insurance, loan and trust companies, construction, road-transportation, vital, hospital, and immigration statistics relate to the calendar years, and railway and fisheries statistics to the years ended June 30, 1871-1911, and to the calendar years 1921-52. Canal statistics are those of the navigation seasons. Telegraph statistics relate to the fiscal years for Government lines and to the calendar years for other lines.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA

NOTE.—*The interpretation of the symbols used in the tables will be found facing p. 1 of this volume.*

	Item		1871	1881	1891	1901	1911	1921
	Population—							
1	Newfoundland	No.	...	...	...	...	...	...
2	Prince Edward Island	"	94,021	108,891	109,078	103,259	93,728	88,615
3	Nova Scotia	"	387,800	440,572	450,396	459,574	492,338	523,837
4	New Brunswick	"	285,594	321,233	321,263	331,120	351,889	387,876
5	Quebec	"	1,191,516	1,359,027	1,488,535	1,648,898	2,005,776	2,360,510
6	Ontario	"	1,620,851	1,926,922	2,114,321	2,182,947	2,527,292	2,933,662
7	Manitoba	"	25,228	62,260	152,506	255,211	461,394	610,118
8	Saskatchewan	"	..	..	..	91,279	492,432	757,510
9	Alberta	"	..	..	..	73,022	374,295	588,454
10	British Columbia	"	36,247	49,459	98,173	178,657	392,480	524,582
11	Yukon Territory	"	..	..	..	27,219	8,512	4,157
12	Northwest Territories	"	48,000	56,446	98,967	20,129	6,507	8,143
	Canada	"	3,689,257	4,324,810	4,833,239	5,371,315	7,206,643	8,787,949[2]
13	**Households**[1]	No.	..	800,410	900,080	1,058,386	1,482,980	1,897,110
	Immigration—							
14	From United Kingdom	No.	..	17,033	22,042	11,810[4]	144,076	43,772
15	From United States	"	..	21,822	52,516	17,987[4]	112,028	23,888
16	From other countries	"	..	9,136	7,607	19,352[4]	75,184	24,068
	Totals	"	27,773	47,991	82,165	49,149[4]	331,288	91,728
	Vital Statistics—[3]							
17	Births (live)[5]	No.	..	..	..	..	..	..
	Rates per 1,000 population		..	..		..	..	..
18	Deaths, all causes[5]	No.	..		..	.	..	..
	Rates per 1,000 population		..		..	..	..	
19	Marriages	No.	..		..		..	
	Rates per 1,000 population		..		..	..	..	
20	Divorces	No.	4	7	10	19	57	558
	Health and Welfare—							
	HOSPITALS—[6]							
	Public Hospitals—							
21	Hospitals	No.	..		..	..		
22	Bed capacity[9]	"	..		..	..	..	
23	Patient days[10]	"	..		..	..		
24	Expenditure[11]	$	..		..	..		
	Tuberculosis Sanatoria—							
25	Sanatoria	No.	..	..	..	..		
26	Bed capacity	"	..	..	..	..		
27	Patient days	"	..	..	..	..		
28	Expenditure[11]	$	..	..	..	..		..
	Mental Institutions—							
29	Hospitals	No.	..	..	..	..	..	..
30	Bed capacity	"	..	..	..	..	..	..
31	Patient days	"	..	..	..	..	..	..
32	Expenditure[11]	$	..	..	..	..	..	..
33	FAMILY ALLOWANCES	$	..	..	..	..	..	..
34	OLD AGE PENSIONS[12]	$	..	..	..	..	..	..
35	PENSIONS FOR THE BLIND[12]	$	..	..	..	..	..	
36	UNEMPLOYMENT INSURANCE	$	..	..	..	..	..	..
	Criminal Statistics—[15]							
37	Convictions, indictable offences	No.	..	3,509[16]	3,974	5,638	12,627[7]	19,396[7]
38	Convictions, non-indictable offences	"	..	30,365[16]	33,643	36,510	100,633	157,777[7]

[1] These are intercensal estimates adjusted after the 1951 Census. [2] Includes 485 members of the Royal Canadian Navy recorded separately. [3] Exclusive of the Territories. [4] Year ended Mar. 31. [5] By place of occurrence prior to 1941; by place of residence 1941-50. [6] For reporting hospitals only; private and federal hospitals excluded. [7] Figures derived from 1931 Census report. [8] Exclusive of Newfoundland.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

Note.—The interpretation of the symbols used in the tables will be found facing p. 1 of this volume.

1931	1939	1941	1943	1949	1950	1951	1952	
...	...	...	...	345,000[1]	351,000[1]	361,416	374,000	1
88,038	94,000	95,047	91,000[1]	94,000[1]	96,000[1]	98,429	103,000	2
512,846	561,000	577,962	606,000[1]	629,000[1]	638,000[1]	642,584	653,000	3
408,219	447,000	457,401	463,000[1]	508,000[1]	512,000[1]	515,697	526,000	4
2,874,662	3,230,000	3,331,882	3,457,000[1]	3,882,000[1]	3,969,000[1]	4,055,681	4,174,000	5
3,431,683	3,708,000	3,787,655	3,915,000[1]	4,378,000[1]	4,471,000[1]	4,597,542	4,766,000	6
700,139	726,000	729,744	723,000[1]	757,000[1]	768,000[1]	776,541	798,000	7
921,785	906,000	895,992	838,000[1]	832,000[1]	833,000[1]	831,728	843,000	8
731,605	786,000	796,169	785,000[1]	885,000[1]	913,000[1]	939,501	970,000	9
694,263	792,000	817,861	900,000[1]	1,113,000[1]	1,137,000[1]	1,165,210	1,198,000	10
4,230	5,000	4,914	5,000[1]	8,000[1]	8,000[1]	9,096	9,000	11
9,316	12,000	12,028	12,000[1]	16,000[1]	16,000[1]	16,004	16,000	12
10,376,786	11,267,000	11,506,655	11,795,000[1]	13,447,000[1]	13,712,000[1]	14,009,429	14,430,000	
2,275,171	..	2,706,089	..	..	..	3,420,822	..	13
7,678	3,011	435	1,116	20,737	12,669	31,559	45,060	14
15,195	5,654	6,594	4,401	7,756	7,821	7,755	9,333	15
4,657	8,329	2,300	2,987	66,724	53,422	155,077	110,105	16
27,530	16,994	9,329	8,504	95,217	73,912	194,391	164,498	
240,473	229,468	255,317[r]	283,580[r]	366,139	371,071	380,101	395,024[p]	17
23·2	20·4	22·2	24·0	27·1	27·1	27·2	27·4[p]	
104,517	108,951	114,639	118,635[r]	124,047	123,789	125,454	124,456[p]	18
10·1	9·7	10·0	10·1[r]	9·2	9·0	9·0	8·6[p]	
66,591	103,658	121,842	110,937	123,877	124,845	128,230	127,238[p]	19
6·4	9·2	10·6	9·4	9·2	9·1	9·2	8·8[p]	
700	2,068	2,461	3,263	5,934[r]	5,373[r]	5,263	5,562[p]	20
587[7]	609	613	613[r]	738[8,r]	763[8,r]	778[8]	777[8]	21
43,247[7]	51,628	53,445	53,938	61,676[8]	65,529[8]	68,674[8]	68,033[8]	22
9,657,517[7]	11,923,695	13,393,506	13,890,076	17,813,015[8]	18,848,072[8]	19,798,448[8]	20,186,043[8]	23
38,309,400[7]	..	..	59,402,798	146,866,796[8]	162,714,287[8]	196,203,373[8]	..	24
31[7]	47[r]	47	47	60[r]	62[r]	64[r]	62	25
6,044[7]	9,062[r]	9,304	9,602	12,836[r]	13,739[r]	14,194[r]	14,365	26
1,924,289[7]	3,055,910[r]	3,227,640	3,245,099	4,307,083[r]	4,370,008[r]	4,640,217[r]	4,808,365	27
5,329,393[7]	6,882,443	7,753,229	8,619,449	19,166,132	22,893,130[r]	26,815,147	29,183,919	28
52[7]	53	54	54	59	61	63[r]	66	29
29,283[7r]	38,276[r]	38,800	41,192[r]	42,395	42,720[r]	44,205[r]	46,417	30
10,662,343[7]	15,478,080	16,078,250[r]	16,688,530	18,774,505	19,223,090	19,708,905[r]	..	31
13,235,767[7]	15,449,122	14,725,760	16,076,787	35,383,231	41,822,632[r]	46,403,522[r]	51,651,055	32
..	..	..	..	270,909,779	297,514,034	309,465,461	320,457,673	33
7,050,924	28,885,860	28,472,475	30,496,570	64,232,210[8]	89,652,203	99,268,006	76,066,835[12]	34
..	859,853	1,067,239	1,185,018	2,532,074[8]	3,536,730	3,901,109	721,449[12]	35
..	..	..	929,219[14]	69,327,647[14]	94,446,425[14]	72,716,746[14]	114,122,466[14]	36
31,542	48,107[r]	42,646	41,752	41,661[8]	42,624[8]	40,289	41,591	37
327,778	428,608[r]	547,556	465,315	980,489[8]	1,183,991[8]	1,308,466	1,565,707	38

[7] Bassinets for newborn excluded. [8] Days' stay of newborn excluded. [11] Not all hospitals shown above furnished financial reports. [12] Federal contribution only. [12] Three months ended Mar. 31, 1952, under new program. [14] These figures are not comparable with those given in Labour Chapter for "amount of benefit paid". [15] Year ended Sept. 30. [16] 1886 figures; first year available.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item		1871	1881	1891	1901	1911	1921
	Education—							
1	Total enrolment[1]	No.	803,000	891,000	993,000	1,092,633	1,361,205	1,880,805
2	Average daily attendance[2]	"	..	..	..	669,000	870,532	1,349,256
3	Teachers[2]	"	13,559	18,016	23,718	27,126	40,516	56,607
4	Public expenditure on	$	..			11,044,925	37,971,374	112,976,543
	Survey of Production—							
5	Net value[3]	$	..	..	..	..	..	..
	Agriculture—[4,5]							
6	Area of occupied farms	acre	36,046,401	45,358,141	58,997,995	63,422,338	108,968,715	140,887,903
7	Improved lands	"	17,335,818	21,899,181	27,729,852	30,166,033	48,733,823	70,769,548
8	Cash income from the sale of farm products	$'000	..	..	..	..		..
	Field Crops—							
9	Wheat	bu.	16,723,873	32,350,269	42,144,779	55,572,368	132,077,547	226,508,411
		$	16,993,265	38,820,323	31,667,529	36,122,039	104,816,825	374,178,601
10	Oats	bu.	42,489,453	70,493,131	83,428,202	151,497,407	245,393,425	364,989,218
		$	15,966,310	23,967,665	31,702,717	51,509,118	86,796,130	180,989,587
11	Barley	bu.	11,496,038	16,844,868	17,222,795	22,224,366	28,848,310	42,956,049
		$	8,170,735	11,791,408	8,611,397	8,889,746	14,653,697	33,514,070
12	Corn	bu.	3,802,830	9,025,142	10,711,380	25,875,919	14,417,599	10,822,278
		$	2,283,145	5,415,085	5,034,348	11,902,923	5,774,039	7,081,140
13	Potatoes	bu.	47,330,187	55,368,790	53,490,857	55,362,635	55,461,473	62,230,052
		$	15,211,774	13,288,510	21,396,342	13,840,658	27,426,765	44,635,547
14	Hay and clover	ton	3,818,641	5,055,810	7,693,733	6,943,715	10,406,367	8,829,915
		$	38,869,900	40,446,480	69,243,597	85,625,315	90,115,531	174,110,386
	Total Areas, Field Crops[6]	acre	..	..	15,662,811	19,763,740	30,556,168	47,553,418
	Total Values, Field Crops[6]	$	111,116,606	155,277,427	194,766,934	237,682,285	384,513,795	933,045,936
	Live Stock and Poultry—[10]							
15	Horses	No.	836,700	1,059,400	1,470,600	1,577,500	2,599,000	3,451,800
		$	..	..	..	118,279,000	381,916,000	414,808,000
16	Milk cows	No.	1,251,200	1,595,800	1,857,100	2,408,700	2,645,200	3,086,700
		$	..	..	..	69,238,000	111,833,000	188,518,000
17	Other cattle	No.	1,373,100	1,919,200	2,263,500	3,167,800	3,880,900	5,282,800
		$	..	..	..	54,197,000	84,021,000	146,567,000
18	Sheep	No.	3,155,500	3,048,700	2,563,800	2,510,200	2,174,300	3,200,500
		$	..	..	..	10,491,000	10,702,000	20,675,000
19	Swine	No.	1,366,100	1,207,600	1,733,900	2,353,800	3,634,800	3,324,300
		$	..	..	..	16,446,000	26,987,000	35,869,000
20	All poultry	No.	..	..	14,105,100	17,922,700	31,793,300	37,185,800
		$	..	..	..	5,724,000	14,654,000	38,015,000
	Total Values	$	..	..	..	274,375,000	630,113,000	844,452,000
	Dairying—[11]							
21	Total milk production	'000 lb.	..	..	..	6,866,834	9,806,741	11,897,545
22	Cheese, factory[12]	lb.	..	54,574,856	97,418,855	220,833,269	199,904,205	162,117,000
		$	..	5,457,486	9,741,886	22,221,430	21,587,124	28,710,000
23	Butter, creamery	lb.	..	1,365,912	3,654,364	36,066,739	64,489,398	128,745,000
		$	..	341,478	913,591	7,240,972	15,597,807	48,135,000
24	Butter, dairy	lb.	..	102,545,169	111,577,210	105,343,076	137,110,200	107,379,000
		$	..	..	..	21,384,644	30,269,497	35,307,000
25	Other dairy products[13]	$	..	..	..	15,623,907	35,927,426	110,623,000
	Total Values, Dairy Products	$	..	22,743,939	30,315,214	66,470,953	103,381,854	222,775,000
	Forestry—							
26	Primary forest production	$		..	..	..	..	168,054,024
27	Lumber production	M ft. b.m.		..	..	..	4,918,202	2,869,307
		$		..	..	..	75,830,954	82,448,585
28	Total sawmill products	$	..	..	..	..		116,891,191
29	Pulp and paper products	$		..	..	..		151,003,165
30	Exports of wood, wood products and paper[14]	$		..	25,351,085	33,099,915	56,334,695	284,561,478

[1] All types of educational institutions. [2] Provincially controlled ordinary and technical day schools. [3] Revised to reflect changes in classification (*see* DBS *Survey of Production, 1938-1950*). [4] Exclusive of the Territories. [5] Exclusive of Newfoundland. [6] Comparable figures not available. [7] Figures for the decennial census years 1871-1921 are for the immediately preceding years; those for 1871 are for the four original provinces only. [8] Cwt. [9] Includes other field crops, e.g., rye and flaxseed, not specified.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1939	1941	1943	1949	1950	1951	1952	
2,264,106	2,236,342	2,131,391	2,062,990	2,708,804	2,795,574	2,880,043	..	1
1,801,955	1,870,563	1,802,300	1,697,172	1,979,805	2,070,712	2,123,184	..	2
71,246	74,549	75,308	74,315	82,050	85,292	89,534	..	3
144,748,823	122,974,590	129,817,268	142,000,000	407,406,000	454,139,000[r]	..	..	4
..	2,997,278,520	4,356,227,944	6,113,438,381	9,686,046,793	10,558,556,557[r]	12,934,430,171	..	5
163,114,034	[6]	173,563,282	[6]	[6]	[6]	174,046,654	..	6
85,732,172	[6]	91,636,065	[6]	[6]	[6]	96,852,826	..	7
..	[6]	896,371	[6]	[6]	[6]	2,811,949[r]	2,778,343	8
321,325,000	[6]	314,825,000	[6]	[6]	[6]	552,657,000[r]	687,922,000[p]	9
123,550,000	[6]	192,747,000[r]	[6]	[6]	[6]	855,137,000[r]	948,703,000[p]	
328,278,000	[6]	305,575,000	[6]	[6]	[6]	488,191,000[r]	466,805,000[p]	10
77,970,000	[6]	125,920,000	[6]	[6]	[6]	369,296,000[r]	277,326,000[p]	
67,382,600	[6]	110,566,000	[6]	[6]	[6]	245,218,000[r]	291,379,000[p]	11
17,465,000	[6]	47,651,000	[6]	[6]	[6]	269,951,000[r]	275,866,000[p]	
5,449,000	[6]	13,362,000[r]	[6]	[6]	[6]	15,915,000[r]	19,722,000[p]	12
2,274,000	[6]	9,645,000[r]	[6]	[6]	[6]	28,527,000[r]	28,403,000[p]	
52,305,000[8]	[6]	39,052,000[8]	[6]	[6]	[6]	48,355,000[r]	58,957,000[p]	13
22,359,000	[6]	48,274,000	[6]	[6]	[6]	98,077,000[r]	115,762,000[p]	
14,539,600	[6]	12,632,000	[6]	[6]	[6]	19,484,000[r]	19,090,000[p]	14
110,110,000	[6]	158,723,000	[6]	[6]	[6]	297,238,000[r]	271,296,000[p]	
58,862,305	[6]	56,788,400	[6]	[6]	[6]	60,868,000[r]	61,812,000[p]	
435,966,400	[6]	704,761,000[r]	[6]	[6]	[6]	2,120,301,000	2,117,651,000[p]	
3,113,900	[6]	2,788,795	[6]	[6]	[6]	1,303,800[r]	1,180,400	15
205,087,000	[6]	184,549,656	[6]	[6]	[6]	94,130,000[r]	94,998,000	
3,371,900	[6]	3,626,025	[6]	[6]	[6]	2,903,800[r]	2,968,000	16
160,655,000	[6]	191,214,008[r]	[6]	[6]	[6]	722,589,000[r]	624,160,000	
4,601,100	[6]	4,890,982	[6]	[6]	[6]	5,459,300[r]	6,204,700	17
94,952,000	[6]	138,196,159[r]	[6]	[6]	[6]	871,003,000[r]	802,284,000	
3,627,100	[6]	2,839,948	[6]	[6]	[6]	1,461,200[r]	1,582,000	18
19,680,000	[6]	17,038,647	[6]	[6]	[6]	38,439,000[r]	35,190,000	
4,699,800	[6]	6,081,389	[6]	[6]	[6]	4,914,300[r]	5,741,000	19
33,288,000	[6]	54,911,751	[6]	[6]	[6]	185,773,000[r]	152,894,000	
65,468,000	[6]	63,526,202	[6]	[6]	[6]	67,857,000[r]	65,782,000	20
45,138,000	[6]	27,444,115	[6]	[6]	[6]	86,943,000[r]	80,932,000	
558,800,000	[6]	613,354,336[r]	[6]	[6]	[6]	1,998,877,000[r]	1,790,458,000	
14,339,686	[6]	16,549,902	[6]	[6]	[6]	16,423,582[r]	16,784,982	21
113,956,639	[6]	151,866,000	[6]	[6]	[6]	94,261,000[r]	72,658,000	22
12,824,695	[6]	24,737,037	[6]	[6]	[6]	34,702,000[r]	24,586,000	
225,955,246	[6]	285,848,196	[6]	[6]	[6]	257,165,000[r]	280,747,000	23
50,198,878	[6]	93,199,557	[6]	[6]	[6]	162,154,000[r]	169,644,000	
98,590,000	[6]	82,796,000	[6]	[6]	[6]	46,727,000[r]	42,039,000	24
20,098,000	[6]	24,373,000	[6]	[6]	[6]	28,224,000[r]	24,719,000	
109,262,600	[6]	159,363,878	[6]	[6]	[6]	412,938,000[r]	438,123,000	25
192,384,173	[6]	301,673,472	[6]	[6]	[6]	638,018,000[r]	657,072,000	
141,123,930	157,747,398	213,163,089	268,615,283	561,412,062	625,734,603	782,525,015	..	26
2,497,553	3,976,882	4,941,084	4,363,575	5,915,443	6,553,898	6,948,697	6,783,426[p]	27
45,977,843	78,331,839	129,287,703	151,899,684	334,789,873	422,480,700	507,650,241	467,483,000[p]	
62,769,253	100,132,597	163,412,292	195,885,336	396,415,201	496,948,398	591,551,749	560,668,000[p]	28
174,733,954	208,152,295	334,726,175	344,411,614	836,148,393	954,137,651	1,237,897,470	1,157,887,657	29
185,493,491	242,541,043	387,113,232	391,069,658	875,317,680	1,112,945,061	1,399,076,131	1,366,787,043	30

[10] On farms only. [11] Figures for the decennial census years 1881-1921 are for the immediately preceding years. In the Censuses of 1881 and 1891 values only were given of factory butter and cheese; quantities have been calculated by reckoning cheese at 10 cents per lb. and butter at 25 cents per lb. [12] Data shown for 1949-51 represent cheddar and other cheese made from whole milk; prior to 1942 the figures included other cheese for Quebec only. [13] Prior to 1921 this item does not include skim milk and buttermilk. [14] Years ended Mar. 31 prior to 1931.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item	1871	1881	1891	1901	1911	1921
	Mineral Production—						
1	Gold[1] ..... oz. t.	105,187	63,524	45,018	1,167,216	473,159	926,329
	..... $	2,174,412	1,313,153	930,614	24,128,503	9,781,077	19,148,920
2	Silver ..... oz. t.	..	355,083[2]	414,523	5,539,192	32,559,044	13,543,198
	..... $	..	347,271[2]	409,549	3,265,354	17,355,272	8,485,355
3	Copper ..... lb.	..	3,260,424[2]	9,529,401	37,827,019	55,648,011	47,620,820
	..... $	..	366,798[2]	1,226,703	6,098,581	6,886,998	5,953,555
4	Lead ..... lb.	..	204,800[2]	88,665	51,900,958	23,784,969	66,679,592
	..... $	..	9,216[2]	3,857	2,249,387	827,717	3,828,742
5	Zinc ..... lb.	..	..	..	788,000[3]	1,877,479	53,089,356
	..... $	..	..	..	36,011[3]	108,105	2,471,310
6	Nickel ..... lb.	..	830,477[4]	4,035,347	9,189,047	34,098,744	19,293,060
	..... $	..	498,286[4]	2,421,208	4,594,523	10,229,623	6,752,571
7	Coal ..... short ton	1,063,742[5]	1,537,106	3,577,749	6,486,325	11,323,388	15,057,493
	..... $	1,763,423[5]	2,688,621	7,019,425	12,699,243	26,467,646	72,451,656
8	Natural gas ..... M cu. ft.	..	..	..	..	..	14,077,601
	..... $	..	..	150,000[6]	339,476	1,917,678	4,594,164
9	Petroleum, crude ..... bbl.	..	368,987	755,298	622,392	291,092	187,541
	..... $	..	..	1,010,211	1,008,275	357,073	641,533
10	Asbestos ..... short ton	..	..	9,279	40,217	127,414	92,761
	..... $	..	..	999,878	1,259,759	2,943,108	4,906,230
11	Cement ..... bbl.	..	69,843[2]	93,479	450,394	5,692,915	5,752,885
	..... $	..	81,909[2]	108,561	660,030	7,644,537	14,195,143
	Totals, Mineral Production[7] .. $	..	10,221,255[8]	18,976,616	65,797,911	103,220,994	171,923,342
	Water Power—						
12	Turbine installation ..... h.p.	..		71,219	238,902	1,363,134	2,754,157
	Central Electric Stations—						
13	Power houses ..... No.	..		80	58	266	510
14	Capital invested ..... $	..	..	4,113,771	11,891,025	110,838,746	484,669,451
15	Power generated ..... '000 kwh.		..	..	..		5,614,132
16	Customers ..... No.	..	..	..	..		973,212
	Fisheries—						
17	Marketed value of all products. $	7,573,199	15,817,162	18,977,874	25,737,153	34,667,872	34,931,935
	Furs—						
18	Pelts taken[10] ..... No.		..	..	..	..	2,936,407
	..... $		..	..	..	..	10,151,594
19	Value of animals on fur farms .. $	..	..	..	..	..	5,977,545
	Manufactures[11]						
20	Employees ..... No.	187,942	254,935	369,595	339,173	515,203	438,555
21	Capital ..... $	77,964,020	165,302,623	353,213,000	446,916,487	1,247,583,609	2,697,858,073
22	Salaries and wages ..... $	40,851,009	59,429,002	100,415,350	113,249,350	241,008,416	497,399,761
23	Values of materials used in Products— .... $	124,907,846	179,918,593	250,759,292	266,527,858	601,509,018	1,365,292,885
24	Gross ..... $	221,617,773	309,676,068	469,847,886	481,053,375	1,165,975,639	2,488,987,148
25	Net[12] ..... $	96,709,927	129,757,475	219,088,594	214,525,517	564,466,621	1,123,694,263
26	**Index of Industrial Production**[13]	..	..	..	..		..
	Construction—						
27	Values of contracts awarded .. $	..	..	..	..	345,425,000	240,133,300
	Labour—						
	Gainfully Occupied—[15,16]						
28	Agricultural occupations ..... No.	..	..	735,207[17]	716,860	933,735	1,035,283[r]
29	Other primary " ..... "	..	..	58,211[19]	71,584[19]	139,877[20]	115,737[21],[r]
30	Manufacturing " ..... "	..	..	237,972	299,535	372,234	406,677[r]
31	Construction " ..... "	..	..	86,694	89,165	150,567	162,275[r]
32	Transportation[22] " ..... "		..	61,310	82,483	158,926	199,568[r]
33	Trade and finance " ..... "		..	88,064	99,552	221,805	293,334[r]
34	Service " ..... "		..	203,897	236,205	322,895	420,173[r]
35	Clerical " ..... "	..	..	24,121	58,789	106,351	217,937
36	Labourers[24] " ..... "	..	..	116,598	127,867	317,244	306,215[r]
37	Not stated " ..... "	..	..	3,534	792	..	7,149[r]
	Totals, Gainfully Occupied[16] . "	..	..	1,615,608	1,782,832	2,723,634	3,164,348[r]
38	Wage-earners[15] ..... No.	..	..	..	..	1,628,273	1,972,089

[1] As from 1932 the values include exchange equalization. [2] 1887. [3] 1898. [4] 1889. [5] 1874. [6] 1892. [7] Includes other items not specified. [8] 1886. [9] Excludes Newfoundland. [10] Years ended Sept. 30. [11] *The statistics of manufactures in 1871, 1881 and 1891 include* all establishments irrespective of the number of employees. From 1901, statistics are for establishments with five hands or over. The figures shown for census years prior to 1921 are for the preceding year. From 1922, statistics are exclusive of construction hand trades, repair and custom work. Figures for 1931-51 include non-ferrous metal smelting not included in earlier years. [12] Since 1924 the net value of production is computed by subtracting the cost of fuel and electricity

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1939	1941	1943	1949	1950	1951	1952	
2,693,892	5,094,379	5,345,179	3,651,301	4,123,518	4,441,227	4,392,751	4,471,725	1
58,093,396	184,115,951	205,789,392	140,575,088	148,446,648	168,988,687	161,872,873	153,246,016	
20,562,247	23,163,629	21,754,408	17,344,569	17,641,493	23,221,431	23,125,825	25,222,227	2
6,141,943	9,378,490	8,323,454	7,849,111	13,098,808	18,767,561	21,865,467	21,065,603	
292,304,390	608,825,570	643,316,713	575,190,132	526,913,632	528,418,296	539,941,589	516,075,097	3
24,114,065	60,934,859	64,407,497	67,170,601	104,719,151	123,211,407	149,026,216	146,679,040	
267,342,482	388,569,550	460,167,005	444,060,769	319,549,865	331,394,128	316,462,751	337,683,891	4
7,260,183	12,313,768	15,470,815	16,670,041	50,488,879	47,886,452	58,229,146	54,671,021	
237,245,451	394,533,860	512,381,636	610,754,354	576,524,097	626,454,598	682,224,335	743,604,155	5
6,059,249	12,108,244	17,477,337	24,430,174	76,372,147	98,040,145	135,762,643	129,833,285	
65,666,320	226,105,856	282,258,235	288,018,615	257,379,216	247,317,867	275,806,272	281,117,072	6
15,267,453	50,920,305	68,656,795	71,675,322	99,173,289	112,104,685	151,269,994	151,349,438	
12,243,211	48,676,990	18,225,921	17,859,057	19,120,046	19,139,112	18,586,823	17,579,002	7
41,207,682	15,692,698	58,059,630	62,877,549	110,915,121	110,140,399	109,038,835	111,026,149	
25,874,723	35,185,146	43,495,353	44,276,216	60,457,177	67,822,230	79,460,667	88,686,465	8
9,026,754	12,507,307	12,665,116	13,159,418	11,620,302	6,433,041	7,158,920	9,517,638	
1,542,573	7,826,301	10,133,838	10,052,302	21,305,348	29,043,788	47,615,534	61,237,322	9
4,211,674	9,846,352	14,415,096	16,470,417	61,118,490	84,619,937	116,655,238	143,038,212	
164,296	364,472	477,846	476,196	574,906	875,344	973,198	929,339	10
4,812,886	15,859,212	21,468,840	23,169,505	39,746,072	65,854,568	81,584,345	89,254,913	
10,161,658	5,731,264	8,368,711	7,302,289	15,916,564	16,741,826	17,007,812	18,520,538	11
15,826,243	8,511,211	13,063,588	11,599,033	32,901,936	35,894,124	40,446,288	48,059,470	
230,434,726	474,602,059	560,241,290	530,053,966	901,110,026	1,045,450,073	1,245,483,595	1,285,342,353	
6,666,337	8,289,212	8,845,038	10,214,513	11,613,333	12,562,750	13,342,504	14,305,880	12
559	611	607	622	650	665	647		13
1,229,988,951	1,564,603,211	1,641,460,451	1,778,224,640	..	..	..		14
16,330,867	28,338,030	33,317,663	40,479,593	44,418,573	48,493,718	54,851,844		15
1,632,792	1,941,663	2,081,270	2,169,148	3,076,369	3,269,824	3,439,750		16
30,517,306	40,075,922	62,258,997	85,594,544	132,306,372	152,062,597	175,718,088[9]	149,737,361[9]	17
4,060,356	6,492,222	7,257,337	7,418,971	9,902,790	7,377,491	7,479,272	7,931,742	18
11,803,217	14,286,937	21,123,161	28,505,033	22,899,882	23,184,033	31,134,400	24,199,111	
8,497,237	6,920,464	7,928,971	10,044,903	8,743,225	10,444,286	10,195,561	9,560,702	19
528,640	658,114	961,178	1,241,068	1,171,207	1,183,297	1,258,375	1,273,187[p]	20
3,705,701,893	3,647,024,449	4,905,503,966	6,317,166,727	..	..	..	..	21
587,566,990	737,811,153	1,264,862,643	1,987,292,384	2,591,890,657	2,771,267,435	3,276,280,917	3,609,546,000[p]	22
1,221,911,982	1,836,159,375	3,296,547,019	4,690,493,083	6,843,231,064	7,538,534,532	9,074,526,353	9,104,626,000[p]	23
2,555,126,448	3,474,783,528	6,076,308,124	8,732,860,999	12,479,593,300	13,817,526,381	16,392,187,132	16,915,215,000[p]	24
1,252,017,248	1,531,051,901	2,605,119,788	3,816,413,541	5,330,566,434	5,942,058,229	6,940,946,783	7,417,458,000[p]	25
[14]	109·7	164·8	208·5	199·6[p]	211·5[p]	226·5[p]	232·9[p]	26
315,482,000	187,178,500	393,991,300	206,103,900	1,143,547,300	1,525,764,700	2,295,499,200	1,812,177,600	27
1,127,682[r]	..	1,083,816	..	..	..	826,759[18,r]	..	28
150,276[r]	..	203,586	..	..	..	196,996[18,r]	..	29
495,842[r]	..	709,181	..	..	..	973,982[18,r]	..	30
203,056[r]	..	213,493	..	..	..	319,065[18,r]	..	31
289,030[r]	..	311,645	..	..	..	492,986[18,r]	..	32
352,414[r]	..	370,617	..	..	..	520,761[18,r]	..	33
616,953[r]	..	725,456[23]	..	..	..	919,922[18,r]	..	34
258,684[r]	..	314,051	..	..	..	541,713[18,r]	..	35
426,242[r]	..	252,693	..	..	..	323,829[18,r]	..	36
1,654		11,413	..	..	..	63,600[18,r]	.	37
3,921,833[r]	..	4,195,951[23]	..	..	..	5,179,613[18,r]	..	
2,570,097	..	2,816,798[23]	..	..	..	4,006,466[18,r]	..	38

as well as the cost of materials from the gross value of the products. [13] 1935-39=100. [14] Not comparable with later years. [15] 10 years of age or over prior to 1911; 14 years of age or over after 1921. [16] Exclusive of the Territories. [17] Includes all farmers' sons, 14 years and over, whether or not reported with gainful occupation. [18] Exclusive of Newfoundland with a labour force of 106,540 persons (78,658 wage-earners). [19] Excludes Indians. [20] Includes pulp-mill employees and almost all mine and smelter employees, except clerical workers. [21] Excludes Indians on reserves. [22] Includes "Communication". [23] Exclusive of 314,584 persons on Active Service on June 2, 1941. [24] Exclusive of labourers in agriculture, fishing, logging and mining.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item		1871	1881	1891	1901	1911	1921
	Transportation—							
	STEAM RAILWAYS—							
1	Miles in operation	No.	2,695	7,194[r]	13,838	18,140	25,400	39,191
2	Capital liability	$	257,035,188[1]	284,419,293	632,061,440	816,110,837	1,528,689,201	2,164,687,636
3	Passengers	No.	5,190,416[2]	6,943,671	13,222,568	18,385,722	37,097,718	46,793,251
4	Freight	ton	5,670,836[2]	12,065,323	21,753,021	36,999,371	79,884,282	83,730,829[3]
5	Earnings	$	19,470,540[2]	27,987,509	48,192,099	72,898,749	188,733,494	458,008,891
6	Expenses	$	15,775,532[2]	20,121,418	34,960,449	50,368,726	131,033,785[r]	422,581,205
	ELECTRIC RAILWAYS—							
7	Miles in operation	No.	..	..	..	553	1,224	1,687
8	Capital liability	$	..	..	..	..	111,532,347	177,187,436
9	Passengers	No.	..	..	..	120,934,656	426,296,792	781,175,654[r]
10	Freight	ton	..	..	..	287,926	2,496,072[r]	2,282,292
11	Earnings	$	..	..	..	5,768,283	20,356,952	44,536,833
12	Expenses	$	..	..	..	3,435,163	12,096,134	35,945,316
	ROAD TRANSPORTATION—							
13	Highways, total mileages[4]	No.	..	..	..	..	..	
14	Capital expenditure on[4]	$	..	..		..	..	..
15	Motor-vehicles registered	No.	..	..			21,783	464,805
16	Total provincial revenue from licences and operation	$	..	..	..		..	
	SHIPPING—							
17	Vessels on the registry	No.	..	7,394	7,015	6,697	8,088	7,482
		ton	..	1,310,896	1,005,475	666,276	770,446	1,223,973
	Sea-Going—[5,6]							
18	Entered	ton	2,521,573	4,032,946	5,273,935	7,514,732	11,919,339	12,516,503
19	Cleared	"	2,594,460	4,071,391	5,421,261	7,028,330	10,377,847	12,400,226
20	Totals	"	5,116,033	8,104,337	10,695,196	14,543,062	22,297,186	24,916,729
	Inland International—[5,6]							
21	Entered	ton	4,055,198	2,934,503	4,098,434	5,720,575	13,286,102	14,828,454
22	Cleared	"	3,954,797	2,763,592	4,009,018	5,766,171	11,846,257	14,903,447
23	Totals	"	8,009,995	5,698,095	8,107,452	11,486,746	25,132,359	29,731,901
	Coastwise—[5]							
24	Entered	ton	..	7,664,863	12,835,774	17,927,959	34,280,669	28,567,545
25	Cleared	"	..	7,451,903	12,150,356	16,516,837	32,347,265	27,773,668
26	Totals	"	..	15,116,766	24,986,130	34,444,796	66,627,934	56,341,213
	CANALS—							
27	Passengers carried	No.	100,377	118,136	146,336	190,428	304,904	230,129
28	Freight	ton	3,955,621	2,853,230	2,902,526	5,665,259	38,030,353	9,407,021
	AIR TRANSPORTATION—							
29	Miles flown	No.	..	..		..	..	294,449
30	Passenger miles	"	..	..	..	..	..	..
31	Freight carried	lb.	..	..	..	..	..	79,850
32	Mail carried	"	..	..	..	..	..	..
	Communications—							
33	Telegraphs, Govt., miles of line[7]	No.	..	1,947	2,699	5,744	8,446	11,207
34	Telegraphs, other, miles of line	"	..	..	27,866	30,194	33,905	41,577
35	Telephones	"	..	..	..	63,192	302,759[8]	902,090
36	Telephones, employees[9]	"	..	..	..		10,425[8]	19,943
37	Radio receiving licences	"	..	..	..		..	
	Post Office—							
38	Revenue	$	803,637	1,344,970	2,515,824	3,421,192	9,146,952	26,331,119
39	Expenditure	$	994,876	1,876,658	3,161,676	3,837,376	7,954,223	24,661,262
40	Money orders issued	$	4,546,434	7,725,212	12,478,178	17,956,258	70,614,862	173,523,322
	Wholesale and Retail Trade—							
	Wholesale—							
41	Establishments	No.	..	..	..	..	..	
42	Employees	"	..	..	..	..	..	
43	Net sales	$	..	..	..	..	..	
44	Retail—Stores	No.	..	..	..	..	..	
45	Employees, full-time	"	..	..	..	..	..	
46	Net sales	$	..	..	..	..	..	..

[1] 1876. [2] 1875. [3] Duplication eliminated. [4] Fiscal years. [5] Fiscal years prior to 1941. [6] In foreign service, which includes sea-going and inland international after 1936. [7] Prior to 1941, Temiskaming and Northern Ontario Railway Commission excluded. [8] As at June 30. [9] Ex-

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1939	1941	1943	1949	1950	1951	1952	
42,280	42,637	42,441	42,346	42,978	42,979	42,956	42,953	1
4,232,022,088	3,367,702,730	3,397,488,564	3,356,600,167	3,269,633,260	3,475,808,310	3,571,693,932	3,715,208,672	2
26,396,812	20,482,296	29,779,241	57,175,840	34,883,803	31,139,092	30,995,604	30,167,145	3
74,129,694[9]	84,631,122[9]	116,808,091[13]	153,314,264[13]	142,719,431[13]	144,218,319[13]	161,260,521[13]	162,175,381[13]	4
358,549,382	367,179,095	538,291,947	778,914,565	894,397,264	958,985,751	1,088,583,789	1,172,158,665	5
321,025,588	304,373,285	403,733,542	560,597,204	831,456,446	833,726,562	977,577,062	1,057,186,304	6
1,379	1,083	1,028	1,504[r]	719	663	595	..	7
215,818,096	204,581,406	193,532,914	184,926,237	171,370,207	186,444,978	199,411,550	..	8
720,468,361	632,533,152	795,170,569	1,177,003,883	1,240,558,812	1,186,570,685	1,165,123,371	..	9
1,977,441	2,313,748	3,265,449	3,751,785	3,702,016	4,115,974	4,480,072	..	10
49,088,310	42,864,150	55,334,647	80,027,414	91,034,058	95,596,394	99,114,548	..	11
35,367,068	29,605,328	37,030,823	54,548,335	89,414,380	92,378,848	97,880,959	..	12
378,094	497,707	561,489	552,778	561,347	567,155	568,777[r]	..	13
66,250,229	62,577,241	37,237,954	24,894,307	156,223,856	154,699,553	192,810,362	..	14
1,200,668	1,439,245	1,572,784	1,511,845	2,290,628	2,600,269	2,872,420	3,155,824	15
42,231,027	79,915,560	91,139,300	87,507,351[r]	196,040,170	222,332,113	252,213,001	278,004,926	16
8,966	8,419	8,667	9,074	14,102	14,816	15,292	15,815	17
1,484,423	1,287,365	1,271,811	1,348,304	1,832,393	1,665,697	1,659,351	1,731,064	
28,064,762	31,353,871	31,452,400	26,345,562	40,088,377	42,816,949	47,508,342	52,156,098	18
26,535,387	32,044,242	33,313,400	28,504,987	44,256,743	47,340,150	52,750,461	53,023,949	19
54,600,149	63,398,113	64,765,800	54,850,549	84,345,120	90,157,099	100,258,803	105,180,047	20
17,769,690	13,421,245	..		..	..	..	..	21
18,542,037	15,008,129	..		..	..	..	..	22
36,311,727	28,429,374	..		..		..	..	23
47,134,652	45,386,457	48,107,158	40,300,778	56,037,003	56,066,997	60,802,798	56,776,504	24
47,540,555	43,183,652	46,433,320	38,668,241	52,203,784	51,615,568	55,609,082	57,876,563	25
94,675,207	88,570,109	94,540,478	78,969,019	108,240,787	107,682,565	116,411,880	114,653,067	26
126,633	62,790	100,092	72,128	81,216	64,255	93,512	104,135	27
16,189,074	23,391,077	23,453,367	21,476,194	24,373,752	27,439,076	29,325,034	31,354,139	28
7,046,276	10,969,271	12,508,390	15,293,549	37,746,986	41,368,494	48,159,722	52,125,891	29
4,073,552	26,107,750	56,723,714	103,390,464	416,389,463	499,580,633	610,929,523	706,695,531	30
2,372,467	21,253,364	16,559,611	13,853,563	37,097,767[r]	46,681,194[r]	61,693,191[r]	138,416,758	31
470,461	1,900,347	3,411,971	7,586,809	13,506,220	14,241,523	16,485,558	17,877,593	32
9,300	8,780	9,199	9,366	8,037	8,181[r]	8,714[r]	8,155	33
43,928	43,684	43,047	43,048	44,498	43,818[r]	44,866[r]	44,544	34
1,364,200	1,397,272	1,562,146	1,692,162	2,699,612	2,917,092	3,113,766[r]	3,352,366	35
23,825	17,636	20,103	20,694	42,326	45,396	47,387	48,207	36
523,100	1,223,502	1,454,717	1,728,880	2,057,799	2,177,445	2,212,435	2,306,604	37
30,416,107	35,288,220	40,383,366	48,868,762	80,618,401	84,528,655	90,454,678	104,622,208	38
36,292,604	35,456,181	38,699,674	44,741,987	77,642,621	82,639,741	91,781,466	97,973,263	39
167,749,651	145,204,787	173,565,550	236,925,920	415,703,754	479,520,987	511,915,621	576,614,652	40
13,140[10]	..	24,758	..	..	..	26,157	..	41
90,564[10]	..	117,471	..	..	..	177,998[11]	..	42
						223,791[12]	..	
3,325,210,300[10]	..	5,290,751,000	..	..	..	14,376,402,200	..	43
125,003[10]	..	137,331	..	..	..	151,626	..	44
238,683[10]	..	297,047	..	..	..	454,794[11]	..	45
						603,891[12]		
2,755,569,900[10]	2,447,658,000[13]	3,440,901,700	3,785,840,000[13]	8,427,900,000[13]	9,467,400,000[13]	10,659,279,700[p]	11,575,500,000[13,p]	46

cludes rural lines in Saskatchewan. [10] Census figures for 1930. [11] Average minimum. [12] Average maximum. [13] Estimated on intercensal survey.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item		1871	1881	1891	1901	1911	1921
	Wholesale and Retail Trade—concl.							
	Services—							
1	Establishments	No.	..	..	..	..	..	
2	Employees, full-time	"	..	..	..	..	..	
3	Receipts	$	..				..	
4	**Commercial Failures**	No.			1,861	1,341	1,332	2,451[1]
5	Liabilities	$			16,723,939	10,811,671	13,491,196	73,299,111[1]
	Foreign Trade—[2]							
6	Exports, domestic	$	57,630,024	83,944,701	88,671,738	177,431,386	274,316,553	1,189,163,701
7	Re-exports	$	9,853,244	13,375,117	8,798,631	17,077,757	15,683,657	21,264,418
8	Imports, for consumption	$	84,214,388	90,488,329	111,533,954	177,930,919	452,724,603	1,240,158,882
	Totals, Foreign Trade[r]	$	151,697,656	187,808,147	209,004,323	372,440,062	742,724,813	2,450,587,001
9	Total exports to Commonwealth	$	25,346,019	45,980,062	47,137,203	100,748,097	148,967,442	403,452,219
10	Exports to United Kingdom	$	21,733,556	42,637,219	43,243,784	92,857,525	132,156,924	312,844,871
11	Total imports from Commonwealth	$	51,317,045	45,514,323	44,337,052	46,653,228	129,467,647	266,002,688
12	Imports from United Kingdom	$	48,498,202	42,885,142	42,018,943	42,820,334	109,934,753	213,973,562
13	Exports to United States	$	29,164,358	34,038,431	37,743,430	67,983,673	104,115,823	542,322,967
14	Imports from United States	$	27,185,586	36,338,701	52,033,477	107,377,906	275,824,265	856,176,820
15	Exports to other countries	$	3,119,647	3,926,208	3,791,105	8,699,616	21,233,288	243,388,515
16	Imports from other countries	$	5,711,757	8,635,305	15,163,425	23,899,785	47,432,691	117,979,374
	EXPORTS, DOMESTIC, BY CHIEF ITEMS—							
17	Wheat	bu.	1,748,977	2,523,673	2,108,216	9,739,758	45,802,115	129,215,157
		$	1,981,917	2,593,820	1,583,084	6,871,939	45,521,134	310,952,138
18	*Wheat flour*	bbl.	306,339	439,728	295,784	1,118,700	3,049,046	5,017,032
		$	1,609,609	2,173,108	1,388,578	4,015,226	13,854,790	66,520,490
19	Oats	bu.	542,386[r]	2,926,532	260,569	8,155,063	5,431,662	14,321,048
		$	231,227	1,191,873	129,917	2,490,521	2,144,846	14,152,033
20	Barley	bu.	..	8,811,278	4,892,327	2,386,371	1,545,253	8,563,553
		$	..	6,261,383	2,929,873	1,123,055	831,195	11,469,050
21	Bacon, hams, shoulders and sides	cwt.	103,444	103,547	75,542	1,055,495	598,745	982,338
		$	1,018,918	758,334	628,469	11,778,446	8,526,432	31,492,407
22	Beef and veal	cwt.	40,876	13,728	3,098	97,105	9,744	519,994
		$	241,366	83,738	16,051	813,343	91,884	8,331,298
23	Cheese	lb.	8,271,439	49,255,523	106,202,140	195,926,397	181,895,724	133,620,340
		$	1,109,906	5,510,443	9,508,800	20,696,951	20,739,507	37,146,722
24	Planks and boards	M ft.	829,550	652,621	775,793	735,695	1,127,723	1,604,463
		$	8,355,874	7,101,532	8,626,912	9,380,505	21,509,769	71,079,295
25	*Wood-pulp*	cwt.	..	..	..	..	6,588,655	14,363,006
		$	..	..	280,619	1,937,207	5,715,532	71,552,037
26	Newsprint	cwt.	..	..	..	..	..	15,112,586
		$	..	..	..	..	3,092,437	78,922,137
27	Farm implements	$	..	31,269	252,620	1,742,946	5,911,775	12,527,373
28	Copper	lb.	6,246,000	39,604,000	10,994,498	26,345,776	55,005,342	74,175,900[r]
		$	120,121	150,412	505,196	2,659,261	5,575,033	12,748,082[r]
29	Nickel	lb.	..		5,352,043	9,537,558	34,767,523	47,018,300
		$	..		240,499	958,365	3,842,332	9,405,291
30	Lead	cwt.	80		..	656,023	31,980	111,108
		$	208	..	163	2,517,084	100,933	525,656
31	Zinc	cwt.			..	..	..	176,975
		$	..	..	..	..	..	963,962
32	Asbestos	ton	.	..	7,022	26,715	69,829	191,299[r]
		$		..	513,909	864,573	2,076,477	12,633,389[r]
	EXPORTS, DOMESTIC—							
33	Vegetable products (except chemicals, fibres and wood)	$	..	..	13,742,557	25,541,567	84,368,425	482,140,444
34	Animals and their products (except chemicals and fibres)	$	..	..	36,399,140	68,465,332	69,693,263	188,359,937
35	Fibres, textiles and textile products	$	..	..	872,628	1,880,539	1,818,931	18,783,884
36	Wood, wood products and paper	$	..	..	25,351,085	33,099,915	56,334,695	284,561,478
37	Iron and its products	$	..	..	556,527	3,778,897	9,884,346	76,500,741
38	Non-ferrous metals and their products	$	..	..	1,618,955	33,395,096	34,000,996	45,939,377
39	Non-metallic minerals and their products (except chemicals)	$	..	..	3,988,584	7,356,444	10,038,493	40,345,345
40	Chemicals and allied products	$	..	..	851,211	791,855	3,088,840	20,142,826
41	All other commodities	$	..	..	5,291,051	3,121,741	5,088,564	32,389,669
	Totals, Exports, Domestic	$	57,630,024	83,944,701	88,671,738	177,431,386	274,316,553	1,189,163,701

[1] Census figures for 1930.

[2] Figures include 5,542 hotels with 46,556 average minimum and 64,062 average

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1939	1941	1943	1949	1950	1951	1952	
42,223[1]	..	49,271			..	58,749[2]	..	1
55,257[1]	..	62,781	..	..	..	143,892[2,3]	..	2
						190,159[2,4]	..	
249,455,900[1]	..	254,678,000	..	..	..	..	..	3
2,563[5]	1,299	882	186	596	717	797	843	4
52,987,554[5]	11,635,000	6,959,000	3,634,000	17,279,000	15,392,000	19,048,000	19,823,000	5
587,653,440	924,926,104	1,621,003,175	2,971,475,277	2,992,960,978	3,118,386,551[r]	3,914,460,376	4,301,080,679	6
11,907,020	10,995,609	19,451,366	29,877,002	29,491,856	38,686,122	48,923,939	54,878,985	7
628,098,386	751,055,534	1,448,791,650	1,735,076,890	2,761,207,241	3,174,253,138	4,084,856,478	4,030,467,653	8
1,227,658,846	1,686,977,247	3,089,246,191	4,736,429,169	5,783,660,075	6,331,325,811	8,048,240,793	8,386,427,317	
219,781,406	430,806,546	878,640,907	1,401,661,623	1,015,022,448	655,089,381	872,407,020	1,007,532,782	9
170,597,455	328,099,242	658,228,354	1,032,646,964	704,955,726	469,910,011	631,460,954	745,845,393	10
151,999,922	188,900,276	359,942,070	238,631,372	494,228,816	645,624,296	727,088,882	544,461,565	11
109,468,081	114,007,409	219,418,957	134,965,117	307,449,800	404,213,449	420,984,515	359,757,123	12
240,196,849	380,392,047	599,713,463	1,149,232,444	1,503,458,711	2,020,987,630	2,297,674,594	2,306,954,938	13
393,775,289	496,898,466	1,004,498,152	1,423,672,486	1,951,860,065	2,130,475,929	2,812,927,298	2,976,962,332	14
127,675,185	113,727,511	142,648,805	420,581,210	474,479,819	442,309,540	744,378,762	986,592,959	15
82,323,175	65,256,792	84,351,428	72,773,032	315,118,360	398,152,913	544,840,298	509,053,756	16
194,825,612	162,904,586	196,646,340	219,249,942	210,384,483	162,993,750	237,060,505	336,023,883	17
117,871,254	109,050,542	161,856,075	234,457,747	435,158,365	325,613,570	441,042,753	621,292,402	
5,697,224	5,342,172	11,439,191	12,896,995	9,698,024	10,095,002	12,078,671	13,246,269	18
20,207,319	16,378,301	44,807,353	66,273,692	97,693,325	93,838,590	113,854,397	116,054,531	
11,177,072	12,115,598	7,691,664	74,463,476	22,628,271	18,079,576	59,272,650	80,938,416	19
3,767,918	4,142,375	3,295,148	42,294,389	18,532,774	16,571,166	53,898,508	68,239,757	
24,259,755	16,794,866	3,208,764	44,903,783	17,306,100	15,052,045	43,906,154	102,713,061	20
9,923,520	7,881,541	1,958,708	32,434,955	25,471,783	23,442,235	58,822,218	145,683,686	
127,752	1,878,251	4,646,140	5,629,656	670,866	785,267	61,325	35,393	21
2,035,382	32,656,049	77,494,498	116,121,532	24,175,917	28,306,976	3,649,744	2,502,016	
36,893	38,732	62,345	97,001	1,001,802	840,110	934,203	668,463	22
429,938	518,097	996,057	2,002,922	30,629,393	34,219,275	50,965,329	30,322,806	
84,788,400	90,944,800	92,331,000	129,741,000	52,694,800	63,109,600	30,653,200	2,094,900	23
10,594,917	12,248,650	13,554,911	26,811,113	16,256,818	16,551,508	10,231,725	879,546	
937,733	2,113,160	2,282,139	1,726,476	2,180,697	3,575,322	3,435,510	3,328,563	24
20,116,020	48,829,466	74,205,325	74,182,168	160,420,017	290,846,700	312,198,092	295,948,736	
12,450,741	14,110,308	28,234,485	31,129,131	30,974,122	36,922,864	44,866,161	38,811,599	25
30,056,643	31,000,602	85,897,736	100,012,775	170,675,310	208,555,549	365,132,884	291,863,498	
40,164,815	53,174,453	65,240,248	56,205,769	94,093,031	98,761,380	102,241,224	106,548,605	26
107,233,112	115,687,288	154,356,543	144,707,065	433,881,585	485,746,314	536,372,498	591,790,209	
2,888,757	6,974,684	30,972,047	20,228,341	92,527,276	87,811,385	106,438,161	95,692,148	27
196,789,100[r]	549,919,700[r]	430,087,100[r]	259,901,100[r]	397,577,600[r]	376,077,400[r]	304,193,100[r]	336,950,200	28
17,064,860[r]	52,396,086[r]	40,951,367[r]	24,025,941[r]	84,052,256[r]	82,990,177[r]	81,691,243[r]	100,805,833	
63,528,600[r]	234,781,300[r]	275,190,300	271,094,400	254,283,500	243,302,300	262,365,600	284,044,500	29
14,181,565[r]	57,933,511[r]	67,679,708	68,346,346	92,323,686	105,299,743	136,689,457	150,981,762	
2,208,475	3,696,759	3,818,025	3,201,655	2,706,620	2,724,762	2,536,110	3,178,412	30
4,659,776	9,850,076	13,525,301	9,647,410	41,884,902	38,104,940	45,290,081	49,675,775	
2,391,111	3,571,682	3,987,516	4,854,710	5,620,307	5,630,521	6,104,710	7,044,887	31
5,564,529	9,922,232	12,278,377	16,516,365	55,699,669	58,709,957	83,668,834	96,283,451	
159,438[r]	346,018[r]	453,909[r]	442,999[r]	534,990[r]	829,979[r]	942,314[r]	902,058	32
5,174,643[r]	15,365,288[r]	19,410,596[r]	22,381,471[r]	36,933,742[r]	62,751,504[r]	80,332,831[r]	86,509,548	
209,760,786	220,118,056	285,708,739	483,756,894	773,006,888	636,897,823	894,209,730	1,183,496,418	33
70,938,351	131,803,706	201,730,555	289,566,022	338,421,481	365,775,038	348,033,470	237,941,527	34
5,394,084	14,427,669	30,819,633	30,620,390	25,217,322	29,573,450	36,858,344	27,696,811	35
185,493,491	242,541,043	387,113,232	391,069,658	875,317,680	1,112,945,061	1,399,076,131	1,366,787,043	36
19,086,492	63,102,432	239,900,848	716,644,883	292,864,223	251,108,538	342,298,703	406,946,039	37
56,158,939	182,890,103	244,012,336	332,704,960	426,607,610	457,262,306	569,870,193	706,732,321	38
14,976,873	29,332,099	45,172,085	62,191,606	73,710,209	103,654,760	131,529,446	143,473,767	39
10,848,946	24,263,342	58,676,338	86,390,600	70,697,937	100,525,482	131,689,729	124,565,264	40
14,995,478	16,447,654	127,869,409	578,530,264	117,117,628	60,644,093	60,894,630	103,441,489	41
587,653,440	924,926,104	1,621,003,175	2,971,475,277	2,992,960,978	3,118,386,551	3,914,460,376	4,301,080,679	

maximum full-time employees and with receipts of $348,401,100. [2] Average minimum. [3] Average maximum. [4] Includes Newfoundland. [5] Fiscal years prior to 1931.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item		1871	1881	1891	1901	1911	1921
	Foreign Trade—*concluded*							
	IMPORTS FOR CONSUMPTION—							
1	Vegetable products (except chemicals, fibres and wood)...	$	..	..	24,212,140	38,036,146	79,214,041	259,431,110
2	Animals and their products (except chemicals and fibres).	$	..		8,080,862	14,022,896	30,671,908	61,722,390
3	Fibres, textiles and textile products	$	..	..	28,670,141	37,284,752	87,916,282	243,608,342
4	Wood, wood products and paper	$		..	5,203,490	8,196,901	26,851,936	57,449,384
5	Iron and its products	$	..	..	15,142,615	29,955,936	91,968,180	245,625,703
6	Non-ferrous metals and their products	$	..	..	3,810,626	7,167,318	27,579,572	55,651,319
7	Non-metallic minerals and their products (except chemicals)..	$	..	..	14,139,024	21,255,403	53,430,475	206,095,113
8	Chemicals and allied products.	$	..	..	3,697,810	5,684,999	12,471,730	37,887,449
9	All other commodities	$	..	..	8,577,246	16,326,568	42,620,479	72,688,072
	Totals, Imports	$	84,214,388	90,488,329	111,533,954	177,930,919	452,724,603	1,240,158,882
	Prices—							
10	Wholesale indexes (1935-39=100)		81·3	72·4	67·1	63·7	81·1	143·4
11	Consumer price index (1949=100)		..	..	..	..		80·9
	Federal Finance—							
12	Customs revenue	$	11,841,105	18,406,092	23,305,218	28,293,930	71,838,089	163,266,804
13	Excise revenue	$	4,295,945	5,343,022	6,914,850	10,318,266	16,869,837	37,118,367
14	Income tax	$	..		..	..		46,381,824
15	Sales tax (*net*)	$	..	..	..	..	..	38,114,539
16	Total receipts from taxation	$	16,320,369	23,942,139	30,220,068	38,612,196	88,707,926	368,770,498
17	Per capita receipts from taxes..	$	4·50	5·63	6·32	7·28	12·69	43·10
18	Total revenue	$	19,335,561	29,635,298	38,579,311	52,514,701	117,780,409	436,292,185
19	Revenue per capita	$	5·34	6·96	8·07	9·91	16·87	50·99
20	Total expenditure	$	19,293,478	33,796,643	40,793,208	57,982,866	122,861,250	528,302,513
21	Expenditure per capita	$	5·32	7·94	8·54	10·94	17·58	61·75
22	Gross debt	$	115,492,683	199,861,537	289,899,230	354,732,433	474,941,487	2,902,482,117
23	Assets	$	37,786,165	44,465,757	52,090,199	86,252,429	134,899,435	561,603,133[1]
24	Net debt	$	77,706,518	155,395,780	237,809,031	268,480,004	340,042,052	2,340,878,984
	Provincial Finance—							
25	Gross general revenue	$	5,518,946	7,858,698	10,693,815	14,074,991	40,706,948	102,030,458
26	Gross general expenditure	$	4,935,008	8,119,701	11,628,353	14,146,059	38,144,511	102,569,515
	National Accounts—							
27	National income	$'000,000	..	..	..	..	..	
	Note Circulation—							
28	Chartered bank notes	$	20,914,637	28,516,692	33,061,042	50,601,205	89,982,223	194,621,710
29	Bank of Canada and other notes[4]	$	7,244,341	14,539,795	16,176,316	27,898,509	99,308,945	271,531,162
	Chartered Banks—							
30	Capital, paid-up	$	37,095,340	59,534,977	60,700,697	67,035,615	103,009,256	129,096,339
31	Assets	$	125,273,631	200,613,879	269,307,032	531,829,324	1,303,131,260	2,841,782,079
32	Liabilities to the public	$	80,250,974	127,176,249	187,332,325	420,003,743	1,097,661,393	2,556,454,190
33	Deposits payable on demand	$	..	..	..	95,169,631	304,801,755	551,914,643
34	Deposits payable after notice	$	..	..	..	221,624,664	568,976,209	1,289,347,063
35	Totals, deposits[4,5]	$	56,287,391	94,346,481	148,396,968	349,573,327	980,433,788	2,264,586,736
36	Cheque payments	$'000	..	..	..	..	..	27,157,474[7]
	Savings Banks—							
37	Deposits in Post Office	$	2,497,260	6,208,227	21,738,648	39,950,813	43,330,579	29,010,619
38	Deposits in Government banks.	$	2,072,037	9,628,445	17,661,378	16,098,146	14,673,752	10,150,189
39	Deposits in special banks	$	5,766,712	7,685,888	10,982,232	19,125,097	34,770,386	58,576,775
	Loan Companies (Dominion)—							
40	Assets	$	8,392,464	73,906,638	125,041,146	158,523,307	389,701,988	96,698,810
41	Liabilities	$	8,392,958	71,965,017	123,915,704	158,523,307	389,701,988	95,281,122
	Loan Companies (Provincial)—							
42	Assets	$	..				..	86,144,153[8]
43	Liabilities	$					..	87,385,807[8]

[1] Active assets only. [2] Fiscal year ended nearest Dec. 31 of the year stated. [3] Includes Yukon Territory for the first time. [4] As at June 30 from 1871 to 1901. Annual averages of month-end figures from 1911 to 1951. [5] In January 1950, the chartered banks' liability for such of their notes as then remained

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1939	1941	1943	1949	1950	1951	1952	
134,433,268	127,835,146	171,835,408	176,446,946	377,392,843	484,475,331	542,641,169	489,192,378	1
28,629,914	32,757,666	34,845,584	36,476,082	74,096,446	86,967,642	125,562,023	85,539,869	2
90,151,516	100,866,078	161,138,512	195,283,341	333,031,836	364,508,831	483,520,382	359,440,017	3
34,923,391	33,703,149	36,739,071	40,284,489	86,326,584	100,365,624	137,046,510	134,553,621	4
116,209,368	183,159,650	431,622,365	420,190,144	891,551,452	980,229,068	1,332,251,363	1,406,626,898	5
38,666,648	42,108,374	94,758,269	115,566,684	174,691,723	215,526,566	290,848,483	296,875,244	6
106,087,909	132,823,892	189,953,788	250,943,166	535,328,513	611,741,427	684,535,336	641,884,695	7
31,336,994	43,705,905	65,382,196	70,548,287	130,660,078	158,221,055	191,812,947	187,713,077	8
47,659,378	54,095,674	262,516,457	429,337,751	158,127,766	172,217,594	296,638,265	428,641,854	9
628,098,386	751,055,534	1,448,791,650	1,735,076,890	2,761,207,241	3,174,253,138	4,084,856,478	4,030,467,653	
94·0	99·2	116·4	127·9[r]	198·3	211·2	240·2	226·0	10
67·9	63·2	69·6	74·2	100·0	102·9	113·7	116·5	11
131,208,955	78,751,111	130,757,011	118,962,839	222,975,471	225,877,683	295,721,750	346,364,563	12
57,746,808	51,313,658	88,607,559	138,720,723	204,651,969	220,564,504	241,046,174	217,939,983	13
71,048,022	142,026,138	248,143,022	910,188,672	1,297,999,404	1,272,650,191	1,513,135,510	2,161,373,408	14
20,783,944	122,139,067	179,701,224	250,478,438	377,302,763	403,437,159	460,120,405	573,470,562	15
296,276,396	435,706,794	778,175,450	2,066,719,961	2,436,142,276	2,323,117,079	2,785,349,899	3,657,775,082	16
29·02	39·12	68·37	177·34	189·98	172·76	203·13	261·10	17
356,160,876	502,171,354	872,169,645	2,249,496,177	2,771,395,075	2,580,140,615	3,112,535,948	3,980,908,652	18
35·04	45·03	76·63	193·02	216·13	191·87	226·99	284·17	19
440,008,855	553,063,098	1,249,601,446	4,387,124,117	2,175,892,334	2,448,615,662	2,901,241,698	3,732,875,250	20
43·26	49·60	109·80	376·45	169·68	182·09	211·58	266·46	21
2,610,265,699	3,638,320,816	5,018,928,037	9,228,252,912	16,950,403,796	16,750,756,246	16,923,307,028	17,521,625,531	22
348,653,762[1]	485,761,502[1]	1,370,236,588[1]	3,045,402,911[1]	5,174,269,644[1]	5,106,147,047[1]	5,489,992,080[1]	6,336,343,985[1]	23
2,261,611,937	3,152,559,314	3,648,691,449	6,182,849,101	11,776,134,152	11,644,609,199	11,433,314,948	11,185,281,546	24
179,143,480	296,836,927	404,791,000[2]	435,771,000[2]	998,127,000[2]	1,154,499,000[2,3]	1,260,943,000[2]	..	25
190,754,202	289,467,574	349,818,000[2]	378,790,000[2]	935,814,000[2]	1,211,288,000[2,3]	1,344,456,000[2]	..	26
3,333[r]	4,373	6,563[r]	9,043	13,194	14,550	17,128[r]	18,135	27
128,881,241	88,820,636	78,761,049	49,082,172	14,731,992	[5]	[5]	[5]	28
153,079,362	184,904,919	406,433,409	773,426,716	1,267,520,386	1,293,238,910	1,360,679,422	1,447,939,213	29
144,674,853	145,500,000	145,500,000	145,500,000	145,500,000	145,500,000	146,502,115	148,522,618	30
3,066,018,472	3,591,564,586	4,008,381,256	5,148,458,722	8,657,764,277	9,015,109,852	9,384,800,263[r]	9,760,480,522	31
2,741,554,219	3,298,351,099	3,711,870,680	4,849,222,532	8,310,215,001	8,660,173,804	9,019,780,755	9,384,111,788	32
578,604,394	741,733,241	1,088,198,370	1,619,407,736	2,353,033,907	2,562,813,591	2,711,524,845	2,931,558,298	33
1,437,976,832	1,699,224,304	1,616,129,007	1,864,177,700	4,333,888,999	4,547,880,387	4,592,929,318	4,811,471,906	34
2,422,834,828	3,060,859,111	3,464,781,844	4,592,336,705	7,921,694,763	8,220,886,332	8,464,510,837	8,899,236,252	35
31,586,468	31,617,352	39,242,957	53,796,715	87,554,363	100,635,459	112,184,633	125,196,894	36
24,750,227	23,045,576	22,176,633	24,373,991	37,741,389	38,754,634	37,661,921	38,031,232	37
69,820,422	81,566,754	76,391,775	84,023,772	184,250,615	192,567,275	193,982,871	200,342,385	38 39
147,094,183	136,358,786	130,795,391	126,943,566	179,795,977	190,733,017	203,103,850	206,973,153	40
146,046,087	136,351,602	130,787,116	126,918,948	144,414,068	152,825,544	165,768,886	175,107,452	41
65,728,238	58,526,904	58,220,073	59,081,710	80,207,903	89,504,876	88,991,635	96,333,209	42
66,387,987	58,533,671	58,220,073	59,081,710	51,546,444	59,893,359	63,699,805	70,406,200	43

outstanding was transferred to the Bank of Canada. [5] Includes deposits of Federal and Provincial Governments and also deposits elsewhere than in Canada from 1901. [7] 1924. [8] 1922.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—concluded

	Item	1871	1881	1891	1901	1911	1921
	Licensees under the Small Loans Act—						
	SMALL LOANS COMPANIES—						
1	Assets $	..			..		..
2	Liabilities $	..		..	..	..	..
	MONEYLENDERS—						
3	Assets $		..	..	..	..	..
4	Liabilities $	..	..	..	..	..	..
	Trust Companies (Federal)—						
	ASSETS—						
5	Company funds $	..	..			..	10,237,930
6	Guaranteed funds $	..	..		..		8,774,185
	LIABILITIES—						
7	Company funds $	..	..	..	..		9,907,331
8	Guaranteed funds $		..	..	..		8,549,642
9	ESTATES, TRUST AND AGENCY FUNDS $	..	..	..	..	..	79,252,639
	Trust Companies (Provincial)—[1]						
	ASSETS—						
10	Company funds (par value) $	..	..	..	..	..	31,418,403
11	Guaranteed funds (par value) $	..	..	..	..	..	32,885,302
12	ESTATES, TRUST AND AGENCY FUNDS $	..				..	629,953,917
	Dominion Fire Insurance—						
13	Amounts at risk, Dec. 31 $	228,453,784	462,210,968	759,602,191	1,038,687,619	2,279,868,346	6,020,513,832
14	Premium income for each year. $	2,321,716	3,827,116	6,168,716	9,650,348	20,575,255	47,312,564
15	Claims paid during each year.. $	1,549,199	3,169,824	3,905,697	6,774,956	10,936,948	27,572,560
	Provincial Fire Insurance—						
16	Amounts at risk, Dec. 31 $	..	..	..	..	..	1,269,764,435
17	Premium income for each year $	..	..	..	..	..	5,545,549
18	Claims paid during each year.. $	..	..	..	..	..	3,544,820
	Dominion Life Insurance—[2]						
19	Amounts in force, Dec. 31 $	45,825,935	103,290,932	261,475,229	463,769,034	950,220,771	2,934,843,848
20	Premium income for each year. $	1,852,974	3,094,689	8,417,702	15,189,854	31,619,626	98,864,371
21	Claims paid during each year.. $	..	..	..	6,845,941	11,051,679	23,997,262
	Provincial Life Insurance—						
22	Amounts in force, Dec. 31 $	..	..	..		..	222,871,178
23	Premium income for each year. $	..	..				4,389,008
24	Claims paid during each year.. $	..					2,812,077

[1] Compiled from data supplied voluntarily to the Superintendent of Insurance by provincial companies and estimated to cover about 90 p.c. of all provincial business. The figures include all the large and most of the small provincial companies. [2] Excludes fraternal insurance.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—concluded

1931	1939	1941	1943	1949	1950	1951	1952	
827,373	5,466,679	7,918,926	10,596,366	48,921,948	61,207,841	73,980,068	87,597,097	1
823,120	5,424,047	7,918,926	10,596,366	48,921,947	61,207,840	73,980,068	87,597,097	2
..	..	11,351,467	11,372,306	24,002,353	27,321,717	30,570,466	46,125,804	3
..	..	11,351,467	11,372,306	24,002,357	27,321,718	30,570,466	46,125,804	4
15,459,347	20,176,418	20,596,781	20,569,787	26,244,737	27,988,873	28,446,331 r	28,731,666	5
25,718,219	36,001,000	38,570,855	41,504,191	90,111,500	93,082,706	93,565,917 r	107,429,793	6
15,066,431	19,351,839	20,086,776	20,168,350	25,892,736	27,568,241	26,658,321 r	28,583,274	7
25,718,221	36,001,000	38,570,855	41,504,191	90,111,501	93,082,707	93,565,917 r	107,429,793	8
215,698,469	242,369,850	268,596,524	313,457,551	560,080,611	494,636,746	543,983,754	588,550,279	9
66,338,148	61,292,364	58,165,471	60,385,651	68,188,785	72,736,140	74,399,404	75,097,721	10
125,829,165	114,606,960	108,912,208	112,006,133	213,671,444	251,832,240	258,413,136	265,257,221	11
1,961,948,175	2,422,219,901	2,418,950,841	2,528,566,545	2,827,988,797	3,126,058,749	3,282,558,573	3,383,650,088	12
9,544,641,293	10,200,346,551	11,386,819,286	13,386,782,873	25,970,407,358	28,957,395,702	33,490,653,184	37,317,499,723	13
50,342,669	40,984,276	49,305,539	47,153,094	103,809,769	115,648,449	134,496,218	139,777,732	14
29,938,409	15,738,902	17,814,322	22,181,244	46,548,822	58,524,685	52,086,541	61,124,918	15
1,341,184,333	1,284,998,454	1,120,181,968	1,273,362,246	2,378,050,919	2,519,157,284	2,887,564,984	2,869,068,710	16
7,185,066	5,750,302	3,992,765	4,552,312	10,181,704	10,519,555	11,614,247	11,695,251	17
4,985,605	3,170,597	2,237,832	2,138,273	5,749,817	6,228,632	6,174,914	5,767,009	18
6,622,267,793	6,776,262,587	7,348,550,742	8,534,093,718	14,408,761,850	15,745,836,067	17,235,583,302	19,090,630,039 p	19
225,100,571	198,042,144	203,459,238	228,700,002	349,813,007	370,091,234	394,019,379	422,712,052 p	20
56,579,358	73,936,661	75,082,008	81,900,064	117,933,354	122,310,999 r	128,489,084	130,006,966 p	21
202,094,301	134,554,434	164,451,218	226,312,273	600,994,643	709,395,888	708,733,573	937,333,486 p	22
5,178,615	3,491,402	3,988,952	5,481,130	13,970,109	17,241,427	16,806,502	22,638,816 p	23
2,603,453	3,178,604	2,583,958	2,937,710	5,053,498	6,860,882	6,727,241	8,243,401 p	24

APPENDIX I

The information normally appearing in Subsections 1 and 2 of the Federal Government Section of Chapter II on Constitution and Government (*see* p. 45) has been taken into this volume as Appendix I in order to permit the inclusion of information becoming available following the General Election of Aug. 10, 1953.

Section 1.—The Federal Government

Subsection 1.—The Executive

The Crown.—The British North America Act provides that "the Executive Government and authority of and over Canada is vested in the Queen" The functions of the Crown, which are substantially the same as those of the Queen in relation to the Government of the United Kingdom, are discharged by the Governor General in accordance with established principles of responsible government. The practical executive functions of government are exercised by the Cabinet.

Apart from her constitutional position in relation to the various governments of the Commonwealth countries, the Queen is Head of the Commonwealth and symbolizes the association of the member countries. Until 1953, the title of the Queen was the same throughout the Commonwealth. Constitutional developments put the title somewhat out of accord with the facts of the position and, in December 1952, it was decided by the Prime Ministers of the Commonwealth countries meeting at London to establish new forms of title for each country. The title for Canada was approved by Parliament and established by a Royal Proclamation on May 29, 1953. The title of the Queen, so far as Canada is concerned, now is:—

> "Elizabeth the Second, by the grace of God of the United Kingdom, Canada and her other realms and territories Queen, Head of the Commonwealth, Defender of the Faith"

The Governor General.—The Governor General, appointed by the Queen on the advice of the Prime Minister of Canada, traditionally serves for a term of five years. He exercises the executive authority of the Queen in relation to the Government of Canada, under the Letters Patent constituting the Office of Governor General and the provisions of the British North America Acts, 1867 to 1952. Acting under the recommendations of his responsible advisers, he summons, prorogues and dissolves Parliament and assents to Bills and exercises other executive functions.

1.—Governors General of Canada since Confederation

Name	Date of Appointment	Date of Assumption of Office
Viscount Monck, G.C.M.G.	June 1, 1867	July 1, 1867
Lord Lisgar, G.C.M.G.	Dec. 29, 1868	Feb. 2, 1869
The Earl of Dufferin, K.P., K.C.B., G.C.M.G.	May 22, 1872	June 25, 1872
The Marquis of Lorne, K.T., G.C.M.G.	Oct. 5, 1878	Nov. 25, 1878
The Marquis of Lansdowne, G.C.M.G.	Aug. 18, 1883	Oct. 23, 1883
Lord Stanley of Preston, G.C.B.	May 1, 1888	June 11, 1888
The Earl of Aberdeen, K.T., G.C.M.G.	May 22, 1893	Sept. 18, 1893
The Earl of Minto, G.C.M.G.	July 30, 1898	Nov. 12, 1898
Earl Grey, G.C.M.G.	Sept. 26, 1904	Dec. 10, 1904
Field Marshal H.R.H. The Duke of Connaught, K.G.	Mar. 21, 1911	Oct. 13, 1911
The Duke of Devonshire, K.G., G.C.M.G., G.C.V.O.	Aug. 19, 1916	Nov. 11, 1916
General The Lord Byng of Vimy, G.C.B., G.C.M.G., M.V.O.	Aug. 2, 1921	Aug. 11, 1921
Viscount Willingdon of Ratton, G.C.S.I., G.C.I.E., G.B.E.	Aug. 5, 1926	Oct. 2, 1926
The Earl of Bessborough, G.C.M.G.	Feb. 9, 1931	Apr. 4, 1931
Lord Tweedsmuir of Elsfield, G.C.M.G., G.C.V.O., C.H.	Aug. 10, 1935	Nov. 2, 1935
Major-General The Earl of Athlone, K.G., P.C., G.C.B., G.C.M.G., G.C.V.O., D.S.O.	Apr. 3, 1940	June 21, 1940
Field Marshal Viscount Alexander of Tunis, K.G., G.C.B., G.C.M.G., C.S.I., D.S.O., M.C., A.D.C.	Aug. 1, 1945	Apr. 12, 1946
The Right Honourable Vincent Massey, C.H.	Jan. 24, 1952	Feb. 28, 1952

The Cabinet.—The Cabinet is a committee of the Queen's Privy Council for Canada and is responsible to Parliament. By convention, the members of the Cabinet are members of either the House of Commons or the Senate. Normally, most of the Cabinet members have seats in the House of Commons; at Dec. 31, 1953, the Government Leader in the Senate was the only member who was not a member of the House of Commons.

The Cabinet initiates nearly all public Bills placed before Parliament and, following established precedent, resigns office when it becomes evident that it no longer holds the confidence of the representatives of the people. Its members are chosen by the Prime Minister and each generally assumes charge of one of the various departments of government, although a Minister may hold more than one portfolio at the same time, or may be without portfolio.

2.—Prime Ministers since Confederation

Ministry	Prime Minister	Length of Administration
1	Rt. Hon. Sir John Alexander Macdonald	July 1, 1867 - Nov. 5, 1873
2	Hon. Alexander Mackenzie	Nov. 7, 1873 - Oct. 16, 1878
3	Rt. Hon. Sir John Alexander Macdonald	Oct. 17, 1878 - June 6, 1891
4	Hon. Sir John Joseph Caldwell Abbott	June 16, 1891 - Nov. 24, 1892
5	Rt. Hon. Sir John Sparrow David Thompson	Dec. 5, 1892 - Dec. 12, 1894
6	Hon. Sir Mackenzie Bowell	Dec. 21, 1894 - Apr. 27, 1896
7	Hon. Sir Charles Tupper	May 1, 1896 - July 8, 1896
8	Rt. Hon. Sir Wilfrid Laurier	July 11, 1896 - Oct. 6, 1911
9	Rt. Hon. Sir Robert Laird Borden	Oct. 10, 1911 - Oct. 12, 1917 (Conservative Administration)
10	Rt. Hon. Sir Robert Laird Borden	Oct. 12, 1917 - July 10, 1920 (Unionist Administration)
11	Rt. Hon. Arthur Meighen	July 10, 1920 - Dec. 29, 1921 (Unionist—"National Liberal and Conservative Party")
12	Rt. Hon. William Lyon Mackenzie King	Dec. 29, 1921 - June 28, 1926
13	Rt. Hon. Arthur Meighen	June 29, 1926 - Sept. 25, 1926
14	Rt. Hon. William Lyon Mackenzie King	Sept. 25, 1926 - Aug. 6, 1930
15	Rt. Hon. Richard Bedford Bennett	Aug. 7, 1930 - Oct. 23, 1935
16	Rt. Hon. William Lyon Mackenzie King	Oct. 23, 1935 - Nov. 15, 1948
17	Rt. Hon. Louis Stephen St. Laurent	Nov. 15, 1948 - ...

3.—Members of the Seventeenth Ministry, as at Dec. 31, 1953

(According to precedence of Ministers)

NOTE.—A complete list of the members of Federal Ministries from Confederation to 1913 appears in the 1912 Year Book, pp. 422-429. Later Ministries will be found in subsequent editions of the Year Book.

Office	Occupant	Date of First Appointment[1]	Date of Appointment to Present Portfolio
Prime Minister and President of the Queen's Privy Council for Canada	Rt. Hon. LOUIS STEPHEN ST. LAURENT	Dec. 10, 1941	Nov. 15, 1948
Minister of Trade and Commerce and Minister of Defence Production	Rt. Hon. C. D. HOWE	Oct. 23, 1935	Jan. 19, 1948 Mar. 22, 1951
Minister of Agriculture	Rt. Hon. J. G. GARDINER	Oct. 28, 1935	Oct. 28, 1935
Minister of National Defence	Hon. BROOKE CLAXTON	Oct. 13, 1944	Dec. 12, 1946
Minister of Transport	Hon. LIONEL CHEVRIER	Apr. 18, 1945	Apr. 18, 1945
Minister of National Health and Welfare	Hon. PAUL MARTIN	Apr. 18, 1945	Dec. 12, 1946
Minister of Finance and Receiver General	Hon. D. C. ABBOTT	Apr. 18, 1945	Dec. 10, 1946
Minister of National Revenue	Hon. J. J. MCCANN	Apr. 18, 1945	Apr. 18, 1945
Minister of Labour	Hon. M. F. GREGG	Jan. 19, 1948	Aug. 7, 1950
Secretary of State for External Affairs	Hon. L. B. PEARSON	Sept. 10, 1948	Sept. 10, 1948
Minister of Justice and Attorney General	Hon. S. S. GARSON	Nov. 15, 1948	Nov. 15, 1948
Minister of Public Works	Hon. ROBERT H. WINTERS	Nov. 15, 1948	Sept. 17, 1953
Minister of Veterans Affairs	Hon. HUGUES LAPOINTE	Aug. 24, 1949	Aug. 7, 1950
Minister of Citizenship and Immigration	Hon. W. E. HARRIS	Jan. 18, 1950	Jan. 18, 1950
Minister of Mines and Technical Surveys	Hon. GEORGE PRUDHAM	Dec. 13, 1950	Dec. 13, 1950
Postmaster General	Hon. ALCIDE CÔTÉ	Feb. 13, 1952	Feb. 13, 1952
Minister of Fisheries	*Hon. JAMES SINCLAIR*	*Oct. 15, 1952*	*Sept. 17, 1953*
Solicitor General and Associate Minister of National Defence	Hon. RALPH O. CAMPNEY	Oct. 15, 1952	Oct. 15, 1952 Feb. 12, 1953
Leader of the Government in the Senate	Hon. WILLIAM R. MACDONALD	May 12, 1953	May 12, 1953
Secretary of State	Hon. JOHN W. PICKERSGILL	June 12, 1953	June 12, 1953
Minister of Northern Affairs and National Resources[2]	Hon. JEAN LESAGE	Sept. 17, 1953	Sept. 17, 1953

[1] Appointee was not necessarily sworn in on date given.

[2] Name of Office changed from Resources and Development on Dec. 16, 1953.

Administrative duties in the various departments of government became so burdensome during World War II that Parliamentary Assistants were appointed to assist six Cabinet Ministers with their parliamentary duties. The practice was extended after the War and at Dec. 31, 1953, there were 12 Parliamentary Assistants, as follows:—

To Prime Minister	W. S. WEIR
To Minister of Agriculture	ROBERT MCCUBBIN
To Minister of Fisheries	J. WATSON MACNAUGHT
To Minister of Veterans Affairs	C. E. BENNETT
To Minister of National Defence	J. A. BLANCHETTE
To Minister of Transport	L. LANGLOIS
To Postmaster General	T. A. M. KIRK
To Minister of Finance	W. M. BENIDICKSON
To Minister of National Health and Welfare	F. G. ROBERTSON
To Minister of Defence Production	JOHN H. DICKEY
To Secretary of State for External Affairs	R. PINARD
To Minister of Public Works	M. BOURGET

The Privy Council.—The Queen's Privy Council for Canada is composed of about seventy members who are sworn of the Council by the Governor General, on the advice of the Prime Minister, and who retain their membership for life. The Council consists, chiefly, of present and former Ministers of the Crown. It does

not meet as a functioning body and its constitutional responsibilities as adviser to the Crown in respect to Canada are performed exclusively by the Ministers who constitute the Cabinet of the day.

4.—Members of the Queen's Privy Council for Canada, According to Seniority Therein, as at Dec. 31, 1953

NOTE.—In this list the prefix "The Rt. Hon." indicates membership in the United Kingdom Privy Council. Clerk of the Privy Council and Secretary to the Cabinet, R. B. BRYCE; Assistant Clerk of the Privy Council, A. M. HILL.

Member[1]	Date When Sworn In	Member[1]	Date When Sworn In
The Rt. Hon. Sir THOMAS WHITE	Oct. 10, 1911	The Rt. Hon. LOUIS STEPHEN ST. LAURENT[3]	Dec. 10, 1941
The Rt. Hon. ARTHUR MEIGHEN	Oct. 2, 1915	The Rt. Hon. Sir WINSTON LEONARD SPENCER CHURCHILL	Dec. 29, 1941
The Hon. ESIOFF LEON PATENAUDE	Oct. 6, 1915	The Hon. ALPHONSE FOURNIER	Oct. 7, 1942
The Hon. ALBERT SEVIGNY	Jan. 8, 1917	The Hon. ERNEST BERTRAND	Oct. 7, 1942
The Hon. JAMES ALEXANDER CALDER	Oct. 12, 1917	The Hon. LEO RICHER LAFLECHE	Oct. 7, 1942
The Hon. SYDNEY CHILTON MEWBURN	Oct. 12, 1917	The Hon. BROOKE CLAXTON[2]	Oct. 13, 1944
The Hon. THOMAS ALEXANDER CRERAR	Oct. 12, 1917	The Hon. ANDREW GEORGE LATTA MCNAUGHTON	Nov. 2, 1944
The Hon. HENRY HERBERT STEVENS	Sept. 21, 1921	The Hon. JOSEPH ARTHUR JEAN	Apr. 18, 1945
The Hon. JAMES HORACE KING	Feb. 3, 1922	The Hon. LIONEL CHEVRIER[2]	Apr. 18, 1945
The Hon. EDWARD JAMES MCMURRAY	Nov. 14, 1923	The Hon. PAUL JOSEPH JAMES MARTIN[2]	Apr. 18, 1945
The Rt. Hon. CHARLES VINCENT MASSEY	Sept. 16, 1925	The Hon. DOUGLAS CHARLES ABBOTT[2]	Apr. 18, 1945
The Hon. CHARLES AVERY DUNNING	Mar. 1, 1926	The Hon. JAMES JOSEPH MCCANN[2]	Apr. 18, 1945
The Hon. WILLIAM DAUM EULER	Sept. 25, 1926	The Hon. DAVID LAURENCE MACLAREN	Apr. 18, 1945
H.R.H. THE DUKE OF WINDSOR	Aug. 2, 1927	The Hon. THOMAS VIEN	July 19, 1945
The Hon. CYRUS MACMILLAN	June 17, 1930	The Hon. WISHART MCLEA ROBERTSON	Sept. 4, 1945
The Hon. ARTHUR CHARLES HARDY	July 31, 1930	The Hon. MILTON FOWLER GREGG[2]	Sept. 2, 1947
The Hon. HUGH ALEXANDER STEWART	Aug. 7, 1930	The Hon. ROBERT WELLINGTON MAYHEW	June 11, 1948
The Hon. DONALD MATHESON SUTHERLAND	Aug. 7, 1930	The Hon. LESTER BOWLES PEARSON[2]	Sept. 10, 1948
The Hon. THOMAS GEROW MURPHY	Aug. 7, 1930	The Hon. STUART SINCLAIR GARSON[2]	Nov. 15, 1948
The Hon. WILLIAM DUNCAN HERRIDGE	June 17, 1931	The Hon. ROBERT HENRY WINTERS[2]	Nov. 15, 1948
The Hon. GEORGE REGINALD GEARY	Aug. 14, 1935	The Hon. FREDERICK GORDON BRADLEY	Apr. 1, 1949
The Hon. SAMUEL GOBEIL	Aug. 14, 1935	The Hon. CHARLES JOST BURCHELL	Apr. 1, 1949
The Hon. LUCIEN HENRI GENDRON	Aug. 30, 1935	The Hon. GASPARD FAUTEUX	May 16, 1949
The Hon. WILLIAM EARL ROWE	Aug. 30, 1935	The Hon. HUGUES LAPOINTE[2]	Aug. 25, 1949
The Hon. ONESIME GAGNON	Aug. 30, 1935	The Hon. GABRIEL EDOUARD RINFRET	Aug. 25, 1949
The Hon. CHARLES GAVAN POWER	Oct. 23, 1935	The Hon. WALTER EDWARD HARRIS[2]	Jan. 18, 1950
The Rt. Hon. JAMES LORIMER ILSLEY	Oct. 23, 1935	The Hon. GEORGE PRUDHAM[2]	Dec. 13, 1950
The Hon. JOSEPH ENOIL MICHAUD	Oct. 23, 1935	The Hon. GEORGE BLACK	Aug. 3, 1951
The Rt. Hon. CLARENCE DECATUR HOWE[2]	Oct. 23, 1935	VISCOUNT ALEXANDER OF TUNIS	Jan. 29, 1952
The Rt. Hon. JAMES GARFIELD GARDINER[2]	Nov. 4, 1935	The Hon. ALCIDE CÔTÉ[2]	Feb. 13, 1952
The Hon. JAMES ANGUS MACKINNON	Jan. 23, 1939	The Hon. JAMES SINCLAIR[2]	Oct. 15, 1952
The Hon. WILLIAM PATE MULOCK	July 8, 1940	The Hon. RALPH OSBORNE CAMPNEY[2]	Oct. 15, 1952
The Hon. COLIN WILLIAM GEORGE GIBSON	July 8, 1940	The Hon. ELIE BEAUREGARD	May 12, 1953
The Hon. ANGUS LEWIS MACDONALD	July 12, 1940	The Hon. WILLIAM ROSS MACDONALD[2]	May. 12, 1953
The Hon. JOSEPH THORARINN THORSON	June 11, 1941	The Hon. GEORGE ALEXANDER DREW	May 12, 1953
The Hon. WILLIAM FERDINAND ALPHONSE TURGEON	Oct. 8, 1941	The Hon. JOHN WHITNEY PICKERSGILL[2]	June 12, 1953
		The Rt. Hon. THIBAUDEAU RINFRET	Sept. 16, 1953
		The Hon. JEAN LESAGE[2]	Sept. 17, 1953

[1] Members of Her Majesty's Privy Council for Canada take rank *inter se* according to the dates of their being sworn in. [2] Ranks as a member of the Cabinet. [3] Ranks as the Prime Minister of Canada.

5.—Duration and Sessions of Parliaments, 1936-53

NOTE.—Similar information for the 1st to the 12th Parliaments, covering the period from Confederation to 1917 is given in the 1940 Year Book, p. 46, and that for the 13th to 17th Parliaments in the 1945 edition, p. 53.

Order of Parliament	Session	Date of Opening	Date of Prorogation	Days of Session	Sitting Days of House of Commons	Date of Election, Writs Returnable, Dissolution, and Length of Parliament[1,2]
18th Parliament.	1st	Feb. 6, 1936	June 23, 1936	139	91	Oct. 14, 1935[3]
	2nd	Jan. 14, 1937	Apr. 10, 1937	87	62	Nov. 9, 1935[4]
	3rd	Jan. 27, 1938	July 1, 1938	156	102	Jan. 25, 1940[5]
	4th	Jan. 12, 1939	June 3, 1939	143	103	4 y., 2 m., 16 d.
	5th	Sept. 7, 1939	Sept. 13, 1939	7	6	
	6th	Jan. 25, 1940	Jan. 25, 1940	1	1	
19th Parliament[6].	1st	May 16, 1940	Nov. 5, 1940	174	61	Mar. 26, 1940[3]
	2nd	Nov. 7, 1940	Jan. 21, 1942	441	105	Apr. 17, 1940[4]
	3rd	Jan. 22, 1942	Jan. 27, 1943	371	124	Apr. 16, 1945[5]
	4th	Jan. 28, 1943	Jan. 26, 1944	364	120	5 y.
	5th	Jan. 27, 1944	Jan. 31, 1945	371	136	
	6th	Mar. 19, 1945	Apr. 16, 1945	29	19	
20th Parliament.	1st	Sept. 6, 1945	Dec. 18, 1945	104	76	June 11, 1945[3]
	2nd	Mar. 14, 1946	Aug. 31, 1946	171	118	Aug. 9, 1945[4]
	3rd	Jan. 30, 1947	July 17, 1947	169	115	Apr. 30, 1949[5]
	4th	Dec. 5, 1947	June 30, 1948	209	119	3 y., 8 m., 22 d.
	5th	Jan. 26, 1949	Apr. 30, 1949	95	59	
21st Parliament..	1st	Sept. 15, 1949	Dec. 10, 1949	87	64	June 27, 1949[3]
	2nd	Feb. 16, 1950	June 30, 1950	135	90	Aug. 25, 1949[4]
	3rd	Aug. 29, 1950	Jan. 29, 1951	154	17	June 13, 1953[5]
	4th	Jan. 30, 1951	Oct. 9, 1951	253	105	3 y., 9 m., 20 d.
	5th	Oct. 9, 1951	Dec. 29, 1951	82	56	
	6th	Feb. 28, 1952	Nov. 20, 1952	267	87	
	7th	Nov. 20, 1952	May 15, 1953	176	108	
22nd Parliament.	1st	Nov. 12, 1953	...	...	...	Aug. 10, 1953[3] Oct. 8, 1953[4]

[1] The ordinary legal limit of duration for each Parliament is five years. [2] Duration of Parliament in years, months and days. The life of a Parliament is counted from the date of return of election writs to the date of dissolution, both days inclusive (B.N.A. Act, Sect. 50). [3] Date of general election. [4] Writs returnable. [5] Dissolution of Parliament. [6] During the war years Parliament was kept in almost continuous session. When prorogation took place it was followed immediately by a new session. During long adjournments provision was made whereby the Speaker could reconvene Parliament before the date previously set for reassembly.

Subsection 2.—The Legislature

The federal legislative authority is vested in the Parliament of Canada, consisting of the Queen, an Upper House styled the Senate, and the House of Commons. Bills may originate in either the Senate or the House subject to the provisions of Sect. 53 of the British North America Act, 1867, which provides that Bills for the appropriation of any part of the public revenue or the imposition of any tax or impost shall originate in the House of Commons. Bills must pass both Houses and receive Royal Assent before becoming law. In practice, most Public Bills originate in the House of Commons, although there has been a marked increase recently in the introduction of Public Bills in the Senate. Private Bills usually originate in the Senate. (*See* pp. 1255-1258 for current legislation.)

Under Sect. 91 of the British North America Acts, 1867-1952, the legislative authority of the Parliament of Canada extends to the following matters: the amendment of the Constitution of Canada subject to certain exceptions; the public debt and property; the regulation of trade and commerce; unemployment insurance; the raising of money by any mode or system of taxation; the borrowing of money on the public credit; postal service; the Census and statistics; militia, military and

naval service, and defence; the fixing of and providing for the salaries and allowances of civil and other officers of the Government of Canada; beacons, buoys, lighthouses, and Sable Island; navigation and shipping; quarantine and the establishment and maintenance of marine hospitals; sea coast and inland fisheries; ferries between a province and any British or foreign country or between two provinces; currency and coinage, banking, incorporation of banks, and the issue of paper money; savings banks; weights and measures; bills of exchange and promissory notes; interest; legal tender; bankruptcy and insolvency; patents of invention and discovery; copyrights; Indians and lands reserved for the Indians; naturalization and aliens; marriage and divorce; the criminal law, except the constitution of courts of criminal jurisdiction, but including the procedure in criminal matters; the establishment, maintenance and management of penitentiaries; such classes of subjects as are expressly excepted in the enumeration of the classes of subjects by this Act assigned exclusively to the legislatures of the provinces.

In addition, under Sect. 95, the Parliament of Canada may make laws in relation to agriculture and immigration concurrently with provincial legislatures, although in the event of conflict federal legislation is paramount. By the British North America Act, 1951 (14-15 Geo. VI, c. 32), it was declared that the Parliament of Canada might make laws in relation to old age pensions in Canada, but no such law shall affect the operation of any provincial laws in relation to old age pensions.

The Senate.—From an original membership of 72 at Confederation, the Senate, through the addition of new provinces and the general growth of population, now has 102 members, the latest change in representation having been made on the admission of Newfoundland to Confederation in 1949. The growth of representation in the Senate is traced in the 1940 Year Book, pp. 47-49, and is summarized by provinces in Table 6.

6.—Representation in the Senate since Confederation

Province	1867	1870	1871	1873	1882	1887	1892	1903	1905	1915-1948	1949-1953
Ontario	24	24	24	24	24	24	24	24	24	24	24
Quebec	24	24	24	24	24	24	24	24	24	24	24
Atlantic Provinces	24	24	24	24	24	24	24	24	24	24	30
Nova Scotia	*12*	*12*	*12*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*
New Brunswick	*12*	*12*	*12*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*
Prince Edward Island	...	...	...	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*
Newfoundland	...	...	...	...	...	...	...	...	...	...	*6*
Western Provinces	...	2	5	5	6	8	9	11	15	24	24
Manitoba	...	*2*	*2*	*2*	*3*	*3*	*4*	*4*	*4*	*6*	*6*
British Columbia	...	...	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*6*	*6*
Saskatchewan	...	...	...	...	...	*2*	*2*	*4*	*4*	*6*	*6*
Alberta									*4*	*6*	*6*
Totals	72	74	77	77	78	80	81	83	87	96	102

7.—Members of the Senate, by Province, as at Dec. 31, 1953

Speaker..... The Hon. WISHART MCLEA ROBERTSON
Clerk of the Senate and Clerk of Parliaments. LESLIE CLARE MOYER
Leader of the Government..... The Hon. WILLIAM ROSS MACDONALD
Leader of the Opposition..... The Hon. JOHN THOMAS HAIG

(Ranked according to seniority, by province. All Senators are entitled to the designation "The Honourable".)

Province and Name of Senator	P.O. Address
Newfoundland—	
(6 Senators)	
BAIRD, ALEXANDER BOYD.....	St. John's
PETTEN, RAY.....	St. John's
BURKE, VINCENT P.....	St. John's
PRATT, CALVERT C.....	St. John's
BASHA, MICHAEL G.....	Curling
BRADLEY, FREDERICK G.....	Bonavista
Prince Edward Island—	
(4 Senators)	
MCINTYRE, JAMES PETER	Mount Stewart
GRANT, THOMAS VINCENT, M.D.....	Montague
BARBOUR, GEORGE H.....	Charlottetown
JONES, J. WALTER.....	Bunbury
Nova Scotia—	
(8 Senators—2 vacancies)	
DENNIS, WILLIAM HENRY.....	Halifax
QUINN, FELIX PATRICK.....	Bedford
ROBERTSON, WISHART MCLEA..	Truro
KINLEY, JOHN JAMES.....	Lunenburg
MCDONALD, JOHN ALEXANDER.	Halifax
COMEAU, JOSEPH WILLIE.....	Comeauville
ISNOR, GORDON B.....	Halifax
HAWKINS, CHARLES G.....	Milford Station
New Brunswick—	
(8 Senators—2 vacancies)	
VENIOT, CLARENCE JOSEPH.. ..	Bathurst
MCLEAN, ALEXANDER NEIL...	Saint John
PIRIE, FREDERICK WILLIAM ...	Grand Falls
BURCHILL, GEORGE PERCIVAL..	South Nelson
EMMERSON, HENRY READ.....	Dorchester
DOONE, J. J. HAYES.....	Black's Harbour
FERGUSSON, MURIEL MCQUEEN	Fredericton
LEGER, AUREL D.....	Grande Digue
Quebec—	
(19 Senators—5 vacancies)	
RAYMOND, DONAT.....	Montreal
HUGESSEN, ADRIAN KNATCHBULL.....	Montreal
FAFARD, J. FERNAND..	L'Islet
HOWARD, CHARLES BENJAMIN.	Sherbrooke
BEAUREGARD, ELIE	Montreal
HUSHION, WILLIAM JAMES.....	Westmount
GOUIN, LÉON MERCIER.....	Montreal
VIEN, THOMAS.....	Outremont
DUTREMBLAY, PAMPHILE RÉAL	Montreal
BOUCHARD, TÉLÉSPHORE DAMIEN.....	St. Hyacinthe
DAIGLE, ARMAND.....	Montreal
VAILLANCOURT, CYRILLE.....	Lévis
NICOL, JACOB.....	Sherbrooke
DUPUIS, VINCENT.....	Longueuil
DESSUREAULT, JEAN MARIE....	Quebec
BOUFFARD, PAUL HENRI.....	Quebec
GODBOUT, JOSEPH ADELARD....	Frelighsburg
JODOIN, MARIANA BEAUCHAMP .	Montreal
TREMBLAY, LEONARD D. S....	St. Malachi

Province and Name of Senator	P.O. Address
Ontario—	
(22 Senators—2 vacancies)	
HARDY, ARTHUR CHARLES....	Brockville
MCGUIRE, WILLIAM HENRY....	Toronto
WILSON, CAIRINE REAY.....	Ottawa
FALLIS, IVA CAMPBELL.....	Peterborough
LAMBERT, NORMAN PLATT.....	Ottawa
HAYDEN, SALTER ADRIAN.....	Toronto
PATERSON, NORMAN MCLEOD..	Fort William
DUFFUS, JOSEPH JAMES.....	Peterborough
EULER, WILLIAM DAUM.....	Kitchener
DAVIES, WILLIAM RUPERT.....	Toronto
CAMPBELL, GORDON PETER....	Toronto
TAYLOR, WILLIAM HORACE.....	Brantford
BISHOP, CHARLES LAWRENCE..	Ottawa
ROEBUCK, ARTHUR WENTWORTH.....	Toronto
HURTUBISE, JOSEPH RAOUL....	Sudbury
FARQUHAR, THOMAS.....	Little Current
FRASER, WILLIAM ALEXANDER..	Trenton
GOLDING, WILLIAM HENRY....	Seaforth
WOODROW, ALLAN L.....	Toronto
BRADETTE, JAMES A.....	Cochrane
CONNOLLY, JOHN J.....	Ottawa
MACDONALD, WILLIAM ROSS....	Brantford
Manitoba—	
(4 Senators—2 vacancies)	
HAIG, JOHN THOMAS.....	Winnipeg
BEAUBIEN, ARTHUR LUCIEN...	St. Jean Baptiste
CRERAR, THOMAS ALEXANDER	Winnipeg
HOWDEN, JOHN POWER.....	Norwood Grove
Saskatchewan—	
(6 Senators)	
CALDER, JAMES ALEXANDER....	Regina
MARCOTTE, ARTHUR.....	Ponteix
HORNER, RALPH BYRON.....	Blaine Lake
ASELTINE, WALTER MORLEY....	Rosetown
STEVENSON, JOHN JAMES.....	Prince Albert
WOOD, THOMAS H.....	Regina
Alberta—	
(6 Senators)	
BUCHANAN, WILLIAM ASHBURY	Lethbridge
BLAIS, ARISTIDE.....	Edmonton
GERSHAW, FRED WILLIAM.....	Medicine Hat
ROSS, GEORGE HENRY.....	Calgary
MACKINNON, JAMES ANGUS...	Edmonton
STAMBAUGH, J. WESLEY.....	Bruce
British Columbia—	
(6 Senators)	
KING, JAMES HORACE.....	Vancouver
FARRIS, JOHN WALLACE DE BEQUE.....	Vancouver
TURGEON, JAMES GRAY.....	Vancouver
MCKEEN, STANLEY STEWART..	Vancouver
REID, THOMAS.....	New Westminster
HODGES, NANCY.....	Victoria

The House of Commons.—In Sect. 37 of the British North America Act of 1867 it was provided that "The House of Commons shall, subject to the provisions of this Act, consist of one hundred and eighty-one members, of whom eighty-two shall be elected for Ontario, sixty-five for Quebec, nineteen for Nova Scotia, and fifteen for New Brunswick". Further, under Sect. 51, it was enacted that, after the completion of the 1871 Census and of each subsequent decennial census, the representation of the four provinces should be readjusted by such authority, in such manner, and from such time, as the Parliament of Canada provided, subject to and according to certain rules set out in the original Act.

The representation of the provinces in the Parliament of Canada as at 1867 and the readjustments that took place with the admission of the newer provinces into Confederation and with each decennial census up to 1931, are outlined in the 1946 Year Book, pp. 57-59. The postponement of redistribution of parliamentary constituencies following the 1941 Census, together with the Address of both Houses of Parliament to the King requesting that a Bill for the required amendment to Sect. 51 of the British North America Act be laid before the United Kingdom Parliament, the wording of the new Section, and the passage of the Representation Act, 1947 (11 Geo. VI, c. 71), providing for an increase of membership from 245 to 255 are described in the 1951 Year Book, p. 65.

Under the Terms of Union of Newfoundland with Canada (*see* 1951 Year Book, pp. 56-57), provision was made for the Province of Newfoundland to be represented by seven members in the House of Commons. This increased the number of Members of Parliament to 262.

By c. 15 of the statutes of 1952, the Parliament of Canada, acting under the authority conferred by the British North America Act of 1949, amended Sect. 51 of the British North America Act providing for a new method of readjustment of representation in the House of Commons. Pursuant to this amendment a new Representation Act was passed (1 Eliz. II, c. 48) providing for a total of 265 members of the House of Commons (*see* pp. 1288-1289 for details).

The number of representatives of each province elected at each of the 22 general elections since Confederation is given in Table 8.

8.—Representation in the House of Commons as at Federal General Elections, 1867-1953

Province or Territory	1867	1872	1874 1878	1882	1887 1891	1896 1900	1904	1908 1911	1917 1921	1925 1926 1930	1935 1940 1945	1949	1953
Ontario	82	88	88	92	92	92	86	86	82	82	82	83	85
Quebec	65	65	65	65	65	65	65	65	65	65	65	73	75
Nova Scotia	19	21	21	21	21	20	18	18	16	14	12	13	12
New Brunswick	15	16	16	16	16	14	13	13	11	11	10	10	10
Manitoba	...	4	4	5	5	7	10	10	15	17	17	16	14
British Columbia	...	6	6	6	6	6	7	7	13	14	16	18	22
P. E. Island	...	...	6	6	6	5	4	4	4	4	4	4	4
Saskatchewan	...	...	...	...	4	4	10	10	16	21	21	20	17
Alberta	...	...	...	...				7	12	16	17	17	17
Yukon	...	...	...	...	...	...	1	1	1	1	1	1	1
Mackenzie River													1
Newfoundland	...	...	...	...	...	...	...	...	...	...	...	7	7
Totals	**181**	**200**	**206**	**211**	**215**	**213**	**214**	**221**	**235**	**245**	**245**	**262**	**265**

Redistribution of Federal Parliamentary Constituencies, 1952.—Results of the Census of 1951 necessitated a readjustment in the representation of the House of Commons pursuant to the provisions of the British North America Acts, 1867 to 1951, and a Bill (No. 8) was introduced by the Prime Minister on Mar. 10, 1952, entitled: "The Representation Act, 1952" This Bill was withdrawn on June 25,1952.

Between these two dates the Committee on Redistribution recommended to the House the presentation of two Bills: (1) a Bill to amend the British North America Act to provide for new rules with regard to redistribution; and (2) a new Representation Bill which would be in accordance with those rules.

The British North America Act, 1952 (Bill 331), was introduced in the House on June 10, 1952, and received Royal Assent on June 18, 1952. The Minister of Citizenship and Immigration stated on its second reading: "The opportunity to amend the B.N.A. Act and our constitution by an Act of this Parliament arose in 1949 by the passing of an address requesting the insertion in the B.N.A. Act of a clause which would permit the amendment of the constitution by an Act of this Parliament"

The new Act (1 Eliz. II, c. 15) repeals Sect. 51 of the British North America Act and substitutes therefor as follows:—

"Sect. 51.—(1) Subject as hereinafter provided, the number of members of the House of Commons shall be two hundred and sixty-three and the representation of the provinces therein shall forthwith upon the coming into force of this section and thereafter on the completion of each decennial census be readjusted by such authority, in such manner, and from such time as the Parliament of Canada from time to time provides, subject and according to the following rules:—

"1. There shall be assigned to each of the provinces a number of members computed by dividing the total population of the provinces by two hundred and sixty-one and by dividing the population of each province by the quotient so obtained, disregarding, except as hereinafter in this section provided, the remainder, if any, after the said process of division.

"2. If the total number of members assigned to all the provinces pursuant to rule one is less than two hundred and sixty-one, additional members shall be assigned to the provinces (one to a province) having remainders in the computation under rule one commencing with the province having the largest remainder and continuing with the other provinces in the order of the magnitude of their respective remainders until the total number of members assigned is two hundred and sixty-one.

"3. Notwithstanding anything in this section, if upon completion of a computation under rules one and two, the number of members to be assigned to a province is less than the number of senators representing the said province, rules one and two shall cease to apply in respect of the said province, and there shall be assigned to the said province a number of members equal to the said number of senators.

"4. In the event that rules one and two cease to apply in respect of a province then, for the purpose of computing the number of members to be assigned to the provinces in respect of which rules one and two continue to apply, the total population of the provinces shall be reduced by the number of the population of the province in respect of which rules one and two have ceased to apply and the number two hundred and sixty-one shall be reduced by the number of members assigned to such province pursuant to rule three.

"5. On any such readjustment the number of members for any province shall not be reduced by more than fifteen per cent below the representation to which such province was entitled under rules one to four of this subsection at the last preceding readjustment

of the representation of that province, and there shall be no reduction in the representation of any province as a result of which that province would have a smaller number of members than any other province that according to the results of the then last decennial census did not have a larger population; but for the purposes of any subsequent readjustment of representation under this section any increase in the number of members of the House of Commons resulting from the application of this rule shall not be included in the divisor mentioned in rules one to four of this subsection.

"6. Such readjustment shall not take effect until the termination of the then existing Parliament.

"(2) The Yukon Territory as constituted by chapter forty-one of the statutes of Canada, 1901, shall be entitled to one member, and such other part of Canada not comprised within a province as may from time to time be defined by the Parliament of Canada shall be entitled to one member."

On June 27, 1952, the Minister of Citizenship and Immigration introduced Bill 393, an Act to readjust the Representation in the House of Commons. Royal Assent was given on July 4 to the Representation Act, 1952 (I Eliz. II, c. 48). As a result of this legislation, the total membership of the House of Commons was increased to 265 members, to be effective at the following general election. The representation of the various provinces will be, according to Sect. 2 of the Act, as follows:—

"Sect. 2. Eighty-five members of the House of Commons shall be elected for the Province of Ontario, seventy-five for the Province of Quebec, twelve for the Province of Nova Scotia, ten for the Province of New Brunswick, fourteen for the Province of Manitoba, twenty-two for the Province of British Columbia, four for the Province of Prince Edward Island, seventeen for the Province of Saskatchewan, seventeen for the Province of Alberta, seven for the Province of Newfoundland, one for the Yukon Territory and one for Mackenzie district of the Northwest Territories, thus making a total of two hundred and sixty-five members."

The Opposition.—The Opposition occupies an essential place in constitutions based on the British parliamentary system. Like many other institutions such as that of the premiership, for instance, it is founded on the unwritten customs that have been accepted and become firmly established.

The choice of the Canadian electorate not only determines who shall govern Canada but, by deciding which party receives the second largest number of seats in the House of Commons, it designates which of the major parties becomes the Official Opposition. The function of the Leader of the Opposition is to offer intelligent and constructive criticism of the Government of the day.

When criticism by the Opposition becomes sufficiently effective it can overthrow the existing Government and the Leader of the Opposition might then, as a result of the ensuing election, become Prime Minister.

Although the position of Leader of the Opposition is not recognized in the British North America Act, it received statutory acknowledgment in Canada in 1927. The Senate and House of Commons Act of that year provided for an annual salary to be paid to the Leader of the Opposition in addition to his indemnity as a Member of the House. (*See* p. 1296.)

9.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to Dec. 31, 1953.

Speaker.....The Hon. L. René Beaudoin
Clerk of the House of Commons.....Leon J. Raymond
Leader of the Opposition.....The Hon. George A. Drew

NOTE.—The vote is summarized by provinces in Table 10, p. 1295. The leaders of the political parties are indicated by asterisks (*). For Parliamentary Assistants, see p. 1282. This information, except the population of constituencies, has been supplied by the Chief Electoral Officer, Ottawa. Party affiliations are unofficial: Lib.=Liberal; P.C.=Progressive Conservative; C.C.F.=Co-operative Commonwealth Federation; S.C.=Social Credit; L.-Lab.=Liberal-Labour; Ind.=Independent.

Province and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
Newfoundland— (7 members)							
Bonavista-Twillingate	45,319	24,274	12,738	10,072	Hon. J. W. PICKERSGILL	Ottawa, Ont.	Lib.
Burin-Burgeo	43,043	21,412	12,593	11,017	C. W. CARTER	St. John's	Lib.
Grand Falls - White Bay - Labrador	59,128	33,449	18,889	13,653	T. G. W. ASHBOURNE	Twillingate	Lib.
Humber-St. George's	52,142	27,357	16,297	12,526	H. BATTEN	Corner Brook	Lib.
St. John's East	55,116	29,961	19,757	8,310	A. MACPHERSON FRASER	St. John's	Lib.
St. John's West	56,338	30,784	19,177	9,965	J. A. POWER	St. John's	Lib.
Trinity-Conception	50,330	27,048	12,317	8,814	L. T. STICK	Bay Roberts	Lib.
P. E. Island— (4 members)							
Kings	17,943	10,514	9,175	4,750	T. J. KICKHAM	Souris	Lib.
Prince	37,735	19,670	16,879	8,782	J. W. MACNAUGHT	Summerville	Lib.
				10,351	N. A. MATHESON	Charlottetown	Lib.
Queens	42,751	25,285	40,508	10,086	J. A. MACLEAN	Beaton's Mills	P.C.
Nova Scotia— (12 members)							
Antigonish-Guysborough	26,216	15,164	10,330	6,884	J. R. KIRK	Antigonish	Lib.
Cape Breton North and Victoria	42,337	23,593	15,861	9,535	W. M. BUCHANAN	North Sydney	Lib.
Cape Breton South	82,859	45,632	30,798	14,971	C. GILLIS	Glace Bay	C.C.F.
Colchester-Hants	54,893	32,815	26,033	12,660	G. T. PURDY	Truro	Lib.
Cumberland	39,655	23,839	17,223	8,860	A. R. LUSBY	Amherst	Lib.
Digby-Annapolis-Kings	66,510	38,432	31,980	16,422	G. C. NOWLAN	Wolfville	P.C.
Halifax	162,217	98,208	124,773	34,587	J. H. DICKEY	Halifax	Lib.
				34,222	S. R. BALCOM	Halifax	Lib.
Inverness-Richmond	32,500	20,149	14,438	9,033	A. J. MACEACHEN	Inverness	Lib.
Pictou	44,002	27,185	21,092	10,626	H. B. MCCULLOCH	New Glasgow	Lib.
Queens-Lunenburg	45,800	29,397	23,262	13,053	Hon. R. H. WINTERS	Ottawa, Ont.	Lib.
Shelburne-Yarmouth-Clare	45,595	26,422	19,065	11,556	T. A. M. KIRK	Yarmouth	Lib.
New Brunswick— (10 members)							
Charlotte	25,136	15,177	11,869	6,155	A. W. STUART	St. Andrews	Lib.
Gloucester	57,489	27,699	23,336	13,330	H. ROBICHAUD	Caraquet	Lib.
Kent	26,767	13,451	10,758	7,039	H. J. MICHAUD	Buctouche	Lib.
Northumberland	42,994	22,182	16,789	10,666	G. R. MCWILLIAM	Newcastle	Lib.
Restigouche-Madawaska	70,541	34,141	26,815	13,266	J. G. BOUCHER	Edmundston	Lib.
Royal	35,673	21,928	17,897	9,725	A. J. BROOKS	Sussex	P.C.
Saint John-Albert	84,407	53,055	38,579	18,881	T. M. BELL	Saint John	P.C.
Victoria-Carleton	40,810	22,661	17,295	8,445	G. W. MONTGOMERY	Woodstock	P.C.
Westmorland	80,012	46,768	37,406	20,160	H. J. MURPHY	Moncton	Lib.
York-Sunbury	51,868	30,595	24,646	12,888	Hon. M. GREGG	Ottawa, Ont.	Lib.

9.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to Dec. 31, 1953—continued.

Province and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
Quebec— (75 members)							
Argenteuil - Deux-Montagnes	46,920	27,933	19,132	13,283	P. Valois	Lachute	Lib.
Beauce	54,662	27,519	22,955	13,016	R. Poulin	St. Martin de Beauce	Ind.
Beauharnois-Salaberry	46,311	27,672	19,035	14,269	R. Cauchon	Valleyfield	Lib.
Bellechasse	31,076	16,287	12,077	7,124	L.-P. Picard	Quebec	Lib.
Berthier-Maskinongé-Delanaudière	44,292	24,436	19,062	10,709	J. Langlois	St. Justin	Lib.
Bonaventure	41,121	20,463	15,843	9,177	B. Arsenault	Bonaventure	Lib.
Brome-Missisquoi	38,082	22,137	14,920	9,362	J.-L. Deslières	Sutton	Lib.
Chambly-Rouville	34,522	21,068	15,013	9,824	R. Pinard	Montreal	Lib.
Champlain	51,190	28,577	22,966	14,420	I. Rochefort	Cap de la Madeleine	Lib.
Chapleau	53,951	30,284	21,279	10,495	D. Gourd	Amos	Lib.
Charlevoix	42,851	22,338	18,179	10,742	A. Maltais	Sillery	Lib.
Châteauguay-Huntingdon-Laprairie	44,343	24,468	18,295	11,104	J. Boucher	Laprairie	Lib.
Chicoutimi	58,043	29,823	24,635	16,046	P.-E. Gagnon	Bagotville	Ind.
Compton-Frontenac	42,428	21,648	17,255	10,365	J.-A. Blanchette	Chartierville	Lib.
Dorchester	36,807	18,625	15,695	7,762	R. Perron	Sillery	P.C.
Drummond-Arthabaska	77,479	40,610	29,430	15,870	A. Cloutier	Drummondville	Lib.
Gaspe	56,050	30,296	23,359	12,058	L. Langlois	Ste. Anne des Monts	Lib.
Gatineau	42,467	23,500	16,538	10,759	J.-C. Nadon[1]	Maniwaki	Lib.
Hull	64,264	37,626	29,491	21,785	A. Caron	Hull	Lib.
Iles-de-la-Madeleine	9,999	4,903	4,300	2,337	C.-A. Cannon	Quebec	Lib.
Joliette - L'Assomption - Montcalm	76,957	42,749	22,908	18,149	M. Breton	Joliette	Lib.
Kamouraska	34,521	18,292	11,951	6,065	A. Masse	Quebec	Lib.
Labelle	42,701	22,298	18,679	9,569	G. Roy	Mont Laurier	Lib.
Lac-Saint-Jean	36,022	17,785	15,549	8,697	A. Gauthier	St. Joseph d'Alma	Lib.
Lapointe	57,861	28,019	22,314	11,854	F. Girard	Jonquière	Ind.
Lévis	41,279	24,095	19,474	13,897	M. Bourget	Lauzon	Lib.
Longueuil	60,437	38,958	25,078	16,688	A. Vincent	Montreal	Lib.
Lotbinière	36,419	18,590	16,088	9,047	Hon. H. Lapointe	Ottawa, Ont.	Lib.
Matapédia-Matane	60,663	29,546	23,673	12,689	L. Thibault	Matane	Lib.
Mégantic	56,873	29,239	22,588	13,951	J. Lafontaine	Thetford Mines	Lib.
Montmagny-L'Islet	37,972	20,151	15,137	10,121	Hon. J. Lesage	Ottawa, Ont.	Lib.
Nicolet-Yamaska	44,248	24,357	19,383	9,483	M. Boisvert	Quebec	Lib.
Pontiac-Témiscamingue	41,899	21,281	15,581	9,041	H. Proudfoot	Fort Coulonge	Lib.
Portneuf	44,351	24,959	18,332	12,701	P. Gauthier	Deschambault	Lib.
Quebec East	79,177	47,504	33,296	25,945	Rt. Hon. L. S. St. Laurent*	Ottawa, Ont.	Lib.
Quebec West	54,726	31,222	23,259	8,464	J. W. Dufresne	Quebec	P.C.
Quebec South	52,834	35,959	25,588	18,950	Hon. C. G. Power	Quebec	Lib.
Quebec-Montmorency	72,659	39,793	30,625	18,029	W. La Croix	Quebec	Lib.
Richelieu-Verchères	44,386	28,275	19,156	15,406	L. Cardin	Sorel	Lib.
Richmond-Wolfe	52,830	28,114	20,564	13,006	E.-O. Gingras	Marbleton	Lib.
Rimouski	61,776	31,647	24,087	8,554	G. Legaré	Rimouski	Lib.
Roberval	45,984	21,142	17,385	8,646	G. Villeneuve	Mistassini	Lib.
St. Hyacinthe-Bagot	55,430	31,649	Acclamation		J. Fontaine	St. Hyacinthe	Lib.
St. Jean-Iberville-Napierville	49,459	27,829	18,508	16,088	Hon. A. Côté	Ottawa, Ont.	Lib.
St. Maurice-Laflèche	68,606	38,571	29,221	18,662	J.-A. Richard	Shawinigan Falls	Lib.
Saguenay	42,057	23,938	15,679	7,815	L. Brisson	Quebec	Lib.
Shefford	54,618	30,048	22,858	15,409	M. Boivin	Granby	Lib.
Sherbrooke	56,711	34,613	24,211	15,827	M. Gingues	Sherbrooke	Lib.
Stanstead	40,103	22,363	16,927	10,034	L.-E. Roberge	Rock Island	Lib.
Témiscouata	56,383	27,194	18,708	10,675	J.-F. Pouliot	Rivière du Loup	Lib.

[1] Died Dec. 16, 1953.

9.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to Dec. 31, 1953—continued.

Province and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
Quebec—concluded							
Terrebonne	68,087	40,035	Acclamation		L. Bertrand	Ste. Thérèse	Lib.
Three Rivers	57,104	34,080	29,714	15,556	L. Balcer	Three Rivers	P.C.
Vaudreuil-Soulanges	26,611	16,790	10,839	8,463	L.-R. Beaudoin	Hudson	Lib.
Villeneuve	69,004	34,910	23,289	14,851	A. Dumas	Malartic	Lib.
Island of Montreal and Ile Jesus—							
Cartier	50,577	26,270	16,553	12,493	L. D. Crestohl	Montreal	Lib.
Dollard	55,056	37,750	23,608	14,964	G. Rouleau	Montreal	Lib.
Hochelaga	69,209	43,080	26,002	19,467	R. Eudes	Montreal	Lib.
Jacques-Cartier-Lasalle	72,609	50,195	33,575	19,678	E. Leduc	Lachine	Lib.
Lafontaine	53,720	35,394	20,695	15,285	J.-G. Ratelle	Montreal	Lib.
Laurier	50,244	31,993	18,295	12,648	J.-E. Lefrançois	Montreal	Lib.
Laval	69,044	44,336	27,691	19,337	L. Demers	St. Laurent	Lib.
Maisonneuve-Rosemont	74,146	48,424	29,658	12,266	J. P. Deschatelets	Montreal	Lib.
Mercier	77,934	47,153	28,499	17,341	M. Monette	Pointe-aux-Trembles	Lib.
Mount Royal	77,394	52,067	28,166	17,183	A. A. MacNaughton	Montreal	Lib.
Notre-Dame-de-Grâce	77,886	54,200	33,767	16,690	W. M. Hamilton	Montreal	P.C.
Outremont-St.-Jean	56,397	33,389	17,004	11,536	R. Bourque	Outremont	Lib.
Papineau	69,565	46,149	27,288	10,387	A. Meunier	Montreal	Lib.
St. Ann	45,119	26,451	18,719	15,519	T. P. Healy	Montreal	Lib.
St. Antoine-Westmount	63,883	41,960	25,644	14,441	Hon. D. C. Abbott	Ottawa, Ont.	Lib.
St. Denis	67,993	42,835	24,626	17,359	A. Denis	Montreal	Lib.
St. Henri	63,612	37,998	24,036	15,046	J.-A. Bonnier	Montreal	Lib.
St. Jacques	72,417	47,540	23,892	15,443	R. Beaudry	Montreal	Lib.
St. Lawrence-St. George	47,305	32,032	14,854	9,082	Hon. B. Claxton	Ottawa, Ont.	Lib.
Ste. Marie	66,517	39,048	22,531	16,288	H. Dupuis	Montreal	Lib.
Verdun	77,448	48,147	30,051	20,281	P.-E. Côté[1]	Verdun	Lib.
Ontario—							
(85 members)							
Algoma East	33,818	16,861	11,473	7,494	Hon. L. B. Pearson	Ottawa, Ont.	Lib.
Algoma West	51,988	31,094	20,677	10,461	G. E. Nixon	Sault Ste. Marie	Lib.
Brantford	50,702	30,875	21,700	9,576	J. E. Brown	Brantford	Lib.
Brant-Haldimand	46,293	27,540	20,934	10,059	J. A. Charlton	Paris	P.C.
Bruce	28,205	17,735	14,030	7,132	A. E. Robinson	Kincardine	P.C.
Carleton	71,974	48,372	37,038	20,137	Hon. G. A. Drew	Ottawa, Ont.	P.C.
Cochrane	39,255	20,290	14,474	6,667	J. A. A. Habel	Kapuskasing	Lib.
Dufferin-Simcoe	41,350	22,905	16,497	9,248	Hon. W. E. Rowe	Newton Robinson	P.C.
Durham	30,115	19,367	14,594	6,684	J. M. James	Bowmanville	Lib.
Elgin	55,518	32,518	23,433	12,482	C. D. Coyle	Straffordville	P.C.
Essex East	80,086	47,992	30,332	19,946	Hon. P. Martin	Ottawa, Ont.	Lib.
Essex South	45,568	26,324	18,207	10,620	S. M. Clark	Harrow	Lib.
Essex West	90,240	54,380	29,422	15,199	D. Brown	Windsor	Lib.
Fort William	45,675	27,311	20,016	10,402	D. McIvor	Fort William	Lib.
Glengarry-Prescott	43,278	24,232	19,551	7,800	R. Bruneau	Hawkesbury	Lib.
Grenville-Dundas	32,863	21,348	13,911	8,875	A. C. Casselman	Prescott	P.C.
Grey-Bruce	35,430	22,219	15,614	9,236	Hon. W. E. Harris	Ottawa, Ont.	Lib.
Grey North	36,636	23,343	17,570	8,368	C. E. Bennett	Meaford	Lib.
Halton	44,003	28,882	20,680	9,914	Sybil Bennett	Georgetown	P.C.
Hamilton East	68,489	43,307	26,181	11,622	T. Ross	Hamilton	Lib.
Hamilton South	73,049	47,797	30,568	12,296	R. E. Reinke	Hamilton	Lib.
Hamilton West	72,555	45,262	27,879	13,016	Ellen L. Fairclough	Hamilton	P.C.
Hastings-Frontenac	43,771	26,437	18,850	11,084	G. S. White	Madoc	P.C.
Hastings South	55,640	33,882	26,262	13,170	F. S. Follwell	Belleville	Lib.

[1] Accepted an office of emolument under the Crown effective Jan. 1, 1954.

9.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to Dec. 31, 1953—continued.

Province and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
Ontario—concluded							
Huron	43,497	26,133	21,331	11,045	E. CARDIFF	Brussels	P.C.
Kenora-Rainy River	55,008	29,309	20,230	11,380	W. M. BENIDICKSON	Kenora	L-Lab.
Kent	63,174	37,329	26,356	15,532	B. HUFFMAN	Blenheim	Lib.
Kingston	55,644	34,349	27,474	14,663	W. J. HENDERSON	Kingston	Lib.
Lambton-Kent	38,640	23,098	16,802	9,432	H. A. MACKENZIE	Watford	Lib.
Lambton West	53,993	33,522	22,283	11,666	J. W. MURPHY	Camlachie	P.C.
Lanark	35,601	22,273	15,926	10,029	W. G. BLAIR	Perth	P.C.
Leeds	38,831	24,830	20,046	10,097	H. STANTON	Seeleys Bay	P.C.
Lincoln	89,366	57,301	37,338	16,113	H. P. CAVERS	St. Catharines	Lib.
London	72,396	48,202	31,978	15,254	R. W. MITCHELL	London	P.C.
Middlesex East	57,341	36,291	24,364	12,027	H. O. WHITE	Glanworth	P.C.
Middlesex West	32,402	19,815	14,933	8,645	R. MCCUBBIN	Strathroy	Lib.
Niagara Falls	57,808	38,927	22,729	13,400	W. L. HOUCK	Niagara Falls	Lib.
Nickel Belt	39,148	22,796	15,244	8,821	J. L. GAUTHIER	Sudbury	Lib.
Nipissing	48,120	27,298	19,834	12,415	J. R. GARLAND	North Bay	Lib.
Norfolk	42,708	23,666	16,223	8,475	R. E. ANDERSON	Waterford	Lib.
Northumberland	33,482	21,607	17,792	9,595	F. G. ROBERTSON	Cobourg	Lib.
Ontario	78,231	50,149	30,033	12,482	M. STARR	Oshawa	P.C.
Ottawa East	56,121	35,781	26,919	19,863	J. T. RICHARD	Ottawa, Ont.	Lib.
Ottawa West	74,867	49,246	36,538	20,933	G. MCILRAITH	Ottawa, Ont.	Lib.
Oxford	58,818	35,547	25,611	12,693	W. NESBITT	Woodstock	P.C.
Parry Sound-Muskoka	51,686	31,680	22,207	10,940	W. K. MCDONALD	Sundridge	Lib.
Peel	55,673	38,786	25,515	13,487	G. GRAYDON[1]	Brampton	P.C.
Perth	51,022	32,707	24,100	12,959	J. W. MONTEITH	Stratford	P.C.
Peterborough	53,123	33,447	25,358	13,206	G. K. FRASER	Lakefield	P.C.
Port Arthur	66,994	35,410	24,753	12,272	Rt. Hon. C. D. HOWE	Ottawa, Ont.	Lib.
Prince Edward-Lennox	31,111	19,131	12,634	6,726	G. J. TUSTIN	Napanee	P.C.
Renfrew North	37,188	20,907	16,851	9,360	J. M. FORGIE	Pembroke	Lib.
Renfrew South	31,624	19,093	15,562	8,627	Hon. J. J. MCCANN	Ottawa, Ont.	Lib.
Russell	56,951	33,169	24,578	15,969	J.-O. GOUR	Casselman	Lib.
Simcoe East	46,769	27,459	20,124	9,099	W. A. ROBINSON	Midland	Lib.
Simcoe North	33,762	22,690	16,275	8,316	J. H. FERGUSON	Collingwood	P.C.
Stormont	48,458	27,587	20,999	13,503	Hon. L. CHEVRIER	Ottawa, Ont.	Lib.
Sudbury	58,276	31,914	21,526	12,193	D. R. MITCHELL	Sudbury	Lib.
Timiskaming	49,658	25,654	18,889	7,497	ANN SHIPLEY	Kirkland Lake	Lib.
Timmins	45,924	23,103	14,077	5,541	K. A. EYRE	Timmins	Lib.
Victoria	43,654	28,352	21,830	12,634	C. W. HODGSON	Haliburton	P.C.
Waterloo North	78,482	50,457	32,519	16,139	N. C. SCHNEIDER	Kitchener	Lib.
Waterloo South	47,641	30,374	21,875	9,058	A. W. A. WHITE	Galt	Lib.
Welland	65,425	40,393	28,255	15,411	W. H. MCMILLAN	Thorold	Lib.
Wellington-Huron	30,462	18,724	14,420	7,198	W. M. HOWE	Arthur	P.C.
Wellington South	43,350	27,196	20,576	9,275	H. A. HOSKING	Guelph	Lib.
Wentworth	51,990	35,010	22,292	10,476	F. E. LENNARD	Dundas	P.C.
York Centre	66,505	53,779	31,938	13,903	A. H. HOLLINGWORTH	Toronto	Lib.
York East	65,169	45,061	26,319	11,062	R. H. MCGREGOR	Toronto	P.C.
York-Humber	63,279	44,859	27,545	11,157	MARGARET AITKEN	Toronto	P.C.
York North	51,059	33,501	22,661	10,988	J. SMITH	Richmond Hill	Lib.
York-Scarborough	72,117	55,811	34,356	14,889	F. ENFIELD	Toronto	Lib.
York South	90,454	62,202	34,381	12,216	J. W. NOSEWORTHY	Toronto	C.C.F.
York West	64,891	48,605	29,845	12,228	R. ADAMSON	Port Credit	P.C.
City of Toronto—							
Broadview	59,676	39,136	21,302	10,403	G. H. HEES	Toronto	P.C.
Danforth	71,895	51,736	31,163	12,595	R. H. SMALL	Toronto	P.C.
Davenport	60,228	38,035	22,002	8,919	P. T. HELLYER	Toronto	Lib.
Eglinton	72,208	51,266	31,173	17,354	D. M. FLEMING	Toronto	P.C.
Greenwood	57,876	38,351	22,353	9,702	J. M. MACDONNELL	Toronto	P.C.
High Park	58,009	38,281	23,303	10,032	A. J. P. CAMERON	Toronto	Lib.
Parkdale	57,079	36,847	22,027	10,391	J. HUNTER	Toronto	Lib.
Rosedale	56,341	36,181	21,511	8,702	C. HENRY	Toronto	Lib.
St. Paul's	61,486	42,516	23,901	9,738	R. MICHENER	Toronto	P.C.
Spadina	85,47.	52,220	28,004	15,496	D. A. CROLL	Toronto	Lib.
Trinity	62,871	34,778	20,083	8,056	L. CONACHER	Toronto	Lib.

[1] Died Sept. 19, 1953.

9.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to Dec. 31, 1953—continued.

Province and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
Manitoba— (14 members)							
Brandon-Souris	56,589	34,989	24,145	13,915	W. G. DINSDALE	Brandon	P.C.
Churchill	43,323	21,666	12,464	4,984	G. D. WEAVER	Flin Flon	Lib.
Dauphin	42,141	24,062	16,172	6,839	F. S. ZAPLITNY	Dauphin	C.C.F.
Lisgar	46,921	25,981	14,623	6,581	W. A. POMMER	Manitou	Lib.
Marquette	48,626	28,668	18,226	9,900	Hon. S. S. GARSON	Ottawa, Ont.	Lib.
Portage-Neepawa	50,469	28,836	17,946	8,958	W. G. WEIR	Carman	Lib.
Provencher	40,315	20,525	10,163	6,632	R. N. JUTRAS	Letellier	Lib.
St. Boniface	53,067	31,179	18,822	8,051	F. VIAU	St. Boniface	Lib.
Selkirk	47,037	25,012	14,412	6,265	R. J. WOOD	Teulon	Lib.
Springfield	40,275	21,814	12,521	6,240	A. B. WESELAK	Beausejour	Lib.
Winnipeg North	81,311	51,637	31,090	15,005	A. STEWART	Winnipeg	C.C.F.
Winnipeg North Centre	75,599	45,303	24,078	12,713	S. H. KNOWLES	Winnipeg	C.C.F.
Winnipeg South	75,820	52,433	32,080	12,597	O. C. TRAINOR	Winnipeg	P.C.
Winnipeg South Centre	75,048	53,269	29,680	12,489	G. CHURCHILL	Winnipeg	P.C.
Saskatchewan— (17 members)							
Assiniboia	47,894	26,506	20,498	10,596	H. R. ARGUE	Kayville	C.C.F.
Humboldt-Melfort	52,286	27,811	21,036	9,512	H. A. BRYSON	Tisdale	C.C.F.
Kindersley	44,720	26,475	20,621	8,672	M. JOHNSON	Beadle	C.C.F.
Mackenzie	50,741	25,352	18,392	8,021	A. M. NICHOLSON	Sturgis	C.C.F.
Meadow Lake	35,424	17,633	11,726	5,080	J. H. HARRISON	Medstead	Lib.
Melville	43,173	24,090	20,167	10,024	Rt. Hon. J. G. GARDINER	Ottawa, Ont.	Lib.
Moose Jaw - Lake Centre	53,607	34,279	23,908	12,436	W. R. THATCHER	Moose Jaw	C.C.F.
Moose Mountain	40,939	22,901	18,415	8,697	E. G. McCULLOUGH	Manor	C.C.F.
Prince Albert	53,564	28,793	22,890	10,038	J. G. DIEFENBAKER	Prince Albert	P.C.
Qu'Appelle	40,456	22,757	18,267	6,988	H. P. MANG	Edenwold	Lib.
Regina City	66,078	44,153	32,069	14,558	A. C. ELLIS	Regina	C.C.F.
Rosetown-Biggar	44,135	26,682	20,624	11,404	M. J. COLDWELL*	Ottawa, Ont.	C.C.F.
Rosthern	49,455	25,933	19,074	8,616	W. A. TUCKER	Rosthern	Lib.
Saskatoon	56,196	38,838	25,210	12,056	R. R. KNIGHT	Saskatoon	C.C.F.
Swift Current-Maple Creek	50,539	31,394	23,470	10,088	I. STUDER	Lac Pelletier	Lib.
The Battlefords	50,913	27,556	18,884	8,922	M. CAMPBELL	Neilburg	C.C.F.
Yorkton	51,608	29,379	21,228	11,027	G. H. CASTLEDEN	Yorkton	C.C.F.
Alberta— (17 members)							
Acadia	43,832	26,157	17,417	7,956	V. QUELCH	Banff	S.C.
Athabasca	51,559	26,563	15,543	7,293	J. M. DECHENE	Bonnyville	Lib.
Battle River-Camrose	56,913	30,641	18,344	9,238	R. FAIR	Vermilion	S.C.
Bow River	44,795	23,993	15,495	7,320	C. E. JOHNSTON	Calgary	S.C.
Calgary North	67,358	47,448	29,841	11,002	D. S. HARKNESS	Calgary	P.C.
Calgary South	70,590	48,790	30,198	12,491	C. O. NICKLE	Calgary	P.C.
Edmonton East	62,843	39,263	22,094	8,802	A. HOLOWACH	Edmonton	S.C.
Edmonton-Strathcona	56,093	39,202	24,044	8,901	R. F. L. HANNA	Edmonton	Lib.
Edmonton West	68,299	45,223	26,501	11,301	Hon. G. PRUDHAM	Ottawa, Ont.	Lib.
Jasper-Edson	56,605	30,133	18,975	7,639	C. YUILL	Barrhead	S.C.
Lethbridge	56,613	26,492	17,355	9,737	J. H. BLACKMORE	Cardston	S.C.
Macleod	49,506	26,992	18,087	8,685	E. G. HANSELL	Vulcan	S.C.
Medicine Hat	48,656	28,356	19,490	9,305	W. D. WYLIE	Medicine Hat	S.C.
Peace River	61,015	31,925	20,876	10,151	S. E. LOW*	Ottawa, Ont.	S.C.
Red Deer	46,496	26,688	16,883	8,792	F. D. SHAW	Innisfail	S.C.
Vegreville	47,475	25,118	17,201	8,023	J. DECORE	Vegreville	Lib.
Wetaskiwin	50,853	25,763	14,914	6,920	R. THOMAS	Wetaskiwin	S.C.

9.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to Dec. 31, 1953—concluded.

Province or Territory and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
British Columbia—(22 members)							
Burnaby-Coquitlam	49,633	29,679	19,324	7,232	E. REGIER	New Westminster	C.C.F.
Burnaby-Richmond	51,540	31,784	20,621	7,021	T. GOODE	Burnaby	Lib.
Cariboo	40,244	25,860	15,225	5,562	B. R. LEBOE	Prince George	S.C.
Coast-Capilano	65,645	44,177	29,822	13,614	*Hon. J. SINCLAIR*	Ottawa, Ont.	Lib.
Comox-Alberni	52,015	29,744	17,834	6,115	T. S. BARNETT	Alberni	C.C.F.
Esquimalt-Saanich	45,569	30,907	20,832	9,537	G. R. PEARKES	Victoria	P.C.
Fraser Valley	64,070	35,689	23,314	9,618	A. B. PATTERSON	Abbotsford	S.C.
Kamloops	44,318	25,175	16,451	7,578	E. D. FULTON	Kamloops	P.C.
Kootenay East	33,223	18,675	13,329	4,988	J. BYRNE	Kimberley	Lib.
Kootenay West	49,570	26,960	18,485	8,990	H. W. HERRIDGE	Nakusp	C.C.F.
Nanaimo	45,857	27,583	18,960	7,272	C. CAMERON	Victoria	C.C.F.
New Westminster	81,533	52,111	34,982	10,770	G. HAHN	New Westminster	S.C.
Okanagan Boundary	54,004	29,562	20,860	8,086	O. L. JONES	Kelowna	C.C.F.
Okanagan-Revelstoke	29,477	16,622	11,884	3,537	G. W. MCLEOD	Enderby	S.C.
Skeena	36,685	20,937	12,431	5,332	E. T. APPLEWHAITE	Prince Rupert	Lib.
Vancouver-Burrard	61,416	43,874	26,196	9,035	J. L. MACDOUGALL	Vancouver	Lib.
Vancouver Centre	47,528	35,263	20,421	8,259	Hon. R. O. CAMPNEY	Ottawa, Ont.	Lib.
Vancouver East	54,089	34,214	20,310	10,192	H. E. WINCH	Vancouver	C.C.F.
Vancouver-Kingsway	55,048	35,453	22,170	10,162	A. MACINNIS	Vancouver	C.C.F.
Vancouver Quadra	64,131	43,367	29,320	12,769	H. C. GREEN	Vancouver	P.C.
Vancouver South	64,926	43,625	28,732	10,459	E. PHILPOTT	Vancouver	Lib.
Victoria	74,689	49,621	33,953	13,696	F. T. FAIREY	Victoria	Lib.
Yukon Territory—(1 member)							
Yukon	9,096	5,028	3,818	2,176	J. A. SIMMONS	Whitehorse	Lib.
Northwest Territories—(1 member)							
Mackenzie River	10,279	5,682	3,596	1,722	M. A. HARDIE	Yellowknife	Lib.

10.—Voters on the Lists and Votes Polled at the Federal General Elections of 1940, 1945, 1949 and 1953

NOTE.—Corresponding statistics for the general elections of 1911, 1917, 1921 and 1925 are given in the *1926 Year Book, p. 82*; those for *1926 in the 1945* edition, p. 66; those for *1930* and *1935 in the 1948-49* edition, p. 94.

Province or Territory	Voters on the Lists				Votes Polled			
	1940	1945	1949	1953	1940	1945	1949	1953
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland	...	...	182,439	194,285	...	...	105,190	111,768
P. E. Island	55,339	54,794	55,772	55,469	62,943[1]	63,807[1]	68,393[1]	66,562[1]
Nova Scotia	335,990	362,754	373,585	380,836	283,428[2]	312,954[2]	338,928[2]	334,855[2]
New Brunswick	251,986	262,261	286,723	287,657	174,734	204,273	225,877	225,390
Quebec	1,799,942	1,956,225	2,177,152	2,352,619	1,189,489	1,433,591	1,610,510	1,565,262
Ontario	2,340,344	2,457,937	2,718,118	2,894,150	1,625,439	1,831,806	2,042,294	1,938,959
Manitoba	425,066	433,921	451,882	465,374	320,860	327,794	324,079	276,422
Saskatchewan	481,931	445,601	472,884	480,532	373,376	379,539	375,471	356,479
Alberta	423,609	430,430	492,228	548,747	272,418	315,863	341,222	343,258
British Columbia	472,584	545,077	673,782	730,882	368,103	433,402	464,785	475,456
Yukon Territory[4]	2,097	3,445	9,064	5,028	1,741	2,164	6,823	3,818
Northwest Territories[4]	...	...	...	5,682	...	...	...	3,596
Totals	**6,588,888**	**6,952,445**	**7,893,629**	**8,401,261**	**4,672,531**	**5,305,193**	**5,903,572**	**5,701,825**

[1] Each voter in the double-member constituency of Queens County, P.E.I., had two votes; in 1953, 25,285 voters on the list cast 40,508 votes. [2] Each voter in the double-member constituency of Halifax, N.S., had two votes; in 1953, 98,208 voters on the list cast 124,773 votes. [3] Electoral District of Yukon. [4] Electoral District of Mackenzie River.

Indemnities and Allowances.*—Members of the Senate receive a sessional indemnity of $4,000. In addition, they receive an annual expense allowance of $2,000 paid at the end of each calendar year. Members of the House of Commons are paid a sessional indemnity of $4,000. In addition, they receive $2,000 as an expense allowance paid at the end of each calendar year. This allowance, except in the case of Ministers of the Crown and the Leaders of the Opposition in the House and in the Senate, is not subject to income tax. The remuneration of a Cabinet Minister is $10,000 a year and the Prime Minister $15,000, in addition to the sessional indemnity and expense allowance each receives as a Member of Parliament. The Leader of the Opposition also receives $10,000 a year in addition to his sessional indemnity and expense allowance. A Cabinet Minister is also entitled to a motor-car allowance of $2,000. The Speakers of the Senate and of the House of Commons receive, besides their sessional indemnity and expense allowance, a salary of $6,000 and a motor-car allowance of $1,000 and are also entitled to $3,000 in lieu of residence. The Deputy Speaker of the House of Commons receives a salary of $4,000 and an allowance in lieu of a residence of $1,500. Parliamentary Assistants to the Ministers of the Crown, of whom there were 12 at Dec. 31, 1953, receive $4,000 sessional indemnity as Members of Parliament, $4,000 a year as Parliamentary Assistants and the $2,000 expense allowance paid to all Members of Parliament.

The Federal Government Franchise.—Legislation concerning the right to vote at federal elections is outlined in the 1947 Year Book, pp. 72-73.

The present franchise laws are contained in the Canada Elections Act (R.S.C. 1952, c. 23). The franchise is conferred upon all Canadian citizens or British subjects, men and women, who have attained the age of 21 years and who have been ordinarily resident in Canada for 12 months prior to polling day at a federal election, and ordinarily resident in the electoral district on the date of the issue of the writ ordering such election. Persons denied the right to vote are:—

(1) Judges appointed by the Governor General in Council;
(2) The returning officer for each electoral district;
(3) Persons undergoing punishment as inmates of any penal institution for the commission of any offence;
(4) Indians ordinarily resident on an Indian Reserve who were not members of His Majesty's Forces in World Wars I or II, or who did not execute a waiver of exemption under the Indian Act from taxation on and in respect of personal property;
(5) Persons restrained of their liberty or deprived of the management of their property by reason of mental disease;
(6) Doukhobors who are exempt from military service and are disqualified by provincial law from voting at elections of members of the legislative assembly;
(7) Persons disqualified, under any law relating to the disqualification of electors, for corrupt and illegal practices.

The Canadian Defence Service Voting Regulations set out in the Schedule to the Canada Elections Act prescribe voting procedure for members of the Armed Forces of Canada and also for veterans in receipt of treatment or domiciliary care in certain institutions.

* Bills affecting the indemnities of Members of the House of Commons, the Senate, Cabinet Ministers, etc., were being debated in Parliament in February 1954.

APPENDIX II

The results of provincial general elections held between Mar. 31, 1953, the date of the closing-off of the material on Provincial and Territorial Governments, pp. 55-69, and Dec. 31, 1953, are covered in this Appendix.

In the case of Prince Edward Island, no election was held but the Ministry changed on May 25, 1953.

1.—Members of the Twenty-Third Ministry of Prince Edward Island

(Party standing at latest General Election, Apr. 26, 1951: Liberal 24, Progressive Conservative 6.)

Office	Name
Premier and President of the Executive Council	Hon. Alexander W. Matheson
Minister of Health and Welfare	Hon. B. Earle MacDonald
Minister of Agriculture	Hon. C. Cleveland Baker
Provincial Secretary	Hon. William Hughes
Minister of Industry and Natural Resources	Hon. Eugene Cullen
Attorney and Advocate General and Provincial Treasurer	Hon. Walter E. Darby
Minister of Public Works and Highways	Hon. Dougald MacKinnon
Minister of Education	Hon. Keir Clark
Minister without portfolio	Hon. J. Wilfrid Arsenault

2.—Members of the Fourteenth Ministry of Nova Scotia

(Party standing at latest General Election, May 26, 1953: Liberal 23, Progressive Conservative 12, Co-operative Commonwealth Federation 2.)

Office	Name
Premier, President of Council, Provincial Treasurer and Minister of Highways and Public Works	Hon. Angus L. Macdonald
Attorney General	Hon. Malcolm A. Patterson
Minister of Agriculture and Marketing and Minister of Lands and Forests	Hon. A. W. Mackenzie
Minister of Public Health and Minister of Public Welfare	Hon. Harold Connolly
Minister of Mines and Minister of Labour	Hon. A. H. MacKinnon
Minister of Education	Hon. Henry D. Hicks
Minister of Municipal Affairs	Hon. R. M. Fielding
Minister without portfolio (in charge of administration of Nova Scotia Liquor Control Act)	Hon. Geoffrey Stevens
Minister of Trade and Industry	Hon. W. T. Dauphinee
Provincial Secretary	Hon. A. B. DeWolfe

3.—Members of the Fourteenth Ministry of Manitoba

(Party standing at latest General Election, June 8, 1953: Liberal Progressive 32, Independent Liberal Progressive 3, Progressive Conservative 12, Co-operative Commonwealth Federation 5, Labour Progressive 1, Social Credit 2, Independent 2.)

Office	Name
President of the Council and Minister of Dominion-Provincial Relations	Hon. Douglas L. Campbell
Attorney-General	Hon. Ivan Schultz
Minister of Public Works	Hon. William Morton
Minister of Mines and Natural Resources and Minister of Labour	Hon. Charles E. Greenlay
Minister of Health and Public Welfare	Hon. Francis C. Bell
Minister of Education	Hon. Wallace C. Miller
Minister of Municipal Affairs and Provincial Secretary	Hon. Edmond Prefontaine
Provincial Treasurer and Minister of Industry and Commerce	Hon. Ronald D. Turner
Minister of Agriculture and Immigration	Hon. Ronald D. Robertson
Minister of Public Utilities	Hon. Charles L. Shuttleworth

4.—Members of the Twenty-Fifth Ministry of British Columbia

(Party standing at latest General Election, June 9, 1953: Social Credit 28, Co-operative Commonwealth Federation 14, Liberal 4, Progressive Conservative 1, Labour 1.)

Office	Name
Premier and President of the Council	Hon. William Andrew Cecil Bennett
Provincial Secretary and Minister of Municipal Affairs	Hon. Wesley Drewett Black
Attorney General	Hon. Robert William Bonner
Minister of Lands and Forests and Minister of Mines	Hon. Robert Edward Sommers
Minister of Finance	Hon. Einar Maynard Gunderson[1]
Minister of Agriculture	Hon. William Kenneth Kiernan
Minister of Public Works	Hon. Philip Arthur Gaglardi
Minister of Railways, Minister of Trade and Industry, and Minister of Fisheries	Hon. William Ralph Talbot Chetwynd
Minister of Labour	Hon. Lyle Wicks
Minister of Health and Welfare	Hon. Eric Charles Fitzgerald Martin
Minister of Education	Hon. Tilly Jean Ralston[2]

[1] Holding office temporarily. [2] Died Oct. 12, 1953; Attorney General took over portfolio.

The following information may be added to Table 9, p. 65, showing Legislatures of Saskatchewan:—

Date of Election	*Legislature*	*Number of Sessions*	*Date of First Opening*	*Date of Dissolution*
June 24, 1948	11th General Assembly	5	Feb. 10, 1949	May 7, 1952
June 11, 1952	12th General Assembly	1	Feb. 12, 1953	1

[1] Life of Legislature not expired at Dec. 31, 1953.

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NOTE.—This Index does not include references to Special Articles published in previous editions of the Year Book. These are listed at pp. 1239-45.

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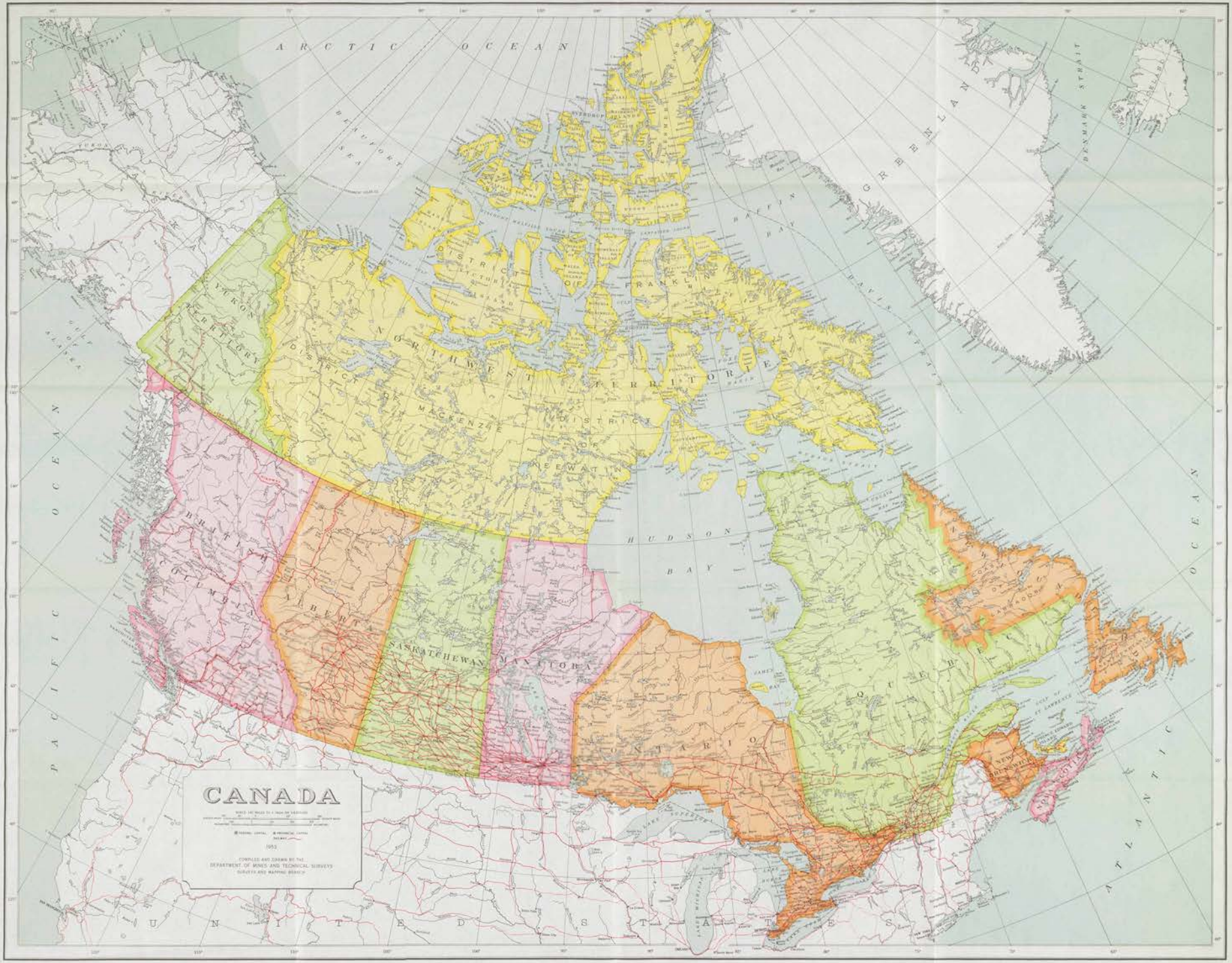
CANADA
1952
COMPILED AND DRAWN BY THE
DEPARTMENT OF MINES AND TECHNICAL SURVEYS
SURVEYS AND MAPPING BRANCH
ARCTIC OCEAN
BEAUFORT SEA
GREENLAND
BAFFIN BAY
DAVIS STRAIT
DENMARK STRAIT
PACIFIC OCEAN
ATLANTIC OCEAN
HUDSON BAY
YUKON TERRITORY
NORTHWEST TERRITORIES
DISTRICT OF MACKENZIE
DISTRICT OF FRANKLIN
DISTRICT OF KEEWATIN
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
QUEBEC
NEWFOUNDLAND
LABRADOR
PRINCE EDWARD ISLAND
NOVA SCOTIA
NEW BRUNSWICK
UNITED STATES

MAP
OF
CANADA
The most recently compiled political map of Canada available

DISTANCES BETWEEN PRINCIPAL POINTS IN CANADA *

Note.—Generally, the distances given are the shortest by railway.

A knowledge of distances in miles between principal points constitutes very useful information in these days of wide travel, but when an attempt is made to compile such data difficulties are at once encountered. Railway distances are the logical choice, even though road distances are of increasing interest to a vast body of travellers by automobile and are a useful alternative. Railway distances represent usually the shortest practicable land distances between two points and even to-day the bulk of freight and passenger traffic is by rail. Again, distances by air (sometimes called 'bee-line' distances) are only useful in practice to those who travel by air. This is a growing phase of transportation, of course, but has not yet assumed such proportions that its tabulation should displace the more usual one. Again, it is not a difficult matter to estimate air-line distances from a map made to convenient scale, whereas the ordinary reader is not able to obtain railway distances easily.

Even though it be decided to adopt railway distances as most useful, it is necessary to decide whether the most travelled route between two places or the shortest railway route should govern. In the tables given below, the distances between points are the shortest distances by railway and not necessarily the most travelled routes or the routes by which main trains travel. They are compiled principally from the railway time tables. The main table includes the capital of each province and some of the main shipping points chosen principally, but not altogether, by population; the subsidiary tables include distances of local importance. Included in the distances from Charlottetown is the distance from Borden to Cape Tormentine, over which the trains are transported by ferry; similarly, the train ferry distance between Mulgrave and Point Tupper is included in the distance from Halifax to Sydney. In the main table all the distances from Victoria include the distance travelled by boat from Victoria to Vancouver. However, wherever possible, railway distance only are used. In certain distances from Three Rivers and from Quebec it is possible, by the use of ferries, to travel by shorter routes than those given in the tables, the rail route only being taken in these cases.

Where boat routes are given, the best approximation of the distance travelled is used.

The air-line distances used are not necessarily the straight-line distances between points, but are the distances over the routes usually travelled by aeroplanes in good weather.

Place	St. John's	Charlottetown	Halifax	Moncton	Saint John	Fredericton	Quebec	Montreal	Sherbrooke	Three Rivers	Ottawa	Kingston	Toronto	Hamilton	London	Windsor	Port William	Winnipeg	Brandon	Churchill	Regina	Saskatoon	Calgary	Edmonton	Vancouver	Victoria	Prince Rupert
St. John's	0	894	933	964	1081	1090	1467	1696	1451	1540	1668	1735	1696	1835	1901	2111	2031	2017	2091	1906	2173	2180	2695	2858	4280	4205	4574
Charlottetown	894	0	159	120	215	230	606	886	583	672	795	857	854	1002	1133	1343	1603	1594	1668	1624	1889	1896	2411	2574	3996	3921	4290
Halifax	933	159	0	189	178	262	665	787	640	740	858	920	1091	1160	1196	1406	1731	1693	1767	1667	1987	1993	2514	2677	4099	4024	4393
Moncton	964	120	189	0	95	194	671	858	657	761	869	931	891	1039	1069	1279	1604	1566	1640	1540	1860	1866	2387	2550	3972	3897	4266
Saint John	1081	215	178	95	0	97	638	876	673	760	887	949	910	1058	1088	1298	1623	1585	1659	1559	1879	1885	2406	2569	3991	3916	4285
Fredericton	1090	230	262	194	97	0	468	690	467	556	683	745	706	854	884	1094	1419	1381	1455	1355	1675	1681	2202	2365	3787	3712	4081
Quebec	1467	606	665	674	638	468	0	188	157	78	186	248	209	361	391	601	926	888	962	862	1182	1188	1709	1872	3294	3219	3588
Montreal	1696	886	787	858	876	690	188	0	185	110	112	174	135	283	313	523	848	810	884	784	1104	1110	1631	1794	3216	3141	3510
Sherbrooke	1451	583	640	657	673	556	157	185	0	106	213	274	235	383	413	623	948	910	984	884	1204	1210	1731	1894	3316	3241	3610
Three Rivers	1540	672	740	761	760	556	78	110	106	0	108	170	131	289	319	529	854	816	890	790	1110	1116	1637	1800	3222	3147	3516
Ottawa	1668	795	858	869	887	683	186	112	213	108	0	111	135	287	317	527	852	814	888	788	1108	1114	1635	1798	3220	3145	3514
Kingston	1735	857	920	931	949	745	248	174	274	170	111	0	181	330	359	569	894	856	930	830	1150	1156	1677	1840	3262	3187	3556
Toronto	1696	854	1091	891	910	706	209	135	235	131	135	181	0	158	188	398	723	685	759	659	979	985	1506	1669	3091	3016	3385
Hamilton	1835	1002	1160	1039	1058	854	361	283	383	289	287	330	158	0	90	300	625	587	661	561	881	887	1408	1571	2993	2918	3287
London	1901	1133	1196	1069	1088	884	391	313	413	319	317	359	188	90	0	210	535	497	571	471	791	797	1318	1481	2903	2828	3197
Windsor	2111	1343	1406	1279	1298	1094	601	523	623	529	527	569	398	300	210	0	325	287	361	261	581	587	1108	1271	2693	2618	2987
Port William	2031	1603	1731	1623	1659	1419	926	848	948	854	852	894	723	625	535	325	0	435	511	410	730	736	1257	1420	2842	2767	3136
Winnipeg	2017	1594	1693	1566	1585	1381	888	810	910	816	814	856	685	587	497	287	435	0	76	176	296	302	823	986	2408	2333	2702
Brandon	2091	1668	1767	1640	1659	1455	962	884	984	890	888	930	759	661	571	361	511	76	0	100	220	226	747	910	2332	2257	2626
Churchill	1906	1624	1667	1540	1559	1355	862	784	884	790	788	830	659	561	471	261	410	176	100	0	320	326	847	1010	2432	2357	2726
Regina	2173	1889	1987	1860	1879	1675	1182	1104	1204	1110	1108	1150	979	881	791	581	730	296	220	320	0	6	527	690	2112	2037	2406
Saskatoon	2180	1896	1993	1866	1885	1681	1188	1110	1210	1116	1114	1156	985	887	797	587	736	302	226	326	6	0	521	684	2106	2031	2400
Calgary	2695	2411	2514	2387	2406	2202	1709	1631	1731	1637	1635	1677	1506	1408	1318	1108	1257	823	747	847	527	521	0	163	1585	1510	1879
Edmonton	2858	2574	2677	2550	2569	2365	1872	1794	1894	1800	1798	1840	1669	1571	1481	1271	1420	986	910	1010	690	684	163	0	1422	1347	1716
Vancouver	4280	3996	4099	3972	3991	3787	3294	3216	3316	3222	3220	3262	3091	2993	2903	2693	2842	2408	2332	2432	2112	2106	1585	1422	0	75	444
Victoria	4205	3921	4024	3897	3916	3712	3219	3141	3241	3147	3145	3187	3016	2918	2828	2618	2767	2333	2257	2357	2037	2031	1510	1347	75	0	369
Prince Rupert	4574	4290	4393	4266	4285	4081	3588	3510	3610	3516	3514	3556	3385	3287	3197	2987	3136	2702	2626	2726	2406	2400	1879	1716	444	369	0

From Halifax —		From Saint John —		Swift Cur. March	839	From Regina —		From Waterways —		From Vancouver —	
to Yarmouth	211	to Edmundston	186	Swift Cur. Lenores	855	to Moose Jaw	45	to Resolution (by boat)	512	to Kamloops	221
Sydney	284	Campbellton	356	Quebec	870	Moose Jaw	45	Hay River	1,112	Prince George	340
Clase Bay	304	St. Stephen	84	Kenora	1,100	Prince Albert	218	Aklavik (by boat)	1,900	Prince Rupert	740
New Glasgow	107			Cobalt	930	North Battleford	286		(to boat)		
Port aux Basques	540	From Montreal —		Timmins	885	Yorkton	532	From McMurray —	(481)	Whitehorse —	(481)
(by boat)		to Huntingdon Falls	46	Moosonee	960			to Fort Smith (all-rail)	235	(part by boat)	
	12	St. Hyacinthe	33			From Calgary —		Yellowknife (all-rail)	430	Dawson —	(471
St. John's	635	Drummondville	130	From Winnipeg —		to Medicine Hat	170		(part by boat)		
(by boat)				to Portage la Prairie	54	Lethbridge	247	From Vancouver —		From Victoria —	
	127	From Taschereau —		The Pas	468	Banff	82	to Yoho	497	to Hamilton	79
		to Rimouski	68	Port Arthur	868	Red Deer	93				
From Sydney —		St. Catharines	73	Fort Frances	949				ALASKA HIGHWAY		
to Port aux Basques	92	Toronto	62	(Fort Frances road		From Edmonton —		From Dawson Creek —			
(by boat)		Ottawa	72	from Sturt to Lorde		to Jasper	226	to Fort St. John	97		
	178	Peterborough	77	Lake 15 miles)	734	Peace River	327			to Whitehorse	918
St. John's	635	North Bay	238	Norway House (by		Grande Prairie	407	Fort Nelson	392	Carcross, Yukon	1,314
(by boat)		Sudbury	396	boat from Selkirk)	314	Waterways	399	Watson Lake	535		

*Prepared under the direction of E. W. Waugh, Surveyor General, Department of Mines and Technical Surveys, Ottawa.