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Hunters on Driftwood River, Northern Ontario.

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THE OFFICIAL HANDBOOK OF PRESENT
CONDITIONS AND RECENT PROGRESS

PUBLISHED BY THE AUTHORITY OF
THE RIGHT HONOURABLE C. D. HOWE
MINISTER OF TRADE AND COMMERCE

PREPARED BY THE
DOMINION BUREAU OF STATISTICS
DEPARTMENT OF TRADE AND COMMERCE
OTTAWA

Price 25 Cents

OTTAWA
EDMOND CLOUTIER, C.M.G., B.A., L.Ph.
KING'S PRINTER AND CONTROLLER OF STATIONERY
1950

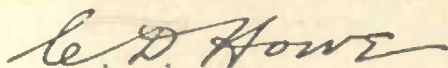
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Foreword

THE "Canada" Handbook Series was initiated twenty years ago to supplement the field of the *Canada Year Book* by offering to teachers and pupils in the public schools and to Canadian citizens generally a brief and attractive record of current economic conditions at a price within the reach of all. The *Year Book* is primarily a detailed reference work and is not designed to meet the need for a popular publication medium of this kind.

The growing popularity of the Handbook and the numerous special editions and reprints that have been required, by Government Departments and outside sources to meet their special needs, attest to the soundness of the original plan and to its value.

The past two decades have seen expansion of the national economy in every direction and, since a considerable proportion of space in the Handbook is allocated to illustrations, the editorial task of giving a well-balanced presentation in a publication of this size and at low cost becomes more difficult each year. Currently many thousands of copies are being distributed abroad through our Diplomatic and Trade Commissioner services and it is desirable for this reason alone that the Canadian economy should be explained fairly completely and that appropriate feature material should be included.

A handwritten signature in dark ink, reading "L. D. Howe". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

Minister of Trade and Commerce

OTTAWA, February 1, 1950.

Prefatory Note

THIS Handbook has been prepared and edited in the Year Book Division of the Dominion Bureau of Statistics from material that has, in the main, been obtained from the different Divisions of the Bureau. In certain special fields information has been kindly contributed by other branches of the Government Service.

The Handbook is planned to give a balanced picture of the general economic and social structure of Canada, the weight of emphasis being placed from year to year on those aspects that are currently of most importance, since there is not space to deal adequately with all. Chapter material has been brought up to date as at the time of going to press. The leading special article in this edition deals with "The Political Evolution of Canada".

H. Marshall

Dominion Statistician

Symbols

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

- .. to indicate figures are not available.
- ... to indicate figures are not appropriate or not applicable.
- to indicate nil or zero.
- to indicate that the amount is too small to be expressed or where "a trace" is meant.
- p to indicate that figures are preliminary.

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Acknowledgments

Acknowledgment is made to the following sources by whose courtesy photographs were made available for this publication:—

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Vacationists enjoying Nova Scotia scenery.

Kodachrome—Courtesy
Nova Scotia Government Bureau of Information



Skier, at an altitude of 6,800 ft., nearing the top of the chair lift,
Mount Norquay, Banff National Park, Alta.

*Kodachrome --- Courtesy
Department of Mines and Resources*

Introduction

Economic Conditions at the Close of 1949



*The Right Honourable C. D. Howe,
Minister of Trade and Commerce.*

DURING 1949 the Canadian economy was characterized by high production and employment. For the year as a whole, the gross national product will probably exceed \$16,000,000,000 and show some increase over 1948 in real terms. Unemployment at the end of October, although somewhat above 1948 levels, was less than 3 p.c. of the civilian labour force.

In general, the inflationary pressures that were reflected in the rising prices of 1948 were no longer apparent in the latter part of 1949. For the past two or three years short-run supply conditions have been a major consideration in any appraisal of the economic situation. This is no longer true. Post-war shortages, which contributed so much to price increases during the period 1946-48, have to a large extent

disappeared and the influence of deferred demand has abated. Longer-run and more normal factors, particularly from the demand side, must now be given greater weight in assessing the inherent strengths or weaknesses of the Canadian economy.

At the end of the year domestic demand seems firm. Personal incomes have continued to increase throughout the year. Government expenditure is rising. Any tendency for capital investment to decline because of the need for greater selectivity in business expansion seems likely to be offset by projected expansion in the oil and iron-mining industries and in housing.

The most obvious soft spot in demand lies in foreign trade. Here, improvement in the European domestic supply, combined with the dollar difficulties of the Sterling Area, raises serious problems for Canada's exports, particularly of agricultural produce. It is impossible to judge the extent of the setback this may give to the Canadian economy. Looking beyond

the immediate future, however, this unfavourable influence will be offset to some extent at least by the increasing industrialization of Canada and by the continuing growth of population which assures a greater domestic market.

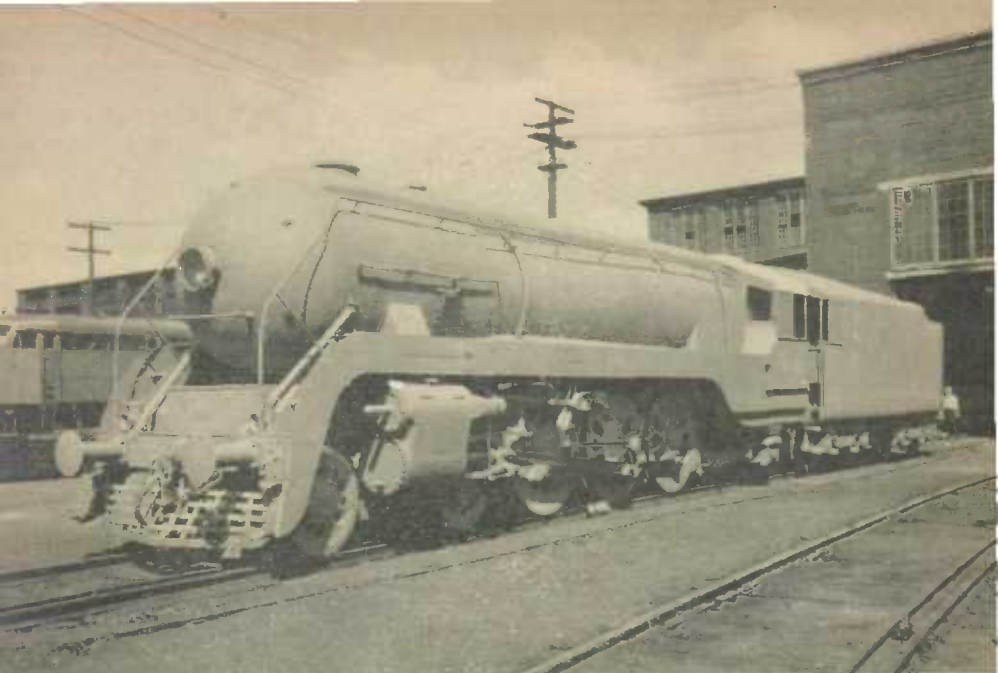
Foreign Trade.—Canadian exports are now running at a lower figure than in 1948, and for the year as a whole, a small decline in volume is expected. In 1949, Canada's current account surplus with all countries will be considerably less than the \$453,000,000 surplus of 1948, largely because of the substantial increase in imports from the United States.

Merchandise exports to the United States were \$1,344,000,000 and exports of non-monetary gold \$126,000,000 for the first eleven months of 1949 compared with \$1,353,000,000 and \$107,000,000, respectively, for the first eleven months of 1948. At the same time, merchandise imports from the United States increased markedly from \$1,646,000,000 in the first eleven months of 1948 to \$1,801,000,000 in the first eleven months of 1949. The unfavourable balance with the United States is even greater when invisible items such as interest and dividends, and tourist expenditure are taken into account. Merchandise exports to the United Kingdom were \$655,000,000 in the first eleven months of 1949 compared with \$638,000,000 in the first eleven months of 1948 while imports were \$287,000,000 in the first eleven months of 1949 compared with \$275,000,000 in the first eleven months of 1948.

There was no decline in Canada's holdings of gold and United States dollars since the unfavourable balance of trade with the United States was more than offset by favourable balances with the United Kingdom and other overseas countries. These latter favourable balances provided Canada with United States dollars, except for the part financed by the \$120,000,000 borrowed by the United Kingdom from Canada under the terms of the United Kingdom Financial Agreement Act of 1946. Canada's holdings of gold and United States dollars rose from \$998,000,000 at the end of 1948 to \$1,117,000,000 at the end of 1949. Nevertheless as long as overseas currencies are not freely convertible into United States dollars, Canada is faced with the very real problem of redressing this lack of balance in her trade with the United States and the United Kingdom.

It is too early to assess the effects of devaluation of the pound sterling and other currencies on the direction and extent of world trade and particularly on Canadian exports. Despite the devaluation of the Canadian dollar by approximately 10 p.c., sterling devaluation has raised the price of Canadian agricultural produce abroad and has created additional obstacles for this large and vulnerable part of our export trade. At time of writing, the full extent of the United Kingdom food contracts for 1950 is not known but it seems clear that some reduction in both prices and quantities will take place. Canadian non-agricultural exports to overseas countries declined during 1949 because of the dollar difficulties of these countries, and the competitive position of Canadian merchandise was further weakened by devaluation, except as regards the United States. Fortunately the domestic market has absorbed much of this production and the general strength of Canadian and United States demand continues in some measure to offset the decline in overseas markets.

At the close of 1949 imports remain high because of high levels of employment and income and the needs of capital expansion. Exports, on the other



One of the 120 powerful steam engines built in Montreal for service in India. In the background is a streamlined diesel-electric locomotive, a complete line of which is being manufactured for use on Canadian and foreign railways.

hand, suffer both from the shortage of dollars overseas and more normal conditions of supply in world markets. Moreover, despite some favourable factors such as the widespread endorsement of gradual tariff reductions and removal of trade barriers, multilateral trading with free convertibility of currencies seems still to be some distance in the future. Consequently the bilateral aspects of Canadian trade continue to be of great importance. The problem of Canadian trade is therefore twofold: first, to maintain the volume of exports relative to imports and second, to correct the direction of trade so that both the favourable balance with the United Kingdom and the unfavourable balance with the United States will tend to diminish.

Capital Expansion.—Early expectation of a record level of private capital formation in 1949 now seems to have been fully justified. The value of new building and engineering construction rose substantially and business purchases of new machinery and equipment were also at higher levels. For the year as a whole it appears that investment expenditures on plant, equipment, and housing will be more than 10 p.c. higher than for 1948.

A substantial part of the increased construction activity in 1949 was the result of the record house-building program. More than 95,000 new units were completed during the year, including the net increase from conversions. In 1948, 81,000 units were completed. Employment in building and general engineering construction increased by about 11 p.c. over 1948. The monthly average of construction costs has been a little higher than in 1948 although building material prices have been declining



Cedar logs on the haulway of a British Columbia sawmill.

slightly since early 1949. By the end of the year it appeared as if the peak in construction costs had been reached.

There was a general increase in the supply of Canadian manufactured machinery and equipment and factory shipments were somewhat higher than in the first nine months of 1948. Imports of all types of machinery were up about 15 p.c. Sales of farm machinery were much higher than in 1948. The value of farm machinery shipments by Canadian manufacturers was about 30 p.c. higher than in 1948 and imports were almost 50 p.c. higher than the year before.

Net addition to inventories, another form of business investment, fell off sharply during the year, as industry and consumer pipelines were filled. Business inventories (excluding farm inventories) increased by about \$200,000,000 in 1949 in contrast with the increase of \$700,000,000 in 1948.

Income and Expenditure.—Personal income during 1949 was again higher than in any previous year. Salaries and wages increased although at a slower rate than in the period 1946-48. Net income of farmers and other unincorporated business did not appear likely to reach the 1948 peak of \$2,900,000,000 since total returns from the 1949 crop are expected to be lower than in 1948.



Spraying potatoes on a New Brunswick farm.

The impact of the higher level of personal income in 1949 was accentuated by the sharp reduction in personal income-tax rates and increased exemptions. The total reduction in tax payments was estimated at \$282,000,000 over the year. At the same time, the distribution of 1943 and 1944 compulsory savings in the spring of 1949 released approximately \$222,000,000 for personal use. In addition, the Wheat Board distributed equalization and adjustment payments to farmers amounting to \$205,000,000.

For the first time since the end of the War, the increase in income is not set against a background of sharply rising retail prices. Food prices during 1949 were only slightly higher than the year before and clothing prices advanced only 5 p.c. as compared with 21 p.c. in 1948. The repeal of the wartime excise taxes in the 1949 budget and the reduction of the 25 p.c. luxury tax to 10 p.c. may also result in lower prices. Rents and the prices of various services rose in 1949. At the same time, employment in the service industries was increasing and services began to absorb a larger proportion of personal expenditure. During this year the total value of retail sales advanced more rapidly than retail prices, in contrast to 1948 when the increase in sales lagged behind.

Personal expenditure in 1949 was higher than in any previous year in both value and real terms. Since 1946 personal expenditure has accounted for over 90 p.c. of income after taxes, in contrast with the war years when expenditure dropped to below 80 p.c. The greatest contrast in expenditure is in automobiles and gasoline, furniture and household appliances. Expenditure on these goods and on clothing and household textiles, which were in short supply during the War, rose rapidly in 1947 and 1948 and, although the value of purchases has been more than maintained in 1949, the rate of increase has slackened. Although personal expenditure in 1949 still reflected the effects of deferred demand in some lines, it is not likely that this factor will have any appreciable influence in 1950. The volume and variety of consumer goods on the market at the close of 1949 indicates that more normal conditions will prevail.

Production and Employment.—The employed labour force was 5,053,000 in October, 1949, an increase of 195,000 over November, 1948. This increase was almost entirely in non-agricultural employment. The volume of production in manufacturing, mining and power was slightly higher than in 1948, as indicated by a rise of almost 1.5 p.c. in the index of industrial production, while the volume of agricultural production declined by perhaps as much as 10 p.c. in spite of increased acreage.

The physical output of manufacturing establishments was slightly greater for the first eleven months of 1949 than for the comparable period of 1948, and about 93 p.c. above the 1935-39 level. Shortages still persist in a few lines, notably motor vehicles and some construction materials but, in general, full production since the end of the War has produced a much better balance between supply and demand at current prices.

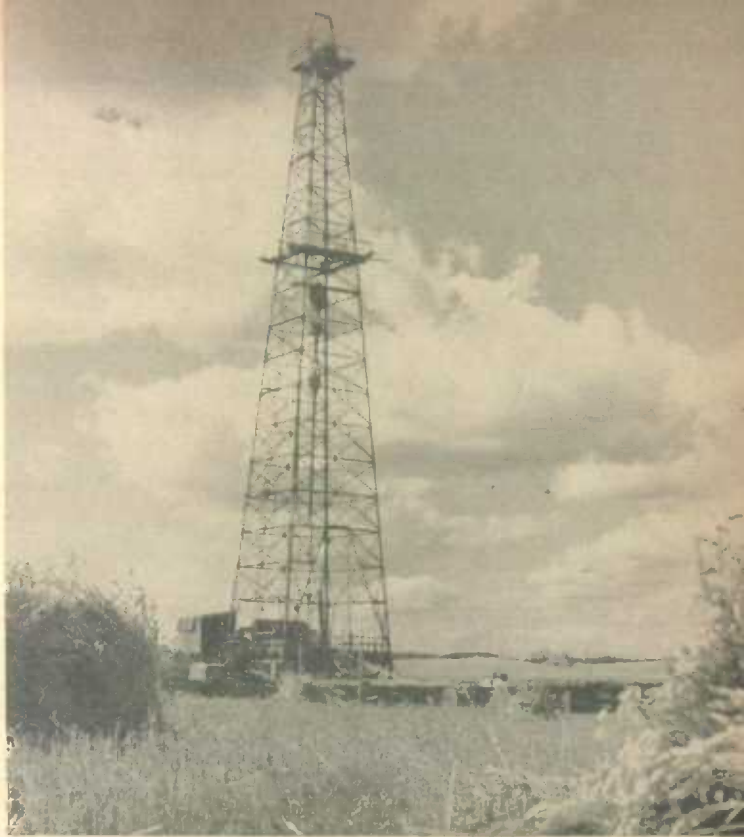
In mining the most significant development was the expansion of Alberta's oil production and the proving of large oil reserves for future development. Apart from the impetus given to the economy by the capital investment in this industry, rapidly increasing production has reduced imports of oil from the United States, and reduced our need for United States dollars. Conservative estimates place Alberta's known oil reserves at approximately 1,000,000,000 bbl. At the present time, actual production is perhaps not more than half this current capacity since the prairie market absorbs only about 60,000 bbl. a day and pipelines to other markets have not been completed.

Development of the extensive iron-ore deposits near the Quebec-Labrador Boundary is soon to begin. This program has important implications for Canadian industrial growth, particularly because of the gradual depletion of the Mesabi deposits in the United States. In addition, it supplies an immediate stimulus in the way of capital investment.

The wheat crop is estimated at 367,000,000 bu. or 26,000,000 bu. less than the 1948 crop. The harvest of coarse grains was considerably lower; the production of oats dropped by 12 p.c., barley by 22 p.c. and rye by 60 p.c. from 1948. Inspected slaughterings of cattle and calves were not quite as high this year as last and hog slaughterings declined 13 p.c. The production of milk and butter in 1949 was relatively unchanged from last year.

The favourable employment situation during 1949 is indicative of the tempo of economic activity. The labour force increased in 1949 and although

Imperial Oil well
No. 17 stands
in a wheat field
near Devon, Alta.



there was some increase in unemployment, the employed labour force was larger than the year before. The October survey shows a total civilian labour force of 5,200,000 with unemployment of less than 3 p.c. The average weekly wage in eight leading industries was \$43.78 on Nov. 1, 1949, compared with \$42.15 at the same time in 1948.

During the first ten months of 1949, Canadians received a total of \$6,327,000,000 in salaries, wages and supplementary income compared with \$5,867,000,000 in the same period of 1948, an increase of 7.8 p.c. The Canadian industrial scene was comparatively free of labour disputes. The only strike of consequence in Canada was in the asbestos mines during the winter and spring of 1949.

Prices.—The price level during 1949 remained fairly stable. While prices were still high, they were gradually coming into adjustment and the inflationary situation of the post-war years abated. The cost-of-living index was 159.6 on Jan. 1 and 161.5 on Dec. 1, while the general wholesale price index showed a slight decline. The main reason for this opposite tendency was that sensitive wholesale prices had reached their peak earlier and had begun to decline at the beginning of the year, while retails prices, previously restrained by regulation, continued to rise slowly. The services such as rents, street-car fares and hospital fees were coming into line with the general price level in 1949. Toward the end of 1948, rent control had been removed from all dwellings becoming vacant, and in November,

1949, rental regulations were further modified by permitting increases of 18 and 22 p.c. on unheated and heated accommodation, respectively, subject to existing leases.

Wholesale prices declined during the year for fishery products, furs, live stock, cotton fabrics, lumber, wood-pulp, scrap iron, copper, lead and zinc. Many of these items are dependent on trading conditions in international markets so that the price decline can be attributed to world rather than domestic demand.

Farm prices of agricultural products wavered during the year, without any noticeable upward or downward trend. Retail prices for food, however, showed a slight advance although declines for some items were noticeable at the end of the year. Building and construction material prices declined somewhat in the latter half of the year.

Finance.—Attention in recent years has been focused on the use of the Government Budget as a balance-wheel of the economy, to take up the slack in employment during times of falling national income through increased public investment, and to act as a deterrent to inflation in times of boom by taxing away surplus spending power.

Since a high level of consumption, income, employment and production was maintained in 1949, public investment, which is the corner-stone of counter-cyclical budgeting, has not been called upon to play its compensatory role. The 1949 Budget indicated that the policy of the Federal Government was to defer its construction program except where defence or other essential requirements have intervened. At the provincial and municipal levels, current information with regard to both revenue and expenditure is lacking, but the forecast of intentions at the beginning of 1949 indicated that municipal capital investment would show a moderate increase over 1948, and that provincial capital investment would remain at 1948 levels. The outlook for increased public investment in 1950 centres mainly around developments which are taking place in connection with national defence, the construction of the Trans-Canada Highway, and government plans to assist with the servicing of land for housing and the promotion of housing projects.

The total expenditure of the Federal Government for the first nine months of the year ending Mar. 31, 1950, was \$1,537,000,000, about \$191,000,000 or 14 p.c. over the corresponding period of the previous fiscal year. Increased defence spending accounted for \$77,000,000 of this increase, and payments to Newfoundland under the accession agreement, higher family allowances and old age pensions, and the effects of generally higher price levels of all government operations explain most of the balance.

Federal revenues in the first nine months of the fiscal year 1949-50 were down noticeably to \$1,836,000,000 as compared with \$1,956,000,000 in the previous fiscal period. This represents a decline of approximately 6 p.c. and is the result of substantial reductions in the personal income tax rate, and the abolition of indirect taxes on many articles and services. The surplus of \$300,000,000 for the first nine months will not be maintained since expenditures become very much heavier towards the close of the fiscal year.

Although the net Federal Government debt was reduced in 1948-49 by the large surplus of \$596,000,000, a reduction on this scale will not take

place during 1949-50 since the estimated surplus is only \$90,000,000. In addition, the Federal Government assumed \$72,000,000 of the sterling debt of Newfoundland during 1949-50.

Money Supply.—The average money supply of Canada for the first nine months of 1949 was approximately 5 p.c. above that for the same period of 1948. Relative to the value of goods and services produced, the means of payment in Canada has shown a definite decline since 1946.

Bond Prices and Interest Rates.—Government of Canada bond prices remained steady in the early months of 1949 but began to move upward in July. Between July and December the price of the longest term Victory Loan bonds (maturing in 1966) increased from an average of 101.12 to an average of 102.65 with the yield declining from 2.89 p.c. to 2.73 p.c.

Chartered Bank Loans and Investments.—Average chartered-bank holdings of federal, provincial and municipal government securities during the first ten months of 1949 increased by approximately 8 p.c. over the same period of 1948. At the same time, the volume of commercial loans as indicated by month-end averages increased by 11 p.c. to \$2,350,000,000 as at Oct. 31, 1949. These increases are slightly over-stated due to the inclusion of Newfoundland in the 1949 figures. Government securities and commercial loans as proportions of the total assets of chartered banks held steady at the 1948 ratios of approximately 43 and 25 p.c., respectively.

A helicopter, chartered by the Government Topographical Survey, picks up surveyors at a remote triangulation station in that district on the Quebec-Labrador Boundary where the rich iron-ore deposits have been discovered.



The Political Evolution of Canada

THE discovery of Newfoundland and the eastern coast of North America is generally credited to John Cabot's voyage of 1497. There is reason to believe, however, that the Grand Banks fishing grounds and the mainland were known long before John Cabot's day. Ships from ports of western England and Brittany are known to have been engaged in the Icelandic and northern fisheries for many decades before 1497, and as early as 1000 A.D. daring Scandinavian and Icelandic sailors are said to have settled somewhere in Nova Scotia. Nevertheless, the recorded history of Canada begins with the Cabot voyages.

On his first voyage in 1497, Cabot, a Venetian domiciled in England, sailed from Bristol under Letters Patent granted by King Henry VII. He landed either on Cape Breton Island or on the coast of Newfoundland, raised the Royal Standard and took possession in the name of the King of England. He explored the southern coast of Newfoundland from Cape Ray to Cape Race, naming the Trinity Group of Islands (now St. Pierre, Miquelon and adjacent islands) *en route*.

During his second voyage, a year later, Cabot followed the mainland southward from about the latitude of Baffin Island, discovered Hudson Strait, sailed down the coast of Labrador, past Newfoundland, Nova Scotia and the New England States as far as Chesapeake Bay.

The coast of North America from Greenland to Florida had in fact been thoroughly explored by the time Jacques Cartier made his first voyage in 1534. Cabot, Corte Real, Verrazano (who gave to the southern part of the mainland its first name of New France), and others prepared the way, each in turn adding to the fund of knowledge about the new continent. Cartier was the first navigator to penetrate inland and explore the unknown regions that make up the vast territory drained by the St. Lawrence and its tributaries. Cartier made three voyages, the first in 1534, the second a year later, and the final voyage in 1541, and it was on the basis of his explorations that France was able to lay claim to large areas in the interior of North America. (See Maps 1 and 2 of insert facing p. 24.) Cartier's first voyage was limited to an exploration of the Gulf of St. Lawrence and neighbouring islands, as well as the mouth of the St. Lawrence River. On his return to France, he reported to the French Court that this new country had great possibilities. He did not bring back the expected spices, gold or silk, but he related stories of fertile lands, dense forests and seas teeming with fish.

On his second voyage, made in 1535, Cartier ascended the St. Lawrence River, explored its shores, passed the mouth of the Saguenay and eventually reached the Indian village of Hochelaga on the Island of Montreal. After spending the winter on a site near what is now Quebec City, Cartier returned to France in 1536. Five years later he made his final voyage. He had hoped

to explore the headwaters of the Ottawa River but ended by following practically the same course as that of 1535.

Cartier's voyages were little more than a memory when Samuel de Champlain carried out his explorations of North America in the early years of the seventeenth century. Accompanied by Sieur de Monts, he established a settlement, named Port Royal, on the Annapolis Basin in 1605. This was the first permanent settlement within what is now known as Canada; in fact, at that time St. Augustine on the Florida coast was the nearest European settlement.

It was 1608 before a permanent settlement was established on the St. Lawrence. In that year Champlain founded Quebec, but during the first winter the settlement was almost destroyed by disease.

Three Rivers was founded in 1634 by Sieur de Laviolette and Montreal in 1642 by Sieur de Maisonneuve on behalf of the Company of One Hundred Associates. These, like other settlements in Canada, faced a hard struggle for many years.

Meanwhile, the English were pursuing their explorations to the north. In 1610-11 Hudson penetrated into Hudson Bay and explored south as far as James Bay. Also in the reign of James I of England, Sir William Alexander, a Scot, endeavoured to establish a colony in Acadia. Very little resulted from his efforts near Port Royal in 1623 and on Cape Breton Island, but this was the first English attempt at colonization on the continent of North America. In 1670 the Hudson's Bay Company was granted a charter by King Charles II. The Company was given control of all lands whose waters emptied into Hudson Bay. This gave rise later on to much dispute with the French whose explorers had worked northward from the St. Lawrence Basin.

A review of European interests in North America at the opening of the eighteenth century shows that New France was then at the zenith of her territorial expansion. Her claims embraced practically the whole of the St. Lawrence and Mississippi Basins. Only the Atlantic coastal area, which constituted New England, the Central, and the Southern English colonies, together with Newfoundland and Rupert's Land, were claimed by the English. The New England, the Central, and the Southern English colonies were bounded on the northwest by the Iroquois lands along the Ohio, on the south by Florida, and were undefined towards the west. The French claimed the territory east of the Mississippi to the Alleghany Mountains but the Royal Charters granted to the English colonists had vaguely extended their territory from "sea to sea" and therefore brought the English into vital conflict with the French in this disputed area. It was, however, the alliance between the Iroquois and the English, much more than the charter stipulations, that was instrumental in deciding the issue in favour of the English.

In the north, Rupert's Land (Hudson's Bay Company domain since 1670) bordered Hudson Bay and Strait, with boundaries that were not specifically defined. The French now disputed with the English a large area of the Hudson Bay Watershed. Newfoundland was English by right of discovery and had been occupied by Sir Humphrey Gilbert in the name of Queen Elizabeth in 1583; since 1621 it had been English by colonization, but France disputed these claims until 1713.

By the Treaty of Utrecht, which ended the War of 1702-13 (generally known as the Spanish Succession or Queen Anne's War) between France

and Britain,* France surrendered her interests in Newfoundland and gave up her rights to Acadia (which between 1654 and 1667 had been English territory) to Britain: the Island of Cape Breton, however, remained French.† She also relinquished any claims she might have had to the Hudson Bay Watershed. The British succeeded, at Utrecht, in getting an acknowledgment of their sovereignty over the Iroquois from the French, thus greatly strengthening their former claims, based on their charter rights, westward from the Alleghany Mountains.

The next great readjustment in the boundaries of North America was made at the end of the Seven Years' War by the Treaty of Paris in 1763, following Wolfe's victory at Quebec and the capture of Montreal by Amherst. France now definitely withdrew from the mainland of North America. She ceded to Spain all the territory in the Mississippi basin west of the Mississippi River, and to Britain all French territory east of the Mississippi except New Orleans, which went by secret treaty to Spain. Spain ceded Florida to Britain and the latter country restored certain conquests to Spain. British territory, therefore, now included: the Hudson Bay Watershed, the entire St. Lawrence basin including the Great Lakes, the Mississippi basin east of the Mississippi River, the Atlantic and Gulf of Mexico Coasts from Labrador to the Mississippi Delta, and Newfoundland (to which Labrador was transferred).

Even before Feb. 10, 1763, when the Treaty of Paris was signed, the British authorities had pledged the continuance of seigneurialism in Canada. By the Treaty, the additional liberty of the Roman Catholic religion was confirmed to the French inhabitants. The form of government was definitely decided by the Proclamation of Oct. 7, 1763, when civil government was instituted under a Governor to be assisted by a Council composed of British officials and eight persons to be chosen by the Governor from the French Canadian inhabitants.

The English colonists along the Atlantic had at last succeeded in dislodging the French from their position athwart the westward avenue of expansion recognized by their charters. The colonists had aided in the conquest of Canada but whatever hopes they entertained that the St. Lawrence Valley would be a free field for their expansion northward were doomed to disappointment, especially after the American War of Independence, 1775-1781.

By the Quebec Act of 1774, the coast of Labrador was restored to the then "Province" of Quebec and the boundaries of this "Province" were defined as extending north to the Hudson's Bay Company's territory, south to the borders of the English colonies (the Ohio) and west to the Mississippi‡ —to the further disappointment of the Atlantic Coast colonists who, even after the Treaty of Paris, had looked upon the area lying south of the Great Lakes and between the fork of the Ohio and the Mississippi as a legitimate

* The early colonies were "English", not "British". They became British after the union of Scotland with England in 1707.

† Cape Breton fell to the British in 1745 after a short siege, but was returned to the French by the Treaty of Aix-la-Chapelle. The British finally gained possession of the fortress of Louisbourg and Cape Breton in 1758.

‡ The western boundary of the "Province" of Quebec was defined very vaguely in the Quebec Act and nearly a century later, when the exact boundary of Ontario was being defined, following the creation of the Province of Manitoba, gave rise to much dispute between the Dominion and Ontario. The main point of dispute was whether the western boundary should have followed the true north line from the confluence of the Ohio and Mississippi Rivers to Hudson's Bay territory, as shown by the dotted line on Map 3 facing p. 24, or the east bank of the Mississippi River, as shown on the same map. The former boundary was awarded by the Dominion to Manitoba in 1881 (see p. 24), but finally reverted to Ontario by award of the Privy Council in 1884, ratified by Imperial Act of Parliament in 1889.

extension of their own territory. (See Map 3 of insert facing p. 24.) But when, following the Treaty of Versailles in 1783, the United States of America was internationally recognized, the boundaries of the former English colonies along the Atlantic Coast were extended by the Treaty to include all this territory between the Ohio and the Mississippi Rivers.

The mainland boundary between Canada and the new United States, from east to west, as set forth in the Treaty, was: the St. Croix River to its source, thence due north to the Highlands, thence along the watershed, which divides the rivers that flow into the Atlantic from those that flow into the St. Lawrence, to the head of the Connecticut River; thence down that river to the 45th parallel of N. Latitude; due west along this line until it strikes the St. Lawrence; through Lakes Ontario, Erie, St. Clair, Huron, and across Superior northwest of the Isles Royale and Phelipeaux to Long Lake; thence through the connecting water-communication to Lake of the Woods; and from the northwest point thereof to the Mississippi River. This boundary was based in part upon boundaries of Nova Scotia and Quebec as previously defined, but, in spite of the fact that the best had been done under conditions existing at the time to define the boundary clearly, future disputes were inevitable, since the negotiators did not agree upon, nor attach to the Treaty, an official map.

Subsequent definitions of the eastern part of the boundary were made by several separately appointed commissions. The controversy was prolonged and at times bitter. In 1831, the King of the Netherlands, under Article V of the Treaty of Ghent (1814) which marked the close of the War of 1812, was appealed to as a disinterested outsider for an award. He recommended a "line of convenience" between the British and the United States claims which agreed fairly closely with the boundary of to-day. Still the Maine Boundary question remained unsettled until 1842 when the Ashburton Treaty was signed at Washington. Map 4, facing p. 24, shows the approximate position of the Maine Boundary as finally adjusted.

Nova Scotia in 1783 encompassed all that part of the mainland east of Chaleur Bay and the State of Maine, and included Cape Breton Island but not Prince Edward Island (St. John's Island, as it was then named) which had been separated politically from Nova Scotia since 1769.

In 1784, New Brunswick was established as a separate colony, the division from Nova Scotia being made from the Cumberland arm of the Bay of Fundy across the Chignecto Isthmus to Baie Verte, and Cape Breton Island was separated politically from Nova Scotia. The division of the "Province" of Quebec was next considered advisable from a standpoint of local government, since the conclusion of peace with the United States in 1783 had brought a great influx of "loyalists" to the territory between Lakes Erie, Ontario and Huron. The Constitutional Act of 1791 authorized this division. An Imperial Order in Council of the same year established the two districts of Upper Canada and Lower Canada, the boundary running from Lake St. Francis northward to the Ottawa River, which was followed to Lake Timiskaming, thence due north to the Hudson's Bay.* However, the Canadas

* The Order in Council, in reference to this line north of Lake Timiskaming, stated: "and from the head of the said lake (Timiskaming) by a line drawn due north until it strikes the boundary line of Hudson's Bay" [italics for emphasis only]. Later this sentence was interpreted to mean the shore of Hudson Bay (dotted extension on Map 4), but the late James White indicates in his article on the Ontario-Manitoba Boundary, *Canada and Its Provinces* (Vol. VIII, pp. 893-4), that this interpretation was a misconception and that the original intention was that the line should proceed due north to the boundary of the Hudson's Bay Company's territory.

were again united in 1840, to remain one until Confederation. The boundaries as understood in 1791 are shown on Map 4.

Developments between 1791 and Confederation were concerned mainly with the exploration of the west coast of North America and the extension of Canada northwards and westwards. These are dealt with under the appropriate headings below. One interesting historical adjustment that came about in 1809 is the reannexation to Newfoundland of the Labrador Coast which had passed to and from the Island and Quebec Province in 1763 and 1774 but now permanently remained with Newfoundland. (See Map 6, facing p. 24.)

Exploration of the West Coast of North America.—In 1728 Bering, a Danish explorer in the service of Russia, explored the northeast coast of Asia and the Bering Strait. In 1741 Bering and Chirikoff continued their explorations to the Alaska Coast and named Mount St. Elias. These voyages gave Russia title to the Alaskan shore as far south as latitude 55°N.—a title held until the sale of Alaska to the United States in 1867.

Captain James Cook took the initial step in British explorations of the northwest coast of North America by charting the coast between latitudes 45° and 65° N. in 1778. He made a landing and established himself at Nootka Sound. In 1790 his achievements became the basis of Britain's title to the northwest coast of America south of Alaska. The Nootka Convention of the same year (1790) put an end to all Spanish claims of supremacy on the Pacific Coast of what is now Canada. In 1792 Captain Vancouver carried on the work of Cook by more carefully exploring the Pacific Coast north of the 39th latitude and particularly the waters between the mainland and Vancouver Island, proving that the latter was indeed an island.

Alexander I of Russia issued a ukase in 1821 granting rights of "commerce, whaling and fishery, and of all other industry" on the North American Coast between Bering Strait and latitude 51°N. to Russian subjects exclusively and prohibiting foreigners from approaching the coast within 100 miles. Protests were lodged by both Great Britain and the United States and the right of Russia to forbid navigation within 100 miles of the coast was stoutly denied, but, whereas the United States denied *in toto* the Russian claim south of latitude 55°N. and even felt that she, herself, had some claim to the coast as high as 61° by virtue of the Treaty of Florida Blanca, 1819 (whereby Spain ceded to the United States all her rights and claims north of latitude 42°N.), Great Britain, by right of priority of discovery and the forts established by the North West Company and the Hudson's Bay Company, claimed the coast to approximately 58°N. latitude. Moreover, south of the Columbia, the "Oregon Country" was about that very time a matter of dispute between Great Britain and the United States. Great Britain refused to accept latitude 49°N. as her southern boundary with that country.

Negotiations with Russia were carried on separately by the United States and Great Britain and, finally, treaties were signed by these countries in 1824 and 1825. The treaty between Russia and Great Britain (1825) defined the line of demarcation between Russian and British territory as commencing from the southernmost part of Prince of Wales Island eastward to the Portland Canal and up the Canal to the 56th parallel of north latitude,

thence along the summits of the mountains paralleling the coast as far as 141°W. longitude, and along that meridian to the Arctic Ocean. The southern boundary between British territory and the United States remained in dispute until 1846, when the 49th parallel of north latitude was followed to the coast, but the whole of Vancouver Island went to Great Britain. Vancouver Island was made a colony in 1849. In 1858 the mainland extending north from the International Boundary to the Skeena and Finlay Rivers and east to the Rockies passed from the Hudson's Bay Company to the Crown as a separate colony. (See Map 6, facing p. 24.)

Meanwhile, in 1866, the union of the colony of Vancouver Island with British Columbia took place and the northern boundary of British Columbia was extended to the 60th parallel of latitude.

Extension Northwards and Westwards of the Eastern Settlements.—In the intervening years between 1792 and Confederation, there was a continued and steady westward and northward extension of the boundaries of British North America. In 1821 the Hudson's Bay Company and the aggressive North West Company (the latter Company had explored and exploited the Pacific and Arctic watersheds) joined resources under the name of the older Company. Their leases now extended from Rupert's Land to Russian America and the Pacific Coast.

The Selkirk Grant.—In the heart of the continent, Lord Selkirk had been granted 116,000 square miles of territory, by the Hudson's Bay Company in 1811. The area comprised the Red River Valley, one of the most fertile districts in North America, and the purpose of the grant was for settlement. After many trials and in the face of much opposition, the settlement finally prospered but not until after the founder's death. When, in 1818, the International Boundary to the Rockies was the subject of a convention between the United States* and Great Britain, the southern part of the Selkirk Grant was absorbed into the Dakotas and Minnesota. Nevertheless, it was the fact of this established settlement and the vested interests of the settlers that played a large part in safeguarding the ideal of a British transcontinental dominion. The establishment of the central part of the settlement as the Province of Manitoba—a part of the Dominion within the British connection—was finally arranged but this did not take place until 1870, after the Hudson's Bay Company had surrendered to the Crown all territorial rights in the Northwest (1869).

The Growth of Canada after Confederation.—Confederation in 1867 brought about immediate union among the four Provinces of Ontario, Quebec, New Brunswick and Nova Scotia. (See Map 5, facing p. 24.)

Representatives from Newfoundland were present at the conference held at Quebec in 1864, when the constitutional foundations of the new nation were laid though Newfoundland did not, at that time, enter the union. The door for her later entry was, however, left open.

In 1870, Manitoba, which had just been organized as a province (see above) entered Confederation and was followed by British Columbia in 1871 and Prince Edward Island in 1873. Map 6, facing p. 24, shows the

* In 1803 the United States had purchased the Louisiana Territory from France which in turn had secured it from Spain by secret treaty in 1800.

Dominion of Canada at this time (1873), the northern boundaries of Ontario and Quebec being those generally understood at Confederation, although later the Province of Ontario made good its claim to the northward as far as James Bay and, in 1898, the northern boundary of Quebec was determined as the East Main River-Labrador line shown on Map 8. British rights to the Arctic Islands were handed over to the Dominion of Canada in 1880.

The western boundary of Manitoba was extended to the 100th meridian of longitude by Dominion Act of 1877. Between 1873 and 1889 much confusion existed between the boundaries of Ontario and Manitoba (see footnote at p. 21 for the origin of this dispute). In 1878, the Ontario Boundary question was referred to arbitration. The award of the arbiters set the northern boundary as the Albany and English Rivers and extended the western boundary to the longitude of the northwest angle of the Lake of the Woods.

A change of government in the Dominion prevented the passage of legislation implementing the decision. In 1881, however, the boundary of Manitoba was set by Dominion Act to about the 53rd parallel of latitude on the north, and to the extension of the "Due North Line" from the confluence of the Ohio and the Mississippi Rivers on the east, which was the western boundary of Ontario according to the contention of the Dominion Government. The Ontario-Manitoba boundary question was finally decided in 1884 by the Imperial Privy Council, which confirmed the arbitration award of 1878. The eastern boundary of Manitoba therefore was now definitely fixed and fell along the extension of the due north line from the source of the Mississippi (not the confluence of the Ohio and Mississippi). An Imperial Act of Parliament, passed in 1889, confirmed this decision.

The Northwest Territories were now becoming politically organized. In 1876 the Provisional District of Keewatin was carved out north of Manitoba to the Arctic Ocean with the west coast of Hudson Bay as its eastern boundary. In 1882 the Districts of Saskatchewan, Assiniboia, Alberta and Athabaska were created. All these boundary decisions are shown in Map 7.

Between 1895 and 1897 what remained of the unorganized Northwest Territories was subdivided into the Administrative Districts of Mackenzie, Ungava and Franklin, and the District of Keewatin was enlarged to take in that portion of the Northwest Territories due north of Ontario. These Districts were not politically independent but were subordinate parts of the Northwest Territories. Yukon, where an important gold-mining industry was rapidly growing, was created a District by Order in Council in 1895. Yukon District became a Territory in 1898. See Map 8.

The Establishment of the Alaska-British Columbia-Yukon Boundaries.—Russia sold her American possessions to the United States in 1867, after which an effort was made by Great Britain to have a joint survey made of the boundary demarcating the line between Alaska, British Columbia and Yukon. A survey to the 141st meridian of west longitude was carried out under the Boundary Survey Conventions of 1892 and 1895, prior to a boundary settlement, by two commissioners, one representing Great Britain and one representing the United States. The demarcation of the 141st meridian was provided for in 1897, but the actual boundary had still to be officially agreed upon. In the meantime, the discovery of gold in the valley of the Klondike River in 1896 had emphasized the importance of the Chilkoot and

White Passes, at the head of the Lynn Canal, as gateways to Upper Yukon. Miners in tens of thousands were entering the gold fields and, since Canada claimed the territory at the head of the Lynn Canal while United States revenue officers ruled that their regulations forbade the landing of British vessels anywhere on the shores of that inlet, much friction ensued. By agreement, Dyea and Skagway were made sub-ports of entry but the importance of finally defining the boundary, especially in this area, was recognized. In 1898 and 1899 outstanding differences were referred to a Joint High Commission, but the Commission separated without settling the points at issue. Later, in October, 1899, a provisional boundary was fixed at the summits of the Chilkoot and White Passes and the Chilkat River at its junction with the Klehini River. Under the Alaska Boundary Convention (1903) reference of points in dispute was again made to a tribunal of "six impartial jurists of repute", three to be appointed by the British Government and three by the United States Government. The most acute differences of opinion centred in the area at the head of the Lynn Canal and in the Portland Canal section. The final award of 1903 was a compromise of the positions taken by the two Governments. In the important Lynn Canal area, the United States secured an adjustment of the provisional line. The final line crossed the Chilkat River about twenty miles further upstream from the Klehini River. In the Portland Canal section the final line was drawn down the centre of the Canal but at its mouth Wales and Pearce Islands went to Great Britain and Sitklan and Kannaughnut Islands to the United States.

The year 1905 marked the rise of Alberta and Saskatchewan to provincial status, embracing the former Districts of Athabaska, Alberta, Saskatchewan and Assiniboia from the Northwest Territories. In 1912 the boundaries of Manitoba and Ontario were extended to their present positions and Quebec absorbed the remainder of Ungava. In 1927, the boundary between the Dominion of Canada and Labrador was finally settled by the Imperial Privy Council. It had formerly been maintained by Canada that Labrador was confined to a narrow strip along the Atlantic Coast, but Newfoundland, to which the area had been re-transferred from Quebec by the Labrador Act of 1809, claimed a much larger area. Certainly in 1809 Labrador included Anticosti, and some other smaller islands in the St. Lawrence, as well as the north shore of the Gulf west from Belle Isle Strait to the St. John River which enters the St. Lawrence opposite to the western tip of Anticosti Island. The Labrador Act of 1825, however, had re-annexed Anticosti, the Magdalen Islands and the north shore, from the St. John River to Anse Sablon, near the Strait of Belle Isle, to Lower Canada. The Privy Council now ruled that Labrador extended inland to the Atlantic Ocean-Hudson Bay and Strait watershed and the boundaries defined were those shown on Map 10.

In July, 1948, the people of Newfoundland, by majority vote in a national referendum, decided to enter the Canadian Confederation, and the Island, together with Coast of Labrador, whose boundaries had been definitely fixed by the Privy Council decision of 1927 as taking in the Atlantic watershed from Cape Chidley at the north to latitude 52°, became the tenth province of Canada on Mar. 31, 1949, thus fulfilling, after 82 years, the dream of the Fathers of Confederation when they met at Quebec in 1864.



The Bow River Valley, Alta., representative of the massive snow-crowned mountains, beautiful valleys with their sparkling lakes and rivers, and primeval forests of the great Cordilleran region bordering Canada's western coast.

Canada—The Country

★ *Physical Features*

CANADA comprises the whole northern part of the North American Continent with its islands, except the United States territory of Alaska. Extending from the Atlantic to the Pacific and from the United States Boundary to the North Pole, it has an area of 3,845,144 square miles, which may be compared with an area of 3,608,787 square miles for the United States and Alaska. The Canada-United States Boundary is 3,986·8 miles long and that between Canada and Alaska 1,539·8 miles.

The fresh-water area of the country is unusually large, constituting over 6 p.c. of the total: its character and disposition—for there are literally thousands of lakes, large and small, that provide storage basins for the regulation and control of stream flow—account for Canada's favourable place among nations in water-power resources. The Great Lakes, with the St. Lawrence River, form the most important system of waterways on the continent and one of the world's notable fresh-water transportation routes, providing ship transportation from the sea into the very heart of the continent. From the Strait of Belle Isle at the northern entrance to the Gulf of St. Lawrence, the sailing distance to the head of Lake Superior is 2,338 miles. The Great Lakes, through which the International Boundary passes, have a combined area of 95,170 square miles, and in addition to these there are twelve large lakes over 1,000 square miles in area and countless smaller lakes scattered all over that portion of Canada lying within the Canadian Shield: in an area of 6,094 square miles, accurately mapped, just south and east of Lake Winnipeg, there are 3,000 lakes.

The physical features of Canada fall naturally into six divisions. The Appalachian Region, including that part of the country lying south and east of the St. Lawrence River—the Maritimes (including the Island of Newfoundland) and part of Quebec—is for the most part mountainous or hilly. The Appalachian Mountains of the eastern United States, continuing up through southeastern Quebec, reach heights up to 4,160 feet. To the east the elevations are lower. It is a beautiful country of diversified character, heavily wooded in sections and with areas of good farm lands.

The valley of the St. Lawrence River and the peninsula of Ontario formed by the Great Lakes, a region about 35,000 square miles in extent, is rich in resources of forests, minerals, water powers and agriculture. Its moderate climate, fertile soil and excellent transportation facilities have combined to make this region an area of great economic importance. Within this area is the greatest concentration of population and industry in the country.

That vast area lying west and north of the St. Lawrence Lowlands, including the remainder of Quebec and Ontario and running westward to Lake Winnipeg and northward across Saskatchewan and the Northwest Territories to the shores of the Arctic Ocean, is known as the Canadian Shield. It is over 2,000,000 square miles in extent and is an area of low.

hummocky hills and ridges separated by depressions occupied by lakes or muskegs. Lakes of all sizes and shapes and containing numerous islands dot practically the entire area, and the rivers are often mere successions of lake expansions connected by stretches in which rapids and waterfalls are numerous. This area, Canada's great storehouse of mineral wealth, is rich in forest, fur and water-power resources.

To the west of the Canadian Shield lie the Interior Plains, part of the great plains regions in the interior of the continent stretching from the Gulf of Mexico to the Arctic Ocean. This is Canada's great wheat-producing area. To the west again and running parallel to the Pacific coast is the Cordilleran Mountain System, the predominant orographical feature of Canada. Throughout Canada this mountain system, which extends up from the south and continues on into Alaska, has a width of 400 miles and covers 530,000 square miles in area. Many of the summits reach 10,000 feet and occasional peaks 13,000 feet above sea-level. It is an area of unsurpassed grandeur, rich in mineral and forest resources. To the south are many broad fertile valleys well suited to the growing of fruit and the production of other agricultural products.

The sixth division includes the islands of the Arctic lying north of the Canadian Shield and a low-lying area on the west side of Hudson Bay.

Thus Canada, in its vast extent, contains a great diversity of physical features and almost limitless natural resources which as yet are, for the most part, in the early stages of development.

Rolling farmlands and tree-clad hills near La Malbaie, Que.





★ *The Climate*

The climate of Canada is dominated by the general movement of the atmosphere from west and northwest. During the winter season cold, dry air from the polar regions moves eastward and southward across the prairies and Eastern Canada to the Atlantic. Usually these cold airmasses are considerably modified by the time they reach the Great Lakes and Eastern Provinces. In winter, air moving northward from the Gulf of Mexico exerts considerable effect on the climate of southeastern Canada, while in summer air from the same source furnishes rainfall to the prairies. Airmasses from over the north Pacific Ocean enter British Columbia but lose much of their water-content while passing eastward over the mountains. As this air moves eastward, it produces mild to hot weather according to season.

Vancouver Island and the coast of the mainland of British Columbia enjoy the mildest winters to be found anywhere in Canada, while summers are long and moderately warm. Although only a small portion of the winter precipitation is in the form of snow, autumn and winter constitute the wet season in this area. In contrast to the western slopes of the Coast Range, the southern interior valleys of British Columbia receive only light precipitation. Both summer and winter temperatures in the interior are more extreme than those experienced along the coast.

The severity of the winters varies greatly in the Prairie Provinces from year to year, depending upon the source-region and path of the dominant airmasses. In some winters outbreaks of cold air from the Arctic may pass quickly to the southeast and be replaced by much milder air from the west or southwest, while in other winters a cold spell may last for several weeks with only slight relief. The 'chinook' is one of the most striking features of the winter weather of the region. This spectacular phenomenon of sudden change from bitter cold to comparative warmth is most pronounced in southern Alberta. Daytime temperatures during the summer months are quite high, exceeding 100°F. on occasions during heat waves. However, the nights are generally quite cool throughout the summer. Only a limited portion of the southern prairies has an average frost-free period of 100 days or more. Although the rainfall over the prairies is relatively light, fortunately most of it occurs during the months May to August when it is required by the growing crops.

Winters are cold throughout northwestern Ontario and summers are moderately warm. However, even in summer, radiation from the rocky hills and ridges on clear nights presents a danger of frost. The length of the period continuously free from frost varies considerably with the topography but in general the region is not eminently suitable for agriculture. During winters with few mild spells, a considerable depth of snow accumulates.

The Lower Lakes region is traversed alternately by warm and cold airmasses. These alternations occur on the average about every three days with precipitation occurring at the margins of the moving airmasses. In southern Ontario precipitation is distributed fairly evenly throughout the year. Even in the winter rain falls in most months. Summers are warm but oppressively hot days with high relative humidity are infrequent.

Southwestern Quebec enjoys a climate quite similar to that of southern Ontario except that the moderating influence of the Great Lakes is absent. The winters are colder, the summers are slightly warmer, and the frost-free season is shorter. Farther down the St. Lawrence River both summer and winter temperatures are lower than in the upper St. Lawrence valley. Northward from the St. Lawrence River winter temperatures become quite severe. During winter cold waves, minimum temperatures occasionally fall to -50°F. or lower in the Laurentian Hills and in far northern Quebec. Precipitation is ample throughout the whole region.

The climate of New Brunswick, Nova Scotia, and Prince Edward Island, is continental rather than maritime. Summers are warm with maximum temperatures rising to 90° or 95°F. at times. Snowfall is heaviest in northern New Brunswick. In Nova Scotia the heaviest precipitation occurs along the Atlantic Coast and is usually part rain even in winter. In Nova Scotia the maximum incidence of fogs is from June to August.

In the interior of Newfoundland the winters are cold, the temperature falling at times to -20° or -25°F.; along the coast winters are more moderate. Spring is late, summers are short and fogs are frequent.

The summers of the Yukon and Mackenzie Territories are characterized by considerably higher temperatures than those experienced in Baffin Island and in the eastern Arctic. Winter temperatures are bitterly cold throughout the entire region. At Snag in Yukon Territory an extreme minimum temperature of -81°F. has been recorded. Both rainfall and snowfall are light throughout all Northern Canada.

Long-Term Temperatures and Precipitation Data for 35 Representative Localities in Canada

Locality	Height Above Sea	Length of Record	TEMPERATURES (Fahrenheit)					Heating Factor Annual Day- Degrees ¹	Killing Frost Average Dates		PRECIPITATION (inches)							Number of Days	
			Annual	Jan.	July	Highest on Record	Lowest on Record		Last in Spring	First in Autumn	Annual Total	Annual Snow	Jan.	Apr.	July	Oct.	Rain		
																	Precip.	Precip.	
	ft.	yrs.																	
Gander, Nfld.	482	11	39.3	19.2	62.3	91	-15	9,477	May 29	Oct. 2	38.24	121.0	2.81	2.32	3.65	3.87	129	199	
St. John's, Nfld.	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	
Charlottetown, P.E.I.	186	65	41.7	17.8	65.6	98	-27	8,679	May 13	Oct. 22	39.47	113.0	3.76	2.78	2.98	4.07	119	162	
Annapolis Royal, N.S.	30	25	44.4	24.4	64.4	89	-13	7,945	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	7,748	May 11	Oct. 14	55.74	70.8	5.40	4.54	3.79	5.42	130	156	
Sydney, N.S.	197	69	42.3	22.1	63.6	98	-25	8,392	May 29	Oct. 13	50.24	97.9	5.16	4.03	3.37	4.70	127	165	
Chatham, N.B.	112	50	40.2	12.2	66.6	102	-43	9,272	May 19	Sept. 29	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	9,165	May 20	Sept. 24	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	8,587	May 4	Oct. 16	42.26	71.1	4.28	3.22	3.03	4.01	134	168	
Arvida, Que.	335	10	36.4	3.0	65.0	95	-42	10,780	May 19	Sept. 19	38.93	116.1	2.90	2.53	4.81	3.53	112	176	
Fort McKenzie, Que.	250	9	22.4	-12.5	54.2	91	-60	15,695	July 8	July 26	22.04	82.4	1.24	1.02	3.67	1.77	77	167	
Lennoxville, Que.	408	24	40.3	12.8	66.2	99	-48	9,130	May 28	Sept. 9	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	8,644	Apr. 28	Oct. 17	40.80	112.3	3.76	2.60	3.74	3.42	112	164	
Kapuskasing, Ont.	752	19	32.4	-1.7	62.4	101	-53	11,913	June 14	Sept. 1	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	8,915	May 7	Oct. 2	34.23	82.0	2.93	2.70	3.39	2.93	98	139	
Port Arthur, Ont.	644	62	36.2	6.7	63.0	104	-40	10,632	May 26	Sept. 20	23.06	42.9	0.91	1.49	3.56	2.45	78	129	
St. Catharines, Ont.	347	21	47.8	26.0	71.1	104	-12	6,718	May 7	Oct. 20	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	7,373	May 2	Oct. 14	32.18	61.9	2.71	2.48	2.95	2.43	109	145	
Churchill, Man.	115	30	17.8	-19.0	53.7	96	-57	17,052	June 28	Aug. 26	15.96	56.9	0.48	0.89	2.19	1.43	52	101	
The Pas, Man.	890	27	30.6	-8.7	64.0	100	-54	12,592	May 30	Sept. 7	15.44	44.9	0.61	0.81	2.22	1.16	59	102	
Winnipeg, Man.	790	66	35.0	-3.1	66.9	108	-54	11,146	May 27	Sept. 14	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	11,820	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	11,259	June 6	Sept. 10	14.70	28.8	0.51	0.74	2.28	0.86	59	109	
Beaverbridge, Alta.	2,484	31	35.3	5.6	59.8	98	-54	11,250	June 4	Sept. 4	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	9,494	June 1	Sept. 6	16.65	50.0	0.51	0.99	2.51	0.69	57	101	
Edmonton, Alta.	2,219	58	36.6	5.9	61.6	99	-57	10,356	May 30	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	8,890	May 12	Sept. 19	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	8,985	June 10	Aug. 28	14.41	56.7	1.80	0.98	1.14	0.89	69	106	
Nelson, B.C.	2,235	39	45.2	24.4	66.4	103	-17	7,445	May 13	Sept. 30	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	-12	6,548	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	-57	9,772	June 18	Aug. 22	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	5,468	Mar. 18	Nov. 27	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	-68	15,530	June 6	Aug. 19	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 25	Aug. 22	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 15	Aug. 6	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. Fuel consumption for heating purposes will be proportional to these totals.

★ *National and Provincial Parks*

Federal and Provincial Governments have each set aside extensive areas of scenic beauty for the use of the people in perpetuity. These areas have been preserved in their natural state, the wildlife and other resources safeguarded, and they have been made accessible by highways and provided with accommodation and other facilities for the visitor. In addition to the rich attractions within their borders, the National and Provincial Parks serve as gateways to new and wonderful sections of wilderness beyond.

National Parks

The National Parks are maintained in a manner designed to ensure that their benefits may be passed on to succeeding generations. The wilderness character and stimulating freshness of the great park areas are being retained, as far as possible, consistent with their functions as national playgrounds. Nearly 1,750,000 persons visited the parks in 1949, approximately 23 p.c. of whom came from the United States and countries abroad. Thus these areas rank high among Canada's major tourist attractions. Here Canadians meet, not as visitors from one province to another, but as joint owners of a great national estate. Here also they mingle with fellow vacationists from other lands in an atmosphere that is friendly and tranquil.

The National Parks Service of the Department of Mines and Resources administers the National Parks. The system comprises 26 separate units with a total area of more than 29,000 square miles. The National Parks Service is responsible for proper development and maintenance. By progressive stages the areas and their outstanding attractions have been made more easily accessible, facilities for recreation and accommodation have been expanded, wildlife is being scientifically managed, and broad measures taken for the effective protection of the flora, fauna and natural features. Modern conservation methods are applied in the parks by highly trained personnel, and constant vigilance is maintained in order to safeguard this priceless heritage for the use and enjoyment of present and future generations.

The National Parks Service is also entrusted with the restoration and marking of places of national historic importance and the commemoration of services rendered by distinguished Canadians. In addition to nine National Historic Parks which form part of the National Parks system, about 390 National Historic Sites in various parts of Canada have been marked or restored. There is a growing public interest in these historic places.

Following is a list of the National Parks and a brief description of each:

PRINCE EDWARD ISLAND—

Coastal strip 25 miles long on the shores of the Gulf of St. Lawrence. Recreational area; fine bathing beaches. Accessible by highway. Hotel and bungalow cabin accommodation within and adjacent to park. Equipped camp-grounds. Established 1937; area, 7 square miles.

NOVA SCOTIA—

CAPE BRETON HIGHLANDS. Rugged Atlantic coast line with mountain background. Fine seascapes from park highway. Recreational opportunities. Hotel and bungalow cabin accommodation within park area. Hotel and boarding-house accommodation adjacent to park. Equipped camp-grounds. Established 1936; area, 390 square miles.

FORTRESS OF LOUISBOURG. National Historic Park with museum near Louisburg. Ruins of walled city erected by the French 1720-40. Interesting excavations. Established 1941; area, 340 acres.

PORT ROYAL. National Historic Park at Lower Granville. Restoration of "Habitation" or first fort built in 1605 by Champlain, DeMonts, and Poutrincourt. Established 1941; area, 17 acres.

FORT ANNE. National Historic Park with museum at Annapolis Royal. Well-preserved earthworks. Established 1917; area, 31 acres.

NEW BRUNSWICK—

FORT BEAUSÉJOUR. National Historic Park with museum near Sackville. Site of early French fort. Established 1926; area, 81 acres.

FUNDY. Delightful recreational area under development on the Bay of Fundy between the cities of Saint John and Moncton. Forested region, wildlife sanctuary, rugged terrain. Equipped camp-grounds, heated salt-water swimming pool. Established 1948; area, approximately 80 square miles.

QUEBEC—

FORT CHAMBLY. National Historic Park with museum at Chambly. First built by the French, 1665. Established 1941; area, 2.5 acres.

FORT LENNOX. National Historic Park on Ile-aux-Noix in Richelieu River, near St. Johns. Built by the French in 1759. Established 1941; area, 210 acres.

ONTARIO—

ST. LAWRENCE ISLANDS. Mainland area and 13 islands among the "Thousand Islands". Recreational and camping area. Mainland accessible by highway; islands reached by boat from nearby mainland points. Established 1914; area, 189.4 acres.

Waskesiu Beach, Prince Albert National Park, Sask.



POINT PEELE. Recreational area on Lake Erie. Remarkable beaches, southern flora. Resting place for migratory birds. Accessible by highway. Hotel and bungalow cabin accommodation in park area and vicinity. Equipped camp-grounds. Established 1918; area, 6.04 square miles.

GEORGIAN BAY ISLANDS. Recreational and camping areas. Accessible by boat from nearby mainland points. Equipped camp-grounds and annual youth camps on Beausoleil Island. Unique pillars on Flowerpot Island. Established 1929; area, 5.4 square miles.

FORT MALDEN. National Historic Park with museums at Amherstburg. Site of defence post built 1797-99. Established 1941; area, 5 acres.

FORT WELLINGTON. National Historic Park with museum at Prescott. Defence post built 1812-13. Established 1941; area, 8.5 acres.

MANITOBA—

RIDING MOUNTAIN. Playground and wildlife sanctuary on summit of Manitoba escarpment. Fine lakes, summer playground and recreational area. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds. Established 1929; area, 1,148 square miles.

FORT PRINCE OF WALES. National Historic Park at Churchill on the shores of Hudson Bay. Ruins of Fort built 1733-71. Established 1941; area, 50 acres.

SASKATCHEWAN—

PRINCE ALBERT. 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. Established 1927; area, 1,496 square miles.

ALBERTA—

BANFF. Magnificent scenic playground in the Rocky Mountains. Contains 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. Established 1885; area, 2,564 square miles.

JASPER. Mountain playground and noted wildlife sanctuary. Contains 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. Established 1907; area, 4,200 square miles.

WATERTON LAKES. Canadian section, Waterton-Glacier International Peace Park. Mountain playground with colourful peaks and charming lakes. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds. Established 1895; area, 204 square miles.

ELK ISLAND. Fenced preserve near Edmonton containing a large herd of buffalo; also deer, elk and moose. Popular recreational area; bungalow cabin accommodation and equipped camp-grounds. Accessible by highway. Established 1913; area, 75 square miles.

BRITISH COLUMBIA—

YOHO. On west slopes of Rockies. Lofty peaks, magnificent waterfalls, colourful lakes. Yoho and Kicking Horse Valleys. Accessible by rail and highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds. Established 1886; area, 507 square miles.

KOOTENAY. Encloses Vermilion-Sinclair section of the Banff-Windermere Highway in Rockies. Broad valleys, deep canyons, mineral hot springs. Hotel and bungalow cabin accommodation. Equipped camp-grounds. Established 1920; area, 543 square miles.

GLACIER. Superb alpine region in Selkirk Mountains. Towering peaks, glaciers and forests. Accessible by railway only. Climbing, skiing, camping. Established 1886; area, 521 square miles.

MOUNT REVELSTOKE. Rolling mountain-top plateau on west slope of Selkirk Mountains. Colourful alpine meadows. Accessible by rail and highway. Summer accommodation in park. All-year accommodation in nearby town of Revelstoke. Equipped camp-grounds. Championship ski runs and ski jump. Established 1914; area, 100 square miles.

NORTHWEST TERRITORIES AND ALBERTA—

WOOD BUFFALO. Immense region of forests and open plains between Athabasca and Great Slave Lakes. Home of largest remaining herd of bison on the continent. Other wildlife species abundant. Established 1922; area, 17,300 square miles.



Sunwapta Falls, Jasper National Park, Alta.

Provincial Parks

Six of the ten provinces of Canada have established Provincial Parks. While in many cases they are undeveloped areas set aside in their natural state, some of the larger parks, especially in British Columbia, Quebec and Ontario, are highly developed and well served with hotels and other tourist accommodation and have organized recreational facilities. The total areas of provincial park land in the different provinces are as follows: British Columbia, 14,071 square miles; Quebec, 10,653 square miles; Ontario, 5,210 square miles; Saskatchewan, 1,685 square miles; Newfoundland, 42 square miles; and Alberta 13 square miles. The most important, in point of size (all over 1,000 square miles in area), are:—

BRITISH COLUMBIA—

Tweedsmuir
Wells Grey
Hamber

SASKATCHEWAN—

Lac La Ronge

ONTARIO—

Algonquin
Quetico

QUEBEC—

Laurentides
Mont-Laurier Senneterre
Road Fish and Game Reserve
Chibougamau Fish and Game
Reserve
Trembling Mountain

Detailed information regarding Provincial Parks may be obtained from the respective Provincial Governments.



The People

★ Population

IN 1604, 79 whites and an unknown number of aborigines inhabited the area now known as Canada. The manner of growth to a total population of 13,549,000 in 1949 appears to have been decidedly cyclical, the peaks of growth coinciding with important points in history—the American Revolution, the Irish famine, the building of the railways, and the opening of the West. The two periods of maximum absolute increases in modern times were in the periods 1841 to 1861 and 1901 to 1911.

When the first census was taken in 1666, 62 years after the first settlers had been left at Ile Ste. Croix, there were 3,215 inhabitants, exclusive of aborigines. At the end of the seventeenth century the white population was approximately 17,000 and the actual increase was fairly constant for the next 70 years. In the decade of the American Revolution the number increased from 105,000 in 1771 to 150,000 in 1781. The coming of the United Empire Loyalists and their settlement in the Eastern Townships and along the upper St. Lawrence, Lake Ontario and the Niagara Peninsula in the last quarter of the eighteenth century, opened up new areas and Canada began the nineteenth century with a white population of 362,000. The million mark was passed in 1831 and the period of the Irish famine brought the total to 2,300,000. When the first Dominion census was taken in 1871 Canada had a total population of 3,689,257. Since that date there has been a continuous measure of population growth by means of the decennial censuses and, beginning with 1906, of the quinquennial censuses of the Prairie Provinces.

But it was within the first decade of the present century that the most spectacular expansion of the population of Canada took place. The outstanding feature was, of course, the opening of the West to settlement. The unorganized southern stretch of the Northwest Territories, ceded to the Dominion by the Hudson's Bay Company soon after Confederation, had been traversed by the Canadian Pacific Railway between 1875 and 1885. But, though the western population had roughly doubled in each of the decades ended 1881, 1891 and 1901, it was only with the discovery of the wheat-growing potentialities of the prairies and the launching of a large-scale immigration movement after 1900 that western settlement became a factor of first importance. In the period 1901-11 immigration exceeded 1,800,000 and, though at least a third of these were lost to Canada, it formed the chief factor in the gain of 34 p.c. which the total population registered in that period and which was larger than the relative growth of any other modern country during the same period. The movement was continued in the first three years of the second decade after which a recession set in.

After the First World War immigration never again reached anything like its former levels and during the depression years of the 1930's it was still

further restricted by Government regulations as well as by economic necessity. The population increase in the period 1921-31 amounted to 18.1 p.c. and in the decade 1931-41 to 10.9 p.c. Between 1931 and 1941 and even to some extent in the previous ten years, the trend of movement of population was from the Prairie Provinces to Ontario and to British Columbia, the percentage increase for British Columbia in these two decades being higher than for any other province. Annual estimates since 1941 show the increase for Canada as a whole to be roughly 100,000 to 300,000 a year.

The drift to the cities and towns in Canada has been strikingly apparent since shortly after the middle of the nineteenth century, a trend characteristic of virtually all western nations. The movement has been brought about largely by the expansion of manufacturing and service industries and by improved transportation and communication facilities. In 1871, 19.6 p.c. of the population dwelt in urban centres, in 1901 the proportion had risen to 37.5 p.c. and to 49.5 p.c. in 1921. In 1941 it was 54.3 p.c. The attraction of industry for labour during and after the Second World War has accentuated the trend in more recent years.

The sex distribution of the Canadian people has been characterized since early colonial times by a preponderance of males, although recently this condition has been greatly modified, especially after the rigid control of immigration following the First World War. 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., the excess of males being more marked in the newer sections of the country. The 1941 Census showed more females in urban centres than males; of every 1,000 urban dwellers 508 were females.

In recent years a more pronounced general ageing of the population has become evident owing to the coincident cessation of immigration and a lower birth rate. In 1921 some 18.3 p.c. of the total population was from 40 to 59 years of age; the proportion grew to 20.1 p.c. in 1931 and to 21.0 p.c. in 1941. Persons 60 years or over represented 7.5 p.c. of the total population in 1921, 8.4 p.c. in 1931 and 10.2 p.c. in 1941.

The Canadian population is made up of diverse races moulding themselves into a nation that takes its pattern from the land of their adoption. At the time of Confederation the largest individual British racial group was Irish, the Irish and Scottish together outnumbering the English by almost two to one. After 1881 the English predominated with Scottish in second place. At the time of the 1941 Census the numerical strength of the principal racial stocks was in the following order: French, English, Scottish, Irish, German, Ukrainian, Scandinavian, Netherland, Jewish and Polish.

In Canada, English and French are the official languages. The 1941 Census revealed 1,474,009 people speaking both, while 7,735,486 spoke English only and 2,181,746 spoke French only.

Population Statistics

The following tables analyse, as at the 1941 Census, the Canadian population from various angles. In the space available in this publication, the subject of population can be dealt with only very summarily. The 1941 Census does not reflect current conditions in post-war Canada and the official estimates of the population for 1942-49 are given at p. 43.

Yonge Street, Toronto. The subway now under construction is designed to relieve the traffic on this thoroughfare.



Population of Canada, Census Years 1891-1941 with Density, 1941

NOTE.—The figures for certain censuses are not altogether comparable but the qualifications are for the most part technical and are given in detail in the Census reports.

Province or Territory	Population						Land Area in Sq. Miles	Persons per Sq. Mile 1941
	1891	1901	1911	1921	1931	1941		
P.E.I. . . .	109,078	103,259	93,728	88,615	88,038	95,047	2,184	43.52
N.S.	450,396	459,574	492,338	523,837	512,846	577,962	20,743	27.86
N.B.	321,263	331,120	351,889	387,876	408,219	457,401	27,473	16.65
Que.	1,488,535	1,648,898	2,005,776	2,360,510	2,874,662	3,331,882	523,860	6.36
Ont.	2,114,321	2,182,947	2,527,292	2,933,662	3,431,683	3,787,655	363,282	10.43
Man.	152,506	255,211	461,394	610,118	700,139	729,744	219,723	3.32
Sask. . . . .	...	91,279	492,432	757,510	921,785	895,992	237,975	3.77
Alta. . . . .	...	73,022	374,295	588,454	731,605	796,169	248,800	3.20
B.C.	98,173	178,657	392,480	524,582	694,263	817,861	359,279	2.28
Yukon. . . .	...	27,219	8,512	4,157	4,230	4,914	205,346	0.02
N.W.T. . . .	98,967	20,129	6,507	8,143	9,316	12,028	1,253,438	0.01
Canada.	4,833,239	5,371,315	7,206,643	8,787,949	10,376,786	11,506,655	3,462,103	3.32

¹ Includes 485 members of the Royal Canadian Navy, who were recorded separately.

Rural Farm, Rural Non-Farm and Urban Population, by Provinces, 1931 and 1941

Province or Territory	1931			1941		
	Rural		Urban	Rural		Urban
	Farm	Non-Farm		Farm	Non-Farm	
P.E.I.....	54,963	12,690	20,385	50,732	19,975	24,340
N.S.....	173,965	107,227	231,654	141,182	169,240	267,540
N.B.....	178,494	100,785	128,940	163,067	150,911	143,423
Que.....	743,598	317,458	1,813,606	823,791	398,407	2,109,684
Ont.....	785,550	550,141	2,095,992	694,684	754,348	2,338,633
Man.....	254,302	129,868	315,969	248,684	159,187	321,873
Sask.....	561,407	69,473	290,905	513,279	87,567	295,146
Alta.....	370,899	82,198	278,508	380,693	108,890	306,586
B.C.....	100,244	199,280	394,739	100,810	273,657	443,394
Yukon.....	74	2,796	1,360	42	3,075	1,797
N.W.T.....	—	9,316	—	—	12,028	—
Canada.....	3,223,496	1,581,232	5,572,058	3,116,964	2,137,275	6,252,416

Urban Centres having over 30,000 Inhabitants, 1931 and 1941

NOTE.—Populations for 1931 are those residing in the incorporated areas as of 1911.

Urban Centre and Province	1931	1941	Urban Centre and Province	1931	1941
Montreal, Que.....	818,577	903,007	Halifax, N.S.....	59,275	70,488
Greater Montreal.....	1,023,158	1,139,921	Greater Halifax.....	74,161	91,829
Toronto, Ont.....	631,207	667,457	Verdun, Que.....	60,745	67,349
Greater Toronto.....	810,467	900,491	Regina, Sask.....	53,209	58,245
Vancouver, B.C.....	246,593	275,353	Saint John, N.B.....	47,514	51,741
Greater Vancouver.....	308,340	351,491	Greater Saint John.....	58,717	65,784
Winnipeg, Man.....	218,785	221,960	Victoria, B.C.....	39,082	44,068
Greater Winnipeg.....	284,295	290,540	Greater Victoria.....	—	75,218
Hamilton, Ont.....	155,547	166,337	Saskatoon, Sask.....	43,291	43,027
Greater Hamilton.....	163,710	176,110	Three Rivers, Que.....	35,450	42,007
Ottawa, Ont.....	126,872	154,951	Sherbrooke, Que.....	28,933	35,965
Greater Ottawa.....	175,988	215,022	Kitchener, Ont.....	30,793	35,657
Quebec, Que.....	130,594	150,757	Hull, Que.....	29,433	32,947
Greater Quebec.....	172,517	200,814	Sudbury, Ont.....	18,518	32,203
Windsor, Ont.....	98,179	105,311	Brantford, Ont.....	30,107	31,948
Greater Windsor.....	110,385	121,112	Outremont, Que.....	28,641	30,751
Edmonton, Alta.....	79,197	93,817	Fort William, Ont.....	26,277	30,585
Calgary, Alta.....	83,761	88,904	St. Catharines, Ont.....	24,753	30,275
London, Ont.....	71,148	78,264	Kingston, Ont.....	23,439	30,126
Greater London.....	—	86,740			

Distribution of Population by Sex and Age Groups, Census Years 1921-41

Age Group	1921		1931		1941	
	Males	Females	Males	Females	Males	Females
Under 10 years.....	1,062,053	1,044,190	1,115,679	1,091,485	1,062,995	1,034,679
10-19 years.....	864,517	850,350	1,068,180	1,045,462	1,121,516	1,099,396
20-29 ".....	698,593	699,050	873,698	823,768	1,006,296	993,120
30-39 ".....	685,537	599,674	727,216	670,083	828,044	775,356
40-49 ".....	523,335	438,780	669,276	562,034	681,119	630,572
50-59 ".....	343,266	298,974	466,492	389,214	591,100	507,496
60-69 ".....	217,012	194,262	277,607	248,124	381,074	333,801
70 or over.....	123,742	123,352	173,682	171,015	228,392	231,699
Not given.....	11,588	9,674	2,711	1,060	—	—
All Ages.....	4,529,643	4,258,306	5,374,541	5,002,245	5,900,536	5,606,119

Virginiatown in the Timiskaming district of Northern Ontario. As the mining, pulp and paper and water-power industries prosper in Canada's vast hinterland, modern and attractive communities frequently grow up around them.



Leading Origins, by Provinces, 1941

Province	British Isles Races	French	German	Ukrainian	Scandinavian	Netherland	Jewish	Polish	Indian
P.E.I.....	78,714	14,799	172	2	152	494	25	1	258
N.S.....	445,178	66,260	15,038	711	2,353	23,834	2,285	2,206	2,063
N.B.....	276,758	163,934	1,394	22	2,929	4,539	1,228	233	1,939
Que.....	452,887	2,695,032	8,880	8,006	4,840	2,645	66,277	10,036	11,863
Ont.....	2,729,830	373,990	167,102	48,158	27,225	73,001	69,875	54,893	30,336
Man.....	360,560	52,996	41,479	89,762	32,620	39,204	18,879	36,550	15,473
Sask.....	397,905	50,530	130,258	79,777	68,806	35,894	4,149	27,902	13,384
Alta.....	399,432	42,979	77,721	71,868	63,494	20,429	4,164	26,845	12,565
B.C.....	571,336	21,876	22,407	7,563	41,560	12,737	3,350	8,744	24,875
Canada ¹	5,715,904	3,483,038	464,682	305,929	244,603	212,863	170,241	167,485	118,316

¹ Includes Yukon and the Northwest Territories.
² Includes 37,149 Danish, 21,050 Icelandic, 100,718 Norwegian and 85,396 Swedish.

Birthplaces of the Population, Census Years 1901-41

Year	Canadian Born		Other British Born ¹		Foreign Born				Total Population
					U.S. Born		Other		
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.
1901....	4,671,815	86.98	421,051	7.84	127,899	2.38	150,550	2.80	5,371,315
1911....	5,619,682	77.98	834,229	11.58	303,680	4.21	449,052	6.23	7,206,643
1921....	6,832,224	77.75	1,065,448	12.12	374,022	4.26	516,255	5.87	8,787,949
1931....	8,069,261	77.76	1,184,830	11.42	344,574	3.32	778,121	7.50	10,376,786
1941....	9,487,808	82.46	1,003,769	8.72	312,473	2.72	701,660	6.10	11,506,655

¹ Includes some hundreds of persons born at sea.
² Includes persons with birthplace not stated.



Winnipeg, Man., incorporated as a city in 1873 with a population of only 1,664, has become in 75 years the fourth largest metropolitan area in Canada.

Conjugal Condition of the Population, by Provinces and Sex, 1941

Province or Territory	Single	Married	Widowed	Divorced	Per- manently Separated	Total ¹
MALES						
Prince Edward Island.....	29,828	17,625	1,549	22	202	49,228
Nova Scotia.....	173,506	111,132	9,359	247	1,770	296,044
New Brunswick.....	140,952	85,093	6,695	197	1,137	234,097
Quebec.....	1,027,162	591,533	46,386	500	7,270	1,672,982
Ontario.....	993,265	851,096	60,210	2,291	14,105	1,921,201
Manitoba.....	209,939	155,157	10,268	473	2,218	378,079
Saskatchewan.....	283,297	179,996	11,383	468	2,351	477,563
Alberta.....	243,666	168,469	10,594	801	2,891	426,458
British Columbia.....	215,205	200,027	13,979	1,547	4,213	435,031
Canada ²	3,322,827	2,363,528	170,743	6,569	36,201	5,900,536
FEMALES						
Prince Edward Island.....	24,748	17,473	3,401	19	178	45,819
Nova Scotia.....	148,474	109,513	21,544	268	2,115	281,918
New Brunswick.....	123,540	84,275	14,040	192	1,256	223,304
Quebec.....	981,890	581,569	85,425	646	9,353	1,658,900
Ontario.....	876,215	826,525	142,731	2,865	18,039	1,866,454
Manitoba.....	176,458	151,105	20,625	654	2,818	351,665
Saskatchewan.....	221,557	175,112	18,965	381	2,414	418,429
Alberta.....	186,215	161,953	17,963	717	2,850	369,711
British Columbia.....	165,064	181,932	29,235	1,718	4,878	382,830
Canada ²	2,907,741	2,292,478	354,378	7,463	43,936	5,606,119

¹ Includes persons with conjugal condition not stated.

² Includes Yukon and the Northwest Territories.

Leading Religious Denominations, by Provinces, 1941

Province or Territory	Roman Catholic ¹	United Church of Canada	Anglican	Presbyterian	Baptist	Lutheran	Jewish	Greek Orthodox
P.E.I.....	42,743	24,005	5,739	14,724	5,443	45	18	10
N.S.....	188,944	124,301	103,393	47,415	89,272	9,104	2,167	347
N.B.....	220,454	63,268	55,155	15,382	88,766	870	1,196	85
Que.....	2,894,621	100,196	162,056	56,086	12,303	7,081	65,683	12,040
Ont.....	882,369	1,073,425	815,413	433,708	192,915	104,111	69,217	28,383
Man.....	203,259	194,001	125,076	43,073	13,267	48,213	18,715	20,777
Sask.....	243,734	230,495	117,674	53,856	19,460	104,717	4,076	37,699
Alta.....	191,343	193,664	113,279	68,910	32,268	84,640	4,052	34,991
B.C.....	113,282	200,817	245,531	94,300	29,780	41,772	3,235	5,198
Canada²	4,986,552	2,204,875	1,751,188	829,147	483,592	401,153	168,367	139,629

¹ Includes Greek Catholic.

² Includes Yukon and the Northwest Territories.

Annual Estimates of Population.—The exact number of the population of Canada given at ten-year intervals by the Census is supplemented by estimates for intervening years. These are essential for the calculation of per capita figures in production and trade, and particularly for use as a base in birth and death comparisons. At every census the previous post-censal data are adjusted to the newly recorded population figures.

Estimates of the Population, by Provinces, 1942-49

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000
1942....	90	591	464	3,390	3,884	724	848	776	870	17	11,654
1943....	91	607	463	3,457	3,917	726	842	792	900	17	11,812
1944....	91	612	462	3,500	3,965	732	846	818	932	17	11,975
1945....	92	621	468	3,561	4,004	736	845	826	949	17	12,119
1946....	94	612	480	3,630	4,101	727	833	803	1,003	24	12,307
1947....	94	621	491	3,712	4,189	743	842	822	1,044	24	12,582
1948....	93	635	503	3,792	4,297	757	854	846	1,082	24	12,883
1949....	94	645	516	3,887	4,411	778	861	871	1,111	24	13,549 ¹

¹ Includes 348,000, the estimated population of Newfoundland.

Aboriginal Races

Indians.—There are more than 130,000 Canadians of Indian race, among whom are successful farmers and ranchers, lumbermen, fishermen and trappers. Most of them have chosen to remain on or near their ancestral lands. Some, however, are pursuing careers as doctors, dentists, ministers, teachers, priests, soldiers, factory workers, lawyers, mechanics, salesmen, tradesmen—almost every type of calling in the national community.

The administration of Indian Affairs is the responsibility of the Indian Affairs Branch of the Federal Department of Mines and Resources, with the exception of medical and health services, which are provided by the Department of Health and Welfare.

Experienced officers of Indian Affairs, while recognizing and protecting the historic rights and privileges of the Indian race, are convinced that the most important single influence and the one that can bring greatest benefit

to the future of the Indian is education. Therefore, despite teacher shortages and the high cost of school construction, the Department of Mines and Resources is undertaking a progressive and long-range education program.

Expenditures for Indian education for the year ended Mar. 31, 1949, amounted to \$5,403,012, and there were in operation 309 Indian day schools, 72 Indian residential schools and 5 combined schools. The numbers of Indian pupils enrolled were: 12,511 in Indian day schools, 9,368 in Indian residential schools and 104 in combined schools. In addition 1,302 attended provincial and private schools, making the total number of Indians enrolled in educational classes 23,285, an increase of 2,015 over the preceding year.

Arrangements were recently made whereby Indian school teachers now receive the benefits of the Civil Service Superannuation Act. The new salary schedule and retirement benefits, introduced into the Indian teaching service by the Administration, require that teachers attend professional and academic summer courses. This has resulted in marked improvement of teaching methods.

Post-war construction on Indian Reserves has been unusually active. Homes for Indian veterans, and new homes built by Indians as the result of a period of economic prosperity, account for much of the building. For the Indian who cannot afford the entire cost of a new home, assistance is given in providing the kind of dwelling in which he can bring up his family amid decent and healthful surroundings. In 1949-50, over \$1,000,000 will be spent for this type of housing assistance from the welfare appropriation of Indian Affairs; \$934,200 for new homes and \$271,895 for repairs and renovations.

One of the most useful welfare projects in recent times has been the disbursement and supervision of Family Allowances, by which 19,021 Indian families (with a total of 54,624 children) benefit. From the first, Agency Superintendents and Agents have been able to watch closely the uses to which Family Allowances were put. From across Canada, almost without exception, they report better filled lunch pails of Indian school children and improved clothing. School attendance, too, has risen since the payment of Allowances began. In the Northwest Territories and Yukon, where Family Allowances are paid in kind, the head of a family may obtain credit for those foodstuffs or clothing best designed for the welfare of the children.

The Indian war veteran has shared fully in the benefits received by his white comrade-in-arms. Almost 1,000 Indian veterans have shared in a \$2,000,000 over-all grant, expended for the following purposes: land and buildings, \$179,532; building materials, \$771,412; clearing land, \$57,673; stock and equipment, \$722,302; forestry equipment, \$9,495; commercial fishing equipment, \$162,446; fur farming, \$28,412; and household equipment, \$122,868.

Responsible officers of the Federal and Provincial Governments, with the whole-hearted assistance of the Indian (a born conservationist), have made great strides in the scientific control of the fur crop. Planned trapping with registered Indian trap lines, the stocking of great areas with muskrat and beaver and the setting aside of these areas for the sole use of Indian hunters have been a major undertaking, but one which is now returning dividends to the Indians. Of seven beaver preserves, three (two in Quebec and one in Ontario) went into production in 1948. In Ontario, the Abitibi preserve beaver catch, despite the drop of fur prices, brought the Indians

Indian children at the Indian Residential School, Shubenacadie, N.S., answer questions about their diets during a nutritional survey conducted by the Department of National Health and Welfare.



\$44,701, the Nottaway project \$55,866 and the Kesagami, \$43,968. The Old Factory preserve in Quebec also went into production in 1949 with a catch estimated at \$60,000.

The Indian Trust Fund, that is, money belonging to Indian Bands and realized through the sale of Band property, timber, oil rights, etc., is administered by the Department. The Government pays 5 p.c. interest on these monies which, as of Mar. 31, 1949, amounted to \$18,642,642. It is of interest to note that during the same year there was an expenditure of \$3,035,502 from Band funds. This amount was paid back to the Indians out of their own communal "bank account". Items of expenditure were mainly distribution of cash relief, pensions, improvement of roads, farming, ranching, enfranchisements and commutations. While individual Indians may secure loans from Band funds, such loans and expenditures must be approved by the Band in question. During the year ended Mar. 31, 1949, \$20,194 was loaned for the purchase of live stock and equipment, \$15,875 for repairs to buildings such as houses and barns, and \$9,975 for the construction of new homes and barns, etc.

Those most experienced in Indian administration recognize that the Indian, like his country, is sharing in a new order of progress, and that he is contributing to it as an increasingly well-educated and self-reliant citizen.

Eskimos.—The Eskimos in Canada are found principally north of the tree-line on the northern fringe of the mainland, around the coast of Hudson Bay, and on some of the islands of the Arctic Archipelago. Most of the Eskimos are essentially coastal dwellers, obtaining much of their food and clothing from the mammals of the sea. However, there are groups of Eskimos living in the interior of Keewatin District on the west side of Hudson Bay who are inland people and who subsist chiefly on caribou and fish. In December, 1948, the Eskimo population of Canada, excluding Labrador, was estimated to be 8,378.

The economy of these nomadic people depends entirely on trapping, hunting and fishing. Trapping, chiefly of white fox, produces pelts to trade



An Eskimo mother receives the Family Allowance for her children from an R.C.M.P. constable at Coppermine, 100 miles north of the Arctic Circle. The Allowance is given in the form of a credit note to the local trading post.

at the posts for the goods of civilization. The seal, walrus, white whale, caribou and Arctic char (sea trout) are the principal sources of native food.

The Eskimos have little or no organization beyond the family. They hunt in small groups usually of two or more families with perhaps an outstanding individual as leader. Each group, following the movements of game and the changing seasons, secures its livelihood in its own district which has no definite boundaries.

The arduous conditions of life in the Arctic have taught the Eskimos that the wishes of the individual must be subordinate to the welfare of the majority and this, together with their inborn good nature, has made them easy to deal with. The Government of Canada, through the Lands and Development Services Branch of the Department of Mines and Resources, has made continuous and unremitting efforts to preserve the natural resources of the country so that the Eskimos may continue to be independent, self-reliant and self-supporting. However, depletion of the wildlife resources and wide fluctuations in the value of furs are matters for concern.

In order to maintain close contact with the Eskimos the Royal Canadian Mounted Police detachments throughout the far north act as local representatives of the Administration in all matters affecting Eskimo welfare. Contact is also maintained by radio, and through the Eastern Arctic Patrol, which carries representatives of the Administration and other Government Departments on annual inspection tours of the Eastern Arctic.

Medical care and hospitalization of Eskimos are functions of the Department of National Health and Welfare.

Immigration

Noteworthy developments in immigration during 1949 have been the continuation of the highly successful movement to Canada of agriculturists from the Netherlands, an interesting change in the pattern of the Displaced

Displaced persons, now employed as Canadian mining men, study special safety posters carrying information in four languages.



Persons Movement, and the redefinition of the boundaries of immigration districts made necessary by the entry of Newfoundland into Confederation.

Since the movement started in 1947 following an agreement between the Netherlands and Canadian Governments, nearly 16,000 members of Dutch farm families had entered Canada by the end of September, 1949. Of this number, whose ultimate objective is the ownership of farms in Canada, many have been settled permanently on farms on an ownership, rental, or crop-sharing basis through the Settlement Service of the Immigration Branch. Large groups of these immigrants have gone to Ontario, but substantial numbers have also settled in Alberta, Quebec, Manitoba and British Columbia.

In the earlier stages of the Displaced Persons Movement, which started in April, 1947, the emphasis, in terms of numbers, was on groups brought to this country in response to requests from industries across Canada. Now that heads of families or single wage-earners have found a satisfactory level in the national economy, they are applying in increasing numbers for the admission of their close relatives.

As of Sept. 30, 1949, a total of 84,651 displaced persons had entered Canada, of whom 43,805 were admitted as close relatives of residents of this country. More than 58,000 of the 62,000 applications received from residents of Canada for the admission of relatives under this plan had been investigated. Some 1,292 orphan children had been placed in homes throughout the country.

Under the group movement plan, 39,629 displaced persons had been brought to Canada, including: farmers, 4,961; family farm groups, 3,272; woods workers, 3,599; textile workers, 568; domestics (married couples) 1,044; female domestics, 9,300; garment workers, 2,819; garment workers' dependants, 2,323; railway workers, 2,391; hydro workers, 2,483; building construction workers, 796; steel and foundry workers, 310; steel and foundry workers' dependants, 24; miners, 3,825; nurses, 42; special trades, 210; furriers, 461;

furriers' dependants, 414; shoe workers, 102; general labourers, 366; general labourers' dependants, 219; cabinet makers, 90; blacksmiths, 10.

The number of immigrants admitted to Canada during the year ended Mar. 31, 1949, was 125,603, as compared with 79,194 in the fiscal year 1947-48, and 66,990 in 1946-47. Of these, 118,297 arrived from overseas and 7,306 from the United States. Of the total, 44,047 were of British racial origin, 1,901 French, and 79,655 represented 47 other racial groups.

Figures for tourists who, although not immigrants, submit to immigration examination at the International Boundary and ocean ports, showed a total entry for the year ended Mar. 31, 1949, of 39,010,000, made up of 25,090,000 visitors from other countries, 13,915,000 Canadians returning from trips to other countries, and 4,600 Canadians returning after residing in the United States. Comparable figures for the previous year were 23,305,000 visitors, 14,178,000 returning residents and 9,000 returned Canadians. The figures pertaining to Canadians returning from visits to other countries include persons who crossed and recrossed the Boundary frequently.

★Vital Statistics

National statistics on births, stillbirths, marriages and deaths have been published since 1920 by the Dominion Bureau of Statistics under authority of the Statistics Act of 1918. At that time a plan was devised whereby the Dominion Bureau of Statistics and the vital statistics authority in each province as well as Yukon and the Northwest Territories would co-operate in the production of the national figures; registration was to be carried out by the provincial authorities and the legislation of each province was made to conform in essential features—one of which was compulsory registration—to a model Vital Statistics Act. Since the initiation of this collaborative national system, material progress has been made in modifying and improving registration techniques and procedures. Of particular interest in this regard was the revision in 1935 of the medical certificate of death.

Conferences on vital statistics held in 1943, 1944 and 1948 were attended by the provincial and federal officials, by representatives of other departments of government and interested national agencies. Topics discussed at these conferences covered such widely diversified problems as: registration affecting Indians; interprovincial exchange of vital records; establishment of standards for delayed registration of births; definition of vital statistics terms; standards of certification; divorce and adoption records; and revision of the model Vital Statistics Act. The 1944 Conference resulted in three major developments:—

- (1) The preparation of a national index covering all persons born in, or immigrating to, Canada since 1925 which is designed for use in connection with Family Allowances and for other governmental purposes.
- (2) The establishment of a Vital Statistics Council made up of a representative from each provincial vital statistics office and the federal officials concerned with vital statistics.
- (3) A revised Dominion-Provincial agreement on Vital Statistics which came into effect on July 1, 1945.

The Vital Statistics Council, which meets at least once a year, has been working towards improvement in statistical and registration techniques and promotion of complete and accurate registration of vital events. In recent years registration has been virtually complete in all provinces. The



Summer outing at Oak Grove, Niagara on the Lake, Ont.

vital statistics of the Province of Newfoundland will be integrated in due course with those of the present Canadian Registration Area.

Births.—There have been several clear-cut cycles in the number of births recorded in Canada. From 1926 to 1930 there was a gradual upward trend from 232,750 to 243,495. This movement was then reversed during the depression period until 1937 when the number of births reached its lowest point at 220,235. During this period Canada's birth rate varied from about 20 to 24 births per 1,000 population. Because of the growing population the rate, however, dropped between 1930 and 1937 from 23.9 to 20.0. The influence of the War is reflected in the sharp increase that took place from 22.2 in 1939 to 28.6 in 1947. There was a drop to 27.0 in 1948, a trend noticeable in most other civilized countries of the world.

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 an accurate ratio of male to female births has become one of the criteria of complete registration. The numbers of males to every 1,000 females born in Canada in 1941-46 varied between 1,057 and 1,067 and were 1,051 and 1,053 in 1947 and 1948, respectively.

Hospitalization and medical attendance at birth have increased greatly in recent years. In 1926-30 only 22 p.c. of live births occurred in hospitals, while in 1947 the proportion was 71 p.c. for Canada as a whole including Yukon and the Northwest Territories. In some provinces, particularly where

either free or prepaid medical care service is provided, the proportions of hospitalized births were much higher, running to 96 p.c. in one province and to between 85 and 95 p.c. in four others.

Deaths.—The annual death rate in Canada averages less than 10 per 1,000 population, which is fairly low in comparison with other countries of the world.

The ten leading causes of death accounted for about 84 p.c. of the total in 1948. Diseases of the heart, considered as a group, was the most important with a rate of 263.6 per 100,000 population. The death rate from this cause increased yearly from 231.5 in 1941. The second leading cause of death in 1948 was cancer with 126.4 deaths per 100,000 population, the rate having advanced from 80.7 in 1926. The increase in cancer deaths is rather misleading; it is due in part to improvement in diagnostic and X-ray techniques which enable the causes of death to be identified, instead of being attributed to other or unknown causes, but is mainly due to the ageing of the population.

Cerebral hæmorrhage and allied cerebral conditions as a group constituted the third leading cause of death in 1948 accounting for 79 deaths per 100,000 population; accidents and other violent deaths, fourth with 9,000 deaths and a rate of 69.7. On the other hand tuberculosis which in 1926 was fourth with almost 8,000 deaths was in eighth place in 1948 with 4,771 deaths and a rate of 37.1, while the influenza, bronchitis and pneumonia group, the leading killers in 1926 with 14,188 deaths, accounted for less than 7,000 deaths in 1948 and was fifth in that year with a rate of 54.5.

Deaths of mothers due to childbirth have shown marked reduction in the past two decades and particularly since 1940. During the period 1926-30 an average of 57 mothers died for every 10,000 children born alive (a rate of 5.7 per 1,000 live births); in 1940 the ratio was 40, and in 1947 and 1948 it was further reduced to 15.

Infant Mortality.—During recent years, the death rate for children under one year of age has shown substantial reduction, falling from 102 per 1,000 live births in 1926 to 60 in 1941 and 54 in 1942 and 1943. Since 1944 the rate has progressively declined from 55 to 44 per 1,000 live births.

Infant Deaths and Death Rates, by Provinces

Province	Infant Deaths under One Year						Rates per 1,000 Live Births					
	1926	1944	1945	1946	1947	1948 ^a	1926	1944	1945	1946	1947	1948 ^a
P.E.I.....	123	102	102	97	135	97	70	45	45	35	45	34
N.S.....	882	838	823	822	840	695	80	54	53	46	44	39
N.B.....	1,095	1,035	966	1,066	1,041	1,047	106	77	71	66	59	61
Que.....	11,666	6,918	6,464	6,110	6,574	6,211	142	68	62	55	57	54
Ont.....	5,302	3,346	3,209	3,653	3,912	3,682	78	43	41	37	36	35
Man.....	1,122	786	781	885	931	765	77	49	48	47	46	41
Sask.....	1,681	858	824	1,004	1,019	866	81	47	44	47	44	40
Alta.....	1,233	889	862	945	914	930	85	46	43	43	37	39
B.C.....	588	767	792	852	958	870	58	40	42	38	36	33
Canada ¹	23,692	15,539	14,823	15,434	16,324	15,163	102	55	51	47	45	44

¹ Exclusive of Yukon and the Northwest Territories.

Natural Increase.—The rate of natural increase in population represents the difference between the birth and death rates and is similarly expressed in terms of 1,000 population. In 1926 the natural increase rate amounted to

13.3 but, with the rapidly declining birth rates of the depression period coupled with slower declining death rates, the natural increase rate declined to 9.7 in 1939. During the war years, the natural increase rate rose proportionally with the increased births to 12.2 in 1941, 14.0 in 1943 and 19.2 in 1947. The decline in the birth rate to 27.0 in 1948 and a slight decline to 9.3 in the death rate, brought the natural increase rate down to 17.7 in 1948.

Marriages.—In 1929 marriages in Canada numbered 77,288 after they had increased steadily since 1926. The depression exercised a marked influence on marriages and on the marriage rate, causing a steep downward movement until 1932, when the number of marriages was 62,531. From 1933 to 1942 a fairly steady increase took place, so that in 1942 marriages numbered 127,372 and the rate per 1,000 population was 10.9. For the years 1943 to 1945 the numbers and rates were somewhat lower but, during 1946, marriages numbered 134,088, the highest ever recorded, and the rate was 10.9. The number declined in 1947 and 1948 to 127,311 and 123,313 with rates of 10.1 and 9.6, respectively.

Births, Marriages and Deaths, 1926-48

Year	Births		Marriages		Deaths		Maternal Deaths	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ²
Av. 1926-30...	236,521	24.1	71,886	7.3	108,925	11.1	1,339	5.7
Av. 1931-35...	228,352	21.5	68,594	6.5	103,602	9.8	1,153	5.0
Av. 1936-40...	228,767	20.5	96,824	8.7	109,514	9.8	1,043	4.6
1939.....	229,468	20.4	103,658	9.2	108,951	9.7	967	4.2
1940.....	244,316	21.5	123,318	10.9	110,927	9.8	978	4.0
1941.....	255,317	22.2	121,842	10.6	114,639	10.0	901	3.5
1942.....	272,313	23.4	127,372	10.9	112,978	9.7	818	3.0
1943.....	283,580	24.0	110,937	9.4	118,635	10.1	798	2.8
1944.....	284,220	23.8	101,496	8.5	116,052	9.7	776	2.7
1945.....	288,730	23.9	108,031	8.9	113,414	9.4	660	2.3
1946.....	330,732	26.9	134,088	10.9	114,931	9.4	595	1.8
1947.....	359,094	28.6	127,311	10.1	117,725	9.4	554	1.5
1948 ³	347,222	27.0	123,313	9.6	119,352	9.3	509	1.5

¹ Per 1,000 population.

² Per 1,000 live births.

Births, Marriages and Deaths, by Provinces, 1948

(Preliminary figures)

Province	Births		Marriages		Deaths		Maternal Deaths	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ²
P.E.I.....	2,842	30.6	635	6.8	887	9.5	3	1.1
N.S.....	17,792	28.0	5,093	8.0	6,097	9.6	19	1.1
N.B.....	17,280	34.4	4,640	9.2	4,959	9.9	23	1.3
Que.....	114,654	30.2	34,646	9.1	33,589	8.9	232	2.0
Ont.....	104,169	24.2	43,241	10.1	42,353	9.9	124	1.2
Man.....	18,863	24.9	7,325	9.7	6,670	8.8	28	1.5
Sask.....	21,561	25.2	7,171	8.4	6,496	7.6	22	1.0
Alta.....	24,074	28.5	8,844	10.5	6,987	8.3	29	1.2
B.C.....	25,987	24.0	11,718	10.8	11,314	10.5	29	1.1
Canada ²	347,222	27.0	123,313	9.6	119,352	9.3	509	1.5

¹ Per 1,000 population.
the Northwest Territories.

² Per 1,000 live births.

³ Exclusive of Yukon and



The Peace Tower, Ottawa, in lilac time.

The Government

THE constitution of Canada is based on the British North America Act, 1867, and its amendments. It is federal in form, with many features borrowed from the British Parliamentary system and adapted to Canadian practice. The Act divides the field of legislative and executive power between national and provincial authorities, giving to the provinces control over such items as education, the administration of justice, municipal institutions, the establishment and maintenance of prisons and hospitals and the administration of public lands. The provinces also have the power of direct taxation to raise revenue for provincial purposes. The field of the Federal Government may be described as the power to make laws for the peace, order and good government of Canada in relation to all matters not assigned exclusively to the provinces. The Federal Government also has unlimited powers of taxation.

In both the federal and provincial fields there is responsible government, whereby the Ministry is answerable for its conduct to the elected representatives of the people in the House of Commons or the Legislative Assemblies. Under the constitution the courts administer the law as it is drawn up and amended by the legislatures.

Federal Government.—The Federal Government is composed of the King (represented by the Governor General), the Senate and the House of Commons. The Governor General, appointed by the King usually for a five-year term, acts only on the advice of the King's Privy Council for Canada, a committee of which constitutes the Ministry of the day. The Ministry, or Cabinet, which is made up of Members of the House of Commons or the Senate, is responsible to Parliament and resigns office when it becomes evident that it no longer holds the confidence of the people's representatives. Members of the Cabinet are chosen by the Prime Minister; 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.

The Senate, the Upper House of the legislative branch of government, has 102 members. Quebec and Ontario each has 24, Nova Scotia and New Brunswick 10 each, the four western provinces 6 each, Newfoundland 6 and Prince Edward Island 4. Membership is for life, vacancies being filled by the government of the day. The Senate passes on all legislation equally with the House of Commons, but has no power to initiate legislation for the expenditure of public funds. The House of Commons initiates most of the legislation and all money bills. It has 262 members elected directly by the people for a maximum term of five years. The number of members assigned

to each province is computed according to population and is adjusted following each decennial census. Provincial distribution at present is as follows:—

Ontario.....	83	Alberta.....	17	Newfoundland....	7
Quebec.....	73	Manitoba.....	16	Prince Edward	
Saskatchewan....	20	Nova Scotia.....	13	Island.....	4
British Columbia..	18	New Brunswick...	10	Yukon.....	1

The right to vote in federal elections is conferred on all British subjects, men and women, who have attained the age of 21 and have resided in Canada for 12 months prior to polling day.

The judicial branch of the Federal Government comprises the Supreme Court of Canada, the Exchequer Court of Canada and courts established under the Railway Act, the Bankruptcy Act the and Farmers' Creditors Arrangement Act. The Supreme Court is the final court of appeal in Canada. The Chief Justice of Canada and the puisne judges of the Supreme and Exchequer Courts are appointed by the Governor General in Council.

Provincial Government.—In the provinces, government is conducted along the same general lines as the Federal Government. The Lieutenant-Governor in each province is the representative of the Crown and is appointed by the Governor General in Council for a term of five years. The provinces, with the exception of Quebec, have one legislative body known as the Legislative Assembly, whose members are elected by popular vote. Quebec still retains a second legislative body, corresponding to the Senate, known as the Legislative Council, the members of which are appointed for life. In the provinces, the Executive Councils perform functions parallel to those of the Cabinet at Ottawa.

The legislature of each province makes laws in relation to the administration of justice in the province including the constitution, maintenance and organization of provincial, civil and criminal courts. 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, are appointed by the Federal Government from the bars of their respective provinces. Judges salaries and pensions are also fixed by the Federal Parliament.

Government of the Territories.—Yukon and the Northwest Territories, those vast northern areas with their small and scattered populations, are under the administration and protection of the Federal Government. Yukon has a local government composed of a Commissioner appointed by the Governor General in Council and a Territorial Council of three members elected for a three-year term. The Government of the Northwest Territories is vested in a Commissioner assisted by a Council of six members, all of whom are appointed by the Governor General in Council. These Councils perform much the same functions as do the Provincial Governments but act under instructions from the Federal Government.

Municipal Government.—Under the British North America Act, the municipalities are the creations of the Provincial Governments and for this reason their bases of organization and their powers differ. However, almost everywhere municipal governments, like other forms of government, have found their spheres of activity continually broadening and they have developed considerable powers of local self-government.

*The Supreme Court
— the final court
of appeal in
Canada.*



*The Chief Justice of Canada from whose office can be
seen the Parliament Buildings.*

*The Chief Justice and six of the puisne judges of the
Supreme Court as they enter to assume their seats.*





A well-known Ottawa home, which is in process of conversion into the official residence for Canada's Prime Ministers.

★ *Canada's Status within the Commonwealth*

At the time of Confederation, Canada was self-governing in respect of her domestic affairs, but the Parliament of the United Kingdom retained the power to enact laws extending to Canada and the right to disallow certain Canadian legislation. The Canadian Government took no part in foreign affairs, for the United Kingdom was responsible for the foreign policy of the whole British Empire. However, from 1867 to the present day, the bounds of Canadian autonomy have been gradually enlarged. Canada to-day has, under the Crown, equality in status with Great Britain and the other member 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; it has membership in the United Nations organizations; 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 Canadian people; and maintains its own military, naval and air forces. In short, Canada now stands as a free democratic nation within the Commonwealth.

★ *Canada's External Services**

Since Canada is one of the principal trading nations, its well-being is dependent, to a high degree, on world trade and prosperity. An original member of the League of Nations before the Second World War, Canada has always been a firm supporter of collective security as a way to peace. Support of the United Nations to-day is a corner-stone of its external policy. Within this framework, Canada is vitally concerned with strengthening the North Atlantic Treaty, which was planned with other free nations as a combined effort to preserve peace and restrain aggression, and with the economic recovery of Western Europe.

* The Department of External Affairs produces a number of publications dealing with Canada's external developments including the monthly bulletin *External Affairs* and the annual report *Canada and the United Nations*.

International Activities.—Canada's development towards the stature of a Middle Power is to-day shown in its added responsibilities undertaken in a world where the remotest nations are neighbours, and where shrunken distances are measured in terms of flying hours. In 1945, Canada signed the Charter of the United Nations at San Francisco, and has since taken an active part in the deliberations of the United Nations. Canada is at present serving its second term (January, 1950, to December, 1952) as a member of the Economic and Social Council; its first term ran from January, 1946, to December, 1948. From January, 1948, to December, 1949, Canada was a member of the Security Council, having been elected to one of the six non-permanent seats.

In addition, many of the specialized agencies of the United Nations—such as the International Labour Organization, the World Health Organization, the International Civil Aviation Organization, the Food and Agriculture Organization, and the United Nations Educational, Scientific and Cultural Organization—count Canada among their members. Through participation in these specialized agencies, Canada has supplemented the work that has been done by its representatives on the Security Council and the Atomic Energy Commission, and its delegations to the annual sessions of the General Assembly of the United Nations.

At the same time Canada has maintained its traditional associations with the other nations of the Commonwealth, and in 1949 was represented at the Commonwealth meetings at London.

The Rt. Hon. Louis S. St. Laurent, Prime Minister of Canada, chats with United States Ambassador Laurence Steinhart, under a portrait of the Rt. Hon. Sir Wilfrid Laurier, Prime Minister of Canada from 1896 to 1911.





*The French Embassy,
Sussex Street, Ottawa.*

The year 1949 marked the union of Newfoundland with Canada. The importance of Canada in the strategic area of the North Atlantic has therefore been greatly increased.

Canada emerged from the Second World War with an immensely greater productive capacity than in 1939, and as a relatively large creditor nation on current account. The reconstruction of Europe and the rebuilding of international trade are essential to Canada's interests as a great trading nation and Canadian resources have been directed to this end as well as to internal reconstruction. By the end of 1949 Canada had made available over \$2,000,000,000 in export credits and relief to its recent Allies, including a loan of \$1,250,000,000 to the United Kingdom. Canada actively supported the establishment of the International Bank for Reconstruction and Development and the International Monetary Fund. Canada also took a leading part in promoting the International Trade Organization of the United Nations; in working out the charter of the Organization which was drafted in Havana in 1947 and 1948; and in conducting the Annecy Tariff Negotiations of 1949.

Canada's Diplomatic Service.—The Department of External Affairs was established in 1909. The Washington Legation was opened in 1927. The Agent-General in Paris was elevated to the rank of Minister the following year, and in 1929 a Legation was opened in Tokyo; but the development of the new service was halted during the depression years of the 1930's. Only one further advance was made before the outbreak of war: in 1939, Legations were established in Belgium and the Netherlands, with the two missions served jointly by one Minister. All of these Legations were subsequently given Embassy status.

The period of the Second World War was marked by a rapid expansion of Canadian representation abroad. New missions were opened in all member states of the Commonwealth and in many foreign countries. The growth of the diplomatic service continued after the end of the War, with the recruitment of personnel returning from the Armed Forces. By the autumn of 1949, diplomatic or consular missions were established in thirty-five countries.

At present there are Embassies in Argentina, Belgium, Brazil, Chile, China, France, Greece, Italy, Mexico, The Netherlands, Peru, Turkey, the

Canada House, the office of the High Commissioner for Canada in London, England.



Union of Soviet Socialist Republics, and the United States. Legations are located in Cuba, Czechoslovakia, Denmark, Norway, Poland, Sweden, Switzerland and Yugoslavia. The Ambassador to Belgium is also accredited as Minister to Luxembourg; the Minister to Sweden as Minister to Finland; and the Minister to Norway as Minister to Iceland.

Canada has High Commissioners in Australia, India, Ireland, New Zealand, South Africa, and the United Kingdom.

The Canadian Consular service was first established during the Second World War. Consulates-general are now located in New York, Chicago, San Francisco, Lisbon, Caracas and Shanghai. Consulates are maintained at São Paulo, Frankfurt, Boston, Detroit and Portland, Maine.

Canada also has a Permanent Delegation to the United Nations in New York City and to the European Office of the United Nations in Geneva; a Military Mission in Berlin; and a civilian Liaison Mission in Tokyo.

Fifty-three countries maintain representation in Canada.



Office of the High Commissioner for South Africa, Sussex Street, Ottawa. Behind and to the left is the residence of the High Commissioner.



Summertime means a week or two at camp for most boys. Facilities for the less fortunate are provided through the efforts of many private and charitable organizations.

Health and Welfare Veterans Affairs

★ *Public Health*

THE responsibility for public health in Canada rests mainly with provincial and local governments, with the Federal Government assuming an increasing share in co-ordination and assistance, and important contributions being made by private associations and organizations. Planning, supervision and financial responsibility have been largely assumed by the provinces, and to a lesser extent by the Federal Government, with actual administration being carried on for the most part by municipal and other local authorities.

The principal co-ordinating agency is the Dominion Council of Health which is composed of the Deputy Minister of National Health, as chairman, the chief health officer of each province and five other members. The Council advises the Minister of National Health and Welfare on the formulation of policy. It is largely responsible for the development of an integrated and co-operative health program and for advising on the establishment within the Federal Department of Health and Welfare of services that can be better operated on a national scale. Under the Council, federal-provincial committees deal with specific aspects of public health.

Federal Health Services

A federal department of health was first established in 1919, to administer early health legislation such as the Quarantine, Opium and Narcotic Drug and Proprietary or Patent Medicine Acts, to promote research and health education and to co-operate with the provinces in the co-ordination of public-health work in Canada. In 1928 these functions, together with health and other services for veterans, were taken over by the new Department of Pensions and National Health. In 1944 the Department of Veterans Affairs was established to assume responsibility for all services to veterans,



and commenced its outstanding treatment and rehabilitation programs. In the same year the Department of National Health and Welfare was established. The various divisions of the Department maintain liaison with the corresponding divisions in the provinces, provide advisory and consultative services and educational material and, on request, conduct special surveys. Divisions whose functions are mainly of this nature include Child and Maternal Health, Dental Health, Epidemiology, Hospital Design, Mental Health and Nutrition.

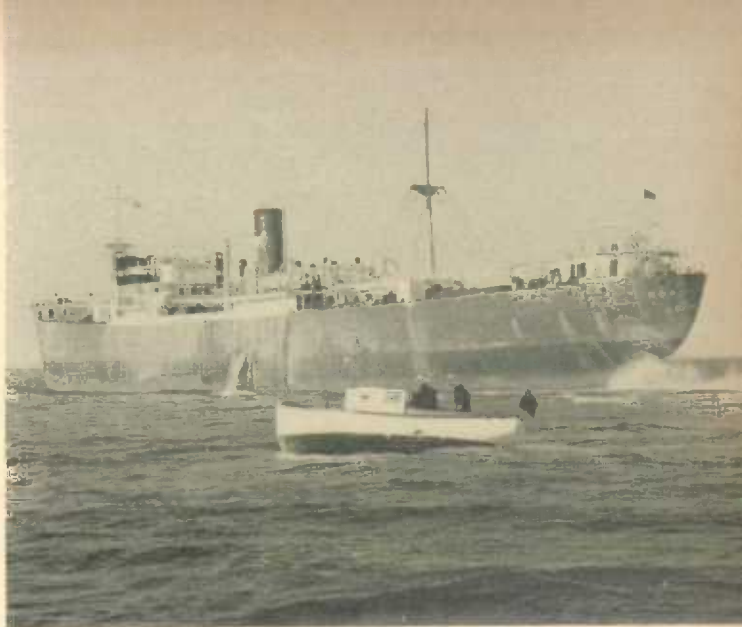
The Department has also certain statutory responsibilities in the administration of the Food and Drugs Act, Proprietary or Patent Medicine Act, Opium and Narcotic Drug Act, Quarantine Act, Public Works Health Act and sections of the Immigration and Canada Shipping Acts. In 1945 administration of health services for Indians and Eskimos was assumed by the Department. The Department shares with the provinces the cost of blind pensions, passes on the eligibility of applicants for pension on the basis of examinations arranged and paid for by the Federal Government and makes grants to the provinces for the remedial treatment of the blind. A new Division of Civil Aviation Medicine was established in 1948. Promotion of the health of federal civil servants is a departmental responsibility.

The National Health Grant Program.—This program, initiated in 1948 under the administration of the Department of National Health and Welfare, consists of three parts; the health survey grant to assist the provinces in assessing their needs and the priority with which they will be met; a group of annual grants designed to encourage the extension and development of provincial health programs; and an annual grant to aid in the provision of hospital accommodation. The amounts and types of these grants for the year ending Mar. 31, 1950, are as follows:—

<u>Grant</u>	<u>Amount</u>	<u>Remarks</u>
	\$	
Health Survey.....	—	A non-recurring grant of \$644,779. The amounts not expended in the first year (1948-49) to be made available in succeeding years, as required, until exhausted.
General Public Health.....	5,276,000	Based on a payment of 40 cts. per capita, rising each year by 5 cts. per capita until a maximum of 50 cts. is reached.
Tuberculosis Control.....	3,176,614	Commencing in 1950-51 a supplementary grant of \$1,000,000 annually will be made available.
Mental Health.....	4,122,171	To be increased to \$5,000,000 in 1950-51, to \$6,000,000 in 1952-53 and to \$7,000,000 in 1954-55.
Venereal Disease Control.....	515,944	An annual grant of \$225,000 was in existence prior to commencement of Health Grant Program.
Crippled Children.....	515,944	—
Cancer Control.....	3,590,093	—
Professional Training.....	515,944	—
Public Health Research.....	205,148	To be increased until a maximum of \$500,000 per annum is reached.
Hospital Construction.....	13,334,629	To be reviewed at end of 1953-54 with possible reduction at that time.
TOTAL.....	31,252,487	

Medical Research.—The Medical Research Division of the National Research Council acts as a co-ordinating body in the conduct of medical research in Canada. Its program is entirely extra-mural. Research projects

Medical personnel of the Quarantine, Immigration and Sick Mariner Service of the Department of National Health and Welfare go out by launch from their Pacific Coast station to inspect an incoming vessel.



are supported by grants-in-aid, and training is provided through the appointment of Research Fellows. While most of its work is done in Canadian medical schools, some important research is also maintained in hospital laboratories and clinics.

Provincial and Municipal Services

Although basic local health services such as sanitation, communicable disease control and registration of births, deaths and marriages are generally in the hands of cities, municipalities, counties or other local units, Provincial Governments have gradually assumed increased financial responsibility, with correspondingly increased supervision and control. The Provincial Departments of Health generally plan and direct such health services as vital statistics, infant, child and maternal hygiene, public-health laboratories, health education and public-health nursing, as well as communicable disease control and public-health engineering.

Diagnostic and treatment clinics are provided in various provinces for one or more of such diseases as tuberculosis, venereal diseases, cancer and poliomyelitis. In some cases vaccines, sera and other special drugs are supplied by provincial laboratories to practising physicians. Other activities of the local and Provincial-Health Departments include dental services, school medical services, epidemiology and industrial hygiene.

Institutions.—The provinces generally operate tuberculosis sanatoria or contribute to their maintenance. Mental hospitals also are usually provincial institutions. The provinces provide grants to assist in the maintenance of public general hospitals, which are largely supported by municipal and provincial funds.

Health Units.—In most provinces there are health districts or units; in many cases these correspond to cities or counties. They are mainly concerned with the usual public-health functions. In some provinces the



Three Red Cross mobile medical-dental clinics starting out for their respective areas in Abitibi, Timiskaming and Gaspé to give free examinations and treatment in these isolated districts.

municipal doctor plan has been developed, where a health unit employs a full-time doctor to serve the residents of the unit.

Medical and Hospital Care.—Free treatment is given to indigents, and in some cases, with respect to certain diseases such as tuberculosis, to all residents. In Alberta a maternity hospitalization service is provided by the Province. In Saskatchewan there is a Provincial Government prepaid hospitalization program, supported by an annual tax on each resident with a maximum payment for a family, which provides for hospital care, including operating room facilities, X-ray and other examinations. A similar program commenced in British Columbia on Jan. 1, 1949. The Newfoundland Government operates cottage hospitals in outport areas and in conjunction with these, medical and hospital care are provided upon payment of an annual fee. Private prepaid medical care and hospital insurance plans have been extensively developed throughout the country.

Non-Governmental Health Agencies

In addition to many local and provincial health organizations, major national agencies are: the Canadian Red Cross, which has converted its war-time blood-donor system into a civilian blood bank and transfusion service; the Victorian Order of Nurses, with well-established home-nursing and maternity services; the Order of St. John, with its training and service in first aid, home nursing, and blood grouping; and the Canadian Tuberculosis Association, whose provincial branches conduct mass X-ray surveys and educational programs. The Health League of Canada sponsors educational and publicity work in health generally and the National Committee for Mental Hygiene operates similarly in its field. Recently the Department of National Health and Welfare co-operated with interested individuals and organizations in the establishment of two national health bodies, the National

Cancer Institute and the Canadian Rheumatism and Arthritis Society, for purposes of education, publicity and research.

Statistics of Health Institutions

The Dominion Bureau of Statistics collects, through its Division of Health and Welfare, statistics concerning public and private hospitals, institutions for incurables, federal hospitals, tuberculosis institutions and mental institutions. The institutions reporting in 1947, by provinces, were as follows:—

Hospitals, by Types and Provinces, 1947

Type of Institution	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T.	Canada
Public.....	6	38	27	87	154	40	118	94	80	9	653
Incurable.....	—	—	1	3	10	1	2	2	3 ¹	—	22
Private.....	—	8	4	53	47	6	39	19	35	1	212
Federal.....	—	9	5	8	20	12	4	10	13	2	83
Mental institutions ²	1	16	1	8	17	4	3	5	4	—	59
Tuberculosis institutions ²	1	12	6	30	16	10	3	5	12	—	95
Totals.....	8	83	44	189	264	73	169	135	147	12	1,124

¹ Includes two branches of the Provincial Infirmary.

² Includes two federal hospitals.

³ Includes 49 units in other hospitals.

In 1947 returns were received from 653 of the 669 public hospitals for acute diseases known to be in operation during the year. Of the reporting hospitals, which contained 98.7 p.c. of the total bed capacity, 515 had X-ray facilities, 356 had clinical laboratories and 262 had physio-therapy facilities. During the year 1,633,069 patients received treatment and the average cost per patient day was \$5.55. The number of salaried doctors in these hospitals increased by 4 p.c. over the previous year, graduate nurses by 10 p.c. and the number of student nurses and probationists enrolled by 6.6 p.c.

Of the 59 mental institutions in Canada in 1947, 41 were operated by the provinces, 14 were county or municipal hospitals, two were federal and two were private hospitals. At the end of the year they reported 54,703 patients under care, 50,203 of whom were in residence. Of the total under care, 75 p.c. were psychotic, 22 p.c. were mental defectives without psychosis, 2 p.c. were epileptics without psychosis and 1 p.c. had other types of mental disorder. Total revenues of these institutions amounted to \$27,614,385, 77 p.c. of which came from Provincial Governments, 1 p.c. from the Federal Government, 4 p.c. from municipal governments, 12 p.c. from paying patients and 6 p.c. from other sources.

The 95 tuberculosis institutions reporting in 1947 had 12,407 patients in residence at the end of the year, compared with 12,006 in 94 institutions at the end of 1946. Of the total revenue of \$13,594,708 received by these institutions in 1947, 64 p.c. came from Provincial Governments, 12 p.c. from federal grants, 10 p.c. from municipalities, 4 p.c. from patients and 10 p.c. from other sources. Much work has been done in recent years by the Provincial Boards of Health in the fight against tuberculosis. In 1947 the total number of examinations made by tuberculosis clinics and mass surveys was 2,003,699, an increase of 438,445 over the number reported in 1946.

The numbers of beds in the different types of institution, by provinces, and per 10,000 population are given in the following table.

Hospital Beds in Reporting Hospitals and Hospital Beds per 10,000 Population, by Provinces, 1947

NOTE.—Rates are based on population figures shown on p. 43.

Province or Territory	Acute Diseases Hospitals ¹	Tuberculosis Institutions ²	Mental Institutions ³	Incurables	Private Hospitals	All Hospitals
TOTAL BEDS⁴						
P.E.I.....	453	145	250	—	—	848
N.S.....	2,793	1,141	2,603	—	42	6,579
N.B.....	2,195	958	900	85	100	4,238
Que.....	14,877	4,044	13,845	114	1,081	33,961
Ont.....	15,209	4,923	15,864	1,643	848	37,587
Man.....	3,480	1,153	2,471	425	105	7,634
Sask.....	4,126	803	3,670	224	146	8,969
Alta.....	5,009	787	2,538	145	140	8,619
B.C.....	5,584	1,301	3,039	329	780	11,033
Yukon and N.W.T....	339	—	—	—	17	356
Canada.....	54,065	14,355	45,180	2,965	3,259	119,824
BEDS PER 10,000 POPULATION						
P.E.I.....	48	15	27	...	...	90
N.S.....	45	18	42	...	...	105
N.B.....	45	20	18	1	2	86
Que.....	40	10	37	—	3	90
Ont.....	36	10	38	4	2	90
Man.....	46	15	33	5	1	100
Sask.....	49	10	44	2	1	106
Alta.....	61	10	31	1	1	104
B.C.....	54	12	29	3	7	105
Yukon and N.W.T....	14	...	...	...	1	15
Canada.....	43	11	36	2	3	95

¹ Federal hospitals not included.

² Includes 34 sanatoria, 12 federal hospitals for tuberculosis only, 6 units in federal hospitals and 43 units in other hospitals.

³ Includes two federal hospitals.

⁴ Basements for newborn not included.

★ Welfare Services

In recent years there has been considerable growth in the extension and co-ordination of municipal, provincial and voluntary welfare services in Canada, as well as notable progress in the development of a nation-wide social security program.

Traditionally and historically, social welfare in Canada developed as a local responsibility, with the municipalities deriving their powers from the provincial authority. Over the past two or three decades, however, economic and social developments, together with rising standards of public welfare, have thrust into provincial and federal areas of jurisdiction an increasing measure of responsibility. Although the municipalities continue to carry substantial welfare burdens, Provincial Governments have undertaken to provide services for special groups, financial assistance to municipal welfare programs, aid in co-ordinating local services and encouragement of improved standards of service.

With the exception of old age pensions, which were introduced in 1927, the trend towards greater federal responsibility began during the pre-war depression decade in the fields of unemployment relief, agricultural relief and other financial aid to the provinces. A national system of contributory unemployment insurance was introduced in 1940, the National Physical Fitness Grant Program in 1943 and family allowances in 1944.

Children visiting a health centre for a dental check-up. Most provinces have secured grants under Canada's National Health Program for projects in dental public health.



On the administrative side, each province has a permanent public welfare service, either as a separate department or jointly with its Department of Health, to operate provincial services and exercise supervisory authority over welfare programs, both public and private.

Federal Welfare Services

The creation of the Department of National Health and Welfare (8 Geo. VI, c. 22, 1944) brought into being for the first time a Federal Government service in which matters of welfare are a prime responsibility. The main functions of that Department in the field of welfare are: the promotion of social security and social welfare of the people of Canada; investigation and research; the preparation and distribution of information on social and industrial conditions affecting the lives and health of the people; co-operation with provincial authorities with a view to co-ordination of efforts in the welfare field. The Welfare Branch administers Family Allowances, Old Age Pensions and Pensions for the Blind, and the National Physical Fitness Program. Other welfare services are administered by the Department of Labour, the Unemployment Insurance Commission, the Department of Mines and Resources and the Department of Veterans Affairs.

Family Allowances.—The Family Allowances Act, 1944, was introduced to provide more equal opportunity for the children of Canada. The allowances are paid monthly to parents (to mothers, except in unusual circumstances) and must be spent exclusively for the maintenance, care, training, education and advancement of the child.

In general, each child under sixteen years of age, including Indians and Eskimos, is eligible for an allowance. Such a child must be registered for the allowance and be maintained by a parent, as defined in the Act. For registration purposes the child under the age of 16 years must reside in Canada and, in addition, must have been born and resident since birth in

Canada or have lived in Canada for one year preceding registration. Residence provisions do not apply to children born to parents domiciled in Canada but temporarily out of the country. The allowance is not payable to a child who fails to attend school according to the laws of the province in which he resides or fails to obtain equivalent education.

The allowances, which are tax free, are paid by cheque at the following rates: children under 6 years of age, \$5; children from 6-9 years of age, \$6; children from 10-12 years of age, \$7; and children from 13-15 years of age, \$8.

Current disbursements under the Family Allowances Act are running at the rate of \$298,000,000 per annum.

Family Allowances Statistics, by Provinces, August, 1949

Province or Territory	Families to Whom Allowances were Paid	Total Children	Average Allowance per Family	Average Allowance per Child	Total Allowances Paid, August, 1949
	No.	No.	\$	\$	\$
Newfoundland.....	49,756	135,296	16.44	6.05	818,071
Prince Edward Island.....	13,116	33,112	15.32	6.07	200,919
Nova Scotia.....	89,990	210,836	14.14	6.03	1,272,132
New Brunswick.....	71,643	185,243	15.54	6.01	1,113,130
Quebec.....	496,881	1,320,670	16.03	6.03	7,963,280
Ontario.....	587,824	1,166,920	12.03	6.06	7,070,580
Manitoba.....	103,625	216,557	12.62	6.04	1,308,200
Saskatchewan.....	116,490	261,191	13.65	6.09	1,589,744
Alberta.....	127,147	273,905	13.02	6.05	1,656,105
British Columbia.....	151,165	289,449	11.47	5.99	1,734,692
Northwest Territories and Yukon.....	3,709	8,077	13.34	6.13	49,495
Canada.....	1,811,346	4,101,256	13.68	6.04	24,776,348

Old Age Pensions and Pensions for Blind Persons.—The Old Age Pensions Act, passed by Parliament in 1927, provided for the payment of non-contributory pensions to persons 70 years of age or over who fulfilled certain requirements as to income, residence and nationality. An amendment to the Act, passed in 1937, provided for pensions for blind persons 40 years of age or over who fulfilled similar requirements.

Several amendments have since been made to the Act, the most important of these being made in 1947 and 1948. As the Act stands at present, the maximum income allowed to old age pensioners, including pension, is \$600 a year in the case of an unmarried pensioner and \$1,080 a year in the case of a married pensioner, with higher amounts for blind pensioners. Within the limits of the Act, each province is free to fix the maximum pension payable and the maximum income allowed. The Federal Government's contribution to any pensioner shall not exceed 75 p.c. of \$40 a month. In certain provinces old age and blind pensions are augmented by supplements, paid for entirely by the province. The qualifying age for old age pensioners remains at 70 years, while that for blind pensioners has been lowered to 21 years. Residence requirements have been relaxed by recent amendments and the requirement regarding nationality has been eliminated. The Department of National Health and Welfare is responsible for the federal administration of pensions paid under the Old Age Pensions Act.

Summary of Old Age Pensions, by Provinces, as at June 30, 1949

Province or Territory	Total Pensioners	Average Monthly Pension ¹	Pensioners to Population 70 Years of Age or Over	Persons 70 Years of Age or Over to Total Population	Federal Government's Contribution since 1927
	No.	\$	p.c.	p.c.	\$
Newfoundland.....	2,785	29.80	22.11	3.91	182,511
Prince Edward Island.....	2,770	26.42	44.68	6.67	4,150,444
Nova Scotia.....	18,779	30.24	55.23	5.35	37,220,668
New Brunswick.....	15,533	30.15	69.04	4.47	27,793,180
Quebec.....	64,954	28.94	51.43	3.33	123,529,591
Ontario.....	79,553	37.06	34.75	5.33	201,536,165
Manitoba.....	15,787	37.86	45.23	4.61	42,547,474
Saskatchewan.....	15,808	37.12	45.95	4.03	41,479,592
Alberta.....	15,277	32.23	46.29	3.90	34,850,381
British Columbia.....	26,219	29.29	42.49	5.70	49,916,522
Northwest Territories.....	20	28.75	10.93	1.52	50,862
Canada².....	257,485	32.88	44.25	4.52	563,277,390

¹ Excluding provincial supplements which are paid for entirely by the provinces.

² Excluding Yukon.

Summary of Pensions for Blind Persons, by Provinces, as at June 30, 1949

Province or Territory	Total Pensioners	Average Monthly Pension ¹	Pensioners to Total Population	Federal Government's Contribution since 1937
	No.	\$	p.c.	\$
Newfoundland.....	117	28.63	0.126	224,603
Prince Edward Island.....	887	38.47	0.140	1,514,350
Nova Scotia.....	1,011	38.85	0.201	1,771,997
New Brunswick.....	3,600	29.68	0.095	5,838,477
Quebec.....	2,149	37.64	0.050	3,764,533
Ontario.....	508	38.55	0.067	851,646
Manitoba.....	452	38.78	0.053	810,684
Saskatchewan.....	425	29.98	0.050	597,241
Alberta.....	593	29.31	0.055	841,223
British Columbia.....	1	30.00	0.008	1,107
Northwest Territories.....				
Canada².....	9,743	34.05	0.076	16,215,861

¹ Excluding provincial supplements which are paid for entirely by the provinces.

² Excluding Yukon.

Unemployment Insurance.—In 1940, by an amendment to the British North America Act, the Federal Government was given complete jurisdiction in the field of unemployment insurance and since that time a national system of unemployment insurance administered by the Unemployment Insurance Commission has been in operation. (See Labour Chapter.)

Physical Fitness.—A program of fitness and recreation for Canada was introduced with the proclamation on Oct. 1, 1943, of the National Physical Fitness Act. Under that Act, a National Council was established to promote the well-being of the people of Canada through physical fitness and recreational activities. The Council, set up on Feb. 15, 1944, is an advisory body appointed by the Governor General in Council, which meets twice each year to discuss the over-all program, and to advise the Minister of National

Health and Welfare on various aspects of it. In some provinces, provincial fitness councils function on lines comparable to the National Council.

The Act is administered by the Department of National Health and Welfare whose Physical Fitness Division acts as a clearing-house among the provinces for the latest information on fitness, recreation, community centres, physical education, sports and kindred activities.

The Federal Government makes available to the provinces on a per capita basis an amount not exceeding \$225,000 annually for the promotion of physical fitness and recreational projects. Special provision has also been made for an additional \$7,000 to be made available for Newfoundland should that Province choose to participate. Financial assistance is given only to those provinces that have signed specific agreements with the Federal Government, such provinces receiving their share to the extent to which they match it dollar for dollar.

<i>Province</i>	<i>Maximum Financial Grant Available Annually</i>	<i>Expiry Date of Agreement</i>	<i>Province</i>	<i>Maximum Financial Grant Available Annually</i>	<i>Expiry Date of Agreement</i>
	\$			\$	
Nfld.....	7,000	No agreement	Man.....	14,270	Mar. 31, 1950
P.E.I.....	1,859	Mar. 31, 1950	Sask.....	17,521	Dec. 31, 1953
N.S.....	11,302	Mar. 31, 1950	Alta.....	15,568	Mar. 31, 1951
N.B.....	8,944	Mar. 31, 1952	B.C.....	15,993	Mar. 31, 1950
Que.....	65,151	No agreement	N.W.T.....	234	Mar. 31, 1952
Ont.....	74,063	Mar. 31, 1950	Yukon.....	97	No agreement

Welfare of Indians and Eskimos.—The Indian Affairs Branch of the Department of Mines and Resources is responsible for the welfare of the Indians of Canada. The Branch, in co-operation with the Family Allowances Division of the Department of National Health and Welfare, administers the payment of family allowances to those Indians who are paid in kind.

The Commissioner in Council of the Northwest Territories and the Elective Legislative Council of the Yukon Territory, are responsible for the health and welfare of indigent white and half-breed persons in their respective areas. These authorities act through the Northwest Territories and Yukon Services of the Department of Mines and Resources which, in co-operation with the Family Allowances Division of the Department of National Health and Welfare, supervise the payment of family allowances to the Eskimos of Canada.

Canadian Government Annuities.—The Canadian Government Annuities Act was passed in 1908 to authorize the issue of Government Annuities, the purpose being to encourage and aid Canadians to make provision for old age. Any resident of Canada may purchase a Canadian Government Annuity up to \$1,200, payable for life only, or for life with a guarantee period of 5, 10, 15 or 20 years, or for the lives of joint annuitants with continuation to the survivor. Immediate annuities may be purchased in a lump sum and are payable immediately. Deferred annuities are usually bought by employed persons and are purchased by payment of periodic premiums or a single premium, and are payable on retirement.

Annuities may be purchased under individual contracts or by members of groups under group contracts. A group contract is generally an agreement



Child health clinics are conducted in almost every community across the country.

with an employer to implement a retirement plan approved by the Minister of Labour, the purchase money being, as a rule, derived jointly from the employer contributions and deductions from wages.

On Mar. 31, 1949, annuity income of \$20,847,452 was payable under 48,064 contracts. The number of deferred annuities being purchased by individuals privately was 80,583. The number of group contracts was 809 covering 113,645 registered employees. The balance at credit of the Annuities Fund was \$501,737,659.

Local offices are maintained in 41 centres throughout Canada to advise the public regarding the purchase of Canadian Government annuities.

Dependants' and Veterans' Allowances.—Allowances paid to veterans' dependants and to certain non-pensionable veterans are dealt with under Veterans Affairs, p. 76.

Provincial Welfare Services

The field of provincial welfare work is a very wide one. It includes homes for the aged and infirm, children's aid societies, reformatories, day nurseries, homes for juvenile delinquents, training schools for mentally defective children, psychiatric services and industrial schools. These are, in some

provinces, maintained solely by provincial funds, in others by municipal, public or joint municipal and provincial funds. The Provincial Governments also supervise the institutions operated by cities, counties, districts and religious and benevolent societies, provide mothers' allowances and other social services and, in co-operation with the Federal Government, provide old age pensions and pensions for the blind (*see pp. 68-69*).

Mothers' Allowances.—All provinces except Newfoundland provide allowances to certain needy mothers who are widowed or who, for other reasons, are without means of support. On Oct. 21, 1949, the Newfoundland Legislature gave third reading to a Mothers' Allowance Bill, which will become effective on proclamation. Except in Alberta, where 25 p.c. of the allowance is borne by the municipality, the whole cost is paid from provincial funds. The Acts of the respective provinces stipulate that the applicant must comply with certain conditions at the time of application.

In all provinces the exact amount granted is determined by the administrative authorities after consideration of the circumstances in each case. In Prince Edward Island, the maximum monthly allowance is \$25 for a mother and one child and \$50 for a family. Nova Scotia has no set maximum for a mother and one child but the family maximum is \$80 per month. In New Brunswick the maximum allowance is \$27.50 per month for a mother and one child, and \$7.50 per month for each additional child. An additional \$7.50 per month may be granted for rent provided the monthly amount payable does not exceed \$60. In Quebec a mother with one child receives \$35 per month if living in a city or town of 5,000 or more, or \$30 per month if living elsewhere, with an extra \$5 a month for a mother physically unable to work and for a disabled husband living at home. An additional monthly payment of \$1 each is made for the second, third, fourth and fifth child, \$2 each for the sixth and seventh, and \$3 for each subsequent child. In Ontario the maximum rate for mother and child is \$50 per month, with \$10 for each additional child and for a disabled husband in the home. A fuel allowance is granted and an additional \$10 per month per beneficiary may also be paid where need is evidenced. Manitoba pays a maximum monthly allowance of \$48 for a mother and one child, with additional allowances for subsequent children and a disabled father in the home. The maximum monthly allowance, excluding winter fuel, granted to any family, with or without the father in the home, is \$137. In Saskatchewan the maximum yearly allowance payable for a mother and one child is \$300, increasing to \$900 for a mother and ten children; \$10 a month is granted for a disabled husband living at home and supplementary aid may be provided under the Social Assistance Program. Alberta pays a maximum of \$35 per month for a mother and child, with the amount rising to \$100 for a mother and nine children. Supplementary assistance, up to \$10 monthly may be granted in special cases. In British Columbia the maximum amount which may be paid is \$50 per month for a mother with one child and \$8.50 for each additional child and for an incapacitated husband in the home; supplementary aid to meet emergency expenses may also be given.

Workmen's Compensation.—For accidents occurring in the course of employment, compensation is payable to workers in accordance with the law of each province or, in fatal cases, to their dependants. In all provinces, except Newfoundland, the entry cost of compensation and medical aid is

borne by employers through a collective liability scheme administered by the province. Newfoundland has an individual liability system whereby the employer is liable to pay compensation. In certain cases, the courts may be asked to decide whether or not the employer must pay.

Monthly pensions at a fixed rate are paid to widows and children; injured workmen receive two-thirds of their earnings (three-quarters in Saskatchewan and Ontario) during total disablement, but the maximum amount of earnings taken into account is \$2,500 in Nova Scotia, New Brunswick, Quebec, Manitoba, Alberta and British Columbia and \$3,000 in Saskatchewan and Ontario. In Newfoundland, machinery is provided in the law to fix payment.

Dependent and Handicapped Groups.—The work of the various institutions and agencies for the care of dependent and handicapped groups may be classified under two main headings: the care of adults and the care of children.

Latest data show that at June 1, 1946, there were 16,302 adults under care. Of these, 1,043 were between the ages of 21 and 30 years; 1,617 between 30 and 50 years; 1,369 between 50 and 60 years; and 12,273 were 60 years or over. Forty per cent were supported from charitable and private funds. In regard to mental and physical condition, 1,794 were either blind,

Pupils of the School for Crippled Children at Montreal board a bus which will return them to their homes. Buses for this purpose have been donated by many Montreal charity organizations.



deaf and dumb, or crippled, while 1,826 were feeble-minded or subnormal, and 1,183 were epileptic, incurable or insane.

At the same date, there were under care 30,317 children under 20 years of age, of which number 5,926 were in homes for adults and children, 11,754 in orphanages, 583 in day nurseries, and 12,054 in children's aid societies.

Other Welfare Services

There are in existence many voluntary organizations whose efforts are directed to social welfare. The Canadian Welfare Council, a national association of public and private agencies, provides a means of co-operative planning and action by serving as a link between voluntary agencies and between public and voluntary agencies. Specialized organizations, such as the Canadian National Institute for the Blind, which functions in every field of welfare for the blind, and the Canadian Council of the Blind, occupy somewhat similar roles in their particular fields. The various Community Chest organizations and service clubs assist welfare work by helping to finance local organizations, and the work of the Young Men's Christian Association, the Young Women's Christian Association, the Catholic Youth Organization and the Young Men's Hebrew Association, the Boy Scouts, Girl Guides and similar youth organizations in what may be described as preventive rather than curative work cannot be overlooked. Day nurseries prove invaluable to many mothers who are obliged to work. Most of the activities of these organizations are not susceptible to statistical measurement. The Canadian Red Cross, the Victorian Order of Nurses, and the Order of St. John perform many welfare services, though they are more properly designated as public health organizations.

★Veterans Affairs

The Department of Veterans Affairs was established in October, 1944, to administer the legislation concerning the re-establishment of ex-service men and women in civilian life. The peak of the Department's work was reached in 1946, since demobilization of approximately one million men and women who served in the Armed Forces of Canada was almost entirely completed during that year. The Department has an organization extending from Charlottetown to Victoria, including hospitals in all the large centres. Close liaison is maintained between the Department of Veterans Affairs and other federal and provincial departments and community organizations. Approximately one-half of the staff has been engaged in providing adequate medical treatment and care for the thousands of eligible veterans requiring it. The remainder of the staff has dealt with the various other branches: the Veterans' Land Act Administration; the Veterans Welfare Branch; the Canadian Pension Commission; the War Veterans Allowance Board; General Administration; etc.

Certain of the legislation passed for the assistance of veterans has served its purpose and has been dropped. Continuing legislation is outlined below.

Treatment Regulations.—The majority of veterans receive treatment under five of the twelve classifications contained in these regulations.

Libraries are popular with hospitalized veterans. Sunnybrook patients have their own library of 3,000 books and may also borrow from the city-wide system's 500,000 volumes.



Class I provides treatment for pensioners for their pensionable disability. If hospitalized, the veteran receives the equivalent of 100 p.c. pension rate less \$15 per month, and if an out-patient, the equivalent of 100 p.c. pension rate.

Class II* provides treatment shown to be required at the time of discharge. Such treatment must be commenced generally within thirty days following discharge and may be continued for the period of a year, or the period of service if less than a year, with allowances equal to the pay and allowances of rank in effect at the time of discharge. If pension entitlement has been granted, treatment may be continued to finality.

Class III* provides treatment for veterans for any disability not a result of misconduct arising during the year following their discharge. While receiving such treatment, monthly allowances of: single \$50, married \$70, plus allowances for dependants, may be paid.

Class V provides treatment for the remainder of their lives for veterans with meritorious service and pensioners, where it is shown that the veteran is unable to afford the treatment required. No allowances are paid except, where necessary, a "comforts and clothing" allowance.

Class VI provides domiciliary care for totally disabled aged veterans who require some one to look after them, but who do not require active treatment.

Veterans are also entitled to any dental treatment required during the year following discharge. They are provided, free of charge, with prosthetic appliances which they require and these appliances are serviced and renewed for life.

The general policy with regard to post-discharge treatment is designed to provide the best possible professional medical and surgical care for veteran patients. The peak of the load was reached in the spring of 1946 and since then a large proportion of the Armed Service hospitals taken over to meet the peak has been closed and a permanent building program undertaken, much of which will not concern beds but rather ancillary services essential for adequate investigation, diagnosis and treatment.

Veterans' Rehabilitation Act.—Under this legislation considerable numbers of veterans have been given the opportunity to resume schooling

* Treatment in this class is ended in practically all cases, due to the time elapsed since the War.

interrupted by war service and to upgrade their abilities in almost every field of business and professional endeavour. Training allowances as well as academic fees were paid under the Act, which also provided for allowances to veterans temporarily incapacitated, those awaiting returns from new farms and businesses, and veterans lacking employment in the first eighteen months after discharge. The majority of these allowances have now ceased, except for those to veterans still studying at Canada's universities under the rehabilitation plan, and those whose applications for vocational training came late in 1948. Awaiting returns allowances may be made available to veterans settled on farms under the Veterans' Land Act at any time within one year after their establishment. Provision is also made for certain disabled pensioners and veterans in hospital whose training has been necessarily postponed.

War Service Grants Act.—This Act provides for gratuities and re-establishment credits for veterans, and these are calculated on length, type and category of service. Payment of war service gratuities has been made to more than 950,000 ex-service men and women, virtually completing this portion of the program. However, re-establishment credits, which are in effect additional gratuities expended on the veterans' behalf only for certain approved purposes, may be used at any time within ten years after the date of discharge or cessation of hostilities (Dec. 31, 1946, under this Act), whichever is the later, provided alternative rehabilitation benefits have not been obtained. The average re-establishment credit is approximately \$400.

The Pension Act.—Under this Act pensions are paid to veterans as a compensation for loss or lessening of normal abilities incurred during service. The 100 p.c. pension rates per annum for ranks equivalent to captain (military) or lower are: man, \$1,128; wife, \$372; first child, \$228; second child, \$180; each subsequent child, \$144; widows, \$900. Higher rates are in effect for higher ranks. Pensions vary from 5 p.c. to 100 p.c. based on assessed percentage of disability. The insurance principle applies for service in Canada and overseas. Under this principle the disability need not be directly a result of service duties.

The Canadian Pension Commission examines the final medical report of each discharged member of the Forces. If a disability is found on discharge a decision on pension entitlement is rendered. Adequate provision exists for the review of unfavourable decisions, and veterans may have the assistance of the Veterans' Bureau in preparing and presenting such claims for review at no cost to the veteran.

War Veterans' Allowance Act.—Veterans become eligible for an allowance under this Act when they reach the age of 60 or, due to physical or economic reasons, or a combination of both, become incapable of supporting themselves before reaching that age. The age limit for widows of veterans who might have qualified is 55. To qualify, veterans must have served with the Canadian Forces in a theatre of war, or on active service with the Canadian Forces in two wars. The maximum annual allowances are: single \$480, married \$840. Reductions in these allowances are made for other income.

Veterans' Land Act.—This Act offers three main types of assistance to qualified veterans for settling on the land: full-time farming; small holdings in connection with industrial or other employment; or small holdings in

connection with commercial fishing. Maximum assistance allowed is \$6,000, of which up to \$1,200 may be spent for stock and equipment. The veteran pays down 10 p.c. of the cost of land, buildings and permanent improvements, and contracts to repay two-thirds of that cost over a period of not more than twenty-five years at $3\frac{1}{2}$ p.c. interest. The remainder of the cost becomes a grant from the Federal Government but may not be realized until the veteran has satisfactorily fulfilled the terms of his contract for at least ten years.

The Act also contains provision for assistance to veterans settling on provincial Crown lands and Indian Reserves, and to veterans holding farms under lease or by agreement of sale. There is also provision for fully repayable loans at $3\frac{1}{2}$ p.c. interest to veterans who own their own farms.

The Veterans' Business and Professional Loans Act.—This Act enables veterans to obtain loans through the chartered banks up to a maximum of \$3,000 at not more than 5 p.c. interest for business or professional purposes. The amount of the loan may not exceed two-thirds of the total amount to be invested in the business. The banks follow normal lending practices, but the Government guarantees each individual bank at the rate of 25 p.c. on any loss incurred on the first million dollars lent by each bank, and 15 p.c. on loans in excess of the first million dollars. The total amount of loans by all banks to which such guarantee extends is \$25,000,000.

The Veterans Insurance Act.—This Act makes Government life insurance available to veterans at cost as low as that of most standard companies and in most cases without medical examination. It is available in multiples of \$500 up to a maximum of \$10,000. It may be applied for within six years of discharge or Feb. 20, 1945, whichever date is later.

Valley View near Kamloops, B.C., a Veterans' Land Act subdivision.





Students on a class promenade

Education Scientific Research

★*Education*

CANADA'S constitution assigns public education, except for that of the native Indians, to the jurisdiction of each of the ten provinces. While the systems vary in particulars the general plan is the same except that in Newfoundland the schools are denominational and the Catholic schools of Quebec follow more closely the system of France.

Provincial administration is under a separate department of government headed by a Minister responsible to the legislature. The local administrative units which hire the teachers and operate the schools are elected by the ratepayers or, in some cases, appointed by a local municipal council. Practically all the necessary funds come from local direct taxation and provincial grants. The Federal Government contributes towards the cost of scholarships, youth training and vocational education including apprenticeship and technical education.

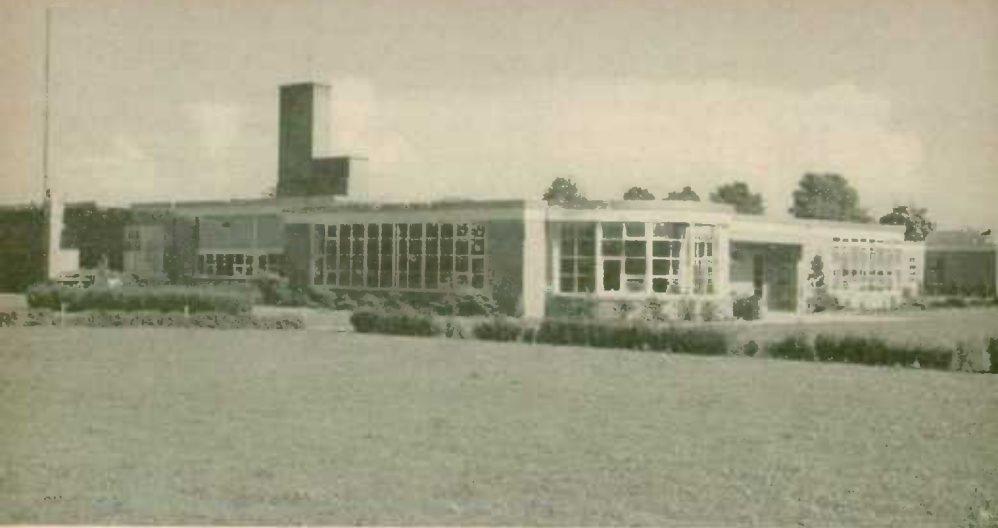
Elementary and Secondary Education.—The elementary school includes the first eight grades and the secondary school course extends for four years more (five years in British Columbia and Ontario) to university entrance. In most provinces grades seven to nine are designated intermediate or junior high school and given a broadened curriculum. Diversification in courses and subjects begins in the secondary grades and varies considerably between provinces. Quebec has the highest degree of diversification and specialization of schools. In Western Canada a variety of subjects are options in the general course. Teachers are trained in provincial normal schools and universities and are licensed by the provinces. A certificate valid in one province is not valid in another.

Canadian education like any dynamic system is changing in several ways and is faced with a number of major problems.

Enrolments are increasing. The increased birth rates of the war years have already shown up in the beginning grades and Family Allowances have had the effect of keeping pupils in school longer. On the basis of births it is estimated that total enrolment in the elementary and secondary schools of the ten provinces will reach 3,100,000 by 1960 as against 2,200,000 actual enrolment in 1947; and the effects of immigration and other current trends may easily raise the increase to as much as 1,000,000 or 1,250,000 pupils. This means an increase of over 50 p.c. in thirteen years and presents serious problems in teacher supply, building requirements and financial needs.

Ontario has announced the adoption of a 3-3-3-4 grade system* to be introduced progressively. This means that all provinces except Newfoundland

*More properly described as an organization of the curriculum into Primary (Grades I to III), Junior (Grades IV to VI), Intermediate (Grades VII to IX) and Senior (Grades X to XIII).



A new public school, typical of those being built in rapidly growing suburban districts.

and Prince Edward Island have adopted the 6-3-3 grade system* or a modification thereof. The courses in the intermediate grades are exploratory and are designed in part to make for a smoother transition from the elementary grades to the senior ones and in part to facilitate meeting the needs of that large body of students (60 p.c.) who do not go beyond Grade IX. In Nova Scotia and New Brunswick the new regional rural high schools are extended downward to include the intermediate grades thereby relieving the one-room rural schools of all pupils above Grade VI.

Composite high schools for rural areas are increasing in number in almost all provinces. These schools are being planned to provide not only the general academic course leading to university but also home economics and agriculture courses suitable for rural children and commercial and industrial courses according to the needs of the locality.

There is a growing demand for a closer relationship between the schools and the economic needs of the community and for an increase in the number of vocational subjects offered, particularly outside the large cities. Since relatively few pupils (33 p.c.) extend their education beyond Grade X something more suited to their needs should be provided for the other 67 p.c. This problem is deemed so important that the Canadian Education Association has set up a research committee on practical education with strong advisory committees in each province. These committees are made up of representatives of education, the home, industry, commerce, agriculture and labour. The aim is a nation-wide survey of practical secondary education.

Technical institutes are being established in three provinces to meet the need for advanced vocational training at the senior secondary and junior college level. In some cases these schools will provide training centres for vocational teachers.

*Essentially an organization of the curriculum into Elementary (Grades I to VI), Intermediate (Grades VII to IX), and Senior (Grades X to XII—Grade XIII in British Columbia). Physical division, where it occurs, is usually between elementary and high school either at the end of Grade VI or Grade VIII.

As a natural result of the increasing enrolments, increased holding power and diversification and extension of subjects and courses, there is a tremendous expansion in building. This is accentuated, particularly at the elementary school level, by the back-log of required building from the war years. Twenty-nine larger centres report having spent \$27,000,000 on buildings and equipment in less than two years and have projected expenditures for the next five years of \$59,000,000.

The heavy cost of this building program added to the high cost of operation has greatly increased the burden of local taxation for education purposes. Between 1941 and 1946 the cost per capita of elementary and secondary education increased 65 p.c. The provinces have assisted by markedly increasing grants to school boards so that the total for Canada now amounts to one-third the cost of operating the schools.

Indian Education.—The Indian Affairs Branch of the Department of Mines and Resources operates day and residential schools in all the provinces of Canada and in the Northwest Territories and Yukon.

The total enrolment in these schools has now reached 22,000 children and there are also nearly 1,000 children enrolled in the elementary grades of provincial schools. There are nearly 400 children now enrolled in secondary schools of various kinds and 300 in high-school grades of Indian schools.

The main feature of academic progress has been the erection of many new day schools. In all, nearly 90 new classrooms were added to the school system during 1948 and it is expected that a similar number will be added in 1949.

High School at Fredericton, N.B.





*Library period in
an elementary
school.*

A larger number of qualified teachers have been employed in these Indian schools mainly due to increased benefits in the form of higher salaries and superannuation privileges. The policy of the Department is to gradually eliminate all non-qualified teachers from its day schools. It is felt that Indian children must receive the benefits accorded to other children in the provincial schools and this can best be granted by the continued improvement in the type of teachers employed.

Higher Education.—Full-time enrolment of undergraduates in Canadian universities and colleges has been about 80,000 in each of the past two years. This is more than double the number in pre-war years. The increase is largely due to the financial assistance provided by the Government to war veterans as part of its rehabilitation program. Reduction in the number of students, except in advanced or post-graduate courses, is to be expected in the academic year 1949-50 and succeeding years.

Expenses of the universities, like their enrolments, have doubled. Reductions per student that might have been expected due to larger classes have in the main been offset by higher costs. Government grants and income from endowment funds have not kept pace with the increased costs, and increases in student fees have consequently been general in the past two years. They have become a matter of such importance that an increasing proportion of families, especially those living at a distance from university centres, may be unable to afford university education for their children. A recent sampling of the costs to single students of a year at university shows \$900-\$1,200 in arts and science and more in such professional courses as medicine and dentistry. Various organizations have been proposing a system of national scholarships so that the ablest matriculants would be assured an opportunity to attend university regardless of cost or family circumstances.

The National Conference of Canadian Universities is asking also for direct annual grants to the universities, on the basis of number of students in professional faculties such as medicine, dentistry, agriculture and forestry,

The development of intricate technological processes in industry has created a demand for personnel with advanced technical education on a level between the high school and the university. Such training gives to the pupil a working knowledge of the hand skills required as well as a sound background of the underlying principles involved in the industrial process at which he is employed.

The illustrations show pupils at work in the highly specialized field of electronics, in furniture design and in costume design—three of the many courses available—which will qualify them, as technicians, for posts of responsibility in the industrial or business world.





A denominational rural school, which also serves as a church, near St. John's, Newfoundland.

for which operations are most costly. This would be, in effect, a continuation on behalf of all students in these faculties, of the practice that has been followed on behalf of veteran students.

Most of the universities in the past three years have conducted campaigns for voluntary subscriptions to their building or endowment funds, and new building has been in progress on several of the campuses. It is doubtful, however, whether the increase in endowment funds will be sufficient to restore the income from that source to its former relative importance in university finance. In the 1920's endowments contributed between 15 p.c. and 20 p.c. of income but in 1947 and 1948 their yield was down to 6 p.c. or 7 p.c.

Adult Education.—In the post-war years increased attention has been given to adult education. For many years there have been night classes in the publicly controlled schools of cities, mainly vocational or avocational in nature. The recent trend has been to encourage a much wider variety of use of the schools on the part of adults, and to extend such uses to smaller communities. The school has in numerous cases become a community centre, in which social and recreational needs, as well as educational in the narrower sense, are being met. The variety of courses offered has at the same time increased. Although there is no significant problem of adult illiteracy, an important activity in many communities has become the provision of language and citizenship classes for the post-war immigrants from Europe. University extension departments continue to be an important factor in adult education, in some provinces more than in others. So also with voluntary organizations.

The Canadian Association for Adult Education, through the medium of its monthly publication, its Joint Planning Commission, and in other ways, remains the chief 'clearing house' for ideas among adult workers in English-language education. The post-war years have witnessed the development of a similar organization for French-language workers, La société canadienne d'enseignement postsecondaire, with headquarters at Laval University, Quebec City.

"In almost every country in the world adult education has grown from obscurity to the position of a third partner along with higher education and the public schools", says a publication of the Canadian Association for Adult Education. While this is particularly the case in countries with a serious problem of adult illiteracy, there is growing recognition of the need in democracy for continuing citizenship education for the entire population. The programs of the two adult education associations are based on this recognition, and both have the collaboration of the Canadian Citizenship Council.

National Research Council Laboratories, Montreuil Road, east of Ottawa. This group includes the aeronautic, hydraulic, structures, low-temperature, engine, gasoline and oil, building research and general engineering laboratories and the wood- and metal-working shops.



In all these meetings the numerous scientific interests of Canada are usually well represented, and when decisions are taken the members are able to carry back the recommendations to their respective organizations and institutions. Included in this category are the research establishments maintained by the larger industrial companies in widely separated centres; research foundations and councils in most of the provinces; graduate research centres at the universities; a large and important group of consultants in the science and engineering fields; and publishing houses that produce technical journals and sponsor the publication of scientific books.

Since the beginning of the twentieth century there has been a remarkable change in the relationship of the farmer and the scientist. The scientist has taken his critical methods to the fields; the farmer has brought his problems to the laboratory. To apply the laws of science to the practices of agriculture is the function of the research and experimental services of the Dominion Department of Agriculture. Highly trained specialists are continuously at work carrying research projects through various stages of analysis in the laboratory, and through testing under controlled conditions in stable, greenhouse, and experimental plot. Finally the products of their research are tested under practical farming conditions throughout the area concerned.

Various types of scientific and industrial research are carried out in the Department of Mines and Resources and its research facilities are designed to promote the more efficient development of and utilization by industry of the products of forest and mine. Resources and occurrences of Canadian minerals are studied, as well as further treatment and recovery of the industrial minerals. Research in anthropology, forest protection and management, geological investigations, mapping, problems in wildlife studies, and astronomical and meteorological subjects are all of interest to that Department. Similarly the fisheries, both inland and coastal, are under continued study by the Fisheries Research Board and the Department of Fisheries.

Health problems involve many and varied research studies, and in this field Canada holds a high position.

An Advisory Panel on Scientific Policy, consisting of senior research officials, keeps in close touch with all research activities carried on under the auspices of the Government of Canada. Each of these agencies, in turn, maintains working relations with provincial and other research institutions and the machinery of scientific and industrial research throughout Canada is thus integrated into a smoothly working mechanism of high efficiency.

The National Research Council.—In a recent address, Dr. C. J. Mackenzie, President of the National Research Council, said that scientific and industrial research can be considered as a tripod on which rests the industrial strength of a country. The three supporting members are: (1) fundamental research which is not focused on any particular application but is a free search for truth; (2) applied research of a basic nature, similar in technique but with a general if long-term focus, e.g., supersonics research, atomic power research, chemical, metallurgical, medical, etc.; and (3) direct industrial or *ad hoc* research and development—the scientific arm of industry in solving its immediate problems of product improvement, trouble-shooting, and cost reduction.

All three are essential elements but it should be emphasized that while in normal times the results of pure research are freely available to scientific research workers in all countries the same is not true of applied and direct research. Here, there is an element of "know how" involved, and an availability of facilities for immediate and local tasks, which make a big difference.

These three activities are, in the main, best carried on in three different kinds of organization. Everyone agrees that universities are best suited for fundamental research. Likewise everyone agrees that the last and most important step must be taken by industry itself: in the case of large industries



Investigating the effects of cold weather on gun operations in the National Research Council's Low-Temperature Laboratory.

Summary Statistics of Education, Academic Year 1946-47

Type of School or Course	Institutions	Pupils	Teachers	Expenditures
	No.	No.	No.	\$
Provincially Controlled Schools—				
Ordinary and technical day schools . . .	30,844	2,067,242	77,371	222,000,493
Evening schools	420 ¹	100,838	...	598,370 ²
Correspondence courses	9 ¹	43,919	...	835,957
Special schools	21	5,289	499	2,803,111
Normal schools	97	8,741	945	2,872,772
Privately Controlled Schools—				
Ordinary academic schools	779	100,025	5,601	11,954,669
Business training schools	255	38,800	1,078	
Dominion Indian Schools	347	19,622	381	3,641,404²
Universities and Colleges—				
Preparatory courses	34	26,169	1,733	45,400,160
Courses of university standards	164	109,430	8,697	
Other courses . . . . .	...	30,984	...	
Totals	32,541	2,551,049	96,305	290,106,936

¹ Omitted from total. Evening classes are conducted in day schools and correspondence courses by provincial departments of education. ² British Columbia and Ontario only; included with day schools in other provinces. ³ Fiscal year ended Mar. 31, 1948.

by their own laboratories and in the case of small industries by some arrangement with research foundations or associations.

The large field of relatively expensive applied basic research, which is nationally of prime importance and the result of which cannot be forecast with certainty as to time or financial return, must be supported by public funds and this is the essential field for government or publicly supported laboratories.

These lines of separation are not clear-cut. For instance many universities do a certain amount of applied research, and government laboratories such as the National Research Council carry on considerable work in pure research. Many industries do some fundamental and a great deal of basic applied research, but in the main the above generalization is sound and serves as a good basis for over-all national thinking in research.

In its service to industry, the National Research Council has three main objectives. First, it encourages scientists from industry to visit the laboratories of the Council and in turn sends its men to visit industrial laboratories. A free and constant flow of personnel and information is thus maintained between the Council and most industries that have laboratories. The aim is 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.

Secondly, the Council undertakes, under contract, research work for any firm which has a problem that cannot be solved by private consulting and testing laboratories, and also obtains assistance, in return, from many companies.

Thirdly, in 1945, the Council organized a Technical Information Service to try to help the innumerable small industries that have no scientific staff and who in many cases do not realize that they have problems capable of solution. This service is essentially an information, not a research activity, but information comes first and in most cases the first need of smaller industries is knowledge of the latest technical and scientific developments.

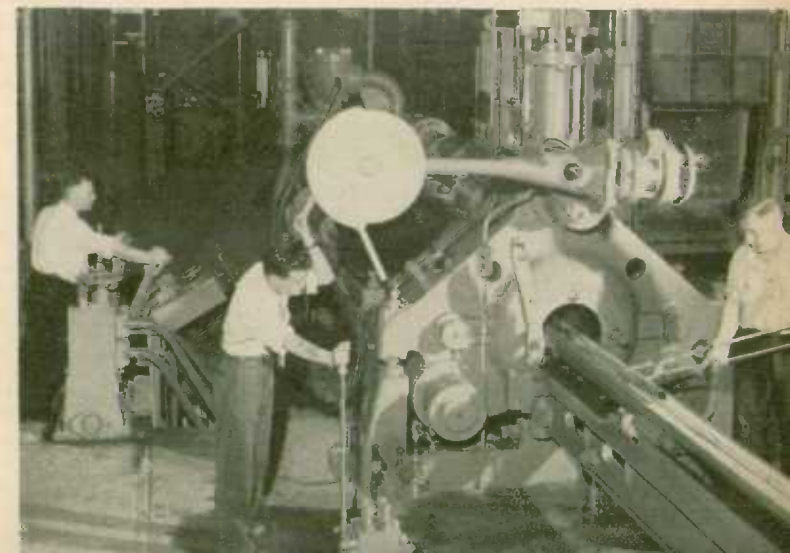
Work in building research also illustrates the point, previously made, viz., that broad research plans must be considered in terms of over-all national needs. Building research is a most widespread activity and when

★Scientific Research

While scientific research is carried on by many different agencies in Canada, there is a close co-ordination of effort which not only results in measurable economies being effected, but ensures that no important fields of activity are overlooked. Scientists are seekers after truth, and nothing is more to their liking than to have full and free discussion of difficult research problems by all who are in a position to make a useful contribution on the subject.

Opportunities to this end are afforded through meetings of scientific and engineering societies and various specialist gatherings convened to consider highly technical subjects. Continuity of effort in this direction is often secured through the appointment of Committees by such organizations as the National Research Council, the Defence Research Board, and the Fisheries Research Board, to name only three.

Seamless copper tubing being extruded from the 750-ton press in the Federal Bureau of Mines Metal-Forming Laboratory.



the Division of Building Research was organized, in 1947, the housing emergency was a major issue everywhere. It was obvious that fundamental and long-term basic research started then could not be expected to give immediate help so it was decided to reverse the normal procedure in building up such Divisions and put initial emphasis on the more direct *ad hoc* day-to-day problems of the construction industry. Useful but unspectacular assistance has been given to the Central Mortgage and Housing Corporation in the solution of their problems.

The Council consists of the President, two Vice-Presidents and seventeen 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 at Ottawa is organized with three Science Divisions—applied biology, chemistry, and physics—and three other Divisions dealing with engineering problems—building research, radio and electrical engineering, and mechanical engineering which includes aeronautics and hydraulics. A Division of medical research supports and correlates research on approved projects in the medical schools of Canadian universities and awards fellowships for post-graduate training in medical research.

The Council operates the great atomic energy project at Chalk River, Ont. A Prairie Regional Laboratory at Saskatoon, Sask., serves the agriculturists of Western Canada in the study of problems relating to utilization of farm wastes and the industrial use of agricultural products. A Maritime Regional Laboratory is under construction at Halifax, N.S., for the dual purpose of providing a graduate research centre for the six colleges in that area, and also to undertake investigations of industrial interest relating to the development and processing of the natural resources occurring on the eastern seaboard.

Close co-operation with government departments, federal and provincial, with the universities and research foundations as well as with industry, enables the Council to maintain at all times a good conspectus of research work in progress throughout Canada.

The movement of logs in storage dams supplying power plants is under study in the National Research Council's laboratories. A simple and economical method of keeping logs from entering power house intakes is essential for the successful operation of power plants on log running rivers.





Social and Cultural Relationships

IN addition to schools and universities, there is a considerable variety of institutions and activities broadly cultural in character in that they assist the Canadian people in their pursuit of knowledge or in the expression of their capabilities. Many of these have come under review by a Royal Commission on National Development in the Arts, Letters and Sciences set up by Order in Council of Apr. 8, 1949. The matters upon which the Commission is asked to make recommendations are the following:—

- (1) The principles upon which the policy of Canada should be based, in the field of radio and television broadcasting;
- (2) Such agencies and activities of the Government of Canada as the National Museum, the Public Archives and the care and custody of public records, the Library of Parliament; methods by which research is aided including grants for scholarships through various Federal Government agencies; the eventual character and scope of the National Library; the scope or activities of these agencies, the manner in which they should be conducted, financed and controlled, and other matters relevant thereto;
- (3) Methods by which the relations of Canada and the United Nations Educational, Scientific and Cultural Organization and with other organizations operating in this field should be conducted;
- (4) Relations of the Government of Canada and any of its agencies with various national voluntary bodies operating in the field with which this inquiry will be concerned.

The Commission began public hearings at Ottawa on Aug. 3, and has since proceeded on a program of hearings in all provinces. Briefs from a great variety of organizations, both official and unofficial, have been heard. Many of the organizations or activities reviewed on the following pages are of central concern to the Commission.

Creative Arts

The arts have enjoyed vigorous growth in most parts of Canada during the past several years, and a widespread awakening of public interest in cultural matters has been seen. Federal Government recognition of the fact is indicated in the preamble of the Order in Council establishing the Royal Commission on National Development in the Arts, Letters and Sciences in these words: "It is in the national interest to give encouragement to institutions which express national feeling, promote common understanding, and add to the variety and richness of Canadian life". Heretofore cultural development in Canada has been mainly on a regional and local basis and there has been little in the nature of a national cultural pattern. Now, however, Canada's obligations to certain international organizations, notably UNESCO, emphasize the need for national stimulation and development of the arts. A significant development of 1949 was the establishment by the Canada Foundation of a national competition for scholarships in the creative arts, with a value of \$2,000 each. Funds are provided by the Canadian Amateur Hockey Association.

Ballet.—While all art forms share in the current general stimulation in Canada, the post-war rise of ballet has been most impressive. From a

virtually unknown not a few years ago, ballet has grown into an activity enjoying enthusiastic box-office support in all parts of Canada, with at least ten permanent ballet schools operating and an estimated 15,000 students enrolled. Canada's Second Annual Ballet Festival, held at Toronto in 1949, brought companies of performers from such widely separated points as Vancouver and Halifax, and proved to be a financial as well as an artistic success.

Creative Writing.—Creative writing, in both English and French, has been successfully establishing itself in recent years as a vital and important cultural activity. Canadian books are increasing in number and improving in quality, and are now competing successfully with the works of long-established United States and British writers. A growing acceptance of the works of indigenous writers is seen in the fact that the initial press-runs of Canadian-published books have trebled in the past few years, and encouragement for Canadian writers is found in the willingness of magazine publishers and radio broadcasters in Canada to use locally produced work of good quality. Many Canadian writers market their entire output in the United States, thereby making a not unimportant contribution to the supply of American dollars in Canada. The Canadian Authors Association is the most important



Members of a Canadian ballet practising backstage before a performance.

writers' organization, having a membership of several thousands and branches in most Canadian cities. The affiliated French language writers' body is *La société des écrivains canadiens*.

Drama.—Post-war renewal of the well-established Dominion Drama Festival resulted immediately in widespread revival of interest in all forms of theatre art. Theatre in Canada is almost entirely the work of amateur groups and, on the whole, has gained a noteworthy degree of competence. Little Theatre organizations are firmly established in all the main cities (the Ottawa Drama League presented its thirty-eighth consecutive annual program of plays in the 1949-50 winter season). University dramatic societies are effective stimulants to Canadian public interest in the theatre, and in recent years rural communities have been encouraged by their provincial governments to organize drama activities. The broadcasting of plays by the Canadian Broadcasting Corporation has won international recognition and prestige, and this activity has provided much encouragement for radio writers and actors. Recently a number of drama organizations have turned their attention to the problem of encouraging Canadian playwrights to write more stage plays with Canadian content and character. A lively interest in the matter of "a national theatre" is found in all parts of the country, although there appears to be little likelihood of specific developments for some years.

Painting.—A notable current increase in public interest in the visual arts is evidenced by the larger numbers of Canadians who are visiting art galleries and buying paintings, and in particular are trying their hand at painting as a form of relaxation and enjoyment. Elementary art training is compulsory in all the public schools of Canada, and advanced courses in drawing and painting, available in all cities, are at present crowded with students. The National Gallery of Canada, at Ottawa, owns and exhibits the nation's chief collection of paintings, and performs extensive extra-mural services to the whole Canadian community. It also arranges frequent important exchanges of exhibitions with galleries and collectors in other countries. Excellent collections are found in the civic galleries of Toronto and Montreal, and both institutions foster public participation in fine art activities. Smaller galleries are maintained in many other cities, and several Canadian universities take a leading part in promoting an appreciation and understanding of both Canadian and foreign works of art. Numerous societies of artists exist in Canada, among the most distinguished being the Royal Canadian Academy, the Ontario Society of Artists, the Canadian Group of Painters and the Federation of Canadian Artists. Eager colonies of young painters are found at Montreal, Quebec, Toronto and Vancouver, and there is at present a noteworthy movement of Canadian art students to Europe and Mexico. Established Canadian painters are now enjoying unprecedented demands for their works at good prices.

Music.—From the earliest times music has been important in the life of Canadians, and to-day one finds in every city, town and village organizations concerned with the teaching, performance and appreciation of music. Great emphasis upon musical understanding is found in the school systems of all the provinces, and conservatories for the teaching of advanced theory and performance are well attended and competently staffed. Music festivals are important annual events in a number of larger cities, the one at Winnipeg

usually involving more than 8,000 competitors. Symphony orchestras are generously supported by public subscription in ten centres. The Royal Conservatory of Music of Toronto, which has gained the status of a national institution, recently inaugurated a School of Opera. Establishment of the Canadian Music Council as a national institution was an important development of 1949. The Canadian Broadcasting Corporation and many of the commercial sponsors of radio programs in Canada give generous employment to large numbers of top-flight musicians. In the past Canadian composers have received little encouragement or recognition, but steps to remedy this situation have been taken in the past few years and some favourable results can now be seen. Competitions for Canadian creative musical works with substantial cash awards, have brought to the fore a number of well-trained and imaginative young composers, and the willingness of the Canadian Broadcasting Corporation to use their works is a constant source of encouragement.

Schools and Institutions.—Cultural institutions in Canada are crowded with students, and are handicapped by lack of accommodation for expanding enrolments. Among the best known are the Bauff School of Fine

Orchestra leader discusses score of "Hansel and Gretel" with members of his young audience after a concert. Children's concerts have been held at Ottawa for several years in the belief that they will help young people grow up with true appreciation for good music.



The art of wood-carving, carried on extensively in Quebec and the Maritimes, is frequently passed on from father to son.



Arts situated in the Rocky Mountains, the Fine Arts colleges of Queen's University in Ontario and Mount Allison University in New Brunswick, the conservatories of Laval and Montreal Universities, the *écoles des beaux-arts* at Quebec and Montreal, and the Ontario College of Arts at Toronto. The curricula of these schools include advanced courses in music, drama, creative writing, painting, sculpture and handicrafts. Schools of architecture are part of several of the larger universities. The Canadian Arts Council, Toronto, a federation of sixteen professional societies, and the Canada Foundation, Ottawa, a clearing-house organization supported by a large number of individual subscribers, are two national, non-governmental organizations devoted to the stimulation of cultural activities.

Handicrafts.—The varied resources of Canada provide the raw materials for home crafts using wood, metals, leather, wool, various fibres and dyes, and clay in some regions. The diverse origins of the people provide traditions of craftsmanship from many sources—the native Indians, the early French and British settlers, and the more recent immigrants from all parts of Europe and some parts of Asia.

Several provincial governments have given stimulus and direction to the development of handicrafts. Those of the Province of Quebec are probably most widely practised and known. There are various voluntary organizations on a local basis, nine of which are affiliated or associated with the Canadian Handicrafts Guild. The Guild has provincial branches in five provinces and maintains a permanent exhibit at its headquarters at Montreal.

Social Sciences and Humanities

Research in the social sciences tends to be conducted in the universities and by government agencies, and to find its outlets, apart from books and government documents, in the quarterly journals of such societies as the

Canadian Historical Association, the Canadian Political Science Association, the Canadian Psychological Association and the Canadian Institute of International Affairs. The several university 'quarterlies' also serve, but like the Proceedings of the Royal Society of Canada, and United States and United Kingdom learned journals, are rather more important for the humanities than for the social sciences.

The Canadian Social Science Research Council and the Humanities Research Council of Canada exist to promote research in their respective fields, and do so by means of grants in aid of research and publication, by fellowships, and by improvement of the training of research workers in the universities. In the few years of their existence the two Councils have been supported largely by grants from the Carnegie Corporation of New York and the Rockefeller Foundation. The Humanities Council has, however, received grants from twenty Canadian universities for five years, and seeks assistance from government sources. The Social Science Council does not desire government origin for any major portion of its income. Much of its subject field concerns matters of government policy, and it considers that greater independence would be retained by deriving its funds from a balanced variety of sources.

Both Councils have expressed the view before the Royal Commission on National Development in the Arts, Letters and Sciences that there is great need for government funds to provide scholarships and fellowships to students of the social sciences and humanities, in order to balance the opportunities provided to students of the natural sciences through the National Research Council awards. They pointed to a study made in the Dominion Bureau of Statistics which showed that nearly all science post-graduate students in Canadian universities receive financial assistance from scholarships, fellowships or part-time employment while studying, whereas only 30 p.c. of social science and humanities students are in receipt of such assistance.

Libraries and Museums

Libraries.—Legislation for the establishment of publicly controlled libraries is enacted by the provincial governments. The libraries may be established by an individual municipality, a group of municipalities or communities, or by a properly constituted local association. The survey of public libraries in Canada for the year 1947 covered the regional libraries of Prince Edward Island, Ontario and British Columbia, and 680 libraries in individual communities.

More than 60 p.c. of the total stock of books reported by the libraries is concentrated in 60 cities, and an additional 20 p.c. is in towns and villages. The problem of providing library service for two and a half million rural people in Canada has not yet been met, but the value of regional and mobile service continues to be demonstrated. Within the past two years Nova Scotia and Saskatchewan have established demonstration projects with generous assistance from the Provincial Governments, and Manitoba has provided the necessary legislation for the establishment of regional libraries by a system of grants-in-aid. Ontario has found the system of county library co-operatives successful for rural areas containing many small communities, and now has eight in operation with some 50,000 books.

A considerable number of the libraries now stock motion picture films as well as books. Total book stock is near 20,000,000, each book being loaned, on the average, three times in a year. Registered borrowers number 1,169,000, and the average library user takes out 17 books in a year. There is no record of the service provided to those who do their reading in the libraries, or those who call the reference librarians on the telephone to have their queries answered.

About \$4,000,000 is required in a year to maintain the public libraries, of which 77 p.c. comes from local taxes, and 9 p.c. from provincial government grants.

Further steps were taken during 1949 toward the establishment of a National Library, by setting up an advisory committee and initiating bibliographical work. In a brief to the Royal Commission on National Development in the Arts, Letters and Sciences, the Canadian Library Association proposes that "the distinguishing characteristic of a Canadian National Library will be its extensive collection of Canadian material . . . (but) collections cannot be confined to *Canadiana* alone". It is proposed that the National Library should act as a service centre for provincial and local libraries, by means of inter-library loans, photographic reproductions and micro-film.

Museums.—Museums include the National Museum at Ottawa, several provincial and municipal museums, of which the Royal Ontario Museum is the largest, and several dozen others, many of them the property of universities, colleges or local historical societies. Archives include the Public Archives of Canada at Ottawa, and some provincial collections. Galleries of fine art include the National Gallery, and others mainly under municipal or unofficial local auspices. The trend in most of these institutions is to reach a wider public through collaboration with schools and by various extension methods including travelling exhibits. International exchanges

Paintings from an art gallery are carefully packed for shipment to rural circuits, where they may be enjoyed by those living in the smaller communities.



are most frequent in the field of fine art through the medium of the National Gallery.

The Canadian Museums Association, organized in 1947, aims to act as a clearing house for information of special interest to Canadian museums, to promote the training of museum workers, to facilitate the exchange of exhibits, and to promote collaboration with the museums of other countries.

Media of Mass Communication

The Press.—Periodical publications were produced in Canada to the value of \$89,000,000 in 1946, and paid for to the extent of \$56,000,000 by advertising, and \$33,000,000 by subscription or sale. Printed books were produced to the value of \$12,500,000, about half for advertising purposes. There is no record of the cost of subscriptions by Canadians to periodicals published abroad but it is probably a larger figure than that for subscriptions from abroad for Canadian publications. Recorded imports of books and other printed matter exceeded the value of recorded exports by about \$26,000,000. It accordingly appears that the per capita cost to Canadians of books, pamphlets and periodicals is \$10 or more in a year, something like half of which is paid for directly, and half indirectly through payment for advertising.

Much the largest item is for daily newspapers—rather more than half the total. There are nearly 100 daily newspapers published in Canada, counting morning and evening editions separately, with a reported circulation of more than 3,000,000 copies, about 80 p.c. in English and the rest in French, except for small numbers in Yiddish and Chinese. Ten papers with circulations approximating or exceeding 100,000 account for more than half of the circulation. Well over 90 p.c. of all newspaper circulation is in cities.

Weekly or monthly publications, the circulation of which is greater than that of dailies, include a considerable variety of foreign-language publications—Ukrainian, German, Yiddish, Polish, etc. Weekly papers serve much larger numbers of the people in rural communities than do the dailies.

Purchases of books and other printed matter in the United States are large, recorded imports being of the value of about \$29,000,000 in each of the past three years. The corresponding sum for imports from the United Kingdom has been growing since the war years, when comparatively little could be obtained, but is still only about \$2,000,000. Imports from France, the third largest supplier, are now valued at \$500,000 or more.

Radio.—The production of radio receiving sets in Canada since the War has averaged well over 600,000 per year for the home market. A survey of the Dominion Bureau of Statistics in November, 1948, indicated that 94 p.c. of the households in Canada, numbering 3,127,000, had radios. In some cities there is scarcely a household to be found without one, and in the country as a whole one family in ten has two or more.

In terms of price to the buyers, radios since the Second World War have averaged about \$70. Roughly speaking, one household in five has bought a set each year, indicating an average annual expenditure of about \$14. The cost of repairs and maintenance is probably a small item, and the licence fee is \$2.50 per year. This fee was paid by 1,944,027 possessors of receiving sets

Animation art director of the National Film Board drawing sketches directly on film.



in 1947-48, and constituted the chief item of income for the Canadian Broadcasting Corporation. For information on the operations of the CBC and privately owned stations, see pp. 227 to 230.

Motion Pictures.—In 1948 Canadians on the average attended motion picture theatres about 18 times and paid about \$7 each in admissions. The source of this entertainment remains largely United States studios although, as in the case of books and other printed materials, there has been some revival of imports from the United Kingdom and France since the War.

While few feature-length films for the commercial theatres are produced in Canada, there is a considerable production of "shorts" both by the National Film Board and commercial producers. Some of these have recently won important international awards. In 1949 the Canadian Association for Adult Education instituted a series of awards for distinguished Canadian film production, including theatrical and non-theatrical types, amateur and professional work. The project was developed by the Association's Joint Planning Commission on which are represented fifty national organizations interested in education and the arts; the awards are presented by the Prime Minister of Canada.

Schools, adult education agencies, and other community groups are making increased use of films. There are some 200 film libraries and community film councils usually founded by public libraries, provincial departments of education, or university extension departments, with the co-operation of school boards, service clubs, etc. The local libraries receive assistance from the National Film Board and the National Film Society in obtaining films. The National Film Board has some 160 rural circuits where provision is made for the periodical exhibition of films in a group of communities.

The National Film Board directs the distribution of Canadian films abroad, and with the increased numbers of Canadian diplomatic and trade representatives in other countries this has become an important part of the Board's work.



Pulpwood, cut far up in the Gatineau hills, stockpiled at the pulp and paper mills across the River from Ottawa.

National Income

Survey of Production

THIS chapter summarizes the year-to-year changes in the value of Canada's annual production of goods and services, and describes the way in which this total product of the country's economic activity is utilized to satisfy consumer wants, to provide government services, or to increase the nation's capital at home or abroad. The first section, "National Income", deals with net national income at factor cost, gross national product and expenditure, and personal income and its disposition. The second section, "Survey of Production", describes the gross and net value of commodity production of primary and secondary industries.

★National Income

National Income, Gross National Product and Gross National Expenditure.—Net national income at factor cost, or more briefly, national income, measures the value of current production after provision has been made for depreciation of capital assets, and exclusive of indirect taxes less subsidies. It is equal to the annual earnings of Canadian residents from the production of goods and services, that is, the sum of salaries, wages and supplementary labour income, military pay and allowances, corporation profits and other returns on invested capital, and net income of farmers and other enterprisers who are in business on their own account.

Gross national product is defined as the value at market prices of all the goods and services produced in a year by the labour, capital and enterprise of Canadian residents, measured through a consolidated national accounting of the costs involved in their production. It is obtained by adding to national income indirect taxes and depreciation allowances and similar business costs, which enter into the cost of goods and services (and hence market prices) but do not form a part of the incomes of Canadians. On the other hand, government subsidies are deducted since their effect is to reduce the cost of goods and services produced.

Gross national expenditure is defined as the market value of all goods and services produced in a year by the labour, capital and enterprise of Canadian residents, measured through a consolidated national accounting of the sales of these goods and services, including changes in inventories. Thus, while it measures the same total as gross national product, it indicates how the goods and services produced are disposed of to resident persons, the government, to business on capital account, and abroad.

Expansion has continued almost unchecked since 1939. The value of goods and services produced in 1948 attained new high levels, surpassing 1947 by 14 p.c. Most of the increase was accounted for by higher prices, with physical output showing a modest gain. The resulting additions to income

were widely distributed. Total income of wage and salary earners went up by 15 p.c., investment income by 7 p.c., and the income of those engaged in agriculture and other unincorporated business by 25 p.c. Since 1939 these three items have more than doubled. It is difficult to say how much of the gain has been in real output, but tentative calculations suggest that when adjustment is made for price changes between the two years, the physical output of the Canadian people was probably two-thirds higher than in 1939.

Net National Income at Factor Cost and Gross National Product at Market Prices, 1929, 1933, 1939 and 1943-48

(Millions of Dollars)

Item	1929	1933	1939	1943	1944	1945	1946	1947	1948 ^p
Salaries, wages and supplementary labour income.	2,839	1,791	2,583	4,746	4,908	4,915	5,322	6,212	7,113
Military pay and allowances.....	8	8	32	910	1,068	1,117	340	83	82
Investment income.....	814	233	783	1,778	1,774	1,905	1,978	2,307	2,473
Net income of agriculture and other unincorporated business.....	1,028	355	891	1,659	1,962	1,810	2,156	2,336	2,920
Net National Income at Factor Cost.....	4,689	2,387	4,289	9,093	9,712	9,747	9,796	10,938	12,588
Indirect taxes less subsidies.....	674	566	737	1,117	1,113	1,007	1,269	1,604	1,735
Depreciation allowances and similar business costs.....	677	500	582	912	863	785	846	1,009	1,085
Residual error of estimate.	-84	+15	-10	+176	+209	+220	+25	+40	+42
Gross National Product at Market Prices.....	5,956	3,468	5,598	11,298	11,897	11,759	11,936	13,591	15,450

Gross National Expenditure at Market Prices, 1929, 1933, 1939 and 1943-48

(Millions of Dollars)

Item	1929	1933	1939	1943	1944	1945	1946	1947	1948 ^p
Personal expenditure on consumer goods and services.....	4,383	2,848	3,861	5,869	6,330	6,999	7,952	9,126	10,083
Government expenditure on goods and services ¹	686	521	724	4,271	5,075	3,710	1,848	1,551	1,768
Gross Home Investment—Plant, equipment and housing ²	1,107	221	554	828	756	882	1,362	2,057	2,576
Inventories.....	10	-105	327	-40	-82	-300	467	879	646
Exports of goods and services.....	1,632	826	1,451	3,403	3,566	3,580	3,203	3,629	4,037
Imports of goods and services.....	-1,945	-828	-1,328	-2,858	-3,539	-2,893	-2,871	-3,612	-3,618
Residual error of estimate.	+83	-15	+9	-175	-209	-219	-25	-39	-42
Gross National Expenditure at Market Prices.	5,956	3,468	5,598	11,298	11,897	11,759	11,936	13,591	15,450

¹ Includes UNRRA, Mutual Aid, etc., of \$518,000,000, \$960,000,000, \$858,000,000, \$97,000,000, \$38,000,000 and \$19,000,000 in the years 1943, 1944, 1945, 1946, 1947 and 1948, respectively.

² Excludes government housing expenditures, excepting for \$36,000,000 by Central Mortgage and Housing Corporation in 1948.

^p Excludes UNRRA, Mutual Aid, etc.; see footnote 1.

An examination of the components of the gross national expenditure reveals how this increase in the value of production was absorbed. Personal expenditure on consumer goods and services rose by 11 p.c. between 1947 and 1948. This is slightly less than the increase of 14 p.c. in the cost-of-living index during the same period, indicating a decline in real terms in personal expenditure on consumer goods and services. Post-war investment continued at an unprecedented rate with expenditures on housing increasing 32 p.c. in 1948 over 1947, and expenditures on plant and equipment by 23 p.c. Inventories continued to grow, although at a slower rate than in 1947. These three items accounted for 21 p.c. of Canada's gross national expenditure in 1948 as compared with 16 p.c. in 1939 and only 5 p.c. in 1945.

Personal Income and Disposition of Personal Income.—The total personal income received by Canadians, and the disposition of this income, is shown in the following tables.

Personal Income, by Sources, 1929, 1933, 1939 and 1943-48

(Millions of Dollars)

Source	1929	1933	1939	1943	1944	1945	1946	1947	1948 ^P
Salaries, wages and supplementary labour income.	2,839	1,791	2,583	4,746	4,908	4,915	5,322	6,212	7,113
DEDUCT: Employer and employee contributions to social insurance and government pension funds.....	-25	-20	-34	-124	-132	-135	-149	-181	-220
Military pay and allowances.....	8	8	32	910	1,068	1,117	340	83	82
Net income of agriculture and other unincorporated business.....	1,028	355	891	1,659	1,962	1,810	2,156	2,336	2,920
Interest, dividends and net rental income of persons ¹	584	428	570	757	806	848	890	1,047	1,145
Transfer payments from governments to persons.	98	196	249	216	263	552	1,111	848	843
Totals, Personal Income	4,532	2,758	4,291	8,164	8,875	9,107	9,670	10,345	11,883

¹ Includes charitable donations from corporations.

Disposition of Personal Income, 1929, 1933, 1939 and 1943-48

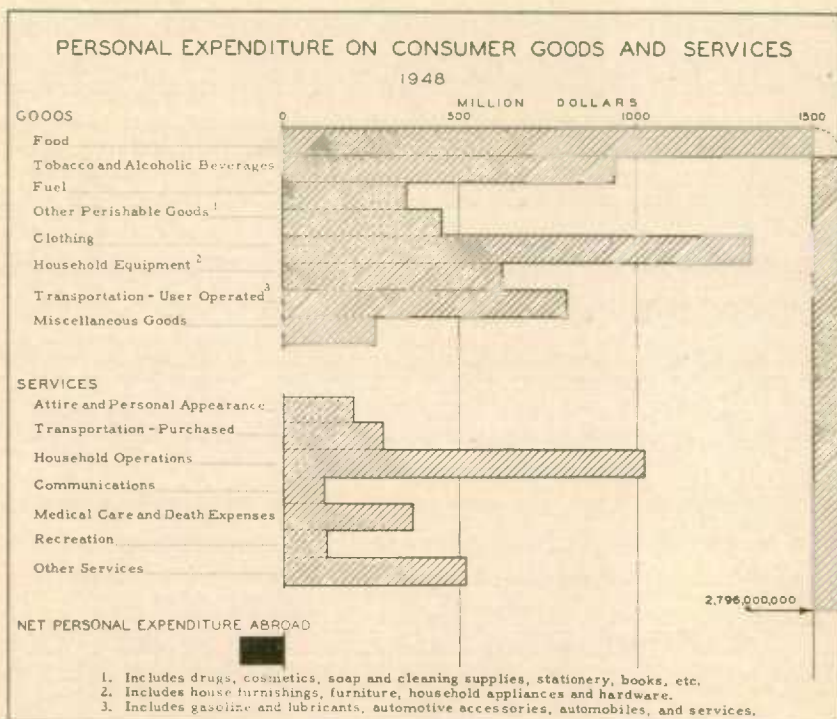
(Millions of Dollars)

Item	1929	1933	1939	1943	1944	1945	1946	1947	1948 ^P
Personal Direct Taxes—									
Income taxes.....	33	38	61	631	772	733	711	694	717
Succession duties.....	16	13	28	38	40	47	54	61	57
Miscellaneous.....	19	16	21	28	25	25	32	36	39
Totals, Direct Taxes..	68	67	110	697	837	805	797	791	813
Personal expenditure on consumer goods and services.....	4,383	2,848	3,861	5,869	6,330	6,999	7,952	9,126	10,083
Personal Saving—									
Net changes in farm inventories.....	-144	-29	60	-62	-124	-238	-41	-111	-65
Other.....	225	-128	260	1,660	1,832	1,541	962	539	1,052
Totals, Personal Saving...	81	-157	320	1,598	1,708	1,303	921	428	987
Totals, Personal Income	4,532	2,758	4,291	8,164	8,875	9,107	9,670	10,345	11,883

Personal income differs from national income in several respects. For example it does not include earned income not paid out to persons such as undistributed corporation profits, but does include unearned income in the form of transfer payments such as family allowances, old age pensions, veterans benefits and charitable contributions by corporations.

Personal income rose by \$1,538,000,000 from 1947 to 1948, or by 15 p.c. The largest relative increase was in the net income of agriculture and other unincorporated business which rose by 25 p.c. from 1947 to 1948. Transfer payments were down slightly due largely to decreases in war service gratuities and re-establishment credits.

Personal direct taxes, although larger absolutely, formed 8 p.c. of personal expenditure in 1947 against 7 p.c. in 1948. There was a notable increase in personal saving from \$428,000,000 in 1947 to \$987,000,000 in 1948. Although less than in the war years of 1942 to 1945, it was well above any other year since 1926.



Personal Expenditure on Consumer Goods and Services.—The chart above reveals the pattern of personal expenditure on consumer goods and services for the year 1948. It shows how the item "personal expenditure on consumer goods and services", which appears in the table of gross national expenditure, is allocated among the main commodity and service groups.

The figures cover not only the expenditures of persons but also those of private non-commercial institutions. Expenditures on consumer goods and



The mighty silver-lead-zinc smelter of Trail, B.C., is the heart of a long-established and progressive mining industry.

services made by business in the course of production are excluded, as are expenditures of governments on behalf of the community, such as for public education and health services. In addition to cash expenditures a valuation of consumption of income in kind has been included under the respective headings. The item "net personal expenditure abroad" consists of the expenditures of Canadian tourists abroad, gifts in kind and personal remittances abroad, less expenditures in Canada of tourists and personal remittances to Canada. In 1948 this item was negative mainly because of the spending of United States tourists in Canada.

In 1948 expenditures on food by Canadians amounted to \$2,796,000,000 or 28 p.c. of total personal expenditures on consumer goods and services. Clothing accounted for 13 p.c. of the total, household operations for 10 p.c., tobacco and alcohol for 9 p.c., automobiles and their operation for 8 p.c., and furniture, household appliances and hardware for 5 p.c. Together, the items above were responsible for 74 p.c. of consumer expenditures.

The main components of the item "household operations" are paid rents and imputed rents of owner-occupied houses, electricity, gas and domestic service. In 1938 household operations accounted for 19 p.c. of consumer expenditures, as compared with 10 p.c. in 1948. The decrease in the importance of this item is due first to the fact that rents have risen by less than half as much as prices generally, as indicated by the components of the cost-of-living index; and secondly, to the fact that whereas Canadians have increased

the quantity of food, clothing and other items purchased, it is not practicable for families to similarly increase the amount of space that they occupy.

Almost half of personal expenditures in 1948 went for perishable goods such as food, tobacco, alcoholic beverages, soap, magazines and fuel. Sixteen per cent went for semi-durable goods—clothing, house furnishings and automobile accessories—while durable goods such as automobiles and furniture accounted for 8 p.c. Services took up the remaining 27 p.c.

★Survey of Production

Industrial output in 1949 continued its post-war record pace. The indexes of industrial production, employment and wholesale prices averaged higher during the first eight months than in the same period of 1948. Also reflecting increased economic activity, the gain in the estimated value of retail trade more than matched the advance in retail prices, and the components of foreign trade, exports and imports (especially the latter), continued at higher levels. There was also greater activity in construction and electric-power development.

Since, for most purposes, the *net* value of production is more significant than the *gross* which includes a large amount of duplication, the subsequent analysis is based mainly on that phase of the subject. Net production is made up of the gross value less the cost of materials, fuel, purchased electricity and supplies consumed in the productive process. The operations of the nine branches of industry considered here are directed either through primary or secondary phases toward the production of commodities rather than services, the activities of transport, trade, finance, government and service groups being entirely excluded.

Current Trends.—The net value of commodity production in 1947, the latest year for which final figures are available, was the highest ever attained in the history of the country: the total was \$7,765,000,000 against \$6,458,000,000 in 1946. Factors contributing to this marked gain included higher price levels, post-war release of accumulated demand for consumer goods here and abroad, record investment in housing, plant and equipment, and significant improvement in the labour situation and the availability of raw materials. Estimates indicate that further expansion of production in all industries was achieved in 1948 and 1949. The physical volume of industrial production rose from 175.5 in 1947 to 181.5 in 1948 and the general index of wholesale prices advanced nearly 19 p.c. in the same comparison.

Each of the nine industrial groups except trapping reached an all-time high in 1947. Among the six primary industries, the principal component—agriculture—showed an increase of 8 p.c. over 1946 which resulted in an even greater net value than in 1944, the previous high point. Greater physical output and still higher prices for farm products indicate a further increase in the value of the agriculture industry in 1948.

The unprecedented building activity and greater production of newsprint and other paper products in 1947 combined with higher prices resulted in an impressive gain of 34 p.c. over 1946 in the value of forestry production. This industry has shown an unbroken record of advances since 1938. Despite a decline in volume, higher prices resulted in a slight gain of 2 p.c. for the fisheries industry when compared with 1946. After a steep advance in 1945, the value

of the industry has remained relatively stable. The sharp drop of nearly 46 p.c. in the net value of trapping was caused mainly by considerably lower prices for practically all kinds of fur in 1947. This has resulted in a six-year low for the industry.

An increase of nearly 31 p.c. in the value of mining, after a four-year recession, has established a new maximum for the industry, having exceeded even the previous high recorded in 1942. Here again, the advance in prices following the removal of price controls was the predominant cause, although there were, in addition, gains in the physical output of gold and some base metals as compared with 1946 and important advances in the volume of iron ore and non-metallic minerals due to the high building activity. The electric-power industry increased 6 p.c. in value over the preceding year, indicating a continuing acceleration in development after the growth of the industry was retarded during the war period.

The total value of the secondary industries reached a new maximum in 1947. The increase over 1946 was nearly 26 p.c. The most outstanding gain recorded was in construction, the net value of which rose more than 47 p.c. over the preceding year. Increased building activity and record prices for construction materials contributed to this marked advance. Custom and repair continued its upward trend with a gain of nearly 16 p.c. over 1946.

Total manufactures surpassed even the wartime peak in 1944 to reach its highest net value in history, having advanced about 24 p.c. over the preceding year to a record of \$4,292,000,000. Higher prices and increased physical output contributed to this sharp gain.

Relative Position of Industrial Groups.—The total net value of production advanced about 172 p.c. in the ten-year period 1938 to 1947. Five of the nine industries failed to equal this gain in the aggregate and therefore lost in relative importance. The remaining four that increased relatively were: forestry, fisheries, construction and manufactures.

Loading wheat from an elevator into a lake freighter. Wheat from Canada's Prairie Provinces is shipped to many parts of the world.





*Pulpwood on the
Gatineau River,
Que.*

The advance in the value of agriculture was about 157 p.c., the percentage of this industry to the total was 20 in 1947 compared with 22 in the pre-war year 1938. The share of forestry rose from 9 p.c. in 1938 to 12 p.c. in 1947 and little change occurred in fisheries and trapping. The position of mining was considerably impaired in the ten-year period, its relative importance having dropped from 13 p.c. in 1938 to 7 p.c. in 1947. Electric power also lost ground in this comparison, development having failed to keep pace with the aggregate power generated during the war and early post-war periods. Due to increased building activity, construction reached its highest point in the period under review, and its rating advanced from 6 p.c. of total production in 1938 to 8 p.c. in 1947. The position of custom and repair receded but total manufactures advanced to over 55 p.c. of the total compared with 50 p.c. in 1938.

Provincial Movements.—Only two provinces failed to establish all-time highs in value of production in 1947. Prince Edward Island receded slightly from its 1946 peak of \$22,100,000 and predominantly agricultural Saskatchewan, despite a rise of over 17 p.c. over 1946, failed to better its record of \$529,000,000 established in 1944.

The increase in net production in Quebec compared with 1946 was nearly 17 p.c. but as the gain in the Canadian total was over 20 p.c., the relative importance of this province was less in 1947 than in the preceding year. Ontario, with a gain of over 24 p.c. in the year under review, gained ground. Despite advances in Nova Scotia and New Brunswick of about 6 p.c. and nearly 18 p.c., respectively, these two Maritime Provinces, together with Prince Edward Island, lost in relative importance. The three Prairie Provinces also suffered in this connection. Manitoba and Alberta established new maxima in 1947 but failed to reach the advance in the Canadian total.

Besides Ontario the only other province to gain in relative importance in 1947 was British Columbia which recorded a larger percentage increase over 1946 than any other province and established a new record.

Per Capita Production.—The total of net production per capita for Canada in 1947 recorded a new maximum of \$617 which surpassed the previous 1944 record of \$563 by nearly 11 p.c. Due to its pre-eminent position in industrial development, Ontario at \$759 was the leader on a per capita basis, and British Columbia was second with \$737. The per capita production of Alberta at \$602 was in third place and Quebec followed with \$558. The standing in the other provinces was: Saskatchewan, \$542; Manitoba, \$495; New Brunswick, \$390; Nova Scotia, \$336; and Prince Edward Island, \$232.

Gross and Net Values of Production, by Industries, 1946 and 1947

Industry	1946		1947	
	Gross	Net	Gross	Net
	\$	\$	\$	\$
Agriculture.....	1,937,301,000	1,468,027,000	2,129,522,000	1,579,604,000
Forestry.....	1,228,994,287	711,026,833	1,628,909,054	953,918,800
Fisheries.....	177,024,678	107,908,162	174,279,465	110,088,471
Trapping.....	31,077,867	31,077,867	16,842,966	16,842,966
Mining.....	754,386,422	422,074,303	1,010,643,735	552,309,949
Electric power.....	226,096,273	220,511,067	239,116,247	233,860,860
Less duplication in forest production ¹	93,930,000	73,516,000	107,757,000	84,438,000
Totals, Primary Production.....	4,260,950,527	2,887,109,232	5,091,556,467	3,362,187,046
Construction.....	868,661,403	408,695,662	1,256,535,677	601,539,452
Custom and repair.....	314,310,000	213,273,000	364,141,000	247,086,000
Manufactures.....	8,035,692,471	3,467,004,980	10,081,026,580	4,292,055,802
Totals, Secondary Production.....	9,218,663,874	4,088,973,642	11,701,703,257	5,140,681,254
Less duplication in manufactures ²	1,266,379,183	518,517,265	1,719,695,805	737,453,025
Grand Totals.....	12,213,235,218	6,457,564,909	15,073,563,919	7,765,415,275

¹ Duplication eliminated between the agriculture and forestry totals: both items include the value of forest products obtained from farm lots. ² This item includes sawmills, pulp and paper mills, etc., also included under other headings above.

Gross and Net Values of Production, by Provinces, 1946 and 1947

Province or Territory	1946		1947	
	Gross	Net	Gross	Net
	\$	\$	\$	\$
Prince Edward Island.....	38,351,051	22,144,302	40,275,589	21,840,154
Nova Scotia.....	350,404,499	197,329,638	381,199,094	208,889,897
New Brunswick.....	300,733,163	162,700,528	365,009,501	191,525,027
Quebec.....	3,441,764,182	1,775,525,027	4,143,940,492	2,069,847,205
Ontario.....	5,063,715,869	2,557,193,323	6,474,752,242	3,177,503,242
Manitoba.....	625,319,340	329,300,254	694,565,858	368,006,138
Saskatchewan.....	626,522,150	388,858,319	734,931,886	456,414,057
Alberta.....	708,612,493	434,902,340	819,106,465	495,086,290
British Columbia.....	1,050,437,480	583,012,640	1,410,697,659	769,392,150
Yukon and Northwest Territories.....	7,374,991	6,598,588	9,085,133	6,911,115
Canada.....	12,213,235,218	6,457,564,909	15,073,563,919	7,765,415,275



Primary Production

★ Agriculture

UNTIL well into the nineteenth century Canadian agriculture remained a subsidiary industry. The early economic development of Canada prior to that time was centred around the fishing industry and the fur trade. It was not until about 1820, when lumbering had taken precedence over trapping, that agriculture began to emerge as a major primary industry. To-day agriculture, including stock-raising and horticulture, is the most important single industry of Canada, employing a quarter of the gainfully occupied population and about 30 p.c. of the gainfully occupied males. In addition, it provides the raw materials for many manufacturing industries, and its products, in raw or manufactured form, constitute a large proportion of Canadian exports.

There are many types of farming in Canada. At the one extreme is wheat production, which predominates in large areas in the Prairie Provinces; at the other are the intensified operations connected with small fruits, market gardening and tobacco, such as are carried on in southern Ontario. These variations in types of farming result largely from differences in soil, climate, and location with respect to markets.

With the exception of the Maritimes and the Central Provinces there is little uniformity or continuity of agricultural areas. In most instances, the agriculture of Canadian areas resembles fairly closely that of the areas of the United States adjoining them, of which they are geographically a part. The tremendous natural obstacles between the areas present difficult problems of communication, transportation and distribution.

Four important agricultural regions are readily distinguished. Agriculture in British Columbia is principally located in the mountain valleys and the coastal plains, and includes dairying, poultry, apples and small fruits, seeds and market gardening. The climate is generally mild and rainfall abundant.

The Prairie Provinces of Alberta, Saskatchewan and Manitoba form a block which includes about two-thirds of the occupied farm land of Canada. The lands are used chiefly for grain production, the choice of farm enterprises being severely restricted by nature and markets. The climate is more extreme than in other agricultural areas; the frost-free period is fairly short and rainfall is limited and variable.

The southern parts of Quebec and Ontario are included in the central group. Most of the agricultural portions of these Provinces are favoured with a temperate climate. Here are located the densest centres of population in Canada, where local conditions and markets have much to do with the determination of the types of farming, which are quite varied in character. Thus near Toronto and Ottawa are fairly well defined areas in which the farmers cater to city demand for dairy produce, market-garden truck, potatoes and other vegetables, and poultry. In the general interlake region of Ontario



*Harvest vegetables
displayed at the
Central Canada
Exhibition, Otta-
wa.*

are several large areas in which beet-raising is important. These are among the earliest settled portions of the Province. There are also long-established dairying districts located in this part of Ontario. The mild climate in the Niagara Peninsula favours fruit-growing and vegetable production, while the shores of Lake Erie produce market-garden crops, tobacco, sugar-beets, corn, orchard crops and produce for canning.

Except for the northern fringe of the agricultural area of Quebec Province, agricultural production is concentrated on both banks of the St. Lawrence River where the climatic conditions lend themselves to dairying, poultry and hog-raising. There is a fairly well defined area where tobacco is grown, largely of the pipe and cigar type, in contrast to Ontario, where cigarette tobacco is more commonly produced. In the vicinity of Montreal there is a highly specialized area where small fruits, apples, vegetables and poultry are main enterprises. Some of the districts bordering the United States specialize in dairy farming. Maple syrup and sugar are quite important additions to the farm income in many sections.

The eastern group includes the Maritime Provinces of Prince Edward Island, Nova Scotia and New Brunswick. The climate in this area is generally temperate, favouring dairying, mixed farming and the growing of potatoes, apples and other fruits. The agriculture of Newfoundland is largely local.

The agricultural production of Canada is greater than domestic needs, and farming adapted to export trade has consequently been a natural development. The volume of total production that has entered export trade has varied through the years from about 40 p.c. when world markets have been favourable, to between 15 and 20 p.c. when the reverse condition existed. The United Kingdom has always been Canada's best customer for the exportable surplus of agricultural products, particularly wheat and flour, bacon and pork products, cheese and dairy products, fresh apples, and to a lesser extent eggs and poultry, meat products and miscellaneous commodities such as fruit products, dried beans, field and garden seeds and tobacco.

During the past decade the pattern of agricultural production in Canada has changed somewhat due to the application of improved farming methods. The trend to mechanization, indicated by the fact that between 1938-48 farmers spent more than \$740,000,000 on machinery and equipment, was stimulated by a scarcity of farm labour during the War, by relatively high wages and the risk of using transient labour to harvest crops with a high market value, and by the increased income received by farmers. Using wholesale values, \$50 per farm was spent on new machinery in 1946 and \$237 in 1948. Also many new weed killers and insecticides such as 2,4-D and D.D.T. are playing their part in ridding crops of weeds and in reducing the onslaughts of insects that have a detrimental effect on agricultural production. Their full value to agriculture generally is as yet unknown.

Agriculture becomes more scientific with the years. Naturally the farmer himself cannot be the agricultural scientist for the field is too extensive, but he can and does put into practice the findings of the scientist in the laboratory and on the test plot.

Agricultural research and its interpretation to the farmer in a practical manner so that it can be effective in the large-scale operations on the farm has been one of the many tasks of the Department of Agriculture for two-thirds of a century. The work comes under two of the main sections of the Department: the Experimental Farms Service and the Science Service.

There are in operation to-day 29 Experimental Farms and Stations, 12 Experimental Substations, 52 District Experimental Substations, 155 Illustration Stations, and 9 Branch Laboratories. Co-ordination and supervision of scientific activities in the major branches of practical agriculture is effected through appropriate Divisions with headquarters at the Central Farm at Ottawa and with suitable laboratories both at Ottawa and at other points in Canada.

Experiments are carried on in the laboratories of Federal Experimental Farms across Canada with a view to improving the quality of various types of fruits and vegetables and furthering their use in commercial fields.



Quite apart from the work of the Central Experimental Farms, research has long been carried on by units of the Science Service, which includes the research Divisions of Animal Pathology, Bacteriology and Dairy Research, Botany and Plant Pathology, Chemistry and Entomology and the Division of Plant Protection. The work of Science Service is directed toward the solution of practical problems of agriculture through scientific investigation. It deals with problems relating to the ravages of insect pests and diseases affecting plants and animals, the deterioration of plant and animal products from fungi and bacteria, the nutritional requirements of plants and animals, and the chemistry and microbiology of soils, foods and dairy products. It carries out chemical and biological determinations required in the administration of various Federal Acts and Regulations, such as the Pest Control Products Act and the Feeding Stuffs Act, and administers the Destructive Insect and Pest Act, including the inspection of imported and exported plants and plant products and the establishment of quarantine and control measures for introduced pests and diseases.

All the experimental and research work is co-ordinated with the other units of the Department and with special research projects undertaken by the National Research Council and by universities and agricultural colleges.

A matter of grave concern to the future of agriculture is the loss of soil through wind and water erosion, and its decreasing productivity through improper methods of cultivation. Much is being done in Western Canada through the activities of the Prairie Farm Rehabilitation Act and in Eastern Canada under the Maritime Marshland Rehabilitation Act, but these are large-scale undertakings. The need is for action by individual farmers on their own farms. Soil conservation is under constant study by the Department and methods are recommended, directed toward keeping the soil where it belongs—on the farm—and keeping it productive.

Legislation to Assist the Farmer.—A number of the Acts passed by the Federal Parliament in recent years directly assist the farmer to meet some of his problems. Among those at present in effect are the Agricultural Prices Support Act, 1944; the Prairie Farm Rehabilitation Act, 1935, as amended in 1937 and 1939; the Maritime Marshland Rehabilitation Act, 1948; the Prairie Farm Assistance Act, 1939; the Cheese and Cheese Factory Improvement Act, 1939; the Farm Improvement Loans Act, 1944; and the Veterans' Land Act, 1942. The Federal Department of Agriculture, the Provincial Departments of Agriculture and the Canadian Farm Loan Board help the farmer financially and in other ways. The following paragraphs summarize Federal Government agricultural policy and legislation.

Prices Support.—Possibly one of the most important pieces of farm legislation enacted within recent years is the Agricultural Prices Support Act, 1944, which enables the Federal Government, acting through a Board, to establish support prices for an agricultural product (except wheat, which is handled separately) that is in over-supply. Support prices have been extended under this Act to potatoes, apples, butter, cheese, beans, honey and skimmed-milk powder.

Prairie Farm Rehabilitation Act.—Land conservation activities are being continued under the Prairie Farm Rehabilitation Act, which was passed in April, 1935, "to provide for the rehabilitation of drought and soil-drifting areas in the Provinces of Manitoba, Saskatchewan and Alberta".



The St. Mary-Milk River Irrigation Project in south-eastern Alberta will, when completed, provide water for 500,000 acres located in a low-precipitation, high-temperature zone in which a wide range of crops are successfully grown where irrigation is available. The earth

dam (above) will be 186 ft. in height. The insert shows operators opening the head gates of the Taber Irrigation District's Chin Reservoir, one of the existing projects in the same area.

In accordance with the terms and intentions of this Act, there has been organized throughout the drier regions of the Prairie Provinces (comprising over 400,000 square miles located in southwestern Manitoba, southern Saskatchewan and southeastern Alberta) a rehabilitation program which has as its main objective the adjustment of prairie agriculture to the conditions



A row-crop cultivator at work in a beef field.

imposed by severe droughts such as those of the 1930-37 period. This rehabilitation program covers three main phases of work: water development, land utilization and promotion of better farming practices. Approximately \$34,000,000 have been spent on this program since its inception, the bulk of which has gone into the construction of water development projects ranging in size from small reservoirs on individual farms to irrigation projects involving thousands of acres. The construction of community pastures on sub-marginal lands has also been important.

Land Reclamation.—While operations under the Prairie Farm Rehabilitation Act are confined to the Prairie Provinces, land reclamation and development work is being carried out elsewhere by the Department of Agriculture to meet special situations. Several projects relating to the settlement of veterans have been undertaken in British Columbia and assistance has been granted to the Maritime Provinces for emergency repairs of the protective dykes in the coastal marshland areas. The Maritime Marshland Rehabilitation Act, passed in 1948, provides for a thorough-going program of dykeland reconstruction, with provincial co-operation.

Prairie Farm Assistance Act, 1939.—Under the Prairie Farm Assistance Act, 1939, the Federal Government makes cash payments each year to farmers in areas within the Prairie Provinces which have had low crop yields because of drought or other causes. The award to a farmer is based upon the acreage of the farm and the average yield of wheat in the township in which the farm is located, and the maximum amount payable on any one farm is \$500. Contributory payments are made by the farmers in the form of a levy of 1 p.c. on the value of all grains marketed. As at Mar. 31, 1949, \$104,606,489 had been paid out in benefits and \$38,634,389 collected from the levy.

Potato Warehouses.—A policy was inaugurated in 1947 whereby the Federal Department of Agriculture provides cash assistance in respect to potato warehouses constructed by co-operative associations. The assistance is conditional upon the association providing an agreed amount; the Federal Government and the Provincial Government concerned share the remainder. All warehouses must have the approval of a Dominion-Provincial Committee set up for the purpose in each province concerned.

Cheese and Cheese Factories.—The Cheese and Cheese Factory Improvement Act was passed in 1939 to encourage the improvement of cheese and cheese factories. Under the provisions of this Act a quality premium of one cent per pound is paid on cheddar cheese scoring 93 points and two cents per pound on cheese scoring 94 points or over.

The Act provides for the payment of not over 50 p.c. of the amount actually expended for new material, new equipment and labour utilized in constructing, reconstructing and equipping cheese factories eligible for a subsidy. The Act also provides for paying 50 p.c. of the cost actually expended in efficiently insulating and enlarging cheese-curing rooms, either with or without mechanical refrigeration. In order to standardize the size of cheese manufactured in the various factories, the Act provides for paying 50 p.c. of the cost of replacing equipment necessary for this purpose.

Farm Credit.—To provide adequate farm credit, the Canadian Farm Loan Board at present carries on lending operations throughout Canada. Loans may be granted for farm improvements, including the erection of buildings, the purchase of live stock and equipment, farm operating expenses, purchase of farm lands and the refinancing of existing farm indebtedness. Second-mortgage loans cannot be made for the purpose of purchasing farm



lands. For intermediate term credit, the Federal Parliament amended the Bank Act (Aug. 9, 1944) and passed a "companion" Act, the Farm Improvement Loans Act, 1944.

The main forms of financial assistance provided at the present time by the Federal Government to farmers for housing purposes include: the Canadian Farm Loan Board outlined above, the National Housing Act, the Farm Improvement Loans Act, and the Veterans' Land Act.

Statistics of Agriculture

Income of Farm Operators.—During 1948 Canadian farmers realized the highest net income from farming operations since 1938, the earliest year for which comparable statistics are available. The preliminary 1948 figure of \$1,693,315,000 is 37 p.c. higher than the figure for 1947 and more than four times the 1938 figure. This income figure includes supplementary payments made, under the provisions of the Prairie Farm Assistance Act, to farmers in the drought-stricken areas of the Prairie Provinces.

Net Income of Farm Operators from Farming Operations, 1946-48

Item	1946	1947	1948 ^p
	\$'000	\$'000	\$'000
1. Cash income.....	1,742,786	1,962,276	2,449,865
2. Income in kind.....	297,921	340,090	371,363
3. Value of changes in inventory.....	-41,224	-110,662	-65,103
4. Gross Income (1 + 2 + 3).....	1,999,483	2,191,704	2,756,125
5. Operating expenses and depreciation charges ...	855,038	968,372	1,083,556
6. Net income excluding supplementary payments (4-5).....	1,144,445	1,223,332	1,672,569
7. Supplementary payments.....	16,950	11,577	20,746
8. Net Income of Farm Operators from Farming Operations (6 + 7).....	1,161,395	1,234,909	1,693,315

Annual estimates of cash income from the sale of farm products, the most important income component of net income, represent gross returns from all products sold off farms valued at prices received by farmers. The estimates include those Federal and Provincial Government payments that farmers receive as subsidies to prices but they do not include the supplementary payments defined above. In 1948 this cash income broke all previous records when it reached \$2,449,865,000, a gain of about 25 p.c. over the previous high of \$1,962,276,000 established in 1947.

This gain can be largely attributed to rising prices and the large sums of money distributed by the Canadian Wheat Board and western grain companies in the form of grain equalization and participation payments. During the past year these payments, totalling \$178,590,000, equalled approximately one-third of the gain in the 1948 cash income over 1947.

High levels of domestic purchasing power as a result of full employment and high wages together with a strong world-wide demand for short supplies



Peaches, grown in the Niagara district of Ontario, ready for shipment.

of producer and consumer goods were important factors affecting the general level of agricultural prices which averaged almost 20 p.c. higher than in 1947. Early in 1948 it was announced that the United Kingdom had agreed to pay Canada higher prices for purchases of bacon, beef, eggs and cheese. Prices of poultry meat were also strengthened during the year as a result of the lowering of the United States tariff on Jan. 1, 1948, and the subsequent substantial shipments southward. On Apr. 1, 1948, the initial price to prairie wheat producers for No. 1 Northern at the Lakehead was advanced from \$1.35 to \$1.55 per bu. At the same time the Canadian Wheat Board prepared to disburse payments which made this 20-cent boost retroactive to Aug. 1, 1945. In August further strength was injected into live-stock prices with the lifting of export controls which, since September, 1942, had embargoed Canadian shipments into the United States of beef cattle and calves and beef and calf products.

Continued liquidation of Canada's live-stock population during 1948 more than offset an increase in the year-end farm stocks of grain to give a year-end inventory value of farm-held products below that of the previous year. The decline in the inventory of farm products as between the beginning



Seeding time in
Saskatchewan.

and end of 1948 was valued at \$65,103,000 and compares with the value of such inventory reduction for 1947 of \$110,662,000.

During 1948 farm operating expenses continued to rise. From \$968,372,000 in 1947, they increased to \$1,083,556,000 in 1948, a gain of nearly 12 p.c. While gains were registered for nearly all of the expense items the most significant increase occurred in the case of live-stock feeds which stood at 19 p.c.

Cash Income from the Sale of Farm Products, by Provinces, 1946-48

Province	1946	1947	1948
	\$'000	\$'000	\$'000
Prince Edward Island.....	17,109	17,803	22,505
Nova Scotia.....	34,356	32,186	36,626
New Brunswick.....	35,972	38,451	44,905
Quebec.....	256,465	285,139	352,153
Ontario.....	479,705	541,274	668,353
Manitoba.....	167,253	181,390	242,882
Saskatchewan.....	387,589	429,474	520,563
Alberta.....	282,187	344,006	448,997
British Columbia.....	82,150	92,553	101,144
Totals.....	1,742,786	1,962,276	2,449,865¹

¹ Includes total adjustment payments made by grain companies on oats and barley delivered by western producers during the period Aug. 1, to Oct. 21, 1947.

Cash Income from the Sale of Farm Products, by Sources, 1948

Source	Cash Income	Source	Cash Income
	\$'000		\$'000
Grains, seeds and hay.....	796,528	Miscellaneous farm products.....	45,165
Vegetables and other field crops...	155,720	Forest products sold off farms....	63,097
Live stock.....	802,181	Fur farming.....	9,699
Dairy products.....	389,598		
Fruits.....	43,518	Cash Income from Farm	
Eggs, wool, honey and maple products.....	144,359	Products.....	2,449,865

Farm Prices.—As shown in the following table, the index number of farm prices* reached an all-time high in August, 1948, since when the movement has been generally downward. The annual average for 1948 was the highest on record.

Index Numbers of Farm Prices of Agricultural Products by Provinces, 1939-49

(1935-39 = 100)

Year and Month	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
1939 Av.....	104.6	107.6	111.4	100.4	99.2	85.6	79.9	84.9	98.8	91.8
1940 Av.....	101.6	99.6	110.1	103.7	104.2	92.8	86.5	90.6	103.6	96.8
1941 Av.....	105.2	117.1	115.5	127.4	120.2	103.7	93.8	102.8	114.5	110.2
1942 Av.....	156.2	144.1	160.4	153.4	147.0	122.2	110.5	121.7	140.6	133.1
1943 Av.....	190.3	169.1	181.4	172.6	165.0	151.3	139.9	149.9	175.9	157.8
1944 Av.....	172.7	173.3	171.9	171.7	169.1	173.1	171.4	176.9	179.7	172.4
1945 Av.....	196.7	180.8	195.3	179.5	174.6	186.3	189.4	193.4	187.9	184.2
1946 Av.....	194.2	191.1	207.7	196.9	187.9	204.3	209.5	213.2	199.0	200.8
1947 Av.....	180.3	184.6	199.6	213.7	202.1	220.8	218.3	225.2	206.8	212.5
1948 Av.....	237.9	213.1	250.6	265.6	259.3	254.6	239.3	256.2	238.0	252.6
1948—										
Jan.....	231.6	202.7	239.7	253.1	239.6	249.2	233.5	244.8	224.9	240.3
Feb.....	229.4	202.3	243.5	257.2	241.1	244.5	231.5	243.6	221.2	240.0
Mar.....	233.8	206.4	242.3	257.7	240.3	243.9	232.7	244.3	220.9	240.3
Apr.....	240.1	208.7	251.1	257.4	242.5	246.7	234.7	247.2	225.5	242.6
May.....	279.1	214.7	266.3	263.2	246.7	252.4	237.9	251.2	228.7	247.5
June.....	303.2	223.1	288.6	266.3	266.3	257.7	242.1	258.0	233.0	257.4
July.....	288.3	231.7	313.9	270.6	264.8	259.3	242.4	260.5	244.3	259.2
Aug.....	258.2	231.0	267.0	274.0	278.6	258.6	243.9	266.0	250.2	263.9
Sept.....	204.3	215.7	226.0	269.8	274.4	261.3	244.2	269.6	250.3	261.5
Oct.....	195.7	206.9	222.1	271.4	274.5	259.1	242.5	266.1	252.0	260.1
Nov.....	196.6	205.4	223.4	272.0	271.3	260.8	241.2	259.3	254.3	258.0
Dec.....	194.1	208.5	222.7	273.9	271.6	261.3	245.1	263.7	251.2	259.9
1949—										
Jan.....	196.5	213.4	227.7	273.9	267.3	260.0	243.9	260.2	247.6	257.6
Feb.....	200.5	215.5	224.4	271.2	260.3	257.0	240.9	254.9	242.4	253.1
Mar.....	199.9	212.7	223.5	267.7	256.2	253.9	240.5	256.8	242.8	251.4
Apr.....	197.8	208.0	219.4	259.9	254.3	254.5	241.8	261.1	243.3	250.9
May.....	195.5	206.8	217.1	256.4	254.1	257.3	242.7	262.1	241.0	250.9
June.....	210.6	208.2	215.8	260.8	264.8	256.8	242.6	262.0	239.5	254.6
July.....	214.5	207.0	216.8	260.2	265.5	253.4	240.4	260.3	243.7	253.8
Aug.....	248.0	219.3	232.2	261.2	261.7	248.3	237.9	262.2	248.8	253.4
Sept.....	211.9	208.9	229.7	260.7	260.0	248.8	236.0	252.0	245.8	249.7
Oct.....	195.5	209.7	217.6	257.0	257.0	242.8	233.8	251.0	245.7	246.8

Field Crops

Wheat.—The crop year 1948-49 brought about for the first time in several years a near balance between world wheat supplies and import requirements. Generally excellent crops were harvested in 1948 with world production of both bread grains and coarse grains reaching considerably higher levels than in 1947. Production also exceeded the 1935-39 average by a substantial margin with improved crops being harvested quite generally in both importing and exporting countries. With this easing of the previously existing tight supply situation, governments of some wheat-importing countries abolished bread rationing while others lowered the compulsory extraction rate in flour milling and considerably reduced the amounts of coarse grains which were formerly mixed with bread grains in the manufacture of flour. These two actions provided larger quantities of milling offals and coarse grains for live-stock feed, and so promoted an expansion of live-stock production. The optimism generated by increased available supplies led to the

* A description of this index, its coverage and the methods used, will be found in the "Quarterly Bulletin of Agricultural Statistics" for October-December, 1946, published by the Dominion Bureau of Statistics.

dissolution of the world allocating agency, the International Emergency Food Council of the Food and Agriculture Organization.

Canada's wheat acreage for 1949 was 27,500,000 acres, 3,400,000 greater than the 1948 acreage. Despite this, the 367,000,000 bu. wheat harvest was down 26,000,000 bu. from 1948 and was 43,000,000 bu. below the ten-year average (1939-48). Unfavourable weather and moisture conditions over wide areas of the prairie during the growing season were responsible for the reduced 1949 crop. In the Prairie Provinces the 1949 wheat crop was 337,000,000 bu. as compared with 363,000,000 bu. in 1948 and 386,000,000 bu. for the ten-year average. Wheat production for the rest of Canada reached 30,000,000 bu. with Ontario's outturn placed at 26,000,000 bu.

The lower 1949 outturn was partially offset by increased carry-over stocks at the beginning of the current crop year, total supplies being nearly equal to those of 1948-49. In the crop year ended July 31, 1949, Canada's total wheat supplies were 471,000,000 bu., comprised of July 31, 1948, carry-over stocks in all positions of 78,000,000 bu. and the 1948 crop of 393,000,000. Carry-over stocks of 99,000,000 bu. at July 31, 1949, together with the production of 367,000,000 bu., give a supply in 1949-50 of 466,000,000. Domestic disappearance is expected to be about 147,000,000 bu. this crop year, leaving 319,000,000 bu. for export and carry-over.

Price.—Effective Apr. 1, 1949, the initial price of wheat to western producers was increased 20 cents per bushel bringing the initial payment up to \$1.75 per bushel, basis No. 1 Northern in store Fort William-Port Arthur or Vancouver. The increase was made retroactive and applies to all western wheat delivered to the Canadian Wheat Board in the five-year pool period from Aug. 1, 1945, to July 31, 1950. During 1949-50, the fourth and final year of the Canada-United Kingdom Wheat Agreement will be completed. The Agreement calls for the shipment of the equivalent of 140,000,000 bu. of wheat to the United Kingdom during the crop year. At the outset of the 1948-49 crop year both the domestic sales price of western wheat and the price under the United Kingdom contract were raised to \$2.00 per bushel plus a 5-cent carrying charge, basis Fort William-Port Arthur or Vancouver. From Aug. 1, 1948, until Mar. 22, 1949, millers and other processors of wheat for human consumption in Canada received a rebate (45 cents per bushel in August and 46½ cents thereafter) as a subsidy to domestic consumers. This rebate was discontinued effective midnight Mar. 22. Prices for domestic use and for export to the United Kingdom remained unchanged until Oct. 1, 1949, when 1 cent per bushel was added to the carrying charge raising the total price both for the final year of the United Kingdom contract and to the domestic consumer to \$2.06 per bu.

The International Wheat Agreement became effective Aug. 1, 1949, committing Canada to supply 203,100,000 bu. of wheat although this figure may be varied depending on the final number of signatory countries. The agreement is to last four years with maximum and minimum prices being fixed for each year. Transactions outside the agreed range of prices will be entirely free, but they will not count toward fulfilment of the obligations assumed by signatory countries. The basic maximum price was originally set at \$1.80 (Canadian currency) per bushel basis No. 1 Northern in store Fort William-Port Arthur for all four years of the agreement, with minimum prices starting at \$1.50 in the 1949-50 crop year and decreasing by 10 cents in each successive

year of the agreement. As a result of the 10 p.c. devaluation of the Canadian dollar on Sept. 20, these prices were advanced by 10 p.c. making the maximum for the current crop year \$1.98 per bu. and the minimum \$1.65. The basic minimum and maximum prices under the I.W.A. do not include such carrying charges as may be agreed upon by buyers and sellers. In the fall of 1949 Canada was adding a 5-cent per bu. carrying charge to the basic price.

Production, Imports and Exports of Wheat, Years Ended July 31, 1940-50

NOTE.—Wheat flour has been converted into bushels of wheat at the uniform average rate of 4½ bu. to the barrel of 196 lb. of flour.

Year ended July 31—	Production ¹	Imports of Wheat and Flour	Exports of Wheat and Flour
	'000 bu.	bu.	bu.
1940.....	520,623	444,369	192,674,369
1941.....	540,190	122,798	231,206,245
1942.....	314,825	29,102	225,828,432
1943.....	556,684	3,023	214,700,901
1944.....	284,460	432,931	343,755,319
1945.....	416,635	404,547	342,945,515
1946.....	318,512	74,765	343,185,751 ²
1947.....	413,725	15,584	239,420,837 ²
1948.....	341,758	824,677	194,982,342 ²
1949.....	393,345	288,881	232,329,336 ²
1950.....	367,406		

¹ Previous year's harvested crop.

² Exports of flour for the period August, 1945, to July, 1949, have been revised to remove effect of time-lag in returns made by customs.

"Combining" swathed wheat in Alberta.



Coarse Grains.—Oats.—Oat production in Canada for the crop year 1949-50 was estimated at 317,000,000 bu. This was 12 p.c. less than the 1948 crop, 30 p.c. below the 454,000,000 average for the wartime period of 1943-45 and 20 p.c. below the ten-year (1940-49) average of 409,400,000 bu. The area sown to oats was 11,400,000 acres, slightly above the 11,200,000 acres of a year ago, though considerably below the 1943-45 wartime average of 14,700,000. However, taking into consideration the carry-over of 59,000,000 bu. at the beginning of the 1949-50 crop year, the estimated total oat supply in Canada for 1949-50 amounts to 376,000,000 bu., about 8 p.c. less than the 1948-49 supply of 407,000,000. Production per acre for 1949 dropped to 28 bu. as compared with 32 bu. for 1948.

Commercial supplies of western oats for the 1948-49 crop year amounted to 94,000,000 bu. comprised of the commercial carry-over of 10,000,000 bu., plus farmers' marketings of 84,000,000 bu. Disposition of these supplies was as follows: exports (including rolled oats and oatmeal), 23,000,000, carry-over at July 31, 1949, 11,000,000—leaving 60,000,000 bu. for domestic use. Of this quantity 47,000,000 bu. were shipped under the freight assistance plan, the remaining 13,000,000 disappearing into other domestic channels. Commercial supplies for the 1949-50 crop year are estimated at 86,000,000 bu. comprised of 11,000,000 bu. carry-over at July 31 and estimated farmers' marketings of 75,000,000 bu.

Barley.—Production of barley at an average rate of 20 bu. per acre gave a total harvest of 120,000,000 bu., some 29 p.c. below the 1948 outturn. Yields per acre for 1949 and 1948 were, respectively, 20.0 and 23.9 bu. The 1949 acreage of barley was 6,000,000, down about one-half million from 1948. Carry-over stocks of barley at the beginning of the 1949-50 crop year were about 2,500,000 bu. below those of the previous year. Thus barley supplies for the current crop year amount to only 149,000,000 bu., about 20 p.c. less than last year and 37 p.c. below average stocks for the wartime period (1943-45). Current crop-year supplies, however, are still 54 p.c. above the pre-war (1935-39) average level of 97,000,000 bu. Commercial supplies of western barley for the 1948-49 crop year amounted to 83,200,000 bu. (commercial carry-over of 14,100,000 plus farmers' marketings of 69,100,000 bu.). Exports were 21,700,000 and July 31, 1949, carry-over was 10,500,000—leaving 51,000,000 bu. for domestic use. Of this quantity, 31,500,000 bu. were shipped under the freight assistance plan, the remainder disappearing into other domestic channels, including malting and brewing. Commercial supplies for the 1949-50 crop year are estimated at only 66,500,000 bu., comprised of the 10,500,000 carry-over at July 31 and estimated farmers' marketings of 56,000,000 bu.

Oat and Barley Prices.—Effective Aug. 1, 1949, the Canadian Wheat Board set up oat and barley marketing pools with initial payments to producers based on existing floor-price levels. At the beginning of the crop year these initial pools were based on 61½ cents per bu. for oats and 90 cents for barley, both for No. 1 feed grades in store Fort William-Port Arthur less all charges before delivery in store at the Lakehead. Related initial payments were set up for other grades. At the time of delivery and sale producers receive certificates entitling them to share in any surpluses accumulated by the Board in the sale of oats and barley delivered to the Board between Aug. 1, 1949, and July 31, 1950.



Harvesting an Ontario grain crop.

Rye.—The 1949 acreage of rye in Canada dropped about 9,000,000 acres from the 1948 level, a decline of 44 p.c. Increased stocks on hand at July 31, 1948, of 12,000,000 bu., third largest on record, together with sagging price levels at seeding time, were largely responsible for the sharp drop in acreage. Adverse weather combined with the greatly reduced acreage resulted in a crop of only 10,000,000 bu. compared with 25,000,000 bu. in 1948. Despite this decrease, supplies at 22,000,000 bu. for the current crop year are down only 4,000,000 from last year due to the high level of carry-over stocks on Aug. 1, 1949 (11,000,000 bu. greater than on Aug. 1, 1948). Rye is traded freely on the open market, with No. 1 C.W. being quoted at \$1.48½ per bushel, basis Fort William-Port Arthur on Nov. 14, 1949.

Flaxseed.—Both the 1949 acreage and production of flax were down sharply to 300,000 acres and 2,300,000 bu. from the 1948 level of 1,900,000 acres and 17,700,000 bu. Total supplies of flax for the current crop year, including carry-over, amount to 13,000,000 bu. as against 21,000,000 for the 1948-49 crop year. For the crop year 1949-50 producers of flaxseed in Western Canada have the option of marketing through a voluntary producers' pool operated by the Canadian Wheat Board, or of selling on the open market.

If flax is put into the pool, producers are guaranteed an initial payment of \$2.50 per bushel, basis No. 1 C.W. in store Fort William-Port Arthur. Open market prices have held well above this level and on Nov. 14, No. 1 C.W. flax in store Fort William-Port Arthur was quoted at \$3.75 per bushel.

Acreages, Production and Values of Field Crops, 1948 and 1949

Crop	Revised Estimate 1948 Crops			Third Estimate 1949 Crops		
	Area	Production	Gross Farm Value	Area	Production	Gross Farm Value ¹
	'000 acres	'000 bu.	\$'000	'000 acres	'000 bu.	\$'000
Wheat.....	24,106	393,345	623,011	27,541	367,406	566,620
Oats.....	11,200	358,807	254,525	11,389	316,558	201,453 ²
Barley.....	6,495	155,018	149,991	6,017	120,383	103,282 ²
Rye.....	2,103	25,340	33,261	1,182	10,011	12,307 ²
Peas, dry.....	82	1,477	4,328	58	934	2,605
Beans, dry.....	92	1,641	6,836	93	1,780	6,199
Soy beans.....	94	1,824	4,195	104	2,605	5,887
Buckwheat.....	186	4,031	4,982	170	3,530	4,263
Mixed grains.....	1,542	61,947	60,317	1,683	55,710	53,075
Flaxseed.....	1,876	17,683	67,315	321	2,262	7,735
Corn, shelled.....	252	12,417	16,369	272	13,650	16,766
		'000 cwt.			'000 cwt.	
Potatoes.....	508	55,260	91,837	510	54,318	86,909
Turnips, etc. ³	110	22,807	22,257	106	19,605	21,563
		'000 tons			'000 tons	
Hay and clover.....	9,748	16,073	254,769	9,502	12,240	230,128
Alfalfa.....	1,317	3,022	51,412	1,489	2,606	52,770
Fodder corn.....	539	5,051	28,639	567	5,510	34,887
Grain hay.....	848	1,204	12,880	740	914	11,301
Sugar beets.....	60	629	9,094	84	855	9,168 ⁴

¹ First estimate of value.
² Based on initial payments only. Later participation payments will increase these values.
³ Including payments except for Ontario.

⁴ Excluding production in the Prairie Provinces.



Canada's wool production in 1948 amounted to 12,000,000 lb., which was only about 12 p.c. of her consumption of wool for that year.



Beef cattle in Western Canada.

Live Stock.—Numbers of live stock on farms in Canada are shown for recent years in the following table.

Numbers of Principal Species of Live Stock on Farms, June 1, 1940-49

Year	Horses	Cattle	Hogs	Sheep and Lambs
	'000	'000	'000	'000
1940.....	2,780	8,380	6,002	2,887
1941.....	2,789	8,517	6,081	2,840
1942.....	2,816	8,945	7,125	3,197
1943.....	2,775	9,665	8,148	3,459
1944.....	2,735	10,346	7,741	3,726
1945.....	2,585	10,759	6,026	3,622
1946.....	2,200	9,665	4,910	2,942
1947.....	2,032	9,718	5,473	2,707
1948.....	1,904	9,476	4,463	2,247
1949.....	1,796	9,081	5,163	2,075

Live-stock production in Canada expanded during the years 1941 to 1945 in response to the increasing call on this hemisphere to meet world needs. Hog numbers reached their peak in 1943 with 8,148,000 on farms, cattle in

1945 with 10,759,000, and sheep in 1944 with 3,726,000. Since these peaks were reached, declines have been rapid. While cattle declined about 15 p.c. since 1945, the number in 1949 was still considerably above the 1939 level. Hog numbers dropped 36 p.c. from their peak, but showed a slight increase over 1948. The decline in the numbers of sheep has been continuous and rapid and in 1949 there were fewer sheep than recorded in any official count or estimate since Confederation.

Poultry and Eggs.—The estimated total number of domestic fowl—hens, cocks and chickens—on farms in Canada at June 1, 1948 was 69,678,400. There were 2,065,800 turkeys, 368,300 geese and 468,400 ducks. These figures are the lowest since 1942 for domestic fowl, the lowest since 1935 for turkeys and the lowest ever recorded for geese and ducks at that period of the year. High cost of feed and the sharp decline in the United Kingdom market for Canadian poultry meat were contributing causes of the decline.

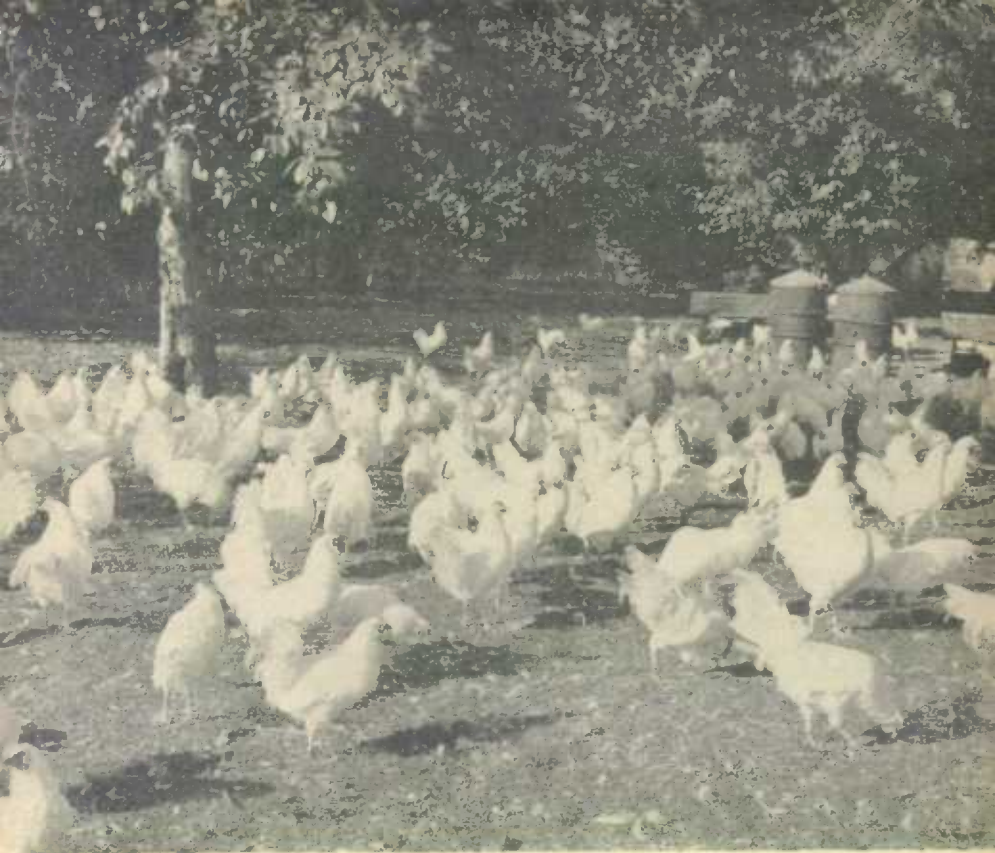
The production in 1948 of farm poultry meat declined to 249,326,000 lb. from 301,389,000 lb. in 1947, and the production of farm eggs declined to 356,166,000 doz. from 373,696,000 doz.

Farm Poultry-Meat and Farm-Egg Production, by Economic Areas, 1947 and 1948

Economic Area and Year	Poultry-Meat Production			Egg Production		
	Marketed	Farm-Home Consumed	Total	Sold for Consumption	Farm-Home Consumed	Total ¹
	'000 lb.	'000 lb.	'000 lb.	'000 doz.	'000 doz.	'000 doz.
Maritimes..... 1947	12,140	6,693	188,833	18,909	5,509	24,780
1948	9,910	4,289	14,199	19,902	5,710	25,959
Que. and Ont.... 1947	127,160	27,341	154,501	177,568	31,747	215,434
1948	112,967	21,336	134,303	169,367	29,130	201,462
Prairies..... 1947	62,578	46,766	109,344	74,831	23,724	104,416
1948	52,341	33,129	85,470	75,698	21,670	100,554
B.C..... 1947	15,680	3,031	18,711	24,937	2,810	29,066
1948	12,515	2,839	15,354	24,327	2,655	28,191
Totals..... 1947	217,558	83,831	301,389	296,245	63,790	373,696
1948	187,733	61,593	249,326	287,294	59,165	356,166

¹ Includes eggs sold for hatching and used for hatching on farms.

Dairying.—The upward trend in the production of dairy products which developed during the Second World War now appears to have reached a position of relative stability. This wartime expansion was stimulated by the payment of subsidies and after these were finally discontinued in 1946 the higher producer prices subsequently established, coupled with a wider demand for dairy products helped to maintain production well above pre-war levels. During 1949, however, price recessions developed which may be attributed in part to a contraction in overseas markets. Shortage of United States dollars and the consequent decline in exports from Canada is tending to focus greater attention on the domestic market, and on the development of new markets on the American continent. The contract with Britain which called for the delivery of 50,000,000 lb. of cheese during the year ended Mar. 31, 1949, was



R.O.P. Lechorn breeding cockerels, Surrey, B.C.

renewed at the same price (30 cents f.o.b. factory) for the year ended Mar. 31, 1950. Owing to a considerable increase in production, this contract was filled by the middle of August, 1949, thus providing greater supplies of cheese for domestic use than for many years past. The decline in exports had a depressing effect on the market for concentrated milk products, and the subsequent decline in prices was reflected in lower factory production during 1949. The distribution of fluid milk is being well maintained and both sales and prices appear to have become more or less stabilized during the year.

Milk Production.—The farm milk supply in 1948 declined to approximately 16,645,000,000 lb., as compared with 17,241,000,000 lb. in the previous year. Production in 1948 was approximately 982,000,000 lb. below the all-time high point of 17,627,000,000 lb. in 1945. The decline in 1948 as compared with the previous year was shared by all provinces except Prince Edward Island, New Brunswick and British Columbia, where the production is comparatively small.

Butter Production.—The total butter production of approximately 347,000,000 lb. in 1948 was practically on a par with that of the previous year. This includes 284,000,000 lb. of creamery butter and 63,000,000 lb. of dairy butter. The decline of 6,521,000 lb. in the former was offset by an increase of



Dairy cows on a Quebec farm.

6,548,000 lb. in the latter. During the first nine months of 1949, the creamery butter make of 228,000,000 lb. was approximately 4,000,000 lb. less than for the same period of 1948.

Cheese Production.—The output of cheddar cheese in 1948 amounted to approximately 87,000,000 lb., representing a decline of 35,000,000 lb. from the previous year. Due to the favourable prices paid for cheese milk as compared with butter-fat, a significant recovery took place in 1949. The output of 90,000,000 lb. during the January-September period represents an increase of over 18 p.c. as compared with the same period of 1948.

Income and Values.—The income received by farmers for the sale of dairy products amounted to approximately \$390,000,000 in 1948 as compared with \$326,000,000 in 1947. This was the highest income on record and represented an average gross return to farmers of \$2.94 per hundred lb. of milk; it represented 16 p.c. of the total farm cash income as against 22 p.c. ten years ago. During 1949 price recessions have developed in all the principal products.

The total farm value of milk production in 1948 was \$485,000,000 as against \$403,000,000 in 1947, and the total value of all products, including whole milk and manufactured products, was \$619,000,000 compared with \$532,000,000 in 1947.

Domestic Disappearance.—The consumption of milk in Canada is being maintained at a slightly lower level than that which prevailed during the war

period when subsidies were in effect. In 1948, the daily per capita consumption was estimated at 0.90 pint as compared with 0.97 pint in 1947 and 1.02 pints in 1946 and 1945. The domestic disappearance of butter, estimated at 28.61 lb. per capita in 1948, was slightly higher than that of the previous year, but was still well below the 33.7 lb. recorded in 1942. The domestic disappearance of cheese was 3.63 lb. per capita in 1948 as compared with 5.25 lb. in 1947. Concentrated whole milk products registered a gain in 1948, the per capita disappearance of 17.63 lb. being compared with 16.50 lb. in the previous year. Concentrated milk by-products declined from 4.58 lb. per capita in 1947 to 4.05 lb. in 1948. All products, in terms of milk, showed a decrease of nearly 30 lb. per capita from the total of 1,235 lb. recorded in 1947.

Dairy Production, by Economic Areas, 1947 and 1948

Economic Area and Year	Milk		Milk Products			
	Fluid Sales	Total Milk	Butter		Cheddar Cheese	Evaporated Milk
			Creamery	Dairy		
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Maritimes. 1947	234,513	1,059,276	17,260	8,014	1,407	4,082
1948	226,346	1,077,375	17,765	8,881	1,426	2,986
Que. and Ont. . . . 1947	2,943,767	10,733,941	174,531	16,303	113,148	169,611
1948	2,830,366	10,269,578	170,464	19,854	79,500	202,490
Prairies. 1947	659,817	4,819,484	94,722	30,281	6,864	13,698
1948	639,437	4,666,108	91,881	32,509	5,341	14,096
B.C. 1947	324,442	628,087	4,439	1,697	533	24,438
1948	319,583	632,080	4,321	1,599	431	31,759
Totals. 1947	4,162,539	17,240,788	290,952	56,295	121,952 ¹	211,829
1948	4,015,732	16,645,141	284,431	62,843	86,698 ¹	251,331

¹ Total cheese production amounted to 125,571,000 lb. in 1947 and 89,511,000 lb. in 1948.

Special Crops

Honey.—Since 1945 there has been a downward trend in the number of beekeepers in Canada. Many people who kept bees to bolster their limited supplies of sugar, jam and jelly during the War have gradually disposed of them leaving the field to commercial producers. Production in 1948 was at a near record level as a result of very favourable climatic conditions in all provinces but British Columbia. With a crop of 45,145,000 lb. to dispose of, it was apparent that much of it would not be sold before the new crop came on the market in 1949 and the Federal Government offered to buy up to 5,000,000 lb. of graded honey. There was a carry-over on Apr. 1, 1949, of 9,879,408 lb. and this coupled with a sharp decline in prices resulted in a further reduction of beekeepers and colonies. Total production (estimated October 1949) was 31,286,000 lb., 31 p.c. below the 1948 level. Production in 1949, by provinces, with comparable data for 1948 was: Prince Edward Island, 63,000 lb. (64,000 lb.); Nova Scotia, 96,000 lb. (125,000 lb.); New Brunswick, 160,000 lb. (200,000 lb.); Quebec, 3,357,000 lb. (4,831,000 lb.); Ontario, 10,655,000 lb. (15,736,000 lb.); Manitoba, 4,800,000 lb. (6,525,000 lb.); Saskatchewan, 5,200,000 lb. (6,492,000 lb.); Alberta, 6,050,000 lb. (10,254,000 lb.); and British Columbia, 905,000 lb. (918,000 lb.).

Maple Products.—The greatest volume of maple sugar and maple syrup is produced in the Eastern Townships of the Province of Quebec. The bulk of the exports come from this area and go chiefly to the United States in the form of maple sugar. In Nova Scotia, New Brunswick and Ontario most of the syrup is sold in consumer containers and the sugar in one-pound blocks while in Quebec a considerable volume of syrup is sold in large containers weighing about 500 lb. This syrup is bought by processing plants which bottle it. Quebec 'bag' sugar is sold in blocks varying widely in shape and size and may weigh as much as 50 lb. This sugar is used by the processing plants for blending purposes and is the type that makes up most of the exports. Production of maple syrup in 1949 with comparable data for 1948 in parentheses was: Nova Scotia, 6,000 gal. (8,000 gal.); New Brunswick, 7,000 gal. (12,000 gal.); Quebec, 1,894,000 gal. (1,750,000 gal.); Ontario, 399,000 gal. (389,000 gal.). Production of maple sugar in 1949 with comparable data for 1948 in parentheses was: Nova Scotia, 13,000 lb. (16,000 lb.); New Brunswick, 81,000 lb. (124,000 lb.); Quebec, 1,651,000 lb. (2,187,000 lb.); Ontario, 42,000 lb. (23,000 lb.). The total crop in 1949 of sugar and syrup, expressed as syrup, amounted to 2,485,000 gal. and production in 1948 amounted to 2,394,000 gal.

Sugar Beets.—There were 84,200 acres of sugar beets (Nov. 17) harvested in 1949, the largest area on record. Increases in acreage over 1948 were reported in all provinces growing beets for sugar—Quebec, Ontario, Manitoba and Alberta. Processing plants are located at St. Hilaire, Que.; Wallaceburg and Chatham, Ont.; Fort Garry, Man.; and Taber and Picture Butte, Alta. The acreages, by provinces, in 1949 with data for 1948 in parentheses was: Quebec, 6,300 acres (2,900 acres); Ontario, 30,100 acres (18,400 acres); Manitoba, 15,500 acres (9,500 acres); Alberta, 32,300 acres (29,200 acres). The increase in acreage in 1949 more than overcame a slight decline in average yield per acre and the total harvest amounted to 855,000 tons or 36 p.c. more than was harvested in 1948 and 32 p.c. more than the ten-year (1939-48) average crop. Dry weather early in the season in Ontario made necessary some replanting but the loss in acreage from this cause was negligible. Dry weather and fall frosts affected the growth of the crop in Alberta and resulted in a downward adjustment in the anticipated yields. Late season second-growth of the roots had the effect of lowering the sugar content.

Seeds.—Production of all types of hay and pasture seeds was considerably lighter in 1949 (Nov. 28) than in the previous season. Late frost and drought in many of the important seed-producing areas were contributing factors. The prolonged hot, dry weather in Ontario and Quebec resulted in a light hay crop and a shortage of summer pasture, so that a considerably reduced area of red clover, alsike clover and timothy was retained for seed. In the Prairie Provinces climatic conditions varied widely. Drought in late May and early June accompanied by damaging late frosts reduced the yields of all grass and most legume seed crops. In addition a large area, including south-western Saskatchewan and eastern Alberta, suffered severely from drought throughout the summer. Production by kinds in 1949 with comparable data for 1948 in parentheses was: alfalfa, 8,718,000 lb. (21,385,000 lb.); red

clover, 4,855,000 lb. (16,086,000 lb.); alsike, 2,564,000 lb. (9,400,000 lb.); sweet clover, 21,754,000 lb. (28,840,000 lb.); timothy, 5,108,000 lb. (5,634,000 lb.); brome grass, 6,050,000 lb. (7,944,000 lb.); crested wheat grass, 300,000 lb. (676,000 lb.); creeping red fescue, 1,200,000 lb. (1,558,000 lb.); Canadian blue grass, 140,000 lb. (250,000 lb.); Kentucky blue grass, 80,000 lb. (580,000 lb.); western rye grass, 123,000 lb. (115,000 lb.); bent grass 2,000 lb. (4,000 lb.).

Total production of vegetable and field-root seeds was also lighter in 1949. While most kinds yielded heavier crops, others which normally make up the bulk of production—beans, corn and peas—were much lighter. Production in 1949 with comparable data for 1948 in parentheses was: asparagus, 20,240 lb. (4,120 lb.); bean, 1,787,650 lb. (2,366,200 lb.); beet, 18,100 lb. (18,600 lb.); cabbage, 1,940 lb. (1,320 lb.); carrot, 52,100 lb. (54,600 lb.); cauliflower, 700 lb. (440 lb.); corn, 225,100 lb. (236,500 lb.); cucumber, 17,500 lb. (18,300 lb.); leek, 850 lb. (800 lb.); lettuce, 27,050 lb. (14,700 lb.); mangel, 72,680 lb. (133,900 lb.); muskmelon, 880 lb. (1,580 lb.); onion, 69,000 lb. (39,700 lb.); parsnip, 3,320 lb. (3,200 lb.); pea, 5,013,000 lb. (14,154,000 lb.); pepper, 230 lb. (190 lb.); pumpkin, 1,900 lb. (3,300 lb.); radish, 21,900 lb. (13,600 lb.); spinach, 13,400 lb. (11,800 lb.); squash and marrow, 3,800 lb. (6,520 lb.); sugar beet, 402,800 lb. (296,300 lb.); swede, 57,000 lb. (23,900 lb.); swiss chard, nil (500 lb.); tomato, 3,780 lb. (2,520 lb.).

Bagging onions, Kelowna, B.C.



Fruit.—Fruit is produced on a commercial scale in Nova Scotia, New Brunswick, Quebec, Ontario and British Columbia. Some cultivated fruits are grown in a limited way in the other provinces but no annual estimates of production are attempted. In addition to the cultivated fruits large quantities of native fruits are harvested, particularly in Eastern Canada, but no complete data on production each year is available.

The outlook for the fruit crops in the spring of 1949 was very favourable except for berries in British Columbia. In the Eastern Provinces dry, hot weather during July and August reduced the strawberry, raspberry and early tree-fruit yields. Advance estimates of production of the other fruits were also cut. The weather turned cool and abundant rain fell during September and October with the result that fruit still had to be harvested, with the exception of grapes in Ontario, gained size rapidly and the estimates were raised accordingly. The grape crop, which is produced almost entirely in Ontario, was the smallest in some years. The November, 1949, estimates of production with final estimates for 1948 in parentheses were: apples, 17,339,000 bu. (13,404,000 bu.); pears, 996,000 bu. (789,000 bu.); plums and prunes, 796,000 bu. (671,000 bu.); peaches, 2,034,000 bu. (1,760,000 bu.); apricots, 182,000 bu. (152,000 bu.); cherries 442,000 bu. (392,000 bu.); strawberries, 25,594,000 qt. (32,950,000 qt.); raspberries, 10,936,000 qt. (15,657,000 qt.); loganberries, 1,244,000 lb. (2,261,000 lb.); and grapes, 34,148,000 lb. (57,623,000 lb.).

During the five-year period 1935-39, the average exports of apples from Canada amounted to approximately 40 p.c. of the crop. The chief market in those days was the United Kingdom. During the War a shortage of shipping practically cut Canada off from this market and growers were forced to look elsewhere for foreign outlets. Since 1945, exchange difficulties have interfered with the re-establishment of the British market for Canadian apples and it was not until 1949 that any sizeable shipments were made. The exports this season were the result of an arrangement between the British and



Vineyard worker carefully ties grape vine branches to supporting wires. This operation is conducted in early spring and is done in conjunction with pruning.



Apple harvest in the Annapolis Valley, N.S.

Canadian Governments whereby Britain agreed to take 400,000 bbl. of Nova Scotia and 434,000 boxes of British Columbia apples for which the Canadian authorities paid 50 p.c. of the cost.

Values of Fruits Produced, 1945-48, with Averages, 1940-44

Fruit	Average 1940-44	1945	1946	1947	1948
	\$	\$	\$	\$	\$
Apples.....	14,453,000	12,857,000	27,196,000	22,840,000	22,631,000
Pears.....	1,367,000	1,582,000	2,278,000	2,178,000	2,185,000
Plums and prunes....	881,000	1,270,000	1,755,000	1,471,000	1,880,000
Peaches.....	2,978,000	4,502,000	5,356,000	4,128,000	4,953,000
Apricots.....	224,000	319,000	446,000	327,000	629,000
Cherries.....	1,410,000	1,724,000	2,113,000	2,128,000	2,863,000
Totals, Tree Fruits..	21,313,000	22,254,000	39,144,000	33,072,000	35,150,000
Strawberries.....	2,390,000	4,186,000	4,498,000	5,404,000	6,821,000
Raspberries.....	1,885,000	3,147,000	3,364,000	4,354,000	3,279,000
Grapes.....	1,653,000	2,543,000	3,160,000	3,568,000	2,559,000
Loganberries.....	143,000	140,000	222,000	213,000	340,000
Totals, Small Fruits.	6,071,000	10,016,000	11,244,000	13,539,000	12,999,000
Totals, All Fruits..	27,384,000	32,270,000	50,388,000	46,611,000	48,149,000



★ Forestry

Canada's forests (exclusive of Newfoundland) cover an area of 1,290,960 sq. miles, or 37 p.c. of the total land area of the country, but a considerable part of these vast forests is not suitable for commercial operations, either because it is too difficult and expensive to reach or because the tree growth is not of satisfactory size and quality. The present accessible productive portion of the forest covers 435,000 sq. miles and it is from this area that the whole output of sawlogs, pulpwood, fuelwood and other primary products is obtained. About 378,000 sq. miles of forest, classed as productive but not at present accessible, form a reserve for the future when transportation systems may be more highly developed.

By far the larger part of the world demand for wood is for softwood, or coniferous species. Canada possesses the principal reserves of softwoods within the Commonwealth, and these include large supplies of the most desirable varieties—spruces, Douglas fir, western hemlock, western red cedar, and white, red and other pines. In addition, the Eastern Provinces furnish hardwoods, such as birches, maples and elms, which are particularly useful for special purposes.

The total stand of timber of merchantable size is estimated to be 311,201,000,000 cu. ft. of which 191,347,000,000 cu. ft. is accessible. Expressed in commercial terms, the accessible timber is made up of 250,250,000,000 bd. ft. of logs in trees large enough to produce sawlogs and 1,684,710,000 cords of smaller material suitable for pulpwood, fuelwood, posts, mining timbers, etc.

The entrance of Newfoundland into Confederation on Mar. 31, 1949, resulted in an appreciable increase in Canada's forested area. It is estimated that about 17,000 sq. miles of the Island of Newfoundland is covered with forest, but no estimate is as yet available of the forest resources of Labrador.

If the forests are not to be impaired, the volumes of wood removed each year to serve useful purposes and the volumes burned or destroyed by pests must be replaced by annual growth. The average annual rate of depletion during the ten years 1937-46, was 3,303,139,000 cu. ft. of which 76 p.c. was utilized, 9 p.c. was destroyed by forest fires and 15 p.c. by insects and disease. Of 2,510,556,000 cu. ft. utilized, 38 p.c. took the form of logs and bolts, 29 p.c. was pulpwood, 29 p.c. fuelwood and the remaining 4 p.c. miscellaneous products. Approximately 7 p.c. of the utilization was exported in unmanufactured form.

The extraordinary demand for forest products which prevailed during the War and post-war years, continued during 1949. Requirements for housing and other forms of construction at home, together with exports, provided a stimulus for high production. However, a decrease in exports of lumber to the United Kingdom resulted in lower production. Pulp and paper production continued to increase and exports of paper reached a new peak in 1949. The increase in the production of paper resulted in a decrease in pulp exports.



A British Columbia spruce.

Forest Administration

The forest resources of Canada as a whole are owned and administered by the provinces. The Federal Government, however, is responsible for the administration of those of the National Parks, Forest Experiment Stations, and Yukon and the Northwest Territories.

The general policy of both the Federal Government and the Provincial Governments has been to dispose of the timber by means of licences to cut, rather than to sell timber-land outright. Under this system the State retains the ownership of the land and control of the cutting operations. Revenue is received in the form of Crown dues or stumpage; ground-rents and fire-protection taxes are collected annually. As new regions are explored, their lands are examined and the agricultural land disposed of. Land suitable only for forest is set aside for timber production, and the policy of disposing of the title to lands fit only for the production of timber has been virtually abandoned in every province of Canada. Efforts are being made, especially in Quebec and Ontario, to encourage the establishment and maintenance of forests on a community basis.

Forest research activities are assuming great importance. The Dominion Forest Service of the Department of Mines and Resources operates five forest experiment stations with a total area of 227 sq. miles, where investigations of the underlying principles governing the growth of forests and improvement in the rate of increment are made and practical methods of management tested. Specialized work in silvicultural research and problems connected with forest utilization are also carried on, while the Department of Agriculture conducts research work in the fields of forest pathology and forest entomology.

Provincial Governments and industry are also doing much to improve and strengthen administrative and protective services. Since the end of the War there has been increased interest and activity of Provincial Governments in forest inventory surveys, particularly on the part of Ontario and British Columbia as a result of recommendations made by Royal Commissions. The work is being greatly facilitated by the use of air survey methods.

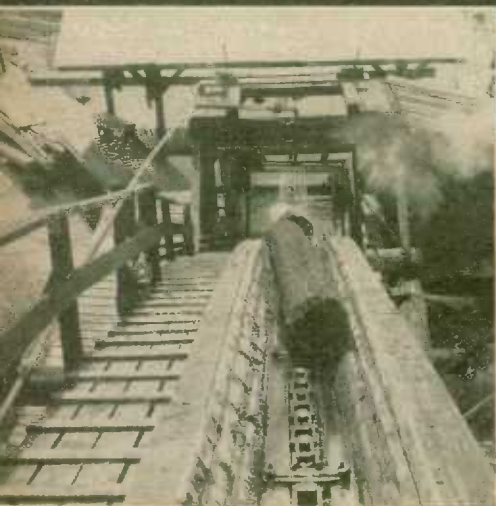
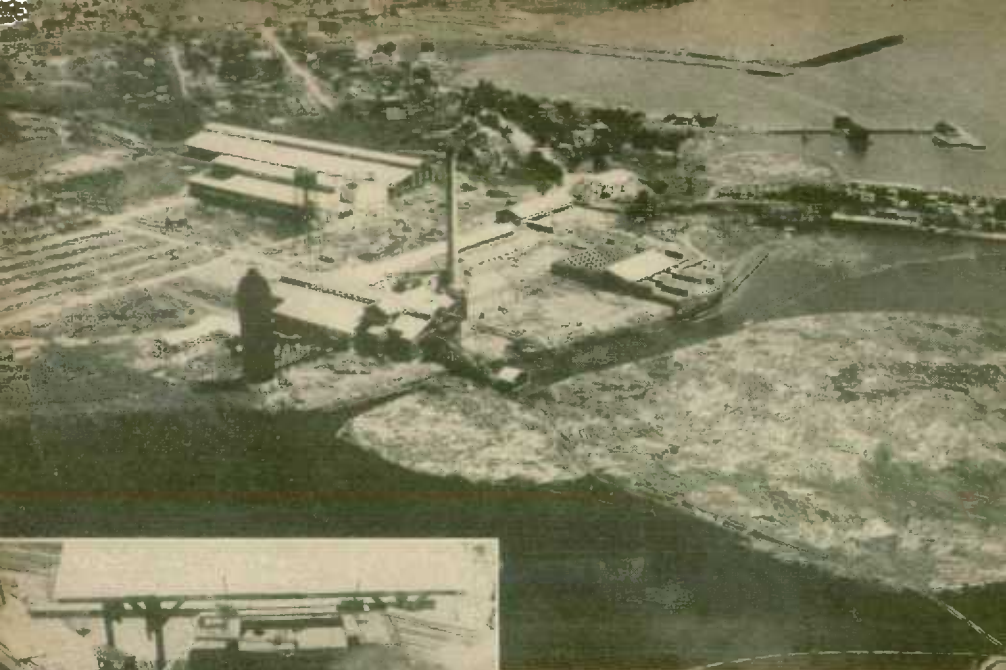
Forest Utilization

Operations in the Woods.—The principal products of the forest consist of logs and bolts which constitute the raw material for sawmills, veneer mills, wood distillation and other plants, and of pulpwood which goes to the pulp-mills. Some logs and bolts are exported in the unmanufactured state, but most pulpwood is processed in barking mills before it is shipped to foreign countries. Other products, such as fuelwood, poles and piling, pitprops, hewn railway ties, and fence posts and rails, are finished in the woods ready for use or export.

It has been estimated that operations in the woods in Canada in 1947 gave employment during the logging season amounting to 43,574,000 man-days, and distributed \$340,000,000 in wages and salaries. Except in British Columbia, where logging operations are fairly uniform throughout the year, work in the woods comes at a time when employment in other industries is at the lowest ebb. The steadying effect of this industry on the employment situation and the fact that it provides a source of income to farmers during the winter season are not always fully appreciated.

A 'cherry picker' loading logs.





↑
A sawmill in Eastern Canada.

←
Logs travelling up the jack ladder
into the mill.

Value of Woods Operations, by Products, 1943-47

Products	1943	1944	1945	1946	1947
	\$	\$	\$	\$	\$
Logs and bolts.....	99,852,479	115,788,036	120,682,306	150,933,681	205,259,855
Pulpwood.....	110,844,790	124,363,926	146,172,701	183,085,359	237,488,741
Firewood.....	45,152,897	44,332,748	45,193,219	49,544,756	46,206,336
Hewn railway ties....	1,138,663	1,289,165	1,339,920	1,131,951	1,177,806
Poles.....	2,032,681	5,217,255	5,663,793	5,302,324	8,404,809
Round mining timber	3,418,857	3,509,015	6,437,074	12,149,767	10,082,458
Fence posts.....	1,902,546	2,216,585	2,690,569	3,091,268	2,832,783
Wood for distillation..	774,344	887,260	687,102	452,196	544,746
Fence rails.....	464,365	513,135	367,741	605,503	628,804
Miscellaneous products.....	3,033,661	3,453,698	5,090,476	6,972,509	7,177,790
Totals.....	268,615,283	301,570,823	334,324,901	413,269,314	519,804,128

Sawn Lumber.—The lumber industry comprises not only the output of mills sawing planks and boards and other long lumber but also the products of shingle, tie, spoolwood, lath, stave and heading mills, and of mills for the cutting-up and barking of pulpwood. Wood sawn into lumber consists chiefly of conifers; spruce, Douglas fir, hemlock, white pine, cedar and the other softwood account for about 95 p.c. and only 5 p.c. is cut from deciduous-leaved trees or hardwoods.

In 1947, the gross value of production for the industry as a whole showed an increase of 40 p.c. over the total for 1946. The 1947 figure includes the following commodities with their valuations: shingles (\$24,449,305); processed pulpwood (\$17,856,938); box shooks (\$10,733,323); sawn ties (\$10,397,208); spoolwood (\$2,902,854); staves (\$1,534,521); lath (\$1,239,824); heading (\$485,684); pickets (\$409,772); and other products and by-products (\$10,075,513).

Almost one-half the sawn lumber produced in 1947 was exported and the remainder was used for structural work in Canada or went into Canadian wood-using industries as the raw material in the manufacture of sash, doors and planing-mill products, furniture, boxes, cooperage, etc.

Production of Sawn Lumber and All Sawmill Products, 1947

Province or Territory	Sawn Lumber Production		Total Sawmill Products
	'000 ft. b.m.	\$	\$
Prince Edward Island.....	13,893	587,924	661,504
Nova Scotia.....	387,996	18,014,263	19,654,834
New Brunswick.....	354,767	17,951,051	20,608,236
Quebec.....	1,227,055	63,258,288	73,898,677
Ontario.....	733,129	41,526,059	51,170,386
Manitoba.....	65,307	2,809,324	2,938,224
Saskatchewan.....	104,744	3,973,886	4,185,743
Alberta.....	283,478	9,691,039	10,743,328
British Columbia.....	2,707,052	164,199,747	218,235,191
Yukon.....	480	36,775	37,175
Totals.....	5,877,901	322,048,356	402,133,298

Pulp and Paper.—Extensive pulpwood resources and widely distributed water powers, together with the proximity of the United States markets, have been largely responsible for the remarkable development of the Canadian pulp and paper industry. It has grown steadily from a business of a few millions of dollars a year at the beginning of the century to become in the early 1920's Canada's leading industry, a position it has maintained ever since except during the years 1942-44. In 1948 the pulp and paper industry ranked highest in net value of production and salary and wage distribution, while the gross value of its products reached the unprecedented total of \$825,857,664. In these comparisons only the manufacturing stages of the industry are considered, no allowance being made for employment furnished, payrolls, or production of operations in the woods.

There are three classes of mills in this industry: mills making pulp only, combined pulp and paper mills, and mills making paper only. In 1948, the 91 mills making pulp, 29 of which made pulp only, produced 7,675,079 tons of pulp valued at \$485,966,164. About 72 p.c. in quantity was made in combined mills and used by them in papermaking and about 28 p.c. was made for sale in Canada and for export.

The volume of pulp and paper produced in 1948 was the highest ever recorded and new peaks were also reached for gross and net value of production, employment, salaries and wages paid, cost of materials used, cost of purchased fuel, and power equipment used. The gross value of production in 1948 was 17 p.c. over the previous record of 1947 and an increase of almost 239 p.c. over 1929. Figures from 1939 are:—

	Gross Production	Net Production		Gross Production	Net Production
	\$	\$		\$	\$
1939.....	208,152,295	103,123,660	1944.....	369,846,086	174,492,103
1940.....	298,034,843	158,230,575	1945.....	398,804,515	180,401,885
1941.....	334,726,175	174,852,041	1946.....	527,814,916	258,104,578
1942.....	336,697,277	164,500,420	1947.....	706,971,628	356,084,900
1943.....	344,411,614	164,244,088	1948.....	825,857,664	412,770,470

Production of pulp during the past ten years is given in the following tables.

Pulp Production, Mechanical and Chemical, 1939-48

Year	Mechanical Pulp		Chemical Fibre		Total Production	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	\$	tons	\$	tons	\$
1939.....	2,796,093	43,530,367	1,370,208	53,601,450	4,166,301	97,131,817
1940.....	3,368,209	56,017,547	1,922,553	92,987,720	5,290,762	149,005,267
1941.....	3,550,285	61,749,788	2,170,562	113,689,763	5,720,847	175,439,551
1942.....	3,308,118	65,208,919	2,298,343	126,936,143	5,606,461	192,145,062
1943.....	3,033,751	63,721,703	2,239,079	130,797,449	5,272,830	194,519,152
1944.....	3,113,142	72,097,231	2,157,995	138,944,181	5,271,137	211,041,412
1945.....	3,380,873	86,723,425	2,219,941	145,149,697	5,600,814	231,873,122
1946.....	4,122,046	113,599,526	2,493,364	174,024,701	6,615,410	287,624,227
1947.....	4,408,698	150,245,618	2,838,205	253,399,159	7,253,671	403,853,235 ¹
1948.....	4,560,237	172,390,391	3,081,175	312,627,506	7,678,079	485,966,164 ¹

¹ Includes unspecified pulp.

Pulp Production, by Chief Producing Provinces, 1939-48

Year	Quebec		Ontario		British Columbia	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	\$	tons	\$	tons	\$
1939.....	2,119,183	49,026,966	1,158,576	27,631,051	321,132	6,197,175
1940.....	2,794,384	76,996,100	1,369,389	38,235,733	445,564	12,109,948
1941.....	2,971,386	89,103,399	1,507,324	46,908,967	508,375	14,875,937
1942.....	2,896,440	97,632,408	1,518,967	51,936,704	481,294	16,243,737
1943.....	2,617,403	94,054,176	1,490,966	54,818,046	450,009	17,543,397
1944.....	2,767,081	105,042,991	1,316,365	54,934,993	489,690	19,739,476
1945.....	2,887,176	114,197,036	1,468,682	62,596,260	520,571	21,998,381
1946.....	3,460,853	140,930,891	1,837,975	84,049,038	520,779	24,216,820
1947.....	3,751,579	194,805,327	2,100,237	122,382,058	593,165	37,720,328
1948.....	3,902,072	227,422,345	2,226,124	153,870,832	688,209	49,220,655

The 62 combined mills and the 26 mills making paper only produced 6,063,646 tons of paper and paperboard in 1948, having a total value of \$582,346,842. Newsprint made up 76.5 p.c. of the total production; paperboard 13.5 p.c.; book and writing paper 3.8 p.c.; wrapping paper 3.4 p.c.; and tissues and miscellaneous papers the remainder.

Newsprint and Total Paper Production, 1939-48

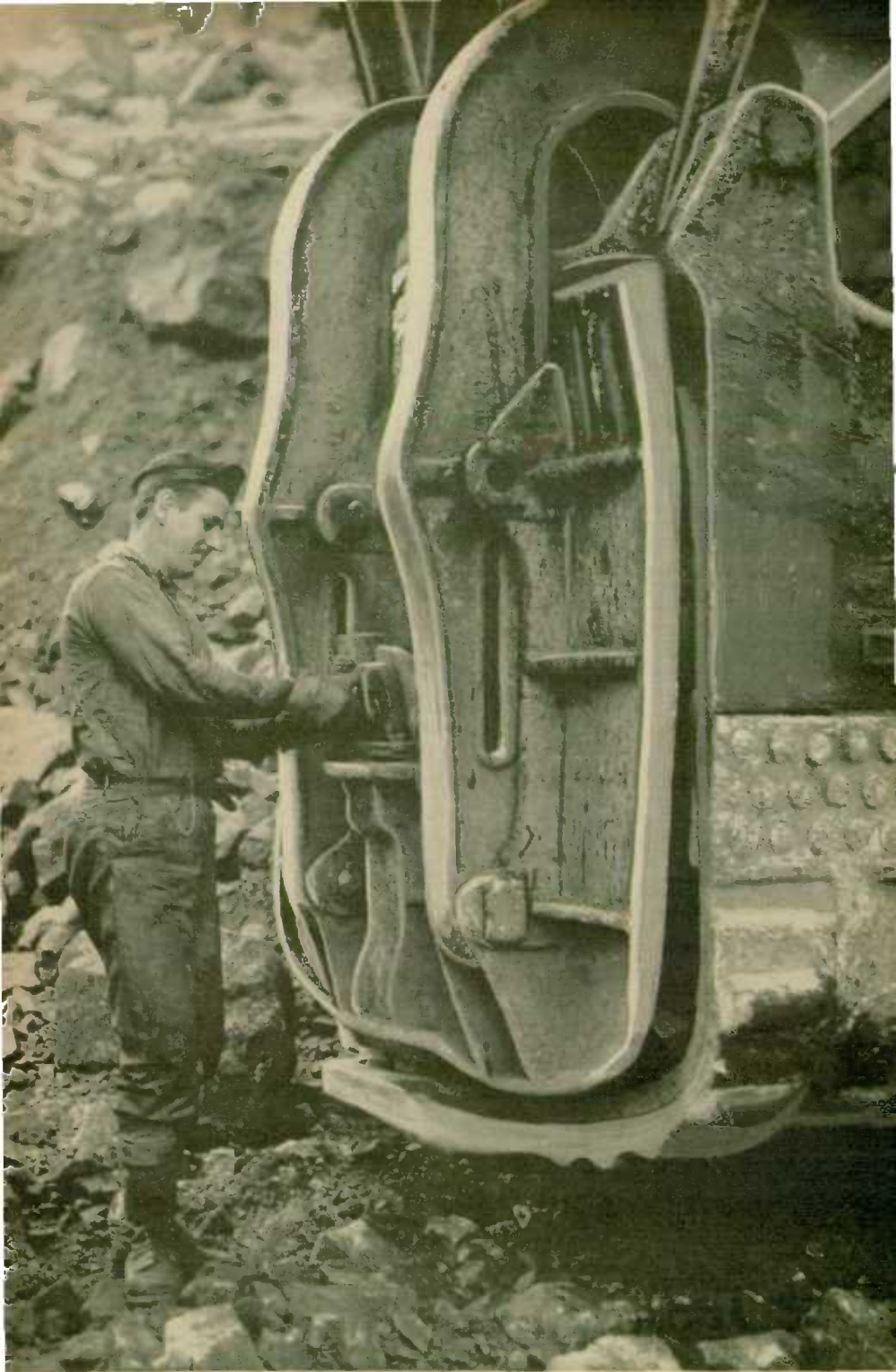
Year	Newsprint Paper		Total Paper	
	Quantity	Value	Quantity	Value
	tons	\$	tons	\$
1939.....	2,926,597	120,858,583	3,600,502	170,776,062
1940.....	3,503,801	158,447,311	4,319,414	225,836,809
1941.....	3,519,733	158,925,310	4,524,776	241,450,292
1942.....	3,257,180	147,074,109	4,231,767	230,269,512
1943.....	3,046,442	152,962,868	3,966,344	234,036,152
1944.....	3,039,783	165,655,165	4,044,376	255,545,841
1945.....	3,324,033	189,023,736	4,359,576	282,847,614
1946.....	4,162,158	280,809,610	5,347,118	396,956,390
1947.....	4,474,264	355,540,669	5,775,082	507,101,277
1948.....	4,640,336	402,099,718	6,063,646	582,346,842

Newsprint production during the first eight months of 1949 showed an increase of 187,000 tons or nearly 6 p.c. over the same period in 1948. The output of Newfoundland mills is included in this comparison.

Exports of newsprint in 1948 amounted to 4,328,084 tons valued at \$383,122,743 and again ranked first among the exports of Canada.

The pulp and paper mill at Corner Brook, Newfoundland, is one of the largest in the world.





Power shovel, typical of the massive equipment used in open-pit mining. Where ore occurs in large bodies close to the surface, it is broken down by drilling and blasting, scooped up by large power shovels and carried away to the mill in trucks.

★ Mines and Minerals

Substantial improvement in the volume of production of the major metals and non-metals, and higher market prices for most of them, brought the value of Canada's mineral production in 1948 to a record total of \$820,000,000. In several of the war years the output had cleared the \$500,000,000 mark, and in 1947 it had jumped to \$645,000,000, but the total for 1948 was far beyond any previous figure.

Only about one-half of this gain in value in 1948 was due to expansion in physical output. From the data that are available at present, it appears that the tonnage of ore raised by Canadian metal mines in 1948 was from 10 to 12 p.c. greater than in the previous year. Output of gold bullion was up nearly 14 p.c., zinc increased 12 p.c., copper 6 p.c., lead 4 p.c., and nickel 9 p.c. Among the non-metallics there were even greater gains. The tonnage of coal was 16 p.c. above the 1947 figure, asbestos was up 7 p.c., gypsum 29 p.c., cement 18 p.c. and crude petroleum 57 p.c.

The other chief factor which helped boost the output value was the further advance in world prices for the principal base metals, which constitute a very large part of Canada's mineral output. Quotations for electrolytic copper at New York rose to 23·2 cents before the year-end, and the average for the year was approximately two cents per pound higher than in 1947. Lead reached a high of 21·5 cents, and over the year its quotations averaged 4½ cents per pound more than in the previous year. Electrolytic zinc rose to 17·5 cents per pound for a gain of 2½ cents on the yearly average, and quotations for electrolytic nickel rose to 40 cents per pound or 5 cents more than the quotations which had prevailed for some months. Most other metals and non-metals were also quoted at higher levels than in 1947. These price advances accounted for about half of the total gain in output value in 1948 as compared with 1947.

Copper.—About one-half of Canada's copper comes from the nickel-copper mines of the Sudbury district. At Copper Cliff the International Nickel Company of Canada, Limited, produces converter copper which is further treated in the company's refinery at that point, and at Falconbridge the Falconbridge Nickel Mines, Limited, produces nickel-copper matte which is exported to Norway for refining. Output of copper in this area in 1948 was 120,187 tons, this including blister copper and the recoverable copper contained in matte or other products. In 1947 the corresponding output figure was 113,930 tons.

Mines in northern Quebec now account for 20 p.c. of Canada's copper production. These ores are treated at the Noranda smelter to produce copper anodes which are shipped to the Canadian Copper Refiners, Limited, at Montreal East for refining. Production of copper by operators in this district amounted to 48,813 tons in 1948 compared with 42,561 tons in 1947. Noranda, Normetal, Waite-Amulet and Amulet Dufault were the principal producing mines. The East Sullivan mill came into production at the year-end and construction work at the Quemont was well advanced.

The Flin Flon-Sherritt Gordon area in northern Manitoba, and extending over the border into Saskatchewan, produced 50,034 tons of copper in 1948 compared with 48,467 tons in the previous year. Ores from the Flin Flon mine of Hudson Bay Mining and Smelting Company, Limited, and from the Sherritt-Gordon Mines, Limited, at Sherritton are treated at the Flin Flon smelter, and the blister copper which is recovered is shipped to Montreal East for refining. The Cuprus Mines commenced shipments to the Flin Flon smelter in October.

Mines in British Columbia, which account annually for about 9 p.c. of Canada's copper, produced 21,855 tons in 1948 as against 21,501 tons in 1947. The Britannia Mining and Smelting Company, Limited, and the Granby Consolidated Mining, Smelting and Power, Limited, were the major producers, with smaller contributions being made by Hedley Mascot, Kelowna and Vananda. Concentrates from these mines were exported to the United States. The Consolidated Mining and Smelting Company of Canada, Limited, exported some copper-bearing matte to the United States in 1948.

While the total tonnage of copper production in 1948, at 240,732 tons, was greater than in 1947, it was lower than in any of the years from 1937 to 1944 inclusive. The record output was in 1940 at 327,796 tons.



The prospector with his Geiger counter has become a familiar sight in the Canadian north as the search for radio-active minerals progresses. Several important uranium discoveries have been made recently by this method.

Output of refined copper amounted to 219,000 tons in 1948 compared with 203,000 tons in 1947. Consumption of the refined metal in Canada totalled 107,000 tons, and exports amounted to 116,169 tons. Shipments to the United Kingdom aggregated 63,494 tons for the year, and to the United States 18,086 tons.

Nickel.—Nickel production in 1948 totalled 131,740 tons, this being made up of refined nickel, the recoverable nickel in matte and sintered oxide exported, and the nickel in salts produced at smelters or refineries. This tonnage was 8 p.c. greater than the corresponding figure for 1947, but was considerably below the record of 144,009 tons established in 1943.

Practically all of this nickel—about 90 p.c. of the total world output, exclusive of U.S.S.R.—comes from the Sudbury nickel-copper ores. The International Nickel Company of Canada, Limited, conducts smelting operations at Copper Cliff and Coniston, Ontario, while the Falconbridge Nickel Mines, Limited, operates a smelter at its mine site a few miles east of the town of Sudbury. Matte from the former is refined at Port Colborne, Ontario, or is exported to the company's associated works in the United States and Great Britain. All of the Falconbridge matte is exported to the company's refinery in Norway. A relatively small amount of nickel oxide is recovered by the Deloro Smelting and Refining Company, Limited, Deloro, Ontario, from the treatment of silver-cobalt-nickel-arsenic ores from the Cobalt district in northern Ontario.

The consumption of refined nickel by Canadian foundries amounts to about 2,000 tons annually.

Lead.—Output of lead in 1948 at 165,271 tons was up only 4 p.c. from the previous year. Here again the scale of mine operations was considerably below the wartime level, but advances in market prices for the metal raised the value of output to an all-time peak of \$60,400,000.

About 96 p.c. of the Canadian output was from the Province of British Columbia, and most of this in turn came from the great Sullivan mine of the Consolidated Mining and Smelting Company of Canada, Limited, at Kimberley. Smaller contributors included the Base Metals Mining Corporation, Highland Bell, Ainsmore Consolidated, Silbak Premier and Sheep Creek Zincton. Production in British Columbia in 1948 totalled 160,019 tons compared with 156,867 tons in 1947.

Recoveries by Quebec's lead producers, the New Calumet Mines, Limited, and the Golden Manitou Mines, Limited, were greater by almost 10 p.c. in 1948 at 4,761 tons. In the Yukon, the output of 2,299 tons, mostly from United Keno Hill, was nearly three times that of the previous year.

Output of new refined lead amounted to 160,000 tons in 1948, a slight decrease from the preceding year. All of this refined metal was made at the Trail smelter of the Consolidated Mining and Smelting Company of Canada, Limited. The concentrates from Quebec's mines were exported to the United States and Belgium.

Consumption of refined lead in Canada continued at a high level. Users reported 1948 purchases at 62,000 tons, of which about 20,000 tons were for use in storage batteries, 15,000 tons for babbitts, solders, etc., 12,000 tons for covering wires and cables, 10,000 tons for pigments, and 5,000 tons for miscellaneous purposes.

Exports of refined lead during the year totalled 103,762 tons.

Zinc.—Mines in British Columbia accounted for 58 p.c. of Canada's zinc production in 1948; the Flin Flon-Sheritt Gordon district in Manitoba and Saskatchewan contributed 22 p.c. and northern Quebec 20 p.c. The total output of 234,164 tons compares with 207,863 tons in 1947 and with the record of 305,377 tons in 1943.

Production in British Columbia was up 5 p.c. in 1948 to 135,155 tons. Most of this came from the Sullivan mine, but there were relatively small shipments from Ainsmore Consolidated, Base Metals Corporation, Silbak Premier, Sheep Creek, Highland Bell, Britannia, and Western Exploration. In central Canada the Flin Flon and Sheritt Gordon mines produced 51,129 tons, or 10 p.c. more than in 1947, and in Quebec the mine shipments totalled 47,879 tons compared with 34,732 tons in the previous year. The Normetal, Waite-Amulet, Golden Manitou and New Calumet contributed to these latter totals, and all the concentrates from these properties were exported to the United States and Belgium.

Output of refined zinc amounted to 189,000 tons, of which about one-quarter or 46,000 tons were for Canadian users and the remainder for export, chiefly to the United Kingdom and the United States.

Gold and Silver.—Gold production increased in practically every mining area in 1948 and the over-all total of 3,529,608 ounces was 14 p.c. above that of the previous year. The Gold Mines Assistance Act was of definite help to a great many marginal mines in their battle against inflated costs, and the success of the industry's experiment in bringing displaced persons from Europe was of great assistance in easing the critical labour shortage. However, the industry is still operating far below its potential. The 1948 output was exceeded in each of the years from 1936 to 1943, inclusive, and it was 35 p.c. below the record of 5,345,000 ounces attained in 1941.



End product of the gold-mining industry—the gold brick.



Modern in every aspect is the main head-frame and mill at the Hollinger Consolidated Gold Mines, Timmins, Ont.

In Ontario, which accounts for almost 60 p.c. of the Canadian total, the output was 2,095,377 ounces or 6 p.c. more than in 1947. In Quebec the gain was 28 p.c. to 770,625 ounces, in Manitoba 50 p.c. to 106,176 ounces, in British Columbia 24 p.c. to 306,998 ounces, and in the Northwest Territories 58 p.c. to 101,625 ounces.

Recoveries of gold from base metal mines in 1948 amounted to 413,661 ounces, an increase of more than 70 p.c. over the corresponding figure for 1947. Bullion from lode and placer mines increased only about 10 p.c. to 3,115,947 ounces.

Silver, a by-product of most gold and base metal mines, increased 25 p.c. in quantity in 1948 to 16,100,000 ounces, including silver bullion and silver contained in concentrates exported. Production of fine silver was about 12,000,000 ounces in 1948 and the consumption by Canadian users, other than for coinage, was 4,500,000 ounces.

Mineral Fuels.—In 1948 the value of coal production was greater than that of any other mineral except gold and copper. It was slightly below copper in this regard and far above nickel, lead, zinc or asbestos. The 1948 output, amounting to 18,449,689 tons worth \$107,000,000, was the highest on record in point of value and second in tonnage; 44 p.c. of the tonnage



Strip-mining coal at Taber, Alta.

came from Alberta mines, 35 p.c. from Nova Scotia, 10 p.c. from British Columbia, 8 p.c. from Saskatchewan and 3 p.c. from New Brunswick. There was also a small tonnage from the Yukon. About 1,274,000 tons of coal were exported in 1948 and imports totalled 31,000,000 tons.

Spectacular developments in the new Leduc, Woodbend and Redwater fields in Alberta resulted in a 57 p.c. advance in Canada's crude oil output in 1948 as compared with 1947. The production of 12,286,660 barrels was the highest ever recorded. Alberta's share of this total was 89 p.c. while Saskatchewan accounted for almost 7 p.c., the Northwest Territories for 3 p.c. and Ontario for 1.4 p.c.

Output of natural gas increased 8 p.c. to 59,000,000 cubic feet valued at \$15,600,000. Alberta wells supplied 83 p.c. of the total quantity.

Other Non-Metallics.—New records were established for all structural materials. Cement production was up 19 p.c. from 1947 to 14,100,000 barrels, shipments of sand and gravel increased 13 p.c. to 69,000,000 tons, stone 5 p.c. to 11,700,000 tons, lime nearly 8 p.c. to 1,000,000 tons, and clay products 20 p.c. to \$17,600,000.

Asbestos production was far ahead of any previous year at 716,769 tons worth \$42,200,000, up 7 p.c. in quantity and 25 p.c. in value from 1947.

Gypsum also reached a new record at 3,216,809 tons valued at \$5,600,000, but barite dropped off to 95,747 tons at \$1,100,000.

Salt production at 741,261 tons worth \$4,800,000, was up 2 p.c. in quantity from 1947. About 56 p.c. of this tonnage was for use in the manufacture of chemicals. The new plant of the Alberta Salt Company, Limited, commenced operations in June.

Output of natural sodium sulphate totalled 153,698 tons at \$2,100,000 in 1948, representing a decline of 8 p.c. in quantity and an increase of 17 p.c. in value compared with 1947. A new plant at Lindbergh, Saskatchewan, has been in operation since June, 1948.

Mineral Production, by Kinds, 1947 and 1948

Item	1947		1948	
	Quantity	Value \$	Quantity	Value \$
METALLICS				
Bismuth..... lb.	284,372	560,213	240,242	480,484
Cadmium..... "	718,534	1,235,879	766,090	1,398,114
Calcium..... "	602,665	642,607	895,203	1,723,266
Cobalt..... "	572,673	875,644	1,544,852	2,029,178
Copper..... "	451,723,093	91,541,888	481,463,966	107,159,756
Gold..... fine oz.	3,070,221	107,457,735	3,529,608	123,536,280
Iron ore..... ton	1,919,366	9,313,201	1,337,244	7,487,611
Lead..... lb.	323,336,687	44,200,124	334,501,917	60,344,146
Nickel..... "	237,251,496	70,650,764	263,479,163	86,904,235
Palladium, rhodium, iridium, etc..... fine oz.	110,332	4,387,740	148,343	6,295,132
Platinum..... "	94,570	5,582,467	121,404	10,622,850
Selenium..... lb.	501,090	937,038	390,894	781,788
Silver..... fine oz.	12,504,018	9,002,893	16,109,982	12,082,487
Tin..... lb.	714,198	517,794	691,332	688,567
Zinc..... "	415,725,826	46,686,010	468,327,036	65,237,956
Other..... "	...	1,526,881	...	1,462,114
TOTALS, METALLICS.....	...	395,118,878	...	488,233,964
FUELS				
Coal..... ton	15,868,866	77,475,017	18,449,689	106,684,008
Natural gas..... M cu. ft.	52,656,567	13,429,558	58,603,269	15,632,507
Peat..... ton	95	950	85	850
Petroleum..... bbl.	7,692,492	19,575,682	12,286,660	37,418,895
TOTALS, FUELS.....	...	110,481,207	...	159,736,260
OTHER NON-METALLICS				
Asbestos..... ton	661,821	33,005,748	716,769	42,231,475
Barite..... "	128,675	1,380,753	95,747	1,073,380
Feldspar..... "	36,104	381,360	54,851	564,437
Fluorspar..... "	7,186	209,886	11,340	344,834
Graphite..... "	2,398	207,364	2,539	239,931
Gypsum..... "	2,496,984	4,734,853	3,216,809	5,548,245
Magnesian dolomite and brucite..... "	...	1,238,948	...	1,724,489
Mica..... lb.	8,318,755	200,903	7,902,303	219,948
Nepheline syenite..... ton	66,995	341,635	74,386	506,462
Peat moss..... "	80,018	2,279,821	89,800	2,767,878
Quartz..... "	1,836,428	1,796,612	2,017,262	2,082,573
Salt..... "	728,545	4,436,930	741,261	4,836,028
Sodium sulphate..... "	163,290	1,793,043	153,698	2,136,276
Sulphur..... "	221,781	1,822,867	229,463	1,836,358
Other..... "	...	862,382	...	1,039,081
TOTALS, OTHER NON-METALLICS.....	...	54,693,105	...	67,151,395



★Water Powers

The potential power available from the falls and rapids on the numerous rivers, large and small, which are distributed across Canada, constitutes one of the country's great natural resources. In most provinces precipitation and topography are favourable to power development.

Low-cost hydro-electric energy is fundamental to the industrial activities of Canada, and is the basis upon which several essential industries have been built. These include the pulp, paper and wood-products industries which absorb enormous amounts of hydraulic and hydro-electric power; mining, milling and refining of base and precious metals together with their fabrication; electro-chemical industries; and also lighter manufacturing such as food-processing and textile production. The wide distribution of hydro-electric power has contributed largely to the high standard of living in Canada by providing economical domestic service to homes and farms, a service that is being rapidly extended.

As an installation of hydraulic capacity averaging 30 p.c. in excess of available power, indicated by the ordinary six-month flow, has been found to be sound commercial practice, it is estimated that Canada's presently recorded water-power resources represent a feasible installation of more than 55,000,000 h.p. Thus the present total of installed capacity is only 21 p.c. of the possible turbine installation.

During 1949 the demand for hydro-electric energy continued to expand throughout Canada as a result of the high level of industrial activity and increased commercial, rural and domestic consumption. The output of primary power by central stations exceeded that for 1948, the previous high year, by nearly 15 p.c. and was well in excess of double the average amount for the pre-war period 1935-39. This high demand, in conjunction with deficient run-off on some rivers, caused a shortage of power in certain areas, particularly in southern Ontario where power restrictions went into effect in September. The completion of the larger plants now under construction or planned will be necessary before any reserve capacity becomes available.

Available and Developed Water Power, by Provinces, Dec. 31, 1949

Province or Territory	Available 24-Hour Power at 80 p.c. Efficiency		Turbine Installation
	At Ordinary Minimum Flow	At Ordinary Six-Month Flow	
	h.p.	h.p.	h.p.
Newfoundland.....	1,135,000	2,585,000	255,150
Prince Edward Island.....	3,000	5,300	2,617
Nova Scotia.....	20,800	128,300	145,384
New Brunswick.....	68,600	169,100	133,347
Quebec.....	8,459,000	13,064,000	6,135,737
Ontario.....	5,407,200	7,261,400	2,896,540
Manitoba.....	3,309,000	5,344,500	547,700
Saskatchewan.....	542,000	1,082,000	111,835
Alberta.....	507,800	1,258,000	106,560
British Columbia.....	7,023,000	10,998,000	1,234,269
Yukon and Northwest Territories.....	382,500	813,500	28,069
Canada.....	26,857,900	42,709,100	11,597,208

Provincial Distribution of Water Power.—The water powers of the *Maritime Provinces*, despite the lack of large rivers, constitute a valuable source of electric power, a considerable proportion of which has been developed. Although only tentative estimates of the water-power resources of *Newfoundland* are available, the new Province appreciably increases the total for Canada. On the Island, relatively heavy precipitation provides a high rate of run-off on the short rivers and, in Labrador, the Hamilton River is outstanding as a potential source of power.

Quebec ranks highest in available water-power resources, having over 30 p.c. of the total recorded for all Canada; it has made remarkable progress as its present installation of 6,135,737 h.p. represents nearly 53 p.c. of the total for Canada. The Saguenay River Shipshaw development of 1,200,000 h.p. and the St. Lawrence River Beauharnois Plant of 742,000 h.p. are the two largest in Canada. The Province of *Ontario* has extensive water-power resources and in total hydro-power developed is exceeded only by Quebec. The Hydro-Electric Power Commission of Ontario operates 57 generating stations with installations totalling nearly 2,000,000 h.p., the largest being the Niagara River Queenston Plant of 560,000 h.p.; a large amount of power is also purchased.

Manitoba has more water-power resources and has developed them to a greater extent than either of the other Prairie Provinces. Practically all of the developed sites centre on the Winnipeg River. These supply not only Winnipeg and its suburban areas but, through the transmission network of the Manitoba Power Commission, power is distributed to more than 200 municipalities and a large part of the rural areas of southern Manitoba where farm electrification is a primary objective. In *Saskatchewan* water-power development is confined to the northern mining districts. The southern portions of Saskatchewan and Alberta, which are lacking in water-power resources, have large fuel reserves. In *Alberta*, present developments are located in the Bow River Basin and serve Calgary and numerous other municipalities between the International Boundary and the area north of Edmonton. However, the larger part of the power resources of the Province is located north of, and remote from, the centres of population.

British Columbia, traversed by three distinct mountain ranges and with favourable climate and rainfall, ranks second among the provinces in available power resources and its hydraulic development is exceeded only by Quebec and Ontario. Present developments are practically all located in the southern part of the Province in the Fraser and Columbia River Basins, although resources are well distributed. In *Yukon* and the *Northwest Territories*, there are numerous rivers offering opportunities for power development, although relatively light precipitation and a prolonged winter season limit favourable sites to locations where adequate storage is available. Successful developments have been made for local mining purposes.

Hydro-Electric Construction during 1949.—The continued growth in demand for hydro-electric energy not only readily absorbed the additional power produced in 1949 but created a shortage in a number of districts during the peak-load autumn and winter period. This condition resulted in an accelerated program of hydro-electric development and the plants under advanced construction will have a capacity of about 1,500,000 h.p.; definite planning



A second source of electric power to that of the Yellowknife River became available to the mines and settlements of the remote Yellowknife district of the Northwest Territories with the opening of the Snare River project in October, 1948. The normal output of this Federal Government plant is 8,350 h.p. The Snare River, when fully developed, has a projected capacity of 30,000 h.p.

and preliminary construction covers additional sites and plant enlargements totalling about 650,000 h.p. and other long-range plans, including the St. Lawrence River, envisage the development of a further 3,000,000 h.p.

Ontario.—Although during 1949 the Hydro-Electric Power Commission of Ontario did not bring any new plants into operation, the Commission had several large developments under active construction. Good progress was made on its major project at Des Joachims on the Ottawa River above Pembroke; the main and the spillway dams were completed and the installation of five units of 60,000 h.p. each, for operation in the summer of 1950, was well up to schedule; the plant will have an ultimate capacity of 480,000 h.p. Active construction, with the main dam partially completed, was also under way at the Chenaux site on the Ottawa River about 10 miles north of Renfrew; this plant, with an ultimate capacity of 160,000 h.p., is expected to be in

partial operation early in 1951. Preliminary construction operations were proceeding at the La Cave site on the Ottawa River near Mattawa, for initial operation late in 1951; ultimate plans call for eight units of 34,000 h.p. each. On the Mississagi River, near Thessalon, the high dam at the Tunnel site was nearing completion and work on the powerhouse was under way; the plant, with two units of 29,000 h.p. each, is scheduled for 1950 operation. At the Pine Portage site on the Nipigon River, diversion of the river flow was completed and work on the main dam and powerhouse well advanced; two units of 40,000 h.p. each will be brought into operation in 1950, and provision is being made for two additional units when required.

Aside from the Commission's operations, the Great Lakes Power Company reports an increased capacity of 2,300 h.p. at its Upper Falls, Montreal River, plant due to raising of the dam during 1948. The Company is also installing a new unit of 22,000 h.p. in its plant on the Michipicoten River for operation in 1950.

Quebec.—The Shawinigan Water and Power Company, serving a large area in Quebec from generating plants and purchased power totalling 1,480,000 h.p., completed its new plant at Shawinigan Falls by bringing into operation the second and third units of 65,000 h.p. each. During 1949, the Company also made good progress on its 320,000-h.p. development at La Trenché Rapids on the St. Maurice River; the cofferdams in the main river have been completed, the river diverted through a by-pass channel, and work is proceeding on schedule on the main dam. Initial operation is planned for 1951.

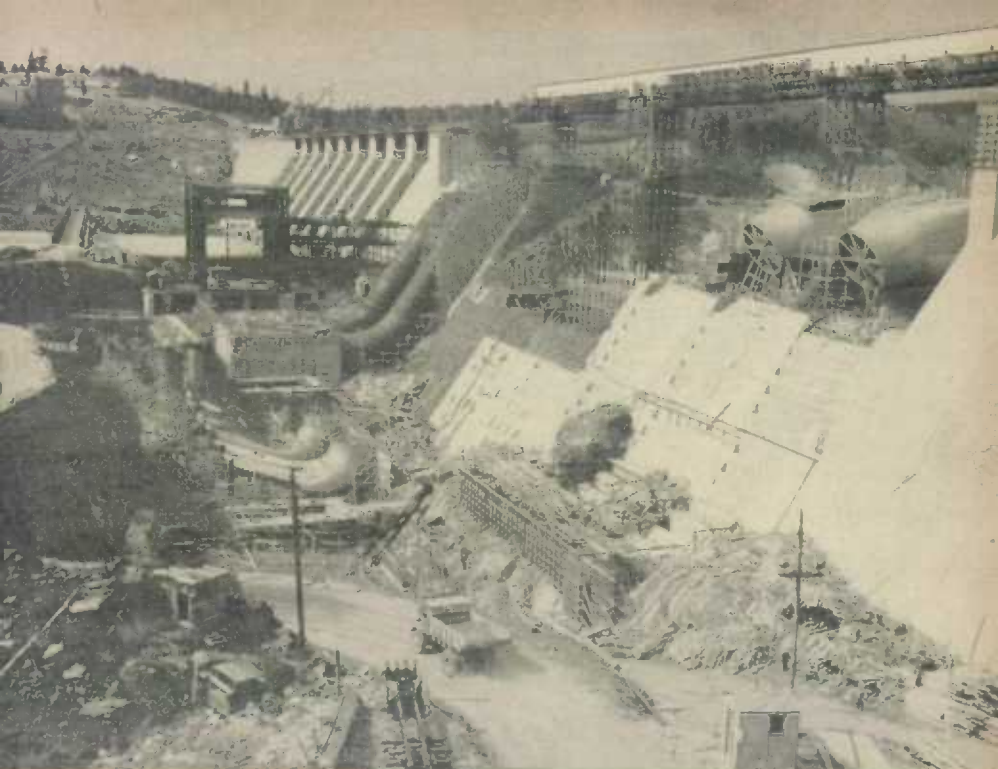
The Gatineau Power Company completed the building of a dam on the Rocher Fendu channel of the Ottawa River and in October brought into operation its new unit of 27,000 h.p. in the Bryson plant.

The Northern Quebec Power Company has completed raising the head on its plant on the Quinze River by 20 ft., thus allowing an increase of 10,000 h.p. in the capacity of its present plant. Work is also proceeding on the construction of a new powerhouse to contain initially one unit of 35,000 h.p., with provision for an additional similar unit.

The Quebec Hydro-Electric Commission, serving chiefly the city of Montreal and environs, was actively engaged in the construction, under contract, of its new powerhouse at Beauharnois, St. Lawrence River, which will have a capacity of 300,000 h.p., with partial operation scheduled for 1951; ultimately the plant may be increased to 600,000 h.p. As administrator for the Quebec Government's Rapid VII plant on the Ottawa River, the Commission completed the installation of a new unit of 16,000 h.p.

Other smaller additions to installed capacity in Quebec during 1949 include: town of Mont Laurier, 2,640 h.p. on the Lièvre River; town of Pembroke, Ont., 3,000 h.p. on Black River; town of Jonquière, 4,200 h.p. on Aux Sables River; Ogilvie Flour Mills, 3,200 h.p. on the Lachine Canal.

British Columbia.—The British Columbia Power Commission brought into operation the third and fourth units of 28,000 h.p. each in its John Hart Development, Campbell River, Vancouver Island; provision has been made for two additional units when required; the storage dam at Ladore Falls also was completed during 1949. Good progress was made at the Commission's project at Whatshan Lake, in central British Columbia, which will have an initial capacity of 30,000 h.p.; the plant will be located on the shore of Lower Arrow Lake and will be served by a two-mile tunnel.



The main dam at Des Joachims on the Ottawa River, showing the first pair of penstocks in position. Rapid progress is being made on this 480,000 h.p. development, where 2,500 men are employed.



The Pine Portage project on the Nipigon River will, when completed, supply an additional 160,000 h.p. to the important pulp and paper industries in that area. Two of its four units are scheduled to go into service in 1936.

On Bridge River, a tributary of the Fraser River, the British Columbia Electric Railway Company completed the installation of the second and third units of 62,000 h.p. each; ultimately, the plant may contain ten units; the project involves a storage dam upstream at Lajoie Falls which has been virtually completed.

The Consolidated Mining and Smelting Company brought into operation a third unit of 37,000 h.p. in its Brilliant plant on the Kootenay River. The city of Nelson also put on load a new unit of 6,750 h.p. in its plant at Upper Bonnington Falls, Kootenay River.

Active investigations were carried on throughout the year by the Aluminum Company of Canada in connection with possible high-head sites of large capacity to be served by the diversion of the head waters of the Fraser River through tunnels to the coast.

Prairie Provinces.—No new developments were made in Alberta, but Calgary Power, Limited, proceeded with a development of about 65,000 h.p. at Spray Lake in the upper Bow River basin; initial production is planned for the late autumn of 1950.

In Manitoba, the Winnipeg Electric Company brought into operation the fourth unit in its Seven Sisters plant on the Winnipeg River. The raising of the plant head to its ultimate height of 66 feet was partially completed,



Linemen patrolling the thousands of miles of transmission lines throughout Ontario may soon be discharging a good portion of their normally rigorous duties from the 'plexiglass' cockpit of a helicopter. The first inspection covered 650 miles of line in 18½ hours flying time; a corresponding inspection from the ground would have required 26 men working 600 man-hours.

and late in 1949 the four units were operating at a 63-ft. head with a capacity of approximately 35,000 h.p. each, the total increase in plant capacity during the year being 44,000 h.p. Unit No. 5 is under installation for operation early in 1950. The Government of Manitoba has under active construction a development of 114,000 h.p. at Pine Falls on the Winnipeg River; initial operation is scheduled for 1951.

Nova Scotia.—The Nova Scotia Light and Power Company completed the addition of 4,500 h.p. to its plant on Black River. The Nova Scotia Power Commission has made good progress in its development of 12,000 h.p. on the Mersey River which is expected to be in operation in 1950.

Central Electric Stations

Central electric stations are companies, municipalities or individuals selling or distributing electric energy generated by themselves or purchased for resale. They are divided into two classes according to ownership: (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 87 p.c. of the total capacity of hydraulic installations in all industries in Canada and the generators driven by this hydraulic equipment generate 97 p.c. of the total output of all central electric stations. The fuel stations number 297 and 44 hydraulic stations have thermal auxiliary equipment.

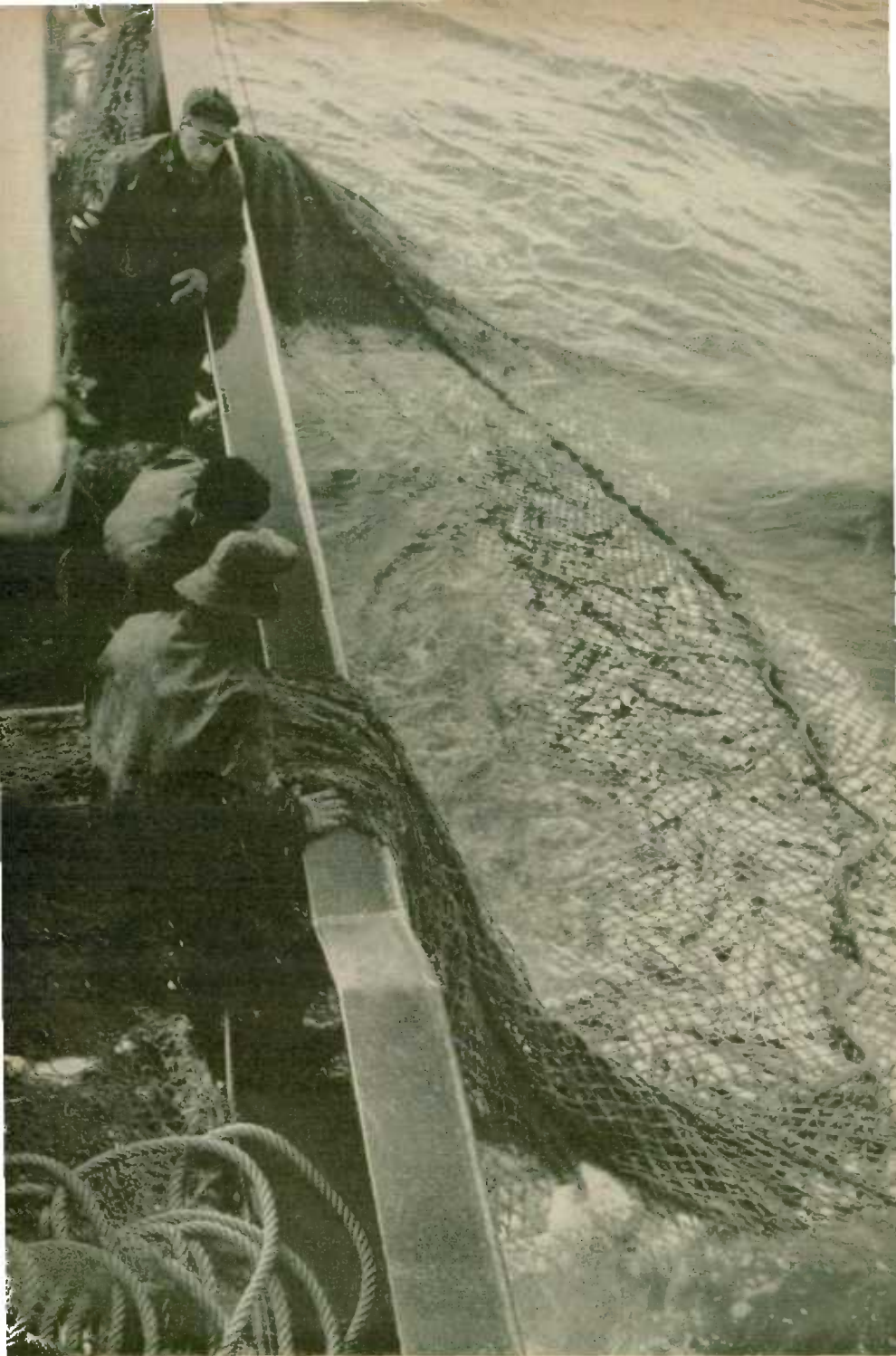
Statistics for the production of electricity by central electric stations were first compiled in 1919. From the 5,500,000,000 kwh. produced in that year the output doubled by 1925, and reached 18,000,000,000 kwh. by 1930. After a period of decline in the early 1930's, there was an almost continuous succession of increases and in 1948 the average monthly output was eight times what it had been in 1919, despite low water in many localities.

Average Monthly Output of Central Electric Stations, 1929-49

Year	From Water	From Fuel	Total	Year	From Water	From Fuel	Total
	'000 kwh.	'000 kwh.	'000 kwh.		'000 kwh.	'000 kwh.	'000 kwh.
1929.....	1,441,203	27,622	1,468,825	1944.....	3,290,538	81,637	3,372,175
1932.....	1,296,360	25,845	1,322,205	1945.....	3,262,771	78,946	3,341,717
1939.....	2,321,815	40,811	2,362,626	1946.....	3,382,602	84,374	3,466,976
1941.....	2,731,880	55,233	2,787,113	1947.....	3,657,843	91,021	3,748,864
1942.....	3,037,823	62,109	3,099,932	1948.....	3,613,200	108,800	3,722,000
1943.....	3,299,998	64,807	3,364,805	1949.....	3,757,024	132,411	3,889,435

Revenues of central stations in 1947 amounted to \$238,929,627 and 2,246,253 domestic customers were served, representing approximately two-thirds of all families in Canada, both urban and rural.

Electric energy is exported from Canada only under licence and an export tax of 0.03 cent per kwh. is levied. Exports showed a steady increase from 1936 to 1945 (amounting to 2,646,435,000 kwh. in 1945) but declined sharply to 1,743,107,000 kwh. in 1948; increasing domestic demand and low water levels left less available for export.



"Grand Bank" fishing is carried on from trawlers or draggers throughout the entire year. The vessels are away from home ports for days or weeks at a time, returning periodically to hand over the catch and obtain supplies. The catch is mostly cod.

★ Fisheries

With the entry of Newfoundland into Confederation, Canada, one of the main fish-producing countries of the world, becomes the leading fish-exporting country in terms of dollar value. Norway exports larger quantities of fish, but Canada, because of her higher-priced products, such as Atlantic lobster and Pacific salmon, stands in first place by value. Canadian fishery products are marketed in many countries.

Canada has ready access to the world's most extensive fishing grounds. Near the Atlantic Coast are the rich 'banks', a submerged range of hills stretching northeastward for about 1,000 miles from Cape Cod to the Grand Banks off the Newfoundland Coast. Fishing craft from Britain, France, Spain and Portugal have for centuries reaped bountiful harvests from the sea on these grounds.

While offshore or bank fisheries are carried on from both Pacific and Atlantic ports, the term is more properly applied to the Atlantic fleet engaged in taking cod, haddock, halibut and similar groundfish. The halibut fishing grounds of the Pacific are extensions of the continental shelf and do not run more than 60 or 70 miles from land.

In 1949 production of the Canadian sea fisheries decreased in both quantity and value as compared with 1948. The total value of landings, excluding those of Newfoundland, was estimated at \$57,000,000 or \$6,000,000 lower than in 1948. This decrease was due to smaller landings on both coasts and to a slight drop in price for a number of the important species of fish. Total landings were about 1,200,000,000 lb. in 1949 compared with 1,285,500,000 lb. in 1948. Significant decreases were shown in the 1949 catches of sardines and of cod and related species on the east coast, and of herring on both coasts.

The inland fisheries generally yielded larger catches in 1949, but some of the more valuable species dropped in price.

Atlantic Coast.—On the east coast, excluding Newfoundland, the production of salted and dried fish (cod and related species) has increased from year to year since 1945. There are indications that 1949 production will be well above that of 1948. Fresh and frozen products, on the other hand, were at a low level in 1949. The total production of fresh and frozen fillets from the above species is estimated at 40,000,000 lb., compared with about 46,000,000 lb. in 1948.

The production of smoked products from cod and haddock was slightly lower than the previous year's estimate of 10,500,000 lb. The pack of canned fish from these species (chicken haddie, flaked fish, etc.) was 43,800 cases, compared with 92,000 cases in 1948.

The catch of lobsters on Canada's east coast reached about 37,150,000 lb., which was 1,300,000 lb. more than in 1948; landed value, at \$10,000,000, was slightly higher. The total quantity canned was 63,000 cases (96-6 oz.)

and, in addition, 1,385,000 lb. of chilled and frozen meat were packed. The amount marketed alive should thus be in the vicinity of 20,725,000 lb. compared with 21,500,000 lb. in 1948.

The catch of mature herring at about 120,500,000 lb. fell short of the 1948 catch by 6,500,000 lb. However, there was an increase in 1949 in the production of pickled, vinegar-cured and smoked products from herring. The amount canned, excluding kippered snacks, was 8,850 cases (48·13 oz.), compared with 93,500 cases in 1948; however, the production of kippered snacks is indicated to be higher in 1949.

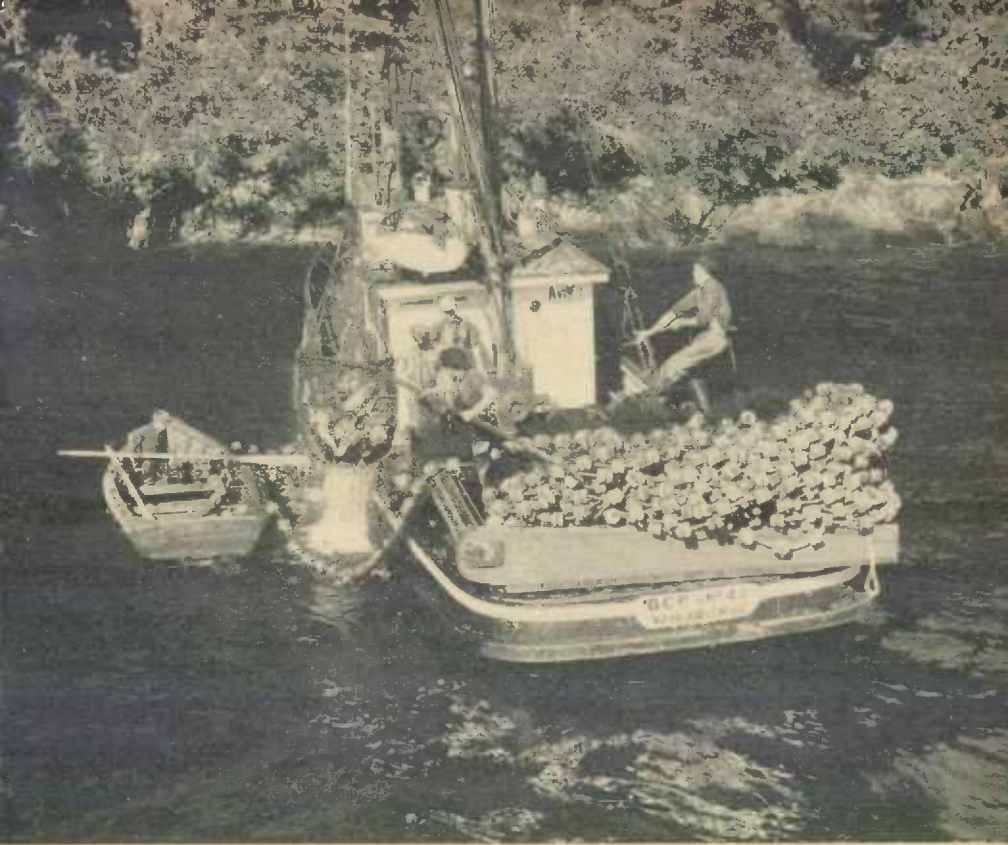
The sardine fishery was rather poor in 1949. The total catch was only 65,000,000 lb., approximately 70 p.c. of the 1948 catch. The total pack of canned sardines was about 595,000 cases, the lowest in recent years.

Newfoundland.—The Newfoundland fisheries during the 1949 season have produced at satisfactory levels. The salted codfish production, which is the backbone of the fisheries industry in that Province, was at a higher level than in 1948 and was estimated at 108,500,000 lb. However, the herring fishery in the 1948-49 winter season was rather disappointing.

The Newfoundland production of frozen fillets was lower than in 1948; while there was an important increase in the production of haddock and rosefish fillets, that of codfish fillets was low. The total production of fillets in 1949 is estimated at about 24,000,000 lb.



Cod fishermen bait their hooks. The value of the cod fishery off the east coast of Canada amounts to about \$15,000,000 a year.



Salmon fishing off the British Columbia coast. With net and troll-line, the world's largest salmon fleet provides the raw material for 20 canneries on a 24-hour production basis.

Pacific Coast.—The landings of salmon on the Pacific Coast reached 143,900,000 lb. in 1949 compared with 145,200,000 lb. in the previous year. The landed value at \$16,000,000 for the year was \$4,000,000 less than in 1948, due to a recession in price and to heavier landings of lower-priced salmon. The total pack of canned salmon in 1949 was 1,434,000 cases. Most significant compared with the previous year was the increase in the pack of pink salmon and the decrease in the pack of chum salmon.

The herring fishery on the West Coast operated at an exceptionally high level in the 1948-49 fall and winter season and the total catch reached 349,400,000 lb. The main products were meal and oil, 31,706 tons of the former and 12,564 tons of the latter being produced.

The catch of halibut, at 17,600,000 lb., was 1,200,000 lb. less than in 1948, though the landed value of this catch at \$2,800,000 was only \$70,000 below that of the previous year.

Inland Fisheries.—Canada's important inland species are lake trout, pickerel, whitefish, tullibee, saugers and pike. These species account for an annual catch worth about \$15,000,000; about half the production comes from

the Great Lakes of Ontario, one-quarter from the lakes of Manitoba, and the balance from Quebec, New Brunswick, Saskatchewan, Alberta, Yukon and the Northwest Territories.

The catch in 1949 compared very favourably with that of the previous year. Exports of fresh-water fish were valued at \$14,200,000 as against \$13,700,000 in the previous year, the increase being accounted for by a 30 p.c. increase in exports of the filleted form. These figures are significant because about 75 p.c. of Canadian fresh-water fish production is exported. During the year some species experienced a significant drop in price.

Marketing.---In general, from the standpoint of both volume and value, sales of the 1949 production of fresh and frozen fisheries products were maintained at a very satisfactory level in the domestic market, and at a reasonably satisfactory level in the United States considering the stock and price adjustments that took place in that market. With few exceptions, price fluctuations on the domestic market followed the usual seasonal pattern reflecting scarcity or relative abundance rather than any marked general downward trend.

Total exports of fish and fish products for 1949 amounted to about \$100,000,000 including approximately \$15,000,000 attributable to exports from Newfoundland since April 1. Exports for the other provinces totalled about \$85,000,000 in 1949 compared with \$89,800,000 in 1948. The decrease was more than accounted for in the first two months of the year, when nothing comparable to the relief shipments of 1948 moved out: from March on, total exports held up very well.

For Newfoundland alone, exports in 1949 amounted to over \$21,000,000 for the calendar year. Exports of frozen fillets were slightly lower than in 1948. The small 1948 stocks of bank and shore salted cod were cleaned out, but sales of the higher production of the new season were slower. Southern European markets absorb 40 p.c. of Newfoundland salt-cod sales with the result that exports from that Province depend on the ability of those countries to pay for their supplies in dollars.

Consumption of fish in Canada appears to be increasing. For 1948, the per capita figure was 12.2 lb. (estimate) as compared with 11.5 lb. per capita consumed in 1947.



*Sardine canning,
Black's Harbour,
N.B.*



↑
Trout-rearing station at South St. Marys,
Ont., part of the Ontario Govern-
ment's effort to keep lakes and streams
stocked with fish.

→
Feeding troutlings in an outdoor pond.



Government Co-operation. The Fisheries Prices Support Board, established to assist Canada's fisheries to achieve an orderly reconversion from wartime abnormality to the operating conditions of peace, took direct action in 1949 to help east coast canners and Manitoba lake fishermen. The Board maintains a field staff operating in all major fishing areas to ascertain background and current information on levels of income to fishermen, costs of fishing operations and other factors pertaining to the well-being of fishermen in relation to the Board's responsibility.

The Fisheries Research Board of Canada, one of the world's largest and most effective fisheries research institutions, has for 50 years carried on scientific investigation directed toward the improvement and perpetuation of Canadian fisheries. Its work in the biological, technological and oceanographic fields has been responsible in no small measure for promoting the interests of the fisheries of Canada.

Statistics of Production

During the twentieth century, the commercial fisheries of Canada have shown the effects of wars and depressions, both in numbers of persons employed and in values of equipment and products. With the general rising trend of prices, values have increased, notably since the beginning of the Second World War. The number of fishermen declined from 82,871 in 1905 to 53,517 in 1923, and rose again to 73,514 in 1946; the 1947 figure was 65,419. Total employment, including the processing industry, reached a peak of 102,182 in 1915, dropped to 68,964 by 1923, and rose to another peak, of 92,910, in 1946; for 1947 the total number employed was 84,050.

The quantity of fish and shellfish landed, for which the earliest available figure is 921,500,000 lb. in 1918, has since fluctuated between 828,900,000 lb. recorded in 1921, and 1,337,200,000 lb. in 1945; for 1947 the total landed weight was 1,220,800,000 lb., 97,800,000 lb. lower than the 1946 figure. The market value of all fishery products, reported at \$21,600,000 in 1900, reached \$60,300,000 in 1918; thereafter it varied to as low as \$25,900,000 in 1932, but did not again exceed \$57,000,000 until it rose to \$62,300,000 in 1941. Each year since then has recorded an increase, until in 1947 the total value reached \$123,900,000, about 2 p.c. higher than the 1946 figure of \$121,100,000.

The value of fishing craft and equipment increased from \$5,700,000 in 1900 to \$31,400,000 in 1919; from then until 1943 it fluctuated between \$23,500,000 (1924) and \$34,000,000 (1929); since 1943 it has risen, by larger steps each year, to \$47,400,000 in 1946 and \$58,600,000 in 1947.

The following table shows the total market value of production, by provinces, for 1947, compared with average figures for the five-year period 1935-39 and percentages of these to the total values for Canada. The chief kinds of fish for each province and territory are also shown, with the total market values for Canada for each kind.



Chicken haddie canning at Souris, P.E.I. The fish is packed into parchment-lined cans and weighed before proceeding to the vacuum and sealing machines.

**Market Values of Fish Production, by Provinces, 1947, and Averages
1935-39, together with Chief Kinds of Fish, by Provinces, 1947**

Province or Territory	Market Values of Production		Percentages of Total Values		Values in 1947 of Chief Commercial Fishes		
	Average 1935-39	1947	Average 1935-39	1947	Kind	Province or Territory	Canada
	\$'000	\$'000	p.c.	p.c.		\$'000	\$'000
Prince Edward Island..	921	2,897	2.4	2.4	Lobsters..	1,156	10,751
					Cod.....	441	14,467
					Hake.....	323	1,268
Nova Scotia.....	8,709	26,659	22.6	21.5	Cod.....	9,665	14,467
					Lobsters..	5,535	10,751
					Haddock..	2,424	2,479
New Brunswick.....	4,375	17,132	11.3	13.8	Sardines..	6,610	6,617
					Lobsters..	3,611	10,751
					Herring...	2,311	17,951
Quebec.....	1,983	5,317	5.1	4.3	Cod.....	2,963	14,467
					Herring...	593	17,951
					Lobsters..	449	10,751
Ontario.....	3,208	5,404	8.3	4.4	Whitefish.	1,441	3,562
					Herring...	941	17,951
					Pickarel..	753	3,519
Manitoba.....	1,638	5,329	4.2	4.3	Pickarel..	2,525	3,519
					Whitefish.	853	3,562
					Saugers..	845	880
Saskatchewan.....	419	1,171	1.1	0.9	Whitefish.	571	3,562
					Trout....	301	1,231
					Pickarel..	139	3,519
Alberta.....	378	857	1.0	0.7	Whitefish.	393	3,562
					Tullibee..	280	785
					Pickarel..	81	3,519
British Columbia.....	16,986	58,596	44.0	47.3	Salmon...	35,520	36,278
					Herring...	12,100	17,951
					Halibut...	5,944	6,531
Yukon.....	11	7	--	--	Salmon...	4	36,278
					Whitefish.	3	3,562
Northwest Territories	1	531	...	0.4	Whitefish.	290	3,562
					Trout....	224	1,231
Canada.....	38,628	123,900	100.0	100.0			

¹ Not collected before 1945.

Numbers, Employment and Production of Fish-Processing Establishments, 1937-47

Year	Establishments		Employees		Value of Production		P.C. of Total Value of Fish Marketed Fresh
	No.	P.C. of 1939 Figure	No.	P.C. of 1939 Figure	\$'000	P.C. of 1939 Figure	
1937.....	597	114.1	14,044	94.8	26,089	90.5	27
1939.....	523	100.0	14,814	100.0	28,817	100.0	28
1941.....	463	88.5	15,842	106.9	48,176	167.2	24
1943.....	523	100.0	15,899	107.3	64,805	224.9	33
1945.....	540	103.3	17,501	118.1	93,545	324.6	41
1946.....	586	112.0	19,396	130.9	100,124	347.4	38
1947.....	594	113.6	18,631	125.8	105,206	365.1	33



★ Furs

The fur trade was Canada's first industry and remained so during the early years of exploration and settlement. It was the demand for furs from Europe and the resulting competition and rivalries among the traders that sent the explorers farther and farther into the wilderness opening up new districts that eventually lured the settlers. As civilization advanced, other industries grew and the fur trade inevitably became relatively less and less important until to-day it is a minor item on the Canadian production record. Nevertheless, Canada is still one of the great natural fur preserves of the world. In her vast northern regions trapping is still the means of livelihood for many of the inhabitants—Indian, half-breed and white man alike. Each year about 7,000,000 pelts are taken, 90 p.c. of them wild furs.

The importance of the preservation of this great natural resource has been recognized by the Federal and Provincial Governments, and measures have been taken to control the catch by prohibition, close seasons and enforcement of trapping regulations. All provinces and territories license individual trappers, trap lines or trapping areas. In Northern Canada, where trappers are widely scattered over vast areas, the enforcement of such regulations is difficult, but through increased staffs of game officials, better education of the trappers in conservation practices and more complete information concerning the areas involved, a continuous improvement in this line is evident. Scientific studies, also, have revealed detailed information which is of great assistance in conserving or restoring to certain areas valuable species of wildlife that formerly abounded there. Thus conditions for the production of beaver and muskrat are readily improved through rehabilitation of the marshes and water areas that constitute their homes.

The total number of pelts taken, wild and from fur farms, in each of the past ten years, is shown in the following table.

Numbers and Values of Pelts Taken, Years Ended June 30, 1939-48

Year Ended June 30	Pelts		P.C. of Value Sold from Fur Farms	Year Ended June 30	Pelts		P.C. of Value Sold from Fur Farms
	Number	Value			Number	Value	
		\$				\$	
1939.....	6,492,222	14,286,937	40	1944.....	6,324,240	33,147,392	28
1940.....	9,620,695	16,668,348	31	1945.....	6,994,686	31,001,456	31
1941.....	7,257,337	21,123,161	27	1946.....	7,593,416	43,870,541	30
1942.....	19,561,024	24,859,869	19	1947.....	7,486,914	26,349,997	37
1943.....	7,418,971	28,508,035	24	1948.....	7,952,146	32,232,992	37

Ontario leads the provinces in value of fur production, having accounted for 25 p.c. of the total in the year ended June 30, 1948. Manitoba produced 19 p.c. of the total, Alberta 16.5 p.c. and Saskatchewan and Quebec each 11 p.c. The numbers of pelts taken in both Alberta and Manitoba were higher than in Ontario, but in those provinces muskrat and squirrel, which are lower-priced furs, made up the major portion of the total while in Ontario the more valuable mink, beaver and fox pelts brought the total value to a much higher level.

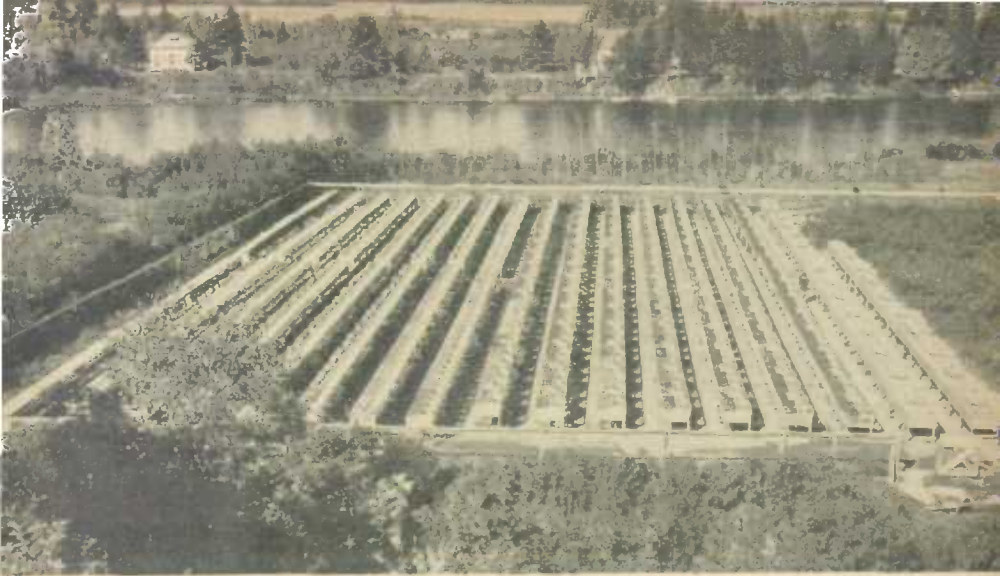
**Numbers and Values of Pelts Taken, by Provinces, Years Ended
June 30, 1947 and 1948**

Province or Territory	1947			1948		
	Pelts	Value	P.C. of Total	Pelts	Value	P.C. of Total
	No.	\$		No.	\$	
Prince Edward Island...	35,168	658,962	2.5	40,603	568,715	1.8
Nova Scotia.....	160,935	716,009	2.7	137,248	622,617	1.9
New Brunswick.....	66,113	834,641	3.2	67,071	453,159	1.4
Quebec.....	511,485	3,913,915	14.8	437,459	3,458,928	10.7
Ontario.....	1,142,490	7,005,904	26.6	1,188,531	8,132,455	25.2
Manitoba.....	1,348,730	3,099,159	11.8	1,491,638	6,105,926	19.0
Saskatchewan.....	1,086,464	2,303,554	8.7	1,181,662	3,500,943	10.9
Alberta.....	1,837,653	3,738,788	14.2	2,174,744	5,313,956	16.5
British Columbia.....	751,060	2,047,135	7.8	619,543	1,973,874	6.1
Yukon.....	58,777	373,176	1.4	131,227	230,117	0.7
Northwest Territories..	488,039	1,658,754	6.3	482,420	1,872,302	5.8
Canada.....	7,486,914	26,349,997	100.0	7,952,146	32,232,992	100.0

Few industries are subject to more violent fluctuations than the fur industry. Prices of pelts rise and fall like stocks and bonds, for not only must the cycles of animal productivity be reckoned with but also the vagaries of Dame Fashion. Red, black, silver, cross and then platinum fox and other long-haired furs have had their day, but recently the short-haired furs have become more popular. In the 1947-48 season mink skins contributed the highest amount to the total value, followed by muskrat, beaver, fox pelts of all types, squirrel and ermine pelts. The increase in total value as compared with 1946-47 was partly due to higher average prices for beaver, ermine, muskrat, and squirrel skins and partly to increases in the numbers of beaver, mink and muskrat pelts taken. Beaver pelts increased by 8,000, standard mink by 184,000, mutation mink by 28,000 and muskrat by 773,000. The average price of beaver rose from \$29.46 to \$32.31, ermine from \$1.61 to \$2.27, muskrat from \$1.94 to \$2.67 and squirrel from 44 cents to 62 cents. The prices of all types of fox pelts, except for blue fox, were lower than in 1946.



*Chipewyan
Indian woman
stretching a
beaver skin
on a frame
made of wil-
low.*



A mink farm near Chicoutimi, Que.

Fur Farming

Scientific breeding has revolutionized the fur industry. Not only has it stabilized business for the fur farmer, but it has brought new glamorous furs into existence. Blond, pure white and silverblu mink and many colour phases of fox now grace the shoulders of fashionable women.

Fur farming is carried on in all provinces of Canada. Of the 6,147 farms operating in the calendar year 1947, 1,374 were in Quebec, 1,425 in Ontario and 940 in Alberta. The recent decline in the popularity of long-haired fur resulted in a decrease in 1947 of 996 in the number of farms raising foxes, while the number of mink farms increased by 178 in the same year. Of course both mink and fox, as well as other fur animals, are in many cases raised on the same farm and an increase in the saleability of one type of fur means a change-over to production of that type. In 1947 there were 285,128 standard and mutation mink valued at \$10,311,507 on 3,757 farms, and 64,524 foxes of all types valued at \$2,171,323 on 2,733 farms. All other types of animals raised in captivity, including chinchilla, coyote, fisher, fitch, lynx, marten, nutria, raccoon and skunk, numbered only 5,016.

In 1947, 757,484 pelts valued at \$11,717,496 were sold from fur farms. This was an increase of almost 120 p.c. in number and 73 p.c. in value over 1946 sales. Average prices of all pelts, except fitch and raccoon, sold from fur farms were lower than in 1946.

The capital value of fur farms in Canada in 1947 for land and buildings was \$12,345,274 and for fur animals \$14,115,949, a total capital of \$26,461,223.

A platinum (silverblu) mink.





Canadian girls wearing Canadian furs. Scientific breeding and improved processing techniques have brought new glamour to fur garments.

Fur Processing

In 1947 the production of fur manufacturing establishments was valued at \$57,541,628. There were 616 establishments employing over 6,000 persons and paying out \$11,406,564 in salaries and wages. Over 70 p.c. of their production was women's coats. The peak year for fur prices in Canada was 1946. Since then, although the price of pelts has dropped, in most lines the price of the finished garment has not diminished to the same extent. One reason is the high cost of labour. The lowest-paid fur workers in the larger centres earn from \$30 to \$35 for a 40-hour week, and cutters, if they are good, may earn from \$80 to \$120 a week.

There are also in Canada 24 fur-dressing and dyeing establishments which paid out \$2,353,951 in salaries and wages to 1,359 employees in 1947.

Fur Trade

At the present time the United Kingdom and the United States are Canada's best customers for fur pelts, although Canadian furs have a world-wide distribution. Montreal is the leading fur market in Canada, but auction sales are also held at Vancouver, Edmonton, Regina and Winnipeg.

The Canadian fur trade, both exports and imports, is chiefly in undressed furs; the value of dressed and manufactured furs going out of Canada or coming in make up a comparatively small portion of the total. A good part of the exports consists, of course, of those furs which Canada produces in greatest

abundance, mink being the most valuable followed by beaver, muskrat and fox. On the other hand, such furs as Persian lamb, certain types of muskrat, rabbit and squirrel, opossum and raccoon, which are not produced to any extent in Canada, make up the major portion of the imports.

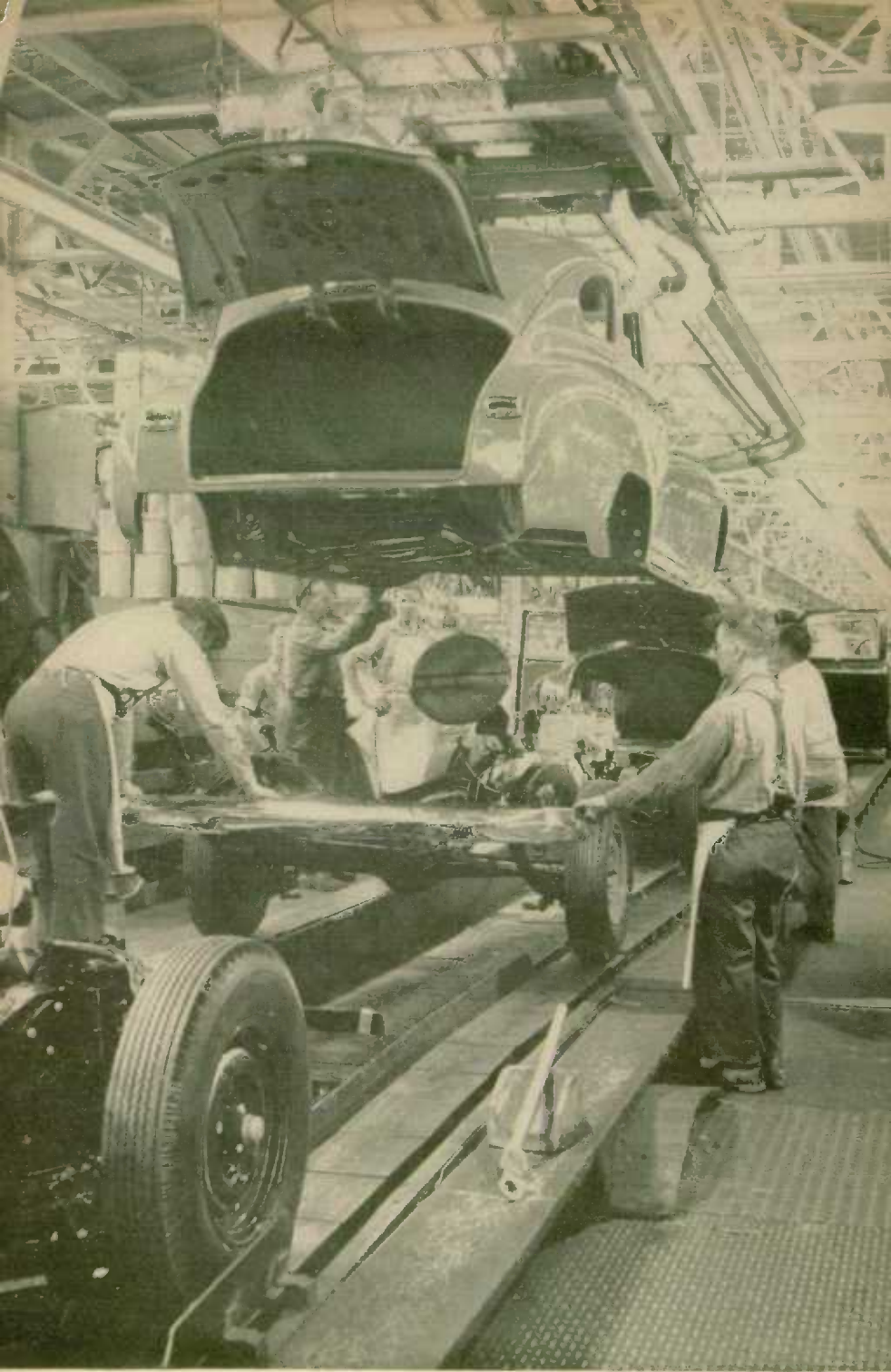
Exports and Imports of Raw and Dressed Furs, 1939-48

Year	Exports ¹			Imports		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	\$	\$	\$	\$	\$	\$
1939.....	7,054,745	6,772,641	14,568,986	1,018,417	4,455,938	7,133,052
1940.....	3,306,271	12,187,096	16,176,075	920,528	6,813,080	8,885,540
1941.....	430,428	14,883,751	16,159,033	1,970,910	4,112,345	9,120,337
1942.....	156,586	16,869,153	17,976,615	945,360	3,306,214	6,448,861
1943.....	66,844	25,086,912	26,448,522	496,578	4,923,632	8,613,879
1944.....	28,321	25,748,651	27,029,329	250,280	6,832,775	11,434,257
1945.....	1,363,727	26,755,604	29,572,474	262,775	9,078,294	21,205,173
1946.....	10,842,086	19,679,471	32,291,425	765,577	14,764,115	27,291,573
1947.....	7,378,628	20,342,001	29,047,741	697,737	18,586,408	22,451,123
1948.....	7,965,968	15,615,058	24,117,782	437,805	21,153,883	24,567,786

¹ Canadian produce only.

Packing fox pelts for shipment.





Car body is dropped on the chassis. Close-coupled scheduling is required to ensure the arrival on the four-mile long assembly line of the right part at the right time.

Secondary Production

★ Manufactures

TO-DAY, Canada ranks as an important manufacturing country of the world, and in the export of a number of manufactured products holds a dominant position.

The forward movement in the development of Canadian manufactures has been the result of three great influences: the opening of the west at the beginning of the present century, which greatly increased the demand for manufactured goods of all kinds, especially construction materials; the First World War which left a permanent imprint upon the variety and efficiency of Canadian plants; and the Second World War with its insatiable demands for food and manufactured materials of all sorts.

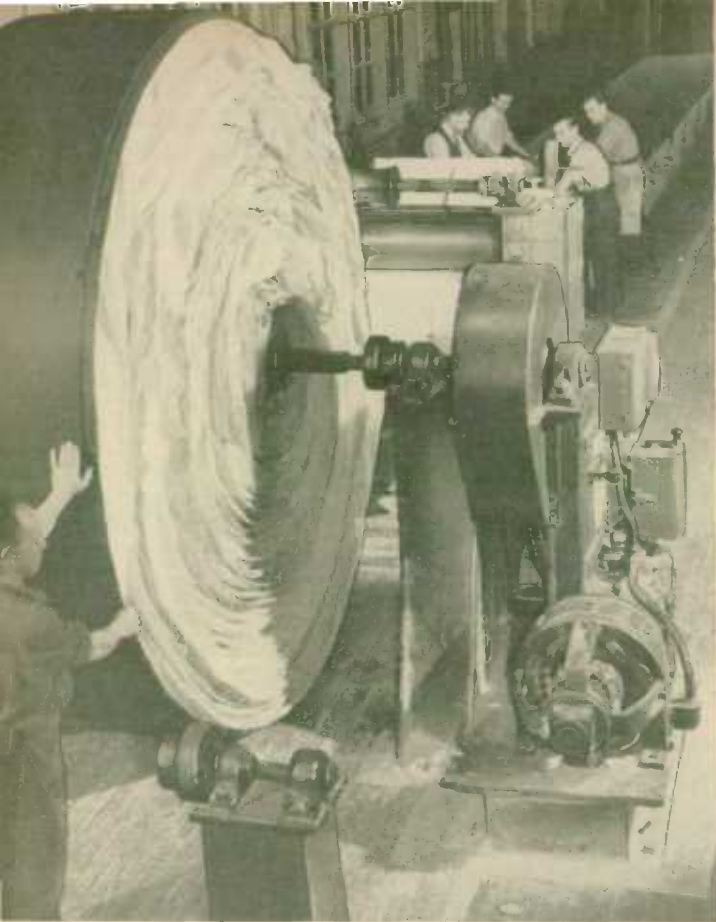
More especially during the Second World War the situation created as a result of Canada's strategic position as a source of food and armaments had far-reaching effects on the magnitude and diversification of Canadian manufacturing production, with the result that Canada, with greatly increased skills and plant capacity, has now entered a new era in manufacturing development.

Statistics of Manufactures, 1870-1948

Year	Establishments	Capital	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	\$'000	No.	\$'000	\$'000	\$'000	\$'000
1870.....	41,259	77,964	187,942	40,851	124,908	96,710	221,618
1880.....	49,722	165,303	254,935	59,429	179,919	129,757	309,676
1890 ¹	75,964	353,213	369,595	100,415	250,750	219,089	469,848
1900 ²	14,650	446,916	339,173	113,249	266,528	214,526	481,053
1910 ³	19,218	1,247,584	515,203	241,008	601,509	564,467	1,165,976
1920 ⁴	22,157	2,914,519	591,753	711,080	2,083,580	1,609,169	3,692,748
1929.....	22,216	4,004,892	666,531	777,291	2,029,671	1,755,387 ⁵	3,883,446
1933.....	23,780	3,279,260	468,658	436,248	967,789	919,671	1,954,076
1937.....	24,834	3,465,228	660,451	721,727	2,006,927	1,508,925	3,625,460
1939.....	24,805	3,647,024	658,114	737,811	1,836,159	1,531,052	3,474,784
1940.....	25,513	4,095,717	762,244	920,873	2,449,722	1,942,471	4,529,173
1941.....	26,293	4,905,504	961,178	1,264,863	3,296,547	2,605,120	6,076,308
1942.....	27,862	5,488,786	1,152,091	1,682,805	4,037,103	3,309,974	7,553,795
1943.....	27,652	6,317,167	1,241,068	1,987,292	4,690,493	3,816,414	8,732,861
1944.....	28,483	..	1,222,882	2,029,621	4,832,333	4,015,776	9,075,693
1945.....	29,050	..	1,119,372	1,845,773	4,473,669	3,564,316	8,250,369
1946.....	31,249	..	1,058,156	1,740,687	4,358,234	3,467,004	8,035,692
1947.....	32,734	..	1,131,750	2,085,926	5,384,280	4,292,056	10,081,027
1948.....	..	..	1,162,000 ⁶	2,397,000 ⁶	6,430,000 ⁶	4,956,000 ⁶	11,800,888 ⁶

¹ From 1870 to 1890 and from 1920 to 1947 the figures include all establishments irrespective of the number of employees but exclude construction and custom and repair work.

² Includes all establishments employing five hands or over. ³ For and since 1929 the figures for the net value of production represent the gross value less the cost of materials, fuel and electricity. Prior to this only the cost of materials is deducted. ⁴ Estimate.



Applying rubber face to a 1,200-ft. belt. The fabric between the layers of belt on the winder prevents the uncured rubber from sticking.

The estimated value of manufactured products in 1948 reached the record total of \$11,800,887,000 as compared with a value of only \$3,474,784,000 in 1939. Although the record is not so impressive in terms of actual physical output, the expansion of Canadian manufacturing production since 1939, as represented by employment which more closely reflects changes in the physical volume of production, is still phenomenal. The number of employees stood at 1,162,000 in 1948, representing an increase of 77 p.c. over 1939; the 1948 figure was only about 6 p.c. lower than the record number employed in 1943 when Canada was engaged in full-scale war production.

Geographical Distribution.—Ontario with about 49 p.c. of the total, ranks as the premier manufacturing province of Canada. This position has been fairly uniformly maintained during the past 70 years. In spite of the rapid industrial development in Quebec, British Columbia and Manitoba in recent years, Ontario is maintaining a manufacturing production roughly equal to that of the remainder of Canada. The geographic position of Ontario on the Great Lakes waterway system, by means of which the iron ore of Minnesota and the coal of Pennsylvania are readily accessible; the wide range of natural resources of forests, minerals, water powers, and agriculture; a large population and excellent water and rail transportation facilities to

other parts of the country; have all encouraged industrial development. Other factors have been proximity to one of the most densely populated sections of the United States and the establishment within the Province of branch factories of United States industries, as in automobile manufacturing. Ontario also has the greatest diversification of manufacturing production of any province. Outstanding among the industries in which this Province is pre-eminent are those of automobiles, agricultural implements, starch, bicycles and carpet manufacture which are carried on practically in this Province alone. Aside from these, Ontario firms contribute over 50 p.c. of the Canadian total in the manufacture of: abrasives; miscellaneous non-ferrous metal products; leather tanneries; soap and washing compounds; rubber goods; cordage, rope and twine; clay products from imported clay; primary iron and steel; woollen yarn; electrical apparatus and supplies; aluminum products; salt; toilet preparations; coke and gas products; acids, alkalies and salts; flour and feed; hosiery and knitted goods; furniture; and glass products.

Quebec ranks second in importance contributing about 30 p.c. of the total value of manufactured products. The assets of Quebec that have tended to develop manufacturing industries include its natural resources of forests, water powers, minerals, and agricultural lands, and also its geographic position astride the St. Lawrence estuary permitting sea-going vessels to reach its main centres of population. Added to these natural advantages, there is a stable and industrious population, which is an important factor in industries such as textiles, clothing, boots and shoes, etc., where a large labour force is required. The production of pulp and paper occupies the premier position. In addition to accounting for about 11 p.c. of the gross value of Quebec

A large packing plant in Manitoba. Slaughtering and meat packing ranks second among the manufacturing industries of Canada, providing employment for over 22,000 persons.





A sawmill on Cowichan Lake, B.C. Accommodation for the workers is seen in the middle distance.

manufactures, it furnishes about 49 p.c. of the total for Canada of this industry. Other industries in which Quebec predominates are: tobacco, cigars and cigarettes; cotton yarn and cloth; women's factory clothing; synthetic fibres and silk; leather boots and shoes; men's factory clothing; railway rolling-stock; fur goods; and hosiery and knitted goods. Quebec is an outstanding manufacturing province by reason of its large individual industries and not so much on account of a diversity of products.

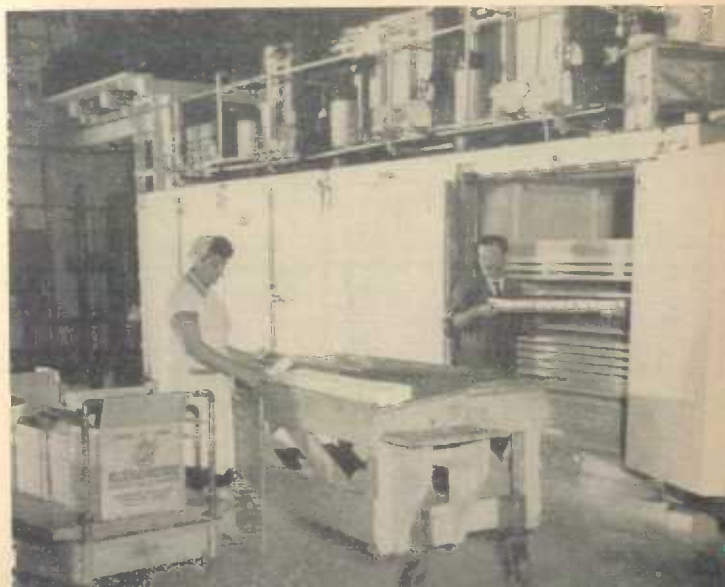
British Columbia is the third most important manufacturing province of Canada with 9 p.c. of the total. The importance of the forests in the industrial life of the Province is emphasized by the fact that sawmilling, which accounts for about 25 p.c. of the total production, ranks as the leading industry, while pulp and paper with 7 p.c. of the total ranks second. Third

in importance is fish curing and packing, based principally on the estuarial salmon fisheries: British Columbia accounts for 44 p.c. of the total fisheries production of Canada. Slaughtering and meat packing is in fourth place and shipbuilding in fifth place.

In the Prairie Provinces the leading industries are those based on their agricultural resources—the 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 widespread use of motor-vehicles and power machinery on farms has given rise to petroleum refineries in each province. The greatly increased production of crude petroleum in Alberta seems likely to lead to further development in the refining industry. 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 powers, forests and, more recently, minerals, have given rise to quite a diversification of industrial production. Considering the Prairie Provinces as a unit, the following industries account for over 50 p.c. of total production: slaughtering and meat packing, flour and feed mills, butter and cheese, and petroleum products.

The Maritime Provinces comprise the smallest manufacturing unit of Canada. In Prince Edward Island the predominant agricultural and fishery resources make butter and cheese, and fish curing and packing 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 primary iron and steel, shipbuilding and repairs, fish curing and packing, sawmills, pulp and paper, and butter and cheese. In addition to this, 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, although fish and agricultural products, sugar refining and production, and railway rolling-stock add to the varied output.

Fillets of sole being placed in a quick-freezing unit.



Statistics of Manufactures, by Provinces and Standard Classification Groups, 1947

Province and Group	Estab- lish- ments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	\$'000	\$'000	\$'000	\$'000
Prince Edward Island.....	260	1,906	1,938	8,610	3,849	12,654
Nova Scotia.....	1,480	30,285	46,113	111,354	84,935	204,219
New Brunswick.....	1,061	24,181	39,583	116,491	83,488	208,367
Quebec.....	11,223	379,449	662,838	1,601,056	1,324,398	3,017,049
Ontario.....	11,860	537,581	1,037,977	2,651,698	2,136,014	4,903,473
Manitoba.....	1,413	39,378	68,973	236,936	139,374	383,130
Saskatchewan.....	1,001	11,723	19,662	151,449	41,481	196,452
Alberta.....	1,382	23,941	41,246	202,324	89,290	296,054
British Columbia.....	3,040	83,161	167,283	453,671	388,702	858,285
Yukon and Northwest Territories.....	14	145	313	691	525	1,344
Totals.....	32,734	1,131,750	2,085,926	5,534,280	4,292,056	10,081,027
Food and beverages....	8,869	167,865	276,245	1,656,529	695,093	2,381,976
Tobacco and tobacco products.....	91	10,880	16,235	97,121	49,221	146,793
Rubber products.....	60	23,473	46,614	82,935	110,673	196,308
Leather products.....	792	35,724	52,629	123,894	86,646	212,430
Textile products (except clothing).....	735	73,189	114,914	287,310	212,556	509,519
Clothing.....	3,121	110,329	106,952	311,019	300,527	614,595
Wood products.....	9,744	120,434	186,468	398,854	365,050	771,403
Paper products.....	502	73,445	168,632	410,457	443,374	911,239
Printing, publishing and allied trades....	2,458	52,096	101,612	82,585	178,667	263,632
Iron and steel products.	2,200	162,399	334,044	451,289	580,342	1,064,654
Transportation equip- ment.....	562	104,348	230,899	426,573	366,152	803,611
Non-ferrous metal products.....	503	43,344	91,047	434,517	201,163	668,074
Electrical apparatus and supplies.....	296	52,736	103,891	162,131	200,859	366,506
Non-metallic mineral products.....	863	26,443	50,456	66,267	115,278	201,787
Products of petroleum and coal.....	80	12,769	28,690	257,421	84,074	361,333
Chemical products.....	1,046	39,237	78,994	238,310	234,057	488,307
Miscellaneous manufac- turing industries.....	812	23,037	37,606	47,067	68,323	116,859

Textile Industries.—In 1948 the demand for all classes of textiles was sufficient to maintain the domestic industries engaged in the manufacture of textiles at an exceptionally high level of production. In addition it was apparently capable of absorbing, without appreciable effect upon domestic production, the British and United States imports which were afforded easier access to Canadian markets by the implementation of the Geneva Agreements.

Practically all industries of the textile group participated in the prosperity resulting from the heavy demand. For the group as a whole, both value and volume of production in 1948 were at record levels for the post-war period while employment and wages established all-time highs. Preliminary figures for the year placed gross value of production at \$1,225,000,000 while estimates of employment and earnings showed 184,000 persons in receipt of salaries and wages amounting to \$315,881,000.

Increased activity was manifest in the operations of most member industries of the primary textile group. The woollen and knit goods industries operated at a somewhat higher level in 1948 than in 1947. The demand for

cotton goods remained strong throughout 1948 and resulted in a fairly substantial increase in fabric production in cotton mills as compared with the previous year. Marked expansion of output was reported by the synthetic textiles industry which enjoyed a year of record production. The high level of activity in the secondary textile group of industries reflected the favourable economic and business conditions prevalent throughout the year. Textile manufacturers continued to increase their productive facilities by modernizing or extending existing plants and by building new mills.

Chemicals and Allied Products.—The upward climb in production by Canada's chemical industries was maintained in 1948 when, according to preliminary figures, the value at factory prices reached a record (exclusive of shell-filling) of \$554,000,000. Compared with the 1947 official value of \$450,000,000 for the chemicals and allied products group of industries, the apparent advance was \$104,000,000 or 23 p.c., but more than half of this gain was due to a change in statistical procedure which placed the vegetable oils industry in this group for the first time. If this latter industry were also

*Dye-carrying rollers
turn plain white
cotton into attrac-
tively patterned
drapery material.*



included in the 1947 compilations, the total output value for that year would be \$488,000,000, and the gain in 1948 would be \$66,000,000 or 14 p.c. on a value basis.

Only a small part of the increase, however, can be attributed to expansion in physical output. Prices of chemicals and allied products advanced substantially during 1948, the official index (1926=100) for such commodities being 120.1 in 1948 compared with 107.9 in 1947, an increase of 11 p.c. By allowing for the prices factor, it appears that the gain in physical volume of output of the chemical industries was about 3 p.c. in 1948 compared with 1947. The index (1926=100) of employment in the chemical industries rose to 339.6 in 1948 from 330.3 in 1947, a gain of 3 p.c., and the official index of physical volume of production by firms in this field advanced 4 p.c. to 182.2 (1935-39=100) in 1948 from 175.7 in the previous year. From all of the statistical evidence, it seems safe to conclude that chemical factories turned out about 3 or 4 p.c. more goods in 1948 than in the previous year.

At the close of 1948 the number of employees in the chemical industries was about 43,000, and the weekly payroll was close to \$2,000,000. The average weekly earnings for both salaried workers and wage-earners was \$46.39 and the average hourly earnings of wage-earners only was 95.6 cents.

Higher output values were recorded for all the component industries, the percentage increases from 1947 being as follows: heavy chemicals, 20.6; fertilizers, 7.1; paints, 15.5; soaps, 18.2; coal-tar distillation, 3.1; toilet preparations, 10.1; compressed gases, 14.8; medicinals, 0.3; polishes, 17.5; inks, 12.8; adhesives, 26.1; primary plastics, 21.5; and miscellaneous, 6.0. The vegetable oils industry gained 37.0 p.c.

The 535 works in Ontario, with 21,000 employees and production at \$310,000,000, accounted for about 56 p.c. of the total output value and for 47 p.c. of the employees. Quebec, with 331 establishments, 14,000 employees, and production at \$161,000,000, accounted for nearly 30 p.c. of the output of chemicals and allied products. British Columbia had 70 plants and production at \$49,000,000 in 1948.

Imports of chemicals and allied products rose to \$118,000,000 in 1948 from \$113,000,000 in 1947, but exports declined to \$80,000,000 from \$84,000,000.

Iron and Steel and Their Products.—A preliminary analysis of the 1948 reports from the manufacturers of iron and steel and their products in Canada indicates a gross production valued at \$2,251,392,204 at factory prices. This output value was 21.4 p.c. above the corresponding figure for 1947 and it was the highest ever recorded for this group of industries.

The values by industries for 1948 were as follows, in millions of dollars: pig iron, ferro-alloys, steel and rolled products \$282.2; iron castings \$121.9; heating and cooking apparatus \$53.7; boilers, tanks and platework \$43.5; farm implements \$146.7; machinery \$228.9; automobiles \$398.0; automobile parts \$138.3; bicycles \$5.3; aircraft \$43.7; shipbuilding \$111.2; railway rolling-stock and parts \$237.4; wire and wire goods \$67.6; sheet-metal products \$152.4; hardware, cutlery and tools, \$87.9; bridge and structural steel work \$65.9; machine shops \$25.3; and miscellaneous iron and steel products \$41.3.

The distribution of this production by provinces was as follows: Ontario \$1,504.4; Quebec \$472.9; Nova Scotia \$74.3; Manitoba \$68.4; British



Canadair Four's, in production at Cartierville, Que., for the British Overseas Airways Corporation, are being delivered at the rate of one every four working days. It is now possible, flying alternately with B.O.A.C., Trans-Canada Air Lines and Canadian Pacific Air Lines, to circle the world in Canadair aircraft.





The world's largest aluminum smelter at Arvida, Que.

Columbia \$85.6; New Brunswick \$19.8; Saskatchewan \$3.9; Alberta \$21.4; and Prince Edward Island \$0.5 millions.

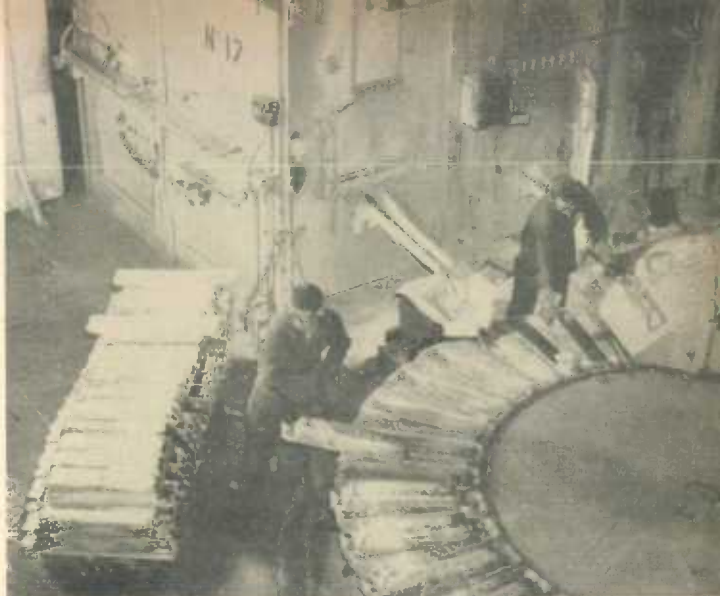
In 1948 a total of 2,553 factories operated in this group, employing a monthly average of 269,630 people who were paid \$650,400,000 in salaries and wages. Materials used in manufacturing processes cost \$1,077,600,000 and fuel and electricity \$53,100,000.

Producers of pig iron in Canada had 14 blast furnaces at the end of 1948 which could produce 2,750,000 net tons a year if operated at rated capacity. Actual production of 2,126,000 net tons in 1948 showed an operating rate of about 77 p.c.

There were 33 steel plants in operation during the year. At the end of 1948 these plants had 128 furnaces, including 49 basic open hearth with an annual rated capacity of 3,076,000 tons, 76 electric furnaces rated at 766,000 tons, and three converters at 10,000 tons. There were nine makers of steel ingots with capacity of 3,552,000 net tons per annum. The total annual steel capacity of all plants, including ingots and castings, was 3,852,000 tons at the year end. Steel production increased 10 p.c. to 3,200,000 tons in 1948 from 2,946,000 tons in 1947, the output of steel ingots increasing to 3,087,000 tons from 2,855,000 tons, and steel castings to 113,000 tons from 91,000 tons. In 1948 there were 11 mills occupied chiefly in hot-rolling steel products and three mills making only cold-drawn and cold-rolled shapes. Nine of these mills were in Ontario, two in Nova Scotia, two in Quebec and one in Manitoba. Rolling-mill sales advanced 31 p.c. to \$203,600,000 from \$155,900,000 in 1947.

One-third of the world production of aluminum is made in Canada from bauxite imported from British Guiana. The industry is centred in Quebec.

Pouring aluminum ingots on a continuous casting table.



Unloading bauxite at Port Alfred, Que.



The three major corporations that constitute the core of the industry in Canada—the Steel Company of Canada, Limited; the Algoma Steel Corporation, Limited; and the Dominion Steel and Coal Corporation—are self-contained in that they process iron and steel from the ore through to the semi-finished and finished articles. These articles consist of billets, rails and fastenings, bars, wire rods, structural shapes, sheets and sheet piling, plates, light shapes, wire, fencing, nails, screws, bolts, nuts, forgings, pipe, etc. A new continuous strip mill, the first of its kind in Canada, was put into operation during the year by the Steel Company of Canada, Limited, at Hamilton, Ont.

Leading Individual Industries

The extraordinary demand for war equipment and food resulted in a rearrangement in the ranking of many industries during the war years. Such industries as miscellaneous chemicals, shipbuilding, iron and steel and aircraft moved up near the top of the list during 1942-44, while pulp and paper, in second place after non-ferrous metal smelting and refining up to 1941, stood in third place in 1942, seventh place in 1943 and fifth place in 1944. Slaughtering and meat packing displaced non-ferrous metal smelting in first place in 1944. In 1946 pulp and paper again moved up to first place, a position it had not occupied since 1933. Slaughtering and meat packing dropped to second place, and non-ferrous metal smelting and refining remained in third place. The ranking of these three industries was the same in 1947. Miscellaneous chemicals which stood in third place in 1944 did not rank among the leading industries in 1946 or 1947.

Principal Statistics of Fifteen Leading Industries, 1947

Industry	Estab- lish- ments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	\$'000	\$'000	\$'000	\$'000
Pulp and paper.....	115	49,946	129,478	295,444	356,085	706,972
Slaughtering and meat packing.....	151	21,726	44,611	406,694	77,054	486,916
Non-ferrous metal smelt- ing and refining.....	16	17,449	40,768	308,268	115,799	453,034
Sawmills.....	6,481	55,425	83,360	208,544	190,515	402,133
Electrical apparatus and supplies.....	296	52,736	103,891	162,131	200,859	366,506
Automobiles.....	9	23,837	58,408	226,845	111,741	340,918
Flour and feed mills.....	961	8,285	14,832	280,674	41,020	324,152
Butter and cheese.....	2,037	20,757	32,406	238,667	66,025	309,728
Petroleum products.....	46	7,760	17,878	217,516	58,326	288,500
Primary iron and steel.....	58	26,933	60,285	104,532	92,890	216,275
Machinery.....	322	29,920	61,970	74,102	124,577	200,895
Rubber goods.....	60	23,475	46,614	82,935	110,673	196,308
Clothing, women's fac- tory.....	1,169	30,969	50,357	92,713	91,158	184,305
Clothing, men's factory.....	566	29,817	45,487	98,082	84,575	183,166
Bread and other bakery products.....	2,942	31,501	47,896	80,084	80,476	165,750
Totals, Fifteen Lead- ing Industries—						
1947.....	15,229	430,536	838,241	2,877,231	1,801,773	4,825,558
1946.....	14,394	394,928	683,264	2,255,340	1,316,999	3,693,331
Grand Totals, All In- dustries—						
1947.....	32,734	1,131,750	2,085,926	5,534,280	4,292,056	10,081,027
1946.....	31,249	1,058,156	1,740,687	4,358,234	3,467,004	8,035,692
Percentages of Fifteen Leading Industries to All Industries, 1947..	46.5	38.0	40.2	52.0	42.0	47.9

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 their gainfully occupied population. In the west the cities are more largely distributing centres, though manufactures are rapidly increasing there also.

The extent to which the manufacturing industries of Canada are concentrated in urban centres is indicated by the fact that in Ontario 94 p.c. of the gross manufacturing production of the Province in 1947 was contributed by cities and towns having a gross production of over \$1,000,000 each. In Quebec the percentage was 93 while in the Maritime Provinces and British Columbia, where sawmilling, fish-packing and dairying are leading industries, the proportions were 68 and 60 p.c., respectively. In the Prairie Provinces manufacturing is confined largely to a few urban centres.

**Urban Centres with Gross Manufacturing Production of Over
\$40,000,000 in 1947**

Urban Centre	Estab- lish- ments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Production
	No.	No.	\$'000	\$'000	\$'000	\$'000
Montreal, Que.....	3,950	177,744	325,114	17,075	682,056	1,298,019
Toronto, Ont.....	3,705	151,532	290,354	14,185	648,648	1,231,936
Hamilton, Ont.....	512	50,567	101,424	14,456	205,430	411,817
Windsor, Ont.....	273	32,154	74,749	4,553	204,383	367,122
Vancouver, B.C.....	1,128	33,162	65,450	3,591	175,048	314,383
Winnipeg, Man.....	779	27,651	47,728	2,828	130,721	228,028
Montreal East, Que....	20	3,926	8,438	6,463	120,011	154,422
Kitchener, Ont.....	123	15,327	29,083	1,398	67,003	128,467
Port Colborne, Ont.....	20	2,746	6,106	2,201	95,983	120,273
London, Ont.....	272	15,049	27,120	1,461	52,551	114,111
Calgary, Alta.....	246	7,790	14,785	1,980	77,842	111,649
Sarnia, Ont.....	45	6,951	15,195	6,261	63,860	106,393
Quebec, Que.....	377	13,583	20,583	2,721	54,387	98,494
New Toronto, Ont.....	31	7,192	16,869	1,380	52,403	97,817
Peterborough, Ont.....	98	10,257	20,626	1,035	57,193	92,057
Edmonton, Alta.....	222	7,625	14,028	809	61,191	88,995
Brantford, Ont.....	144	13,853	25,732	1,307	47,334	88,766
Three Rivers, Que.....	81	7,320	14,359	5,556	38,638	79,787
Welland, Ont.....	57	8,355	18,470	4,192	32,199	76,468
Sault Ste. Marie, Ont....	51	6,444	15,197	4,876	41,359	76,211
St. Boniface, Man.....	62	3,405	6,902	588	55,817	72,039
Leaside, Ont.....	47	7,343	14,904	769	36,748	70,056
St. Catharines, Ont.....	102	10,216	20,570	1,158	32,002	67,533
New Westminster, B.C..	100	6,112	12,262	797	33,042	67,242
Ottawa, Ont.....	211	9,696	17,652	1,327	28,904	64,603
Niagara Falls, Ont.....	70	6,491	13,749	4,363	23,696	61,378
Shawinigan Falls, Que..	43	5,120	11,298	5,291	22,254	56,769
Saint John, N.B.....	118	4,190	6,978	1,104	39,517	56,062
Sherbrooke, Que.....	102	8,523	14,038	896	24,588	52,798
Chatham, Ont.....	67	3,258	6,342	630	35,271	47,877
Fort William, Ont.....	71	3,945	8,906	1,973	23,499	46,231
Saskatoon, Sask.....	95	2,580	4,697	526	33,817	45,424
Cornwall, Ont.....	47	6,254	11,454	2,238	17,281	43,719
Guelph, Ont.....	101	6,131	11,186	677	21,494	42,572
Kingston, Ont.....	52	5,345	10,043	1,003	17,469	40,881
Drummondville, Que....	39	8,227	12,457	1,309	14,580	40,156

Employment in Manufactures

The Dominion Bureau of Statistics conducts monthly surveys of employment, payrolls and man-hours in manufacturing and in the major non-manufacturing industries. The surveys are in the main limited to firms usually employing 15 persons or over. In view of the large-scale operations in many factories, the coverage of total employment in manufacturing in the monthly surveys is particularly high.

Employment in manufacturing generally was maintained at a high level during the first nine months of 1949, the average index being 204.7, slightly exceeding that for the same months of 1948. This was the third successive increase in the average index for the first nine months, but the percentage

increases over the preceding year were progressively smaller. The level of employment in manufacturers in 1949 and immediately preceding years, however, was lower than in the period of intensified activity during the War.

Several factors accounted for the steady increase in employment that has been indicated since 1946. The demand for goods and services was maintained at a high level both in the home and foreign markets, in spite of dollar difficulties abroad which had some effect on the domestic situation in 1949. Earlier shortages of labour and materials lessened in importance as the post-war situation became more normal; a further favourable factor was the establishment of more satisfactory labour-management relations in manufacturing in 1949, the time lost in industrial disputes in the first nine months of that year was only three-fifths of the loss in the same period of 1948.

Except for insignificant declines at Feb. 1 and Aug. 1, the index of employment in manufacturing steadily increased in 1949, rising 3 p.c. from 202.7 on Jan. 1 to 208.8 on Sept. 1, 1949. This gain compared favourably with an advance of 2 p.c. in the index of employment in non-manufacturing industries taken as a unit in a similar comparison. Although the average index for manufacturing in the months Jan. 1 to Sept. 1 in 1949 was one point above that for the same period of 1948, the index at Sept. 1 was 0.7 points below the Sept. 1, 1948, figure.

Employment in the heavy manufacturing industries taken as a unit declined by 2.3 p.c. in the year ended Sept. 1, 1949. There were decreases in all branches of this group with the exception of electrical apparatus and musical instruments. The decline was particularly marked in the iron and steel industries, mainly in plants manufacturing crude, rolled and forged products, machinery (other than vehicles), agricultural implements and steel ship-building and repairing. The employment index for the non-durable manufacturing industries taken as a unit increased by 1 p.c. in the year; this gain was widely distributed among the various industries within this category, the exceptions being the pulp and paper products and rubber groups. The expansion in factories producing beverages, edible plant products, chemicals and allied products and textile products was considerably above average.

At Sept. 1, 1949, the employment indexes for manufacturing in Ontario and the Prairie Provinces were higher than one year earlier. The situation in the remaining areas was not so favourable, there being declines ranging from 1.5 p.c. in Quebec to 2.6 p.c. in British Columbia. In five of the eight leading cities—Montreal, Toronto, Hamilton, Windsor and Winnipeg—the level of employment at Sept. 1, 1949, was higher than at Sept. 1, 1948.

The proportion of women employed in manufacturing establishments increased from 222 per 1,000 employees of both sexes at Sept. 1, 1948, to 228 at Sept. 1, 1949. This change resulted from a relatively greater decline in the number of men (0.4 p.c.) on the staffs of reporting establishments than in the number of their female employees (0.2 p.c.).

As in earlier years, the increase in the average index of employment in manufacturing in the first nine months of 1949 was relatively smaller than that noted in the average index of payrolls in the same period. This was partly due to the effect of continued upward adjustments in the wage rates and increases in cost-of-living bonuses, but was also associated to some extent with stabilizing employment. In the nine months ended Sept. 1, 1949, the index of employment increased by 3 p.c. and the index of payrolls by 7.8 p.c.

At Sept. 1, 1949, the average weekly earnings of persons employed in manufacturing stood at \$44.26, compared with \$41.46 twelve months earlier. The time worked by hourly rated employees averaged 42.4 hours in the week of Sept. 1, 1949, compared with 41.7 hours and 42.3 hours at the same dates in 1948 and 1947, respectively: hourly earnings averaged 82.2 cents at Sept. 1, 1947, 93.4 cents at Sept. 1, 1948, and 98.4 cents at Sept. 1, 1949.

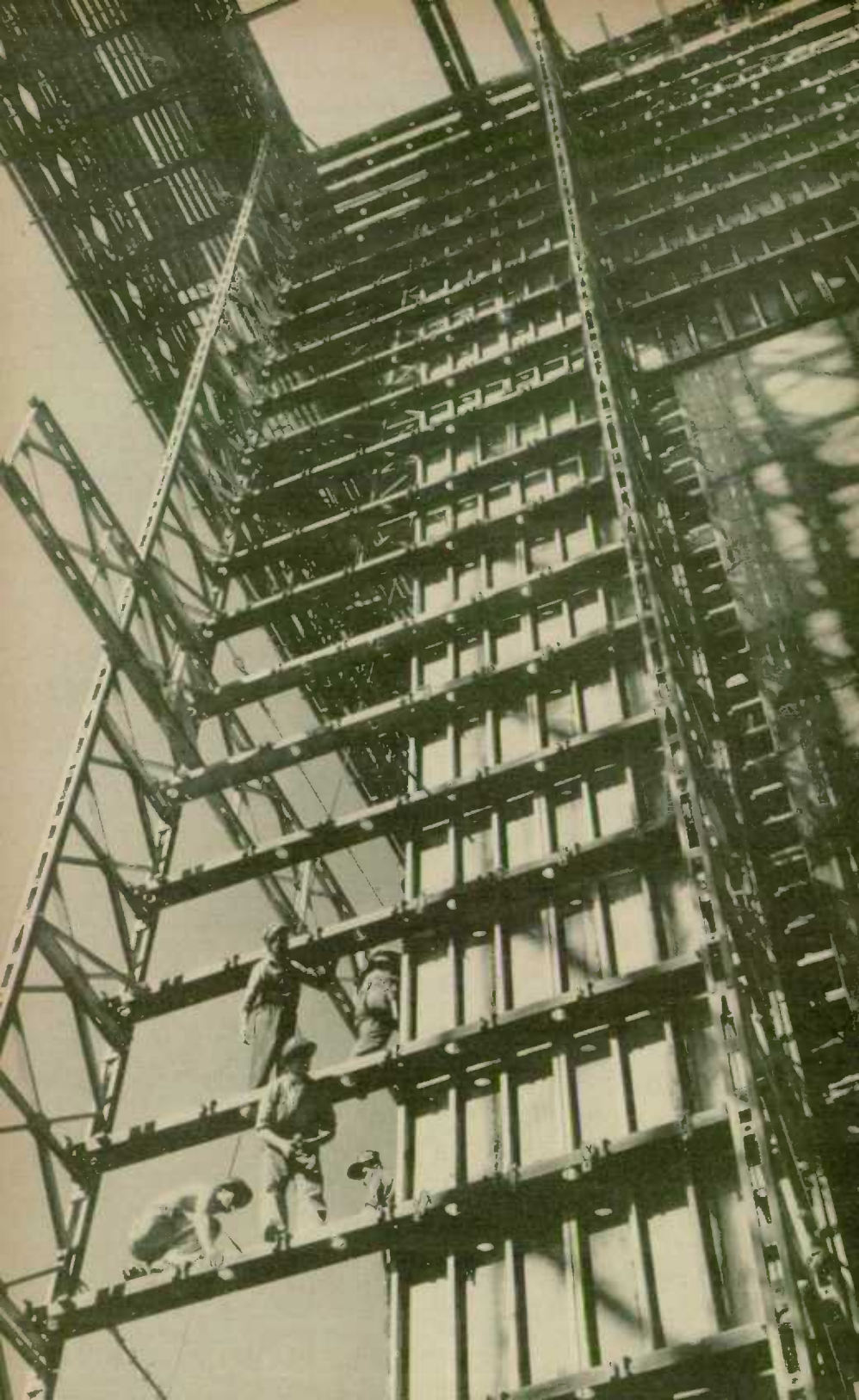
Monthly Indexes of Employment in Manufactures, 1944-49

(1926 = 100)

Month	1944	1945	1946	1947	1948	1949
Jan. 1	226.4	212.7	179.9	190.6	199.9	202.7
Feb. 1	227.3	215.0	182.8	193.9	200.7	202.6
Mar. 1	226.5	214.3	182.6	194.5	202.6	203.0
April 1	225.5	212.9	184.9	195.2	202.0	203.0
May 1	223.2	210.6	186.2	195.8	201.8	203.3
June 1	223.1	209.0	184.7	197.6	203.6	205.1
July 1	225.8	207.2	187.2	200.6	207.2	207.4
Aug. 1	225.0	204.1	184.2	202.5	206.5	206.4
Sept. 1	226.2	198.6	187.2	203.3	209.5	209.2
Oct. 1	223.7	188.3	188.4	203.6	210.0	208.6
Nov. 1	221.3	186.3	192.8	205.1	208.3	206.5
Dec. 1	221.3	186.3	194.2	205.1	207.9	204.2

Tobacco is fed into the hopper of a "making" machine in a Montreal factory. The operator in the foreground feeds completed cigarettes into a packaging machine.





★ Construction

The construction industry had not recovered from the depressed conditions of the early 1930's when war production began to drain off materials and labour from peacetime projects. This was particularly evident in residential construction. Increased personal incomes allowed many families to expand into separate or larger living quarters while at the same time marriage rates were high. Since the end of the War considerable progress has been made to alleviate the shortage of housing and beginning in 1947, for the first time in about ten years, the number of new dwelling units exceeded moderately the net increase in the number of households.

Government Assistance

The Federal Government has administered legislation designed to assist in the financing and improvement of housing in Canada since 1935. There are four Acts of Parliament in effect at the present time under which it is possible to obtain help from the Federal Government for the purpose of building houses: the National Housing Act, 1944; the Farm Improvement Loans Act; the Farm Loan Act, 1927; and the Veterans' Land Act. The first is outlined below while the last is dealt with under Veterans Affairs, p. 76. The other two Acts provide direct and indirect financial assistance to farmers for a wide range of purposes, of which housing represents only a small part. Since 1945, the Government has engaged in direct housing construction through Wartime Housing, Limited, and through the Department of National Defence since 1946.

Central Mortgage and Housing Corporation.—To provide co-ordination in the housing field, the Central Mortgage and Housing Corporation was incorporated by an Act passed in December, 1945. Its purpose and functions are to administer the National Housing Act, 1944, and earlier housing legislation and to provide facilities for the rediscounting of mortgages by lending institutions. Since March, 1947, the Corporation has administered a taxation incentive plan for rental housing construction and, in 1948, it took over the functions of Wartime Housing, Limited. Most of the housing activities of the Federal Government are now being administered by the Corporation.

National Housing Act, 1944

The National Housing Act, 1944, was designed to stimulate the construction of housing for both owner-occupancy and rental. It offers various forms of assistance as summarized below.

Joint Loans.—Loans are made jointly by the Central Mortgage and Housing Corporation and approved lending institutions to prospective home owners and to builders of houses for sale to occupants or for rental. Houses must be constructed according to sound, prescribed standards. Loans for home ownership units are based on the following percentages of lending values: 95 p.c. of the first \$3,000, 85 p.c. of the next \$3,000, and 70 p.c. of the remainder. For rental housing, the maximum loan is limited to 80 p.c. of the total lending value of each unit. The maximum joint loan on any

dwelling unit is \$8,500. Interest payable by the borrower is $4\frac{1}{2}$ p.c. per annum. The term of the loan may be up to 30 years. Payments of principal, interest and taxes are made in monthly instalments comparable to rent. Twenty-five per cent of the money borrowed is advanced to the lending institution by the Corporation.

Joint loans are also available for co-operative housing, for farm housing, and under the Integrated Housing Plan. For farm housing, the amounts of loan are determined on a different basis than for urban housing. Under the Integrated Housing Plan, builders may obtain joint loans for the erection of groups of houses for sale primarily to veterans at an agreed maximum price; the Corporation is obligated to purchase any houses unsold after a period of one year following completion.

In the first six months of 1949, a total of 10,107 units were approved for joint loans, involving \$53,600,000 or an average loan per unit of about \$5,300. These figures compare with 8,999 units, involving \$46,300,000, or an average loan per unit of nearly \$5,150 for the corresponding period of 1948.

Direct Loans.—The Act provides loans by the Central Mortgage and Housing Corporation to limited dividend companies for the construction of low-rental housing. Such loans may be for 90 p.c. of the lending value of the project at an interest rate of 3 p.c. per annum. The period of amortization may be extended to 50 years.

The Corporation is authorized to make direct advances to mining, lumbering and fishing companies in outlying areas, to assist in providing homes for their employees. Loans are made to, or are guaranteed by, the company concerned; the term of the loan may be as long as 15 years, the rate of interest is 4 p.c., and the company may not earn on its investment in the housing project more than 4 p.c. annually. The maximum loan is 80 p.c. of the lending value. In the case of rental insurance projects, the maximum loan is 85 p.c. of lending value. The Act also provides that the Corporation may make direct loans in other cases where a joint loan cannot be obtained.

Direct loans in the first six months of 1949 were approved for 2,868 units involving \$16,300,000. In the corresponding period of 1948, direct loans were approved for 89 units involving \$468,000.

Guarantees.—Loans guaranteed by the Central Mortgage and Housing Corporation may be made by banks or approved instalment credit agencies for home improvement and home extension purposes. These loans are intended to assist home owners to finance additional dwelling units in existing homes. They bear interest at 5 p.c. The section dealing with home improvement loans has not been proclaimed owing to the shortage of building materials.

Life insurance companies under federal jurisdiction are authorized to invest up to 5 p.c. of their Canadian assets in a low- or moderate-rental housing project, and are guaranteed a net return of $2\frac{1}{2}$ p.c. per annum on such investments. Guarantees to lending institutions may be made by the Corporation ensuring a return of $2\frac{1}{2}$ p.c. per annum on approved investments in the purchase and improvement of land to be used for residential development. On payment of an annual premium, the Corporation may guarantee a minimum rental income for approved projects covering periods of not more than 30 years.

Joists, factory-cut and numbered, are laid for the floor of a house under construction at a suburban housing project.



Direct Construction.—Wartime Housing, Limited, was a Crown company established in 1941 to build houses for war workers. In 1947, the supervision of the company—at this time building rental housing for veterans—was taken over by the Central Mortgage and Housing Corporation. Then in June, 1948, the charter of Wartime Housing, Limited, was surrendered and the company's assets transferred to Central Mortgage and Housing Corporation which was empowered to own housing projects and to engage in direct housing construction operations on its own account. In the first six months of 1949, more than 5,000 units for rental to veterans were completed. In addition, the Corporation in 1949 conducted the construction operations of the Department of National Defence in connection with that Department's program of providing married quarters for its permanent personnel.

Research and Community Planning.—The research plans cover the fields of: economic and statistical inquiries; technical research in materials, equipment, standards, etc.; and design. In 1947, the National Research Council formed a Division of Building Research to undertake the major portion of actual technical and laboratory research work regarding building methods and materials. Assistance has been provided, also, to university research in both the technical and social aspects of housing. The Corporation is authorized to make grants-in-aid to municipalities in clearing and preparing land for low- or moderate-rental housing projects.

Land Assembly.—Because of the shortage of serviced land in almost every Canadian municipality, approved lending institutions are now enabled under the National Housing Act, but only with approval of the Central Mortgage and Housing Corporation, to purchase raw land to be used for housing development and to install the necessary services such as roads, sewers and water. The price of the land to the builder or home owner will be fixed to assure that the home owner receives full benefit of the economies effected by this method of land assembly.

Construction Statistics

Housing.—It is estimated that 81,243 dwelling units were completed during 1948 as compared with 79,359 in 1947. This brings completions during the first four post-war years to about 276,000 units. It is estimated that during the first eight months of 1949 an additional 55,435 dwelling units were completed and, at Aug. 31, there were 58,677 units under construction.

Dwelling Units Built, by Types, 1945-49

Type	1945	1946	1947	1948	1949 ¹
	No.	No.	No.	No.	No.
New Construction—					
One-family detached.....	32,681	50,457	58,883	61,787	42,692
Two-family detached.....	3,694	4,206	5,314	4,560	4,800
Row or terrace.....	235	510	608	1,607	365
Apartment or flat.....	4,009	2,898	7,460	7,836	7,333
Other.....	1,166	2,504	81	307	245
Totals, New Construction.	41,785	60,575	72,346	76,097	55,435
Conversions.....	5,982	6,740	7,013	5,146	..
Grand Totals.....	47,767	67,315	79,359	81,243	..

¹ First eight months.

Over 45 p.c. of the dwelling units completed in 1948 were in the 17 metropolitan areas of 40,000 population or over; these areas contain about 36 p.c. of the population of Canada.

Dwelling Units Built in Metropolitan Areas of 40,000 Population or Over, 1945-49

(Exclusive of conversions)

Area	1945	1946	1947	1948	1949 ¹
	No.	No.	No.	No.	No.
Calgary.....	558	1,136	1,306	1,375	1,318
Edmonton.....	418	832	1,291	1,784	1,191
Halifax.....	160	588	371	471	608
Hamilton.....	510	640	1,141	1,317	1,150
London.....	271	625	799	732	796
Montreal.....	4,338	3,571	6,183	8,814	9,727
Ottawa.....	1,226	1,447	1,194	1,454	752
Quebec.....	869	950	834	1,082	714
Regina.....	222	405	518	424	237
Saint John.....	144	242	457	134	215
Saskatoon.....	276	682	750	773	160
Three Rivers.....	228	214	157	533	302
Toronto.....	3,233	4,204	3,836	4,143	4,166
Vancouver.....	2,581	2,968	3,750	6,758	3,775
Victoria.....	496	787	829	1,353	651
Windsor.....	694	716	839	806	746
Winnipeg.....	1,022	1,966	3,242	2,881	2,073
Totals.....	17,246	21,973	27,497	34,834	28,581

¹ First eight months.

All Construction.—In the presentation of the 1948 statistics on construction, 1941 is used as the base year from which long-term trends are measured. The year 1941 was chosen since at that time factors tending to

prohibit construction for other than war purposes and the influence of accelerated construction fostered by Canada's war effort were best balanced.

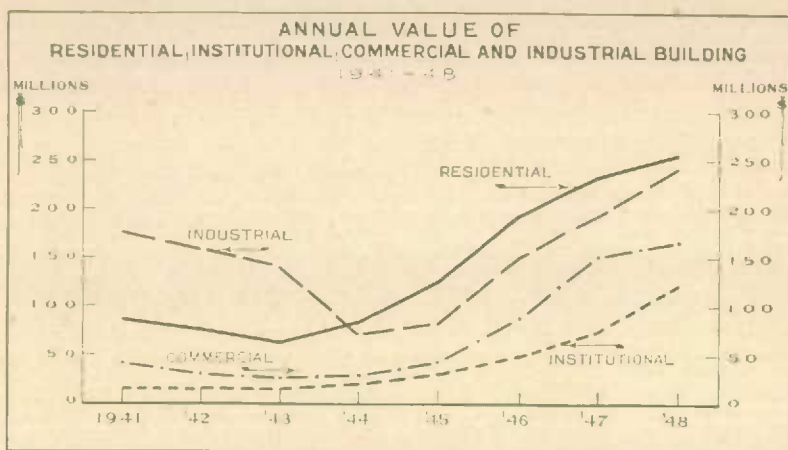
Constant changes in the numbers of firms engaged in construction activities make it difficult to maintain complete coverage of the industry, though an increasing number of reports have been received in recent years from more important segments of the industry. As a result of the coverage difficulties, the figures in the following tables possibly contain some downward bias, but such elements of error are not serious enough to adulterate to any great extent the year-to-year trends. More complete coverage will be effected subsequently by the introduction of new sampling methods and the results will be more representative of the industry.

Space does not permit of a detailed analysis of the following tables, but some of the highlights are singled out for examination:—

- Building showed an increase of 30 p.c. over 1947.
- Ontario continued to lead in construction, accounting for 41 p.c. of the total for Canada.
- The number of persons employed continued upward in 1948—an increase of 34,000 over 1947.
- The cost of labour and materials combined amounted to \$1,400,000,000.

Steel frame of the first welded-steel structure at Toronto, the new 600-bed Hospital for Sick Children, which is scheduled for completion in 1950.





Values of Construction, by Types, 1941, 1947 and 1948

Type	1941	1947	1948	P.C. Change	
				1941-47	1947-48
Building—	\$'000	\$'000	\$'000		
Residential.....	87,586	233,304	255,756	+192.0	+ 9.6
Institutional.....	15,175	73,362	121,421	+700.1	+ 65.5
Commercial.....	41,157	151,130	166,073	+303.5	+ 9.9
Industrial.....	177,698	193,053	242,832	+ 36.7	+ 25.8
Other.....	52,875	7,534	39,540	- 25.2	+424.8
Work by building trades.....	64,604	180,488	262,366	+306.1	+ 45.4
Totals, Building.....	439,095	838,871	1,087,988	+147.8	+ 29.7
Engineering—					
Roads, bridges, etc.....	74,715	219,000	258,486	+246.0	+ 18.0
Marine construction.....	31,621	70,436	108,104	+241.9	+ 53.5
Electric stations, etc.....	30,553	105,129	175,968	+475.9	+ 67.4
Railway, telephone, telegraph.....	2,084	6,501	9,225	+342.7	+ 41.9
Other engineering.....	61,683	16,599	25,790	- 58.2	+ 55.4
Totals, Engineering.....	200,656	417,665	577,573	+187.8	+ 38.3
Grand Totals.....	639,751	1,256,536	1,665,561	+160.3	+ 32.6

¹ Building of all types by independent tradesmen: not classified as to type of building concerned.

Value of Construction, by Provinces, 1941-48

Province	1941	1942	1943	1944	1945	1946	1947	1948
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
P.E.I.....	1,939	1,468	1,646	1,962	1,877	2,382	3,071	5,424
N.S.....	33,153	54,259	40,667	29,833	29,325	40,858	52,897	73,507
N.B.....	18,551	14,195	12,007	13,657	14,374	27,761	42,675	51,590
Que.....	181,860	205,401	159,875	131,064	150,166	225,582	338,515	421,476
Ont.....	261,239	217,829	216,715	165,395	216,545	347,617	501,651	682,466
Man.....	29,610	22,092	20,191	19,357	28,383	43,463	61,254	82,230
Sask.....	20,668	15,603	11,128	12,423	17,482	29,277	40,009	49,380
Alta.....	35,296	33,390	25,142	27,569	32,014	51,573	67,651	109,448
B.C. ¹	57,435	71,413	85,056	48,578	53,414	100,148	148,813	190,040
Canada.....	639,751	635,650	572,427	449,838	543,580	868,661	1,256,536	1,665,561

¹ Includes Yukon and the Northwest Territories.

Operating Statistics of the Construction Industry, 1941-48

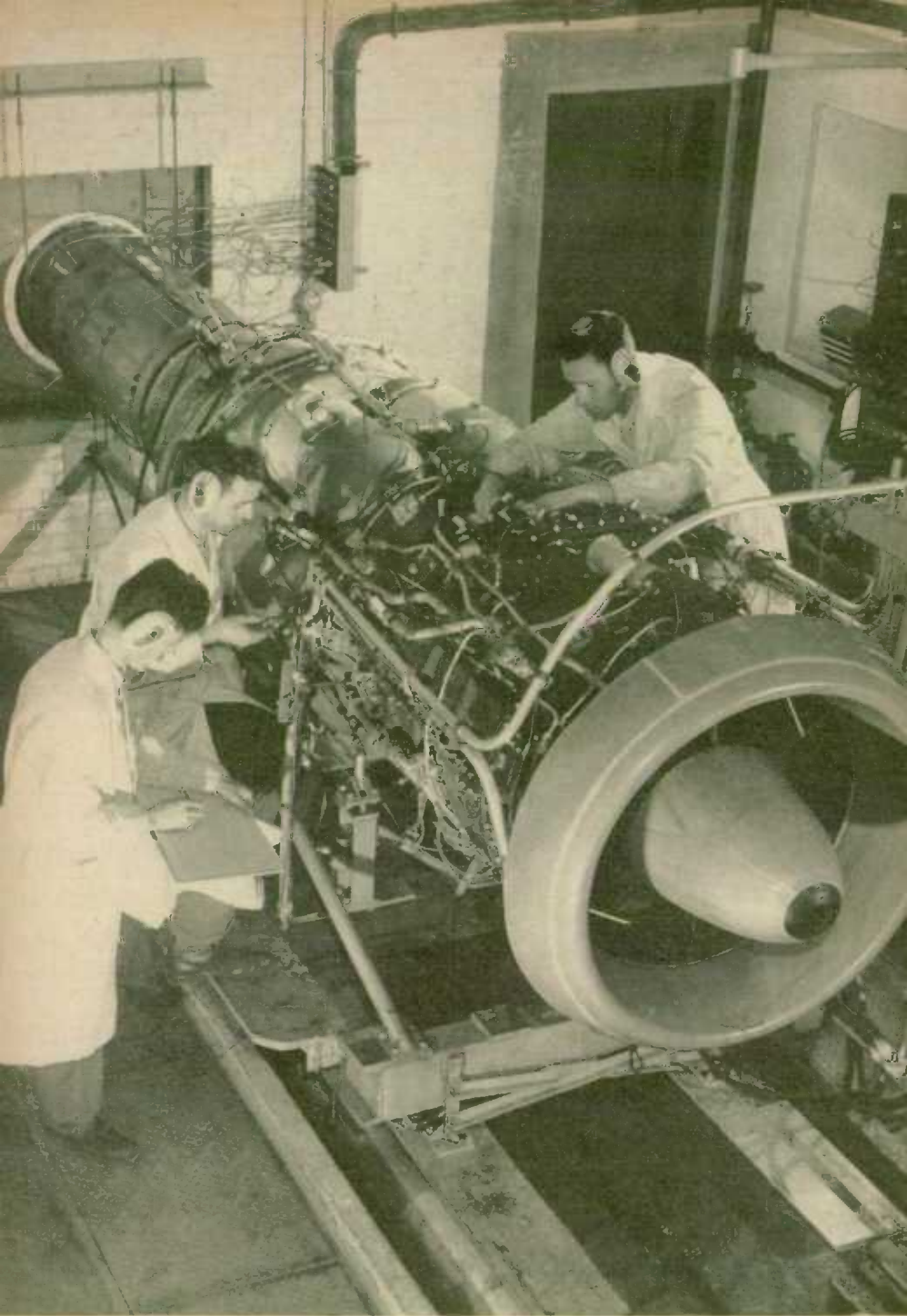
Year	Reports Received	Persons Employed	Salaries and Wages Paid		Cost of Materials Used		Total Value of Work Performed
			Amount	P.C. of Total Work	Amount	P.C. of Total Work	
	'000	'000	\$'000		\$'000		\$'000
1941.....	15	176	235,632	36.8	370,189	57.9	639,751
1942.....	14	175	262,043	41.2	324,732	51.1	635,650
1943.....	13	155	246,836	43.1	278,888	48.7	572,427
1944.....	16	124	197,704	44.0	200,801	44.6	449,838
1945.....	19	147	233,991	43.0	275,622	50.7	543,580
1946.....	24	199	344,893	39.7	459,966	53.0	868,661
1947.....	27	250	482,907	38.4	654,996	52.1	1,256,536
1948.....	22	284	605,496	36.4	835,917	50.2	1,665,561

Building Permits.—Based on reports received from 507 municipalities, building permits issued during 1948 represented proposed building valued at \$647,408,000, divided by type as follows: residential, \$379,913,000; institutional, \$76,660,000; commercial, \$135,017,000; industrial, \$51,210,000; and other, \$4,608,000. These figures are not on a comparable basis with those issued for previous years; the former series was based on reports from only 204 municipalities.

Railways.—The expenditures of railways, steam and electric, on road, maintenance of way and structures and equipment are not included in the figures for the construction industries given above and are therefore summarized here. For steam railways expenditures for these purposes in 1947 amounted to \$247,231,693 compared with \$238,398,950 in 1946. For electric railways, the net in 1947 was \$9,005,013 as against \$11,257,268 in 1946.

The land surveyor plays a vitally important part in defining properties to be acquired for large hydro developments.





Design and construction of jet engines and aircraft, carried on at Malton, Ont., require the services of highly skilled technicians. The resources of this plant, equipped with the most up-to-date research, design and production facilities and employing more than 3,000 people, are directed towards the steady advance of jet engineering.

Labour

MODERN labour is protected by law and the organizations that labour has itself set up or called into existence. Both the Parliament of Canada and the Provincial Legislatures have enacted laws for the protection of workers in their places of employment. Co-operation between the Federal Government and the Provinces before and during the War has resulted in fairly uniform principles being applied throughout Canada for the settlement of industrial disputes.

The Government of Canada provides unemployment insurance through a nation-wide system of employment offices which are concerned with both the payment of claims and the placing of workers in jobs. The Government regulates working conditions of its own employees and provides compensation for them in case of accident during employment. Observance is required of specified wage-and-hour conditions by contractors for federal public works and equipment and supplies. Federal laws govern employment on railways and in the mercantile marine, permit peaceful picketing, and prohibit employment on Sunday except under certain conditions.

In most provinces there are laws for the inspection of mines, factories, shops, and other work places and for the regulation of wages, hours of work, employment of women and children, apprenticeship and workmen's compensation. Laws have also been enacted to protect freedom of association, to require employers to bargain with the representatives of employees or with trade unions and to prohibit any strike or lockout until after an inquiry. In Newfoundland there are laws governing hours of work in shops, hours for women and children in shops, minimum wages and the protection of children.

Labour Organization.—The majority of local trade unions in Canada are branches of international organizations, either craft or industrial, with headquarters in the United States. Broadly speaking the unions are of four types: (1) international unions with active branches existing in Canada, but headquarters in the United States; (2) national unions that are purely Canadian in scope; (3) local unions, directly chartered by central labour federations and congresses; and (4) wholly independent organizations.

At the end of 1948 there were 977,594 union members reported to the Department of Labour, an increase of 65,470 over the 1947 figures. The number of local branches increased from 4,956 in 1947 to 5,114 in 1948. Reports showed 439,029 members of unions affiliated with the Trades and Labour Congress, 338,627 with the Canadian Congress of Labour and 93,370 with the Canadian and Catholic Confederation of Labour at the end of 1948.

Unemployment in Trade Unions.—Reports from trade unions indicated slight increases in the percentage of unemployment among their members during 1948. The average for that year was 2.2 p.c. and that for 1947 1.3 p.c. At the end of June, 1949, reports from 2,504 local branches of labour organizations, with a total membership of 489,045, showed that

8,920 or 1.8 p.c. were unemployed. At June 30, 1948, the percentage was 1.3 but increased to well over 3 p.c. by the end of the year. The highest level of unemployment on record indicated by union returns was at the end of 1932 and at the beginning of 1933 when the figure was over 25 p.c.; the period of lowest unemployment was the summer of 1944 when the percentage was 0.3.

Collective Bargaining and Conciliation Legislation

The Industrial Relations and Disputes Investigation Act came into effect on Sept. 1, 1948. The new legislation replaced both the Industrial Disputes Investigation Act which had been in force from 1907 to March, 1944, and the Wartime Labour Relations Regulations, Order in Council P.C. 1003, which had succeeded the Industrial Disputes Investigation Act in 1944. By proclamation the Industrial Relations and Disputes Investigation Act became effective in the Province of Newfoundland on Sept. 19, 1949.

The new Act applies only to industries within federal jurisdiction, i.e., navigation, shipping, interprovincial railways, canals, telegraphs, steamship lines and ferries, both interprovincial and international aerodromes and air transportation, radio broadcasting stations, and works declared to be for the general advantage of Canada. However, the Act provides that provincial authorities may enact similar legislation for application to employees within provincial jurisdiction and make mutually satisfactory arrangements for the administration of such legislation by the federal authorities.

The Minister of Labour and the Canada Labour Relations Board jointly administer the provisions of the Act. The Minister administers those provisions providing for the appointment of Conciliation Officers, Conciliation Boards, Industrial Inquiry Commissions, for consent to prosecute, and for the making of complaints that the Act has been violated or that a party has failed to bargain in good faith. The Canada Labour Relations Board, which is composed of four representatives each of organized labour and management and a chairman and vice-chairman, administers those portions of the Act that concern 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 that a party has failed to bargain collectively.

The legislation also provides for the right of free association of employees and employers, for the safeguarding of that right by prohibiting unfair labour practices, for compulsory collective bargaining between trade unions and employees upon notice following certification or upon notice to negotiate the renewal of an agreement. Where the parties are unable to reach agreement by direct negotiations, conciliation services by officers and boards may be provided. Strikes and lockouts and the taking of strike votes are prohibited until the legislative procedures of negotiation and conciliation laid down in the Act have either been satisfied or the Minister has refused to appoint a Conciliation Board. Where a Board has been appointed, a strike or lockout may take place seven days after the report of the Board has been given to the Minister of Labour. Where the Minister neglects to appoint a Board, a strike or lockout may take place after 15 days or earlier if the Minister gives notice of refusal to appoint a Board. Enforcement of the Act is by way of court prosecution which can only be instituted by consent of the Minister.

Safety procedures in the mines have become standardized. The card-tag board is a record of the location of the miner's shift. Each man carries his own brass tag while underground and is checked off by the shift boss as he returns to the surface. All men not actually engaged are on the surface during blasting operations.



Strikes and Lockouts

In terms of the number of strikes and the number of workers involved, industrial relations in 1949 showed an improvement as compared with the two preceding years. However, there was a slight increase in time-loss for the first eight months of 1949 as compared with the same period in 1948.

The number of strikes and lockouts, the number of workers involved and the time-loss in man-working days has declined since the peak year of 1946, when 4,500,000 days were lost; in 1948, 886,000 days were lost. During the first eight months of 1949 there were 87 strikes and lockouts, with 29,427 workers involved and a time-loss of 765,086 days; in the first eight months of 1948 there were 108 strikes, involving 29,718 workers and a time-loss of 646,671 days; and in the first eight months of 1947 there were 157 strikes, with 66,798 workers involved and a time-loss of 1,581,319 days.

Based on the number of non-agricultural wage and salary workers in Canada, the time-loss in the first eight months of 1949 was 0.12 p.c. and the estimated working time lost for the same period of 1948 was 0.10 p.c. A strike of asbestos miners and mill workers in various centres of Quebec was responsible for 64 p.c. of the total time-loss in the 1949 period.

Employment in 1949

Industrial employment in Canada in the first nine months of 1949 was the highest on record for that time of year. The improvement over the same period of 1948, however, was slight; the index (based on the 1926 average as 100) in the first three-quarters of 1949 averaged 194.0, compared with 193.1 in 1948. In 1947, the average index for the same period was 184.7, and in 1946, 170.3; during the War, the peak figure for those months was 182.6 recorded in 1944.

Although employment generally increased during the first nine months of 1949, the index at Sept. 1 was 0.4 p.c. lower than at the same date of 1948; it was nevertheless 4 p.c. higher than at Sept. 1, 1947. During the year under review, much of the backlog of consumer demand for heavy manufactured goods had been met, while shortages of dollars in many countries had an adverse effect on export markets. Industrial disputes occasioned a greater loss in working days than in 1948. Shortages of electric power and extreme weather were also retarding conditions in the prairies and British Columbia during the earlier months of 1949; on the other hand, more plentiful supplies of materials and greater availability of skilled workers were favourable factors.

While the general index of employment for the first nine months of 1949 rose only by 0.5 p.c. as compared with the same period of 1948, the index of aggregate weekly payrolls was 9 p.c. higher. The increases in the payrolls in 1948 and 1947 over the preceding years had been proportionately greater, due to more rapidly expanding employment and widely distributed wage adjustments, associated with rising prices. The increase in payrolls during the first nine months of 1949 was considerably less than in the same months of immediately preceding years, the advance amounting to 8 p.c., compared with 17 p.c. in 1948 and 20 p.c. in 1947. The average weekly earnings of salaried employees and wage-earners on the staffs of leading establishments in the eight leading industries at Sept. 1, 1949, were \$43.27, compared with \$40.86 at Sept. 1, 1948, and \$36.76 at Sept. 1, 1947.

As compared with one year earlier, employment gains were reported at Sept. 1, 1949, in Ontario, Manitoba and Alberta. The greatest increase was that of 5.0 p.c. in Alberta, where the most recent index was the highest on record. Improvement over Sept. 1, 1948, was reported in all the major industries in that Province. The employment index in Manitoba rose by 2.8 p.c. in the 12 months, to reach the maximum on record. In Ontario, considerable declines in employment in logging at Sept. 1, 1949, as compared with one year earlier were rather more than offset by increases in other industries; the general index advanced by 1.2 p.c. Employment in the larger establishments in Prince Edward Island showed little general change in the 12 months, in which there were fractional declines in the employment indexes for Saskatchewan and British Columbia. There were reductions in the employment indexes for Quebec, New Brunswick and Nova Scotia which exceeded the decline of 0.4 p.c. in the index for Canada as a whole. The figure for Quebec fell from 205.1 at Sept. 1, 1948, to 199.2 at Sept. 1, 1949; although there were gains in employment in a number of major industries, these were not sufficiently large to offset the declines reported in manufacturing, logging, transportation and construction. The general index for Nova Scotia dropped by 5.7 p.c. from Sept. 1, 1948, to 187.5 at Sept. 1, 1949, reductions in employment being reported by firms engaged in manufacturing, mining and construction. Largely a result of declines in manufacturing, logging and transportation, the index for the eight leading industries in New Brunswick showed a reduction of 3.7 p.c. in the 12-month comparison. With the exception of New Brunswick, the general index number of employment for each of the nine older provinces was higher at Sept. 1, 1949, than at the opening of the year.

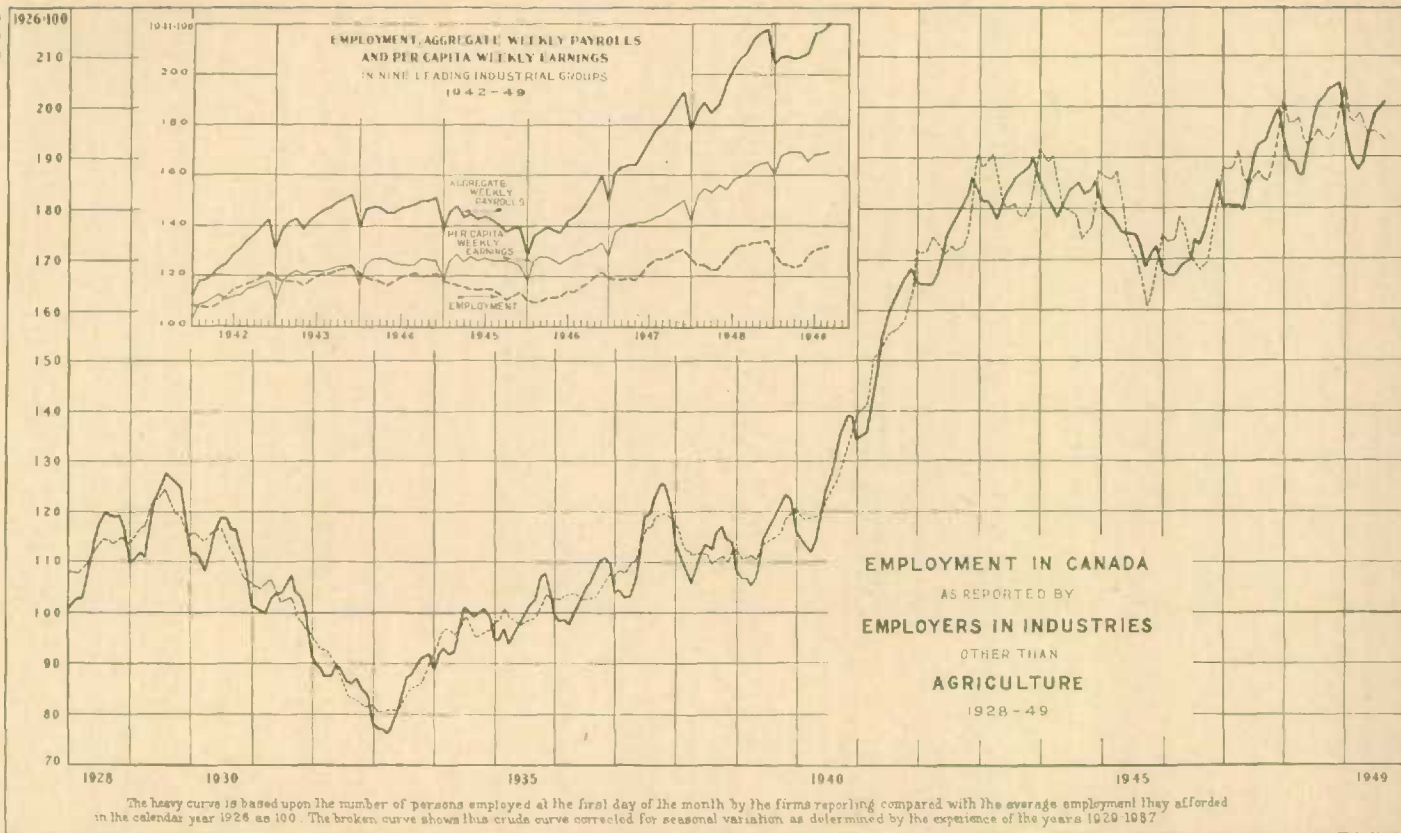
The provincial indexes of aggregate payrolls at Sept. 1, 1949, were higher than at the same date in 1948 except in Prince Edward Island and Nova Scotia. The greatest percentage proportional gain was reported in Alberta. With further wage adjustments, increases in cost-of-living bonuses and a general



Woods-workers start out on their day's work. They live in clean quarters, with laundry, bathing and recreational facilities available. Medical care is also provided.

tendency for employment to level during 1949, the indexes of payrolls reached new all-time high levels in Ontario, the Prairie Provinces and British Columbia. In most areas, the average weekly salaries and wages were also higher than in any preceding period. Prince Edward Island was the exception, the per capita figure in that Province dropping from \$34.04 at Sept. 1, 1948, to \$33.59 at Sept. 1, 1949. The average for the period Jan. 1-Sept. 1 of the latter year, however, was 7.8 p.c. higher than in the first nine months of 1948. In the other provinces, increases in the average earnings during the period under review ranged from \$3.06 per week in British Columbia, to \$1.27 per week in both Nova Scotia and Alberta.

In the 12-month period ended Sept. 1, 1949, improvement in employment was indicated in six of the eight leading cities in Canada, the exceptions being Vancouver and Quebec. The employment index for the latter city was unchanged at 204.3, while the Vancouver index dropped from 240.4 to 232.5, largely a result of a falling-off in activity in manufacturing, transportation and construction. The greatest gain was made in Windsor, where the index rose by 4.6 p.c. Increases in Montreal, Toronto, Ottawa, Hamilton and Winnipeg ranged between 2 and 3 p.c. The general averages of weekly salaries and wages were higher in each of the larger cities, the increases at Sept. 1, 1949, varying from \$1.60 per week in Winnipeg to \$4.11 per week in Hamilton.



A brief review of the situation in the various industries shows that in manufacturing, the index of employment declined by 0.3 p.c. at Sept. 1, 1949, as compared with a year earlier. Although the recession was slight, it was noteworthy because it was the first reduction in staff in a 12-month comparison since 1946, when the situation had been seriously affected by cut-backs in war production, industrial disputes and other post-war problems.

The index at Sept. 1, 1948, had been 3 p.c. higher than at the same date in 1947. In the non-manufacturing industries included in the monthly surveys, taken as a unit, the index also declined slightly in the period under review, falling by 0.4 p.c., as compared with an increase of 5.7 p.c. recorded at Sept. 1, 1948, compared with a year earlier.

Distribution of Persons in Recorded Employment in Manufacturing at Sept. 1, 1939, 1943 and 1946-49

Industrial Group	1939	1943	1946	1947	1948	1949
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Durable manufactured goods.....	38.7	56.7	45.2	46.4	46.2	45.5
Non-durable manufactured goods.....	58.2	41.7	52.5	51.0	50.7	51.1
Central electric stations.....	3.1	1.6	2.3	2.6	3.1	3.4
All Manufacturing Industries...	100.0	100.0	100.0	100.0	100.0	100.0

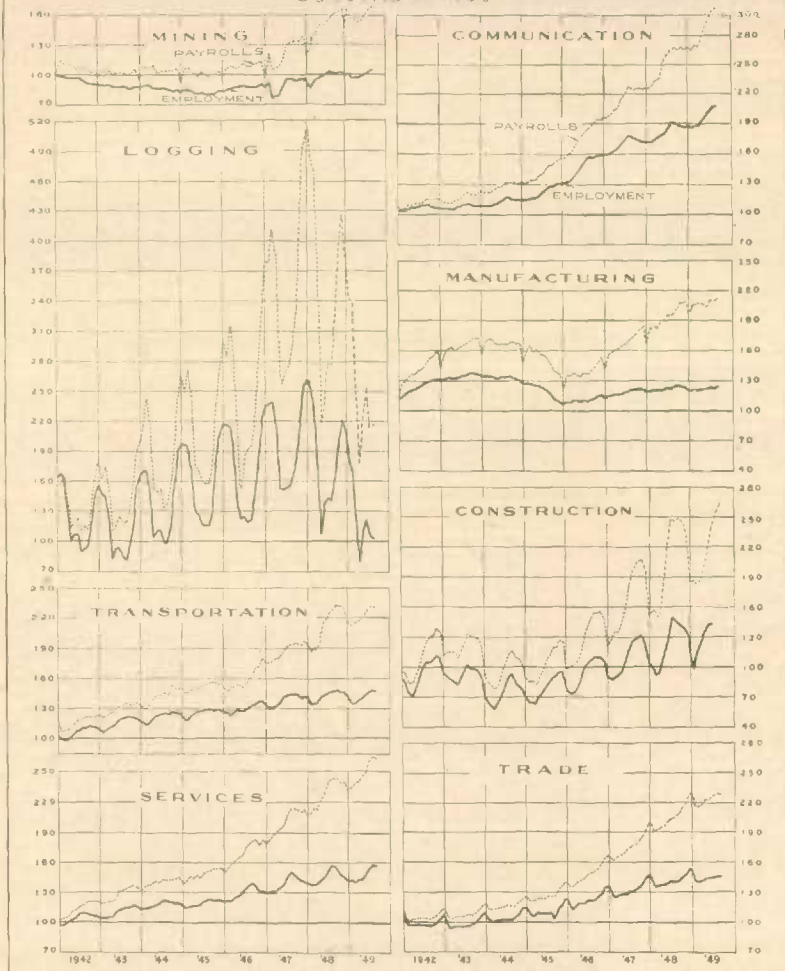
The table indicates some shift in 1949 in the distribution of persons employed in leading manufacturing establishments. Activity in the durable goods industries fell by 2.3 p.c., as compared with 1948, reflecting a reduction in the backlog of consumer demand. On the other hand, employment increased by 1 p.c. in the non-durable goods section and by 9 p.c. in electric light and power, with the result that the proportions of employees in these main groups were higher than at the same date in immediately preceding years. In spite of significant changes in the industrial pattern during and since the War, the distribution in 1949 was closer to that indicated in the pre-war period than in any earlier year for some time.

As previously mentioned, employment in the non-manufacturing industries taken as a unit declined by 0.4 p.c. during the year, although increases were indicated in some of the major industries. Employment in mining in 1949 was affected by strikes in the asbestos division for a lengthy period. Apart from this dispute, and the seasonal declines recorded during the winter months, employment in the industry continued to expand in the year under review; the index of 185.5 at Sept. 1, 1949, was the highest on record, fractionally exceeding the previous all-time high index indicated at Nov. 1, 1941. Employment in the communications industry increased by 8.7 p.c. in the 12-month period, also to reach a new maximum. The advance was particularly marked in the telephone section. As consumer demand was maintained at a high level, the indexes of employment in retail and wholesale trade were higher at Sept. 1, 1949, than at the same date in 1948 or earlier years. Employment in the service industries for which data are tabulated (consisting almost entirely of hotels, restaurants, laundries and dry-cleaning establishments) showed little change in the 12-month period; the index at Sept. 1, 1949, was only slightly higher than at Sept. 1, 1948.

Employment in logging was considerably lower throughout 1949 than in the preceding year. The index at Sept. 1, 1949, was lower than at the same

INDEX NUMBERS OF EMPLOYMENT AND PAYROLLS BY INDUSTRIES, 1942-49

June 1, 1941 = 100



date in any earlier year since 1944, and was 27.1 p.c. below its level at Sept. 1, 1948. The falling-off in this industry was largely responsible for the decline in the general index of employment in the non-manufacturing industries. Some reduction in activity was indicated in construction and maintenance, the index dropping slightly from Sept. 1, 1948, to Sept. 1, 1949. The decrease took place in the highway and railway construction and maintenance divisions; the index for building construction rising by nearly 11 p.c. in the year, to a new all-time maximum at Sept. 1, 1949. Employment in transportation generally showed practically no change.

While employment in the eight leading industries declined by 0.4 p.c. between Sept. 1, 1948, and Sept. 1, 1949, the drop was confined to male employees; the number of women reported by the larger establishments

increased by 2.4 p.c., as compared with a reduction of 1.1 p.c. in the number of men. There were 212 women per 1,000 employees reported by leading establishments at Sept. 1, 1949, compared with 206 at Sept. 1, 1948. The proportion of women in manufacturing rose from 222 per 1,000 workers to 228 and women in communications from 525 per 1,000 employees to 529. With the exception of a decline of from 383 to 374 women per 1,000 employees reported in trade, the proportions in the other major groups showed little change.

Unemployment Insurance

The Unemployment Insurance Act, 1940, providing a co-ordinated program of unemployment insurance and employment offices, is administered by an Unemployment Insurance Commission, consisting of a Chief Commissioner and two Commissioners (one appointed after consultation with employees and one after consultation with employers).

All employed persons are insured unless specifically excepted. Exceptions include such employments as agriculture, fishing, domestic service, school teaching, and those employed on other than an hourly, daily, piece or mileage basis with annual earnings exceeding \$3,120. Persons employed on an hourly, daily, piece or mileage basis are insured regardless of their earnings level.

Employers and their insured workers make contributions according to a graded scale, but in the country as a whole they contribute approximately equal amounts. The Federal Government adds one-fifth of the total employer-employee contributions and pays administration costs. War veterans who enter insured employment and contribute for at least 15 weeks in any year are deemed to have been in such employment for the period of their war service and contributions are paid on their behalf by the Government.

Rates of contribution and benefit under the Unemployment Insurance Act are related to the insured person's earnings. Weekly rates of contribution and selected weekly benefit rates are set forth in the table on p. 210. Contributions are made (usually) by means of the employer attaching a stamp in the employee's book. The stamp combines the employer's and employee's shares (the employer then deducting the employee's share from his earnings) and the weekly stamp is perforated so that it can be divided into six equal parts for the purpose of recording contributions for periods of less than a week. The daily rate of contribution is one-sixth of the weekly rate.

The daily rate of benefit for an insured person is calculated on the basis of his daily average contribution during the most recent 180 days contributions in the two years immediately preceding the claim. The daily rate of benefit for a claimant having no dependent is 34 times, and for a claimant with a dependent 10 cents less than 45 times this average. Daily benefit rates are adjusted to the nearest five cents. The weekly rate is six times the daily rate. The weekly rates of benefit presented in the table are calculated on the assumption that the beneficiary has contributed at the corresponding rate shown in the table during the preceding 180 contribution days.

Since April, 1949, the provisions of the Unemployment Insurance Act have been extended to Newfoundland. However until such time as workers in that Province will have accumulated sufficient contributions to entitle them to unemployment insurance benefits they are covered by a special scheme of unemployment assistance which provides for payments to unemployed persons on the same scale as unemployment insurance benefits.



Shaping girder ends with an oxy-acetylene torch. The demand for new and improved construction of all kinds has ensured the employment of workers at steadily increasing wage rates.

Weekly Rates of Contribution and Benefit Under the Unemployment Insurance Act

(Effective Oct. 4, 1948)

Class	Earnings in a Week	Weekly Contributions		Denomination of Stamp	Weekly Benefits	
		Employer	Employed Person		Person Without a Dependent	Person With a Dependent
0	While earning less than 90 cents a day or while under 16 years of age....	cts. 91 ¹	cts. 91 ²	cts. 18	\$ 1	\$ 1
1	Earning \$5.40 to \$7.49 in a week....	18	12	30	4.20	4.80
2	Earning \$7.50 to \$9.59 in a week....	24	15	39	5.10	6.30
3	Earning \$9.60 to \$11.99 in a week....	24	18	42	6.00	7.50
4	Earning \$12.00 to \$14.99 in a week....	24	21	45	7.20	9.00
5	Earning \$15.00 to \$19.99 in a week....	24	24	48	8.10	10.20
6	Earning \$20.00 to \$25.99 in a week....	30	30	60	10.20	12.90
7	Earning \$26.00 to \$33.99 in a week....	36	36	72	12.30	15.60
8	Earning \$34.00 or more in a week....	42	42	84	14.40	18.30

¹ Workers in this class make no contributions and are not eligible for benefit. They may, however, accumulate benefit rights on the basis of employer contributions. ² Paid on his behalf by employer.

During the first six months of 1949, 464,497 initial and renewal claims were filed in Local Offices, 392,765 were considered entitled to benefit and benefit payments amounted to \$42,516,168. During the calendar year 1948 there were 649,090 initial and renewal claims filed, 499,321 claimants were considered entitled to benefit, and benefit payments totalled \$40,268,109. In 1947, 442,854 initial and renewal claims were filed, 322,333 were considered entitled to benefit, and the amount of benefit paid was \$31,994,772.

Persons Issued an Unemployment Insurance Book, by Sex and Province, as at Apr. 1, 1948

Province	Male	Female	Province	Male	Female
P. E. Island	3,340	1,480	Manitoba	111,390	41,050
Nova Scotia	59,630	13,980	Saskatchewan . . .	41,190	16,340
New Brunswick . .	51,240	15,120	Alberta	82,140	27,070
Quebec	459,000	187,110	British Columbia	173,370	55,700
Ontario	681,740	277,450	Totals	1,663,040	635,300

Wage Rates and Hours of Labour

Index numbers of wage rates, compiled by the Department of Labour, show the general movement of wage rates for the main industrial groups as well as for individual industries, but cannot be used to compare rates in one industry with those in another. The statistics are average straight-time wage rates or average straight-time piece-work earnings and therefore do not include overtime or other premium payments. From 1930 to 1933 there was a considerable decrease in wage rates but increases have been general each year since that time. During 1939-48 the rise amounted to about 96 p.c.

Index Numbers of Wage Rates for Certain Main Groups of Industries, 1901-48

(Rates in 1939 = 100)

Year	Logging	Coal Mining	Metal Mining	Manu- fac- turing	Con- struc- tion	Water Trans- port	Steam Rail- ways	Electric Rail- ways	Tele- phones	General Aver- age ¹
1901 . .	51.4	47.4	61.2	..	35.3	43.9	33.7	32.8	..	38.1
1905 . .	57.0	49.5	58.7	..	42.8	44.7	36.5	37.7	..	43.1
1910 . .	64.0	54.0	62.5	..	50.9	48.4	44.1	44.0	..	49.9
1915 . .	61.1	58.7	66.2	50.1	59.4	54.0	49.8	50.2	..	53.2
1920 . .	142.5	113.3	102.9	102.4	106.0	105.2	108.2	99.7	92.2	107.0
1925 . .	95.2	96.1	93.3	92.3	99.8	90.4	91.2	96.4	89.1	93.8
1930 . .	97.5	97.1	93.9	95.5	119.1	97.2	100.0	102.3	94.7	99.9
1935 . .	73.1	95.0	92.6	87.0	93.6	81.1	90.1	94.3	93.0	88.4
1936 . .	80.9	95.1	94.9	89.1	94.2	82.4	90.1	95.2	93.8	90.0
1937 . .	93.9	95.6	99.1	96.1	96.9	92.0	96.0	97.8	98.5	96.7
1938 . .	101.8	100.0	99.6	99.2	99.2	99.1	100.0	99.4	99.7	99.6
1939 . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940 . .	104.9	102.1	102.8	104.3	104.5	105.2	100.0	103.9	101.3	103.9
1941 . .	114.0	109.4	112.2	115.2	111.6	113.3	109.4	109.1	106.4	113.1
1942 . .	125.9	113.1	118.7	125.5	118.6	125.8	114.8	115.8	112.0	122.5
1943 . .	143.1	124.8	123.1	136.8	127.7	138.8	125.5	121.2	121.9	133.7
1944 . .	146.1	146.0	125.2	141.4	129.6	142.2	125.5	125.7	122.4	137.9
1945 . .	153.3	146.2	128.2	146.5	131.1	144.6	125.5	126.6	125.6	141.8
1946 . .	167.4	146.7	135.7	161.5	143.9	162.3	142.3	139.5	125.2	155.2
1947 . .	195.1	166.7	157.7	183.3	155.0	183.8	142.3	162.3	132.2	173.7
1948 . .	218.8	192.9	173.1	205.9	176.3	213.5	170.2	175.0	140.4	195.8

¹ Includes laundries.

In 1948 average standard weekly hours of labour in manufacturing, weighted by the number of male workers, were as follows: primary textile products, 46.1; clothing, 41.3; rubber, 45.1; pulp and its products, 47.8; paper boxes, 45.3; printing and publishing, 41.0; lumber and its products, 46.0; edible plant products, 47.5; edible animal products, 46.6; fur products, 42.4; leather and its products, 46.1; iron and its products, 45.0; tobacco products, 45.0; brewery products, 43.9; and electrical products, 43.0. Average hours in construction were 43.3; in wholesale trade, 43.7; and in retail trade, 43.7. Weekly hours in logging in the British Columbia coastal area were 40, and in Eastern Canada the majority worked 60 hours. Coal mining in Western Canada was on a 40-hour schedule generally and in Eastern Canada, 48 hours. In metal mining, the 48-hour week was usual in all provinces except British Columbia where the 44-hour week prevailed.

Towards the end of 1944 a statutory 48-hour week, which had been in force in British Columbia for some years, became effective in Ontario. In 1946, however, British Columbia adopted a 44-hour week and the next year Saskatchewan stipulated that no person could be employed for more than 44 hours unless an overtime rate of time and one-half was paid. These statutes exempt a few classes and permit exceptions to be made by the administrative authorities.

Vocational Training

The Training Branch of the Department of Labour is responsible for the administration of the Vocational Training Co-ordination Act, 1942. The Act provides financial assistance to the provinces for various types of training under specified conditions which are set out in Agreements between the Federal Government and the Provincial Governments concerned. The Director of Training at headquarters is assisted by a Regional Director in each province. An Advisory Council representing workers, veterans, employers, etc., advises the Minister on policy and procedure in connection with training projects.

Youth Training Agreements, for young people between 16 and 30 years, are in effect with all provinces, and the federal appropriation of \$425,000 is distributed among them, expenditure being shared equally by the Federal and Provincial Governments. Financial assistance is provided for university students and nurses; in addition, thousands of young people, particularly in rural areas, have benefited by training in agricultural pursuits.

There are Apprenticeship Acts in all provinces. In seven provinces apprenticeship training in skilled trades is aided by the Federal Government under agreements that have been in effect for nearly four years. Over 10,900 apprentices were registered on Mar. 31, 1949.

Youth Training, Veterans Training, Training of Supervisors and of Unemployed Civilians were consolidated under the "Vocational Training Agreement", effective Apr. 1, 1948. The Federal and Provincial Governments share equally in all approved expenditures except for Veterans Training, which is all borne by the Federal Government. This Agreement has been signed by all provinces.

Vocational and technical training on the secondary school level is being assisted in each province for a ten-year period. A \$10,000 annual grant is made to each province and, in addition, if the province appropriates an amount equal to the federal contribution, a sum of \$1,910,000 is available to the provinces each year. This amount is divided in proportion to the



Production line in a nylon stocking plant. Over 36 p.c. of all women working in factories are employed in the textile industries, which are concentrated mainly in Ontario and Quebec.

population in each province between the ages of 15 and 19 years. On the same basis, a special federal contribution of \$12,000,000 has been allotted for capital expenditures incurred prior to Mar. 31, 1952, for buildings and equipment. The program of vocational and pre-matriculation training of former members of the Armed Forces is practically completed.

National Employment Service

The Unemployment Insurance Commission operates a nation-wide free employment service under authority of the Unemployment Insurance Act, 1940. This service is available to all and is widely used by non-insured persons as well as insured workers. With regard to the latter, through the employment service the Commission certifies that a claimant for unemployment insurance benefit is unemployed and that suitable work is, or is not, available. This test is a basic condition for the receipt of unemployment insurance.

During the post-war years the National Employment Service in co-operation with the Department of Labour has played an important role in placing displaced persons from Europe in employment. From the inception of the Group Immigration Plan in August, 1947, until October, 1949, approximately 38,000 workers with 3,000 dependants were directed to employment.



Lake freighters tied up at the Georgian Bay port of Owen Sound. Railway freight terminals are on the left and a 4,000,000-bu. grain elevator is in the background.

Transportation Communications

IMPROVED and ever-expanding means of transportation by land, air and water have characterized the development of the distributive agencies of Canada's economy. Indeed, in some aspects of this advance, such as the transport of freight by air in the northwest, Canada has pioneered. The following treatment shows that the country is abreast of the times not only in transportation but also in the means whereby distributive facilities are made more efficient.

Steam Railways

It would be difficult to over-estimate the importance of the railways in the building of Canada. To-day, with its relatively small population distributed mainly in the southern portion of a vast area 4,000 miles in breadth and engaged in extensive external and internal trade relations, a large and efficient transportation system is a necessity.

One of the first great undertakings to engage the attention of the young Dominion after Confederation in 1867 was the building of a transcontinental railway to link the east and west. Surmounting tremendous difficulties, the Canadian Pacific Railway was completed in 1885 and the vast hinterland of the Canadian west was opened for settlement. The wheat boom during the period 1900-13 brought prosperity and rapid economic expansion and precipitated another era of railway development. To other transcontinental systems, the Canadian Northern and the Grand Trunk Pacific (with the government-built National Transcontinental) were built, and total Canadian railway mileage increased from 18,140 in 1901 to 30,795 in 1914.

Construction continued in the war years and during 1914-18 nearly 7,500 miles of railway were opened to traffic, bringing the total up to 38,252 miles. Much of the financing of the Canadian Northern and Grand Trunk Pacific lines was aided by the Federal and Provincial Governments guaranteeing the interest and principal of their debentures. Immigration was stopped by the War, traffic in the Western Provinces did not develop as anticipated, and these two railways and the Grand Trunk Railway, which was constructing the Grand Trunk Pacific, soon were unable to meet their interest payments. A commission was appointed on the advice of which the Federal Government took over these railways and amalgamated them with the Government-owned railways, some of which had been constructed as a part of Confederation. The resulting Canadian National Railways had a total mileage in 1923 of 21,805 miles, including mileage of the Grand Trunk lines in the United States; this mileage had grown to 23,404 by the end of 1948.

The Provincial Government of British Columbia also took over a bankrupt railway (348 miles) and the Canadian National and Canadian Pacific jointly took over the Northern Alberta Railway (923 miles), which had been under private ownership but was unable to continue operations. The Province of Ontario built and operated a railway (574 miles) primarily for colonization

purposes. Thus the publicly operated railways in Canada are a combination of lines, some of which were constructed for political reasons or colonization purposes and some taken over from private companies faced with bankruptcy.

As a group these railways have not been prosperous: the Canadian National Railways earned a surplus only in 1926 and 1928, and in the five war years, 1941-45, inclusive. During the period 1923-48 the net result was a cash deficit of \$519,797,636 exclusive of capital losses and interest on advances by the Federal Government to meet operating deficits.

With the outbreak of the Second World War, industrial production increased rapidly and freight traffic of the railways showed corresponding increases. Passenger traffic showed even larger increases. The following table shows railway data for 1928, the pre-war peak year; 1933, the lowest of the depression years; 1938, the last full year before the War; and 1942-48, years affected by war and post-war conditions. Since the end of the War passenger traffic has declined steadily, due mainly to the competition of the motor-bus and private automobile.

As the railways are public utilities enjoying certain exclusive operating rights, the Board of Transport Commissioners was set up to control freight and passenger rates as well as other matters relating to construction, operation and safety of railways.

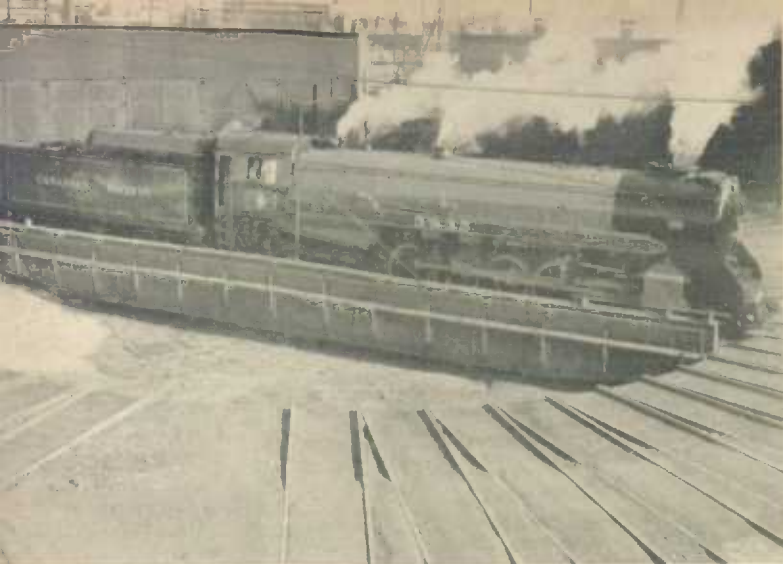
Summary Statistics of Canadian Railways, 1928, 1933, 1938 and 1942-48

Year	Freight Carried One Mile	Passengers Carried ¹	Em- ployees	Gross Operating Revenues	Operating Expenses
	tons	No.	No.	\$	\$
1928.....	41,610,660,776	40,592,792	187,710	563,732,260	442,701,270
1933.....	21,092,594,200	19,172,193	121,923	270,278,276	233,133,108
1938.....	26,834,696,695	20,911,196	127,747	336,833,400	295,705,638
1942.....	56,153,953,000	47,596,602	157,740	663,610,570	485,783,584
1943.....	63,915,074,000	57,175,840	169,663	778,914,565	560,597,204
1944.....	65,928,078,992	60,335,950	175,095	796,636,786	634,774,021
1945.....	63,349,094,918	53,407,845	180,603	774,971,360	631,497,562
1946.....	55,310,257,842	43,405,177	180,383	718,510,764	623,529,472
1947.....	60,143,034,978	40,941,387	184,415	785,177,920	690,821,047
1948.....	59,080,323,337	38,279,981	189,963	875,832,290	808,126,455

¹ Duplications included.



New Roomette Cars are now being built for the Canadian National Railways. These low-priced luxury cars contain 24 individual self-contained rooms, 12 on the floor level and 12 interlocking rooms three easy steps above floor level.



The locomotive of to-day represents over a century of improvement. The giant oil-burning steam engine above, assigned in 1949 to the Calgary-Revelstoke run through the Rockies, is probably the last of her line. The diesel engine (to right) is rapidly replacing the steam engine on the railways.



Electric Railways

Widespread changes in urban transport systems have been taking place in recent years. Electric street railways, at one time the sole type of conveyance, have been replaced or supplemented in many Canadian cities by the motor-bus and the trolley-bus, while a large number of interurban electric lines have been abandoned. During 1948, electric cars were in operation in 19 Canadian cities compared with 43 in 1926. In many cases, the same transportation company has remained in operation, using motor-buses instead of electric cars, but in a considerable number of cities in Ontario and Western Canada the transportation services are owned and operated by the municipalities. Windsor is at present the largest city where buses, exclusively, are operated. Trolley-buses were in use in Montreal, Toronto, Kitchener, Winnipeg, Calgary, Edmonton, Regina, Fort William, Port Arthur and Vancouver.

Equipment owned by companies or municipalities operating electric railways in 1948 included 3,105 electric passenger cars, 1,981 buses and 518

trolley-buses. Passengers carried by these vehicles in that year numbered nearly 1,309,566,000. Electric cars carried 70 p.c. of the traffic, motor-buses 23 p.c. and trolley-buses 7 p.c.

Roads and Highways

The rapid increase in the percentage of motor-car owners to population created a demand for improved roads that has become more and more insistent during the past 30 years. Furthermore, the advantages to be gained by attracting motoring visitors have been a powerful incentive to governing bodies to improve roads and scenic highways within their jurisdictions. Also the widespread rural ownership of automobiles and trucks has brought about improvement of secondary rural roads. There are great stretches of country in the northern portions of Quebec, Ontario, the Prairie Provinces, and British Columbia sparsely populated and with very few roads, but the southern portions are well supplied.

At the end of 1947 there were in Canada 145,809 miles of surfaced road and 408,682 miles of non-surfaced road. Of the surfaced road, 126,780 miles were gravel, 16,624 miles were bituminous surfaced and 2,405 miles concrete. All roads, except those in the Territories and the National Parks which are the responsibility of the Federal Government, are under the juris-

The street railway system in Ottawa, privately owned since its establishment in 1891, was taken over by the municipality in 1948.



The North Bay-Sudbury highway near the town of Wahnapiitei, Ont.



diction of provincial and municipal authorities. The expenditures for 1947 on construction and maintenance of roads and bridges amounted to \$232,514,295.

Motor-Vehicles

There were more motor-vehicles registered in Canada in 1948 than in any other year. The number was 2,034,943, of which 1,496,784 were passenger cars and 538,159 commercial vehicles, including 487,913 trucks, 4,286 buses and 45,960 miscellaneous vehicles. Motorcycle registrations showed a decided increase over 1947, being 33,939 as against 26,129 in the previous year. The apparent supply of new passenger automobiles, which amounted to only 2,099 in 1945, increased to 82,137 in 1946, 163,787 in 1947 and 152,336 in 1948.

Provincial revenues from motor-vehicle registrations and licences reached a high of \$51,287,732 in 1948, and provincial gasoline tax revenues amounted to \$124,330,987.

Motor-Vehicles Registered, 1939-48

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada ¹
1939...	8,040	53,008	38,116	213,148	682,891	88,864	119,018	113,702	122,087	1,439,245
1940...	8,670	57,873	39,000	225,152	703,872	90,932	126,970	120,514	128,034	1,500,829
1941...	8,015	62,805	41,450	242,149	739,194	96,573	131,545	126,127	134,499	1,572,784
1942...	7,537	58,872	37,758	222,622	715,380	93,147	130,040	125,482	132,893	1,524,153
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	140,092	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	1,835,950
1948...	11,290	76,319	62,366	335,953	874,933	128,000	167,515	173,950	202,126	2,034,943

¹ Includes registrations in Yukon and the Northwest Territories.

Motor-Carriers.—Motor-buses and motor-trucks have increased steadily in importance in the transportation field, providing as they do freight

and passenger service between numerous localities, both with and without railway facilities. During the war years rationing of gasoline, tires and motor-vehicles restricted the service considerably. The heavy short-haul traffic of employees to and from munition factories, air fields, etc., obscured, in the statistics, the curtailment in interurban traffic, but since buses have become more plentiful, vehicle-mileage of inter-city and rural transit systems has shown a decided increase.

Statistics of Motor-Carriers, 1944-47

Item	1944	1945	1946	1947
Investments in land, buildings and equipment..... \$	54,186,461	59,400,753	72,725,752	91,278,837
Revenues..... \$	81,707,604	88,157,490	102,241,162	118,139,496
Equipment—				
Trucks.....No.	6,772	6,486	6,652	7,183
Tractor, semi-trailers.... "	2,063	2,063	2,387	2,657
Trailers..... "	1,103	1,154	1,368	1,791
Buses..... "	3,104	3,322	3,824	4,125
Passengers carried..... "	234,809,000	239,858,000	261,041,676	281,651,437
Freight, inter-city and rural ton	9,605,000	10,854,000	11,944,384	13,071,660

Shipping

Canadian shipping is divided into two classes: (1) foreign service, and (2) coasting service. The first is subdivided into: (a) seagoing, i.e., between Canadian ports on the Pacific and Atlantic Oceans and on the St. Lawrence

The canals of the St. Lawrence open up the interior of the continent to ocean-going vessels from all corners of the world. The lake freighter on the right takes advantage of the river current on her down-stream run.



up to Montreal, and ports in other countries, including fishing at sea; and (b) inland, i.e., between Canadian and United States ports on the Great Lakes and connecting rivers. The second is service between Canadian ports, including fishing in Canadian waters. Shipping statistics are collected only from ports at which there is an official of the Customs and Excise Division of the National Revenue Department, and consequently do not include shipping on the Mackenzie River, Lake Winnipeg, etc.

Vessels Entered at Canadian Ports, 1940-48

Year	Foreign Service ¹		Coasting Service		Totals	
	No.	Tons Register	No.	Tons Register	No.	Tons Register
1940 ²	46,241	46,666,396	78,212	44,361,232	124,453	91,027,628
1941 ³	25,122	32,579,900	79,951	50,471,166	105,073	83,051,066
1941 ³	26,203	31,452,400	77,592	48,111,082	103,795	79,563,482
1942.....	24,066	25,640,763	73,366	43,990,764	97,432	69,631,527
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

¹ Sea-going and inland international.

² Year ended Mar. 31.

³ Calendar year.

Harbours

Facilities provided for the co-ordination of land and water transportation at Canada's many ports include docks and wharves, warehouses for general cargo, 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—Halifax, Saint John, Chicoutimi, Quebec, Three Rivers, Montreal, Vancouver and Churchill—are administered by the National Harbours Board, seven others by commissions that include municipal as well as Federal Government appointees, and the remainder by harbour masters directly under the authority of the Department of Transport.

Canals

There are six canal systems under the Department of Transport, namely: (1) between Fort William and Montreal, (2) from Montreal to the International Boundary near Lake Champlain, (3) from Montreal to Ottawa, (4) from Ottawa to Kingston, (5) from Trenton to Lake Huron, and (6) from the Atlantic Ocean to the Bras d'Or Lakes in Cape Breton. These canals have opened to navigation from the Atlantic about 1,875 miles of waterways. Under the Department of Public Works or other authority are minor canals and locks that facilitate local navigation.

The Great Lakes and St. Lawrence River form one of the busiest waterways in the world. More traffic passes up and down the St. Mary's River than any other waterway; in 1948 it reached a tonnage of 115,894,650. Though this was a decrease of over 4 p.c. from the peak year of 1942, which was high because of heavy war requirements of iron ore, it was a peacetime record.



Trans-Canada Air Lines "North Star" over Lake St. Louis, Que.

Civil Aviation

The control of civil aviation in Canada is under the jurisdiction of the Federal Government. The Department of Transport deals with the technical side which includes matters of registration of aircraft, licensing of air-men, establishment and maintenance of airports and facilities for air navigation, air-traffic control, accident investigation and the safe operation of aircraft. Certain statutory functions with respect to the issue of licences to operate commercial air services and the subsequent economic regulation of commercial air services in accordance with the dictates of the public interest are assigned to the Air Transport Board.

Air transport services are grouped into two broad classes: (1) Scheduled Services, providing regular point-to-point services and (2) Non-Scheduled Services which include services not on regular time schedules, chartered and contract services, and specialty services such as forestry or other surveys.

Trans-Canada Air Lines.—Incorporated in 1937, TCA in 1949 operated 16,000 miles of routes, flying to 40 communities in Canada, the United States, the British Isles, Bermuda and the West Indies.

During 1948-49 local services in the Prairie Provinces were extended by including Brandon and Yorkton on the Winnipeg-Regina route. The cities of Lethbridge, Edmonton, Saskatoon, Regina, Medicine Hat and Swift Current were linked by feeder service to the main-line route. Flight frequency of the Ontario service between Toronto, North Bay, Porquis Junction and Kapuskasing was placed on a daily basis. A second daily flight was added



Canadian designed and built, the Avro jet-powered airliner is powered by four Rolls-Royce Derwent 5 gas turbine engines, has a cruising speed of 427 m.p.h. and carries 50 passengers. This aircraft has recently been tested and is expected to be in production by 1952.

between Toronto, Sault Ste. Marie, the Lakehead and Winnipeg. Direct operations commenced between Sydney, N.S., Moncton and Saint John, N.B.

In the domestic service, during the year ended Mar. 31, 1949, 562,170 passengers, 2,772,985 ton-miles of mail and 1,581,879 ton-miles of commodity traffic were carried as compared with 438,549 passengers, 1,311,764 ton-miles of mail and 645,771 ton-miles of commodity traffic in the previous year. These figures include the emergency service provided in British Columbia during the flood in the early summer when all surface communications with that Province were severed for a period of three weeks. Included also is the general carriage of first-class mail by air at unchanged postal rates. As a result of this service, Canadians enjoy the most inexpensive air-mail service in the world.

Overseas flights during the year ended Mar. 31, 1949, accommodated 39,796 passengers, 381,988 ton-miles of mail and 1,099,393 ton-miles of commodity transport, compared with 17,657 passengers, 334,643 ton-miles of mail and 662,116 ton-miles of commodity transport in the preceding year. Under charter contract first with the Province of Ontario and then with the Federal Government, TCA brought to Canada 6,000 immigrants from the United Kingdom and the Continent in 175 westbound crossings during 1948-49—the largest mass movement of immigrants in air transport history.

Flight equipment at the close of 1949 included 20 four-engined North Stars and 27 twin-engined DC-3's.

Canadian Pacific Air Lines.—Canadian Pacific Air Lines operate a widespread group of north-south schedules across Canada whose routes,

as at Mar. 31, 1949, covered a distance of 9,770 miles. Company aircraft during the year flew a distance of nearly 5,000,000 miles, carrying 145,891 passengers, 1,882,034 lb. of mail and 7,309,663 lb. of freight.

In 1948 the Federal Government assigned to Canadian Pacific Air Lines the licence to operate trans-Pacific air services between Canada and points in Australia, New Zealand and the Far East. As a result, development and organization work progressed and orders were placed for the construction of Canadair four-motored aircraft for use on these routes. The trans-Pacific air service between Vancouver and Australia and New Zealand was inaugurated in July, 1949, and the service between Vancouver and the Orient via Alaska, Shemya, Tokyo, Shanghai and Hong Kong in September, 1949.

Independent Air Lines.—Additional to Trans-Canada Air Lines and Canadian Pacific Air Lines, there are seven other domestic air lines licensed to operate scheduled services in Canada. However, most of the independent air lines operate non-scheduled services which, with few exceptions, are charter services from designated bases. It is in this field that the greatest development has taken place in recent years. Non-scheduled charter services and non-scheduled specific point services provide effective means of access to sections of Canada that are inaccessible by other means of transportation and also act as feeders to the scheduled air lines.

Cargo flown into the north country by airliner.



The Empress of Sydney at Honolulu Airport on its inaugural flight. The Canadian Pacific Air Line launched its Australian service in July and its Hong Kong service in September, 1949.



International Agreements.—Canada's position in the field of aviation as well as its geographical location makes it imperative that she should co-operate with other nations of the world engaged in international civil aviation. Canada played a major part in the original discussions that led to the establishment of the International Civil Aviation Organization now with headquarters at Montreal. Canada has actively participated in the deliberations of ICAO and its many committees, and as a result has secured the benefits of the joint knowledge and experience of all member states in the technical and economic aspects of all phases of civil aviation.

As a result of the entry of Newfoundland into Union with Canada on Mar. 31, 1949, new bilateral air agreements have been signed between Canada and the United States, the United Kingdom and Belgium. Canada has been given extended rights on the North Atlantic for traffic from Ireland, Iceland and the Azores, and has been given rights in Brussels by the Belgian Government.

On the Caribbean route, rights have been obtained in Florida from the United States and for additional points of call in British territories. In the Pacific new agreements provide for calls at Honolulu and Fiji and Hong Kong. Also TCA is to be authorized to obtain the right to operate from Montreal to New York in the trans-border field. Operating certificates have been issued to nine Commonwealth and foreign scheduled services flying into Canada.

Telegraphs

Six telegraph systems are operated in Canada, four in conjunction with the railways, one by the Federal Government and one small system that is owned and operated independently. One United States company uses lines across Canadian territory; one private Canadian company operates a wireless system; and three cable companies, in addition to the telegraph companies, operate cables from Canadian stations. In all, there are 22 cables between



Maintenance men repairing a land telegraph line after a winter storm. Meanwhile, messages are re-routed through other channels.

Canada and England, the Azores, Australia, New Zealand, Newfoundland, St. Pierre and Miquelon, and Bermuda, and two cables between North Sydney and Canso, N.S.

These systems have 400,320 miles of telegraph wire in Canada, 5,320 miles outside of Canada, and 32,816 nautical miles of submarine cable between Canada and other countries. Multiple circuits normally produce 924,851 miles of channels for telegraphic use. During 1948 a total of 19,013,468 telegrams and 1,579,679 cablegrams, excluding messages between foreign countries, were handled by these systems.

Telephones

There were 3,056 telephone systems in Canada in 1947, with 7,285,681 miles of wire and 2,230,597 telephones. The estimated number of conversations during the year was 3,843,264,173 or 1,723 per telephone. The transfer from manually operated telephone switchboards to automatic has continued steadily, although it was somewhat restricted by scarcity of equipment during the war years. In 1947, 56 p.c. of all telephones were dial telephones; 93 p.c. of these were in urban centres of over 10,000 population, where they comprised 79 p.c. of the telephones in use.

Radio

On Feb. 9, 1932, the Judicial Committee of the Imperial Privy Council, to whom the matter had been referred, ruled that the control and regulation of radio-communication rested within the jurisdiction of the Federal Parliament. The enactment of the Canadian Radio Broadcasting Act of 1932, by which power was vested in the Canadian Radio Broadcasting Commission to control and regulate radio broadcasting in Canada, followed. At this time the Commission was without a transmission system of its own but proceeded to carry out its responsibilities under the Act in regard to the control of privately owned stations. The nucleus of a nationally owned system was secured in 1933 on the acquisition and operation by the Commission of three stations of the Canadian National Railways at Moncton, Ottawa and Vancouver. The present Canadian Broadcasting Corporation succeeded the Canadian Radio Broadcasting Commission in 1936.

The responsibilities of the CBC as laid down in the Canadian Broadcasting Act of 1936 are to formulate regulations controlling the establishment and operation of networks, the character of any and all programs broadcast in Canada and the proportion of time that may be devoted to advertising in broadcast programs. All radio stations in Canada come under the Department of Transport, Radio Division, for technical administration including frequency, operating power, etc., and are licensed by that authority.

At Sept. 1, 1949, there were operating in Canada 143 standard broadcast band stations, of which 18 were Canadian Broadcasting Corporation stations and 125 privately owned stations; also 34 short-wave stations, of which 26 were Canadian Broadcasting Corporation stations and eight privately owned stations. The number of radio receiving sets in Canada is probably not far below 3,000,000, or about one for every four persons in the population. Private receiving licences number about 2,057,000, many of which cover more than one set.

Canadian Broadcasting Corporation.—With the addition of four stations of the former Broadcasting Corporation of Newfoundland, the Canadian Broadcasting Corporation now operates 18 standard-band stations (seven of them with a power of 50,000 watts), five frequency modulation transmitters, and 19 low-power relay stations. The latter are satellite transmitters servicing communities not able to receive an adequate signal from a Canadian station, and not large enough to support their own local station. Further development of the plan for national coverage originally laid down in 1936 calls for a boost in power to 50,000 watts of CBC stations CBM, Montreal, and CBR, Vancouver, and the opening of a CBC outlet at Windsor, Ont. Work is now under way on these projects. The publicly owned stations, supplemented by privately owned affiliates, make CBC network service available to over 90 p.c. of Canada's population.

The CBC has been active in the development of frequency modulation. It operates two FM stations at Montreal, and one each at Toronto, Vancouver and Ottawa. The CBC has also been devoting much study to tele-

The microphone is a very exacting master—it demands a maximum of precision as well as imagination. The radio actor, with his voice alone, must achieve what the actor on the legitimate stage achieves with the assistance of gesture, costume, make-up, pantomime and facial expression.



vision, and plans to proceed with the development of that new medium in Canada just as soon as necessary financing can be arranged.

Organization of the CBC.—The Canadian Broadcasting Corporation is operated as a national public service. Policy is determined by a board of nine Governors who act as trustees of the national interest in broadcasting. The Governors are appointed by the Governor General in Council for three-year terms, and the Chairman is required to devote his full time to performance of his duties. They are chosen to give representation to the main geographical divisions of Canada and various facets of Canadian life. Direction of policy, day-to-day operations, and management of the system are the responsibility of the General Manager and Assistant General Manager. Revenue is derived from an annual licence fee of \$2.50 paid by listeners, and income from commercial operations.

As constituted under the Act, the CBC is designed to operate in the public interest. It is responsible to Parliament as a whole through a Minister of the Crown and from time to time the work of the Corporation is reviewed by a special Committee of the House of Commons.

Operations.—The CBC operates all radio networks in Canada; the Trans-Canada and Dominion Networks serve English-speaking listeners from coast to coast, and the French Network serves French-speaking listeners in the Province of Quebec. The Networks are made up from 18 CBC-owned and 87 privately owned stations located across Canada. The Trans-Canada has a maximum outlet of 61 stations; the Dominion a maximum of 45; and the French Network a maximum of 16. For occasional broadcasts of national interest the three networks are joined to form the National Network. In addition to these outlets, the CBC has pioneered in the development of low-powered repeater stations, which operate automatically with the Network, in remote areas of Canada. French-speaking listeners in northern Quebec and on the western prairies are served by short-wave stations, and another is used to reach listeners in the northern coastal regions and in the interior of British Columbia.

Short-wave receiving stations are maintained at Ottawa and Toronto, Ont., mainly for the reception of British Broadcasting Corporation transmissions. In order to improve reception from Australia and points in the Pacific area, a new short-wave receiving station is operated at Point Grey, near Vancouver, B.C.

Program Service and Development.—During the year ended Mar. 31, 1949, 63,869 programs were broadcast, taking up 19,792 hours of broadcast time, on the three CBC networks. Of the total hours, 80 p.c. were non-commercial service, an increase of 903 hours over the previous year. The CBC originated and produced 80 p.c. of all network broadcasts, private stations originated nearly 3 p.c. and the remaining 17 p.c. was made up of exchange programs from the British Broadcasting Corporation and United States networks.

Light and semi-classical music occupied the greatest number of hours, followed in order by dramatic and feature productions, news, classical music, agricultural programs, informative talks, educational and religious programs. Children's programs, broadcasts of sports events and sports résumés took up the remaining network time, in that order.



The CBC Opera Company, formed in 1948, rehearses for the performance of "Peter Grimes".

Network broadcasting in Canada is complicated by the fact that program service must be provided to listeners in six different time zones. In order to bring programs to listeners in each of the time zones at suitable hours, the CBC maintains regional production centres, with program, engineering and administrative staffs, at St. John's, Halifax, Montreal, Toronto, Winnipeg and Vancouver. Other CBC production points are maintained at Sydney, Chicoutimi, Quebec City, Ottawa and Edmonton. Decentralization makes it possible for the CBC to meet varying tastes and needs of listeners in the six regions, and to employ and develop local and regional talent. The emphasis, however, is on national radio.

A cardinal rule of CBC program planning is that program schedules should include radio fare to meet all tastes. Canadian talent is used to the fullest possible extent. Over 80 p.c. of all programs carried on CBC networks are Canadian in origin. The balance consists of programs which the CBC carefully chooses from other countries on the basis of listeners' preferences and needs. These programs are mostly of types not available within Canada and are chosen with the over-all program-balance picture in mind.

Because CBC felt many people were turning away from radio due to a certain type of program deficiency, the Corporation inaugurated an experimental series known as "CBC Wednesday Night" in December of 1947. This was a block of non-commercial programs broadcast for a full evening on

the Trans-Canada network and produced primarily for the discriminating listener. The experiment has been very successful and will be continued as a regular Trans-Canada network feature. "CBC Wednesday Night" has included works such as the *St. Matthew Passion* and *Messiah* broadcast in their entirety for the first time; the Benjamin Britten opera *Peter Grimes*, performed by the all-Canadian CBC Opera Company and especially presented for radio, plus many unusual dramas, outstanding recitalists and speakers.

CBC International Service.—In operating the International Service the CBC in effect acts as agent for the Government. Funds are voted specifically by Parliament for the purpose of maintaining this service and none of the revenues of the CBC for service to Canadian listeners are used. The policies of the International Service are laid down after consultation with the Department of External Affairs, and there is an Advisory Committee composed of representatives of the Corporation, of the Department of External Affairs and of the Department of Trade and Commerce.

Since its inception in February, 1945, the CBC International Service has expanded until now the "Voice of Canada" is heard abroad in twelve languages. Built and operated by the CBC on behalf of the Canadian Government, its transmitters, located near Sackville, N.B., send out the strongest signal heard in Europe from North America.

Operations during the year ended Mar. 31, 1949, involved approximately 4,800 hours of broadcasting including news, talks, music, interviews with foreign nationals visiting Canada as well as with Canadians who speak foreign languages, actualities, dramas, documentaries, international conference reports and commentaries, trade news and reviews, special programs in honor of national holidays, and periods when CBC International Service facilities were loaned without charge to the United Nations Radio Division for transmission of their material direct from Lake Success, New York.

Postal Service

Postal service in Canada is provided 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. Points along Hudson Bay receive mail by steamer and by both air-stage and courtesy flights by aircraft.

The mails are carried by railway, air, motor-vehicle and inland and coastal steamer. The principal means of mail transportation is the railway mail service which operates along about 40,000 miles of track and covers an annual track mileage exceeding 45,733,000. The railway mail service employs a staff of 1,300 mail clerks who prepare the mail for prompt delivery and despatch while en route in railway mail cars.

Canada's air-mail system provides several flights daily from east to west and constitutes a great air artery from St. John's, Newfoundland, to Victoria, B.C., intersected with branch 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 is thus facilitated. Air-stage service provides the sole means of communication with the outside for many remote areas. There are, altogether, approximately 19,000 miles of air-mail and air-stage routes in Canada.

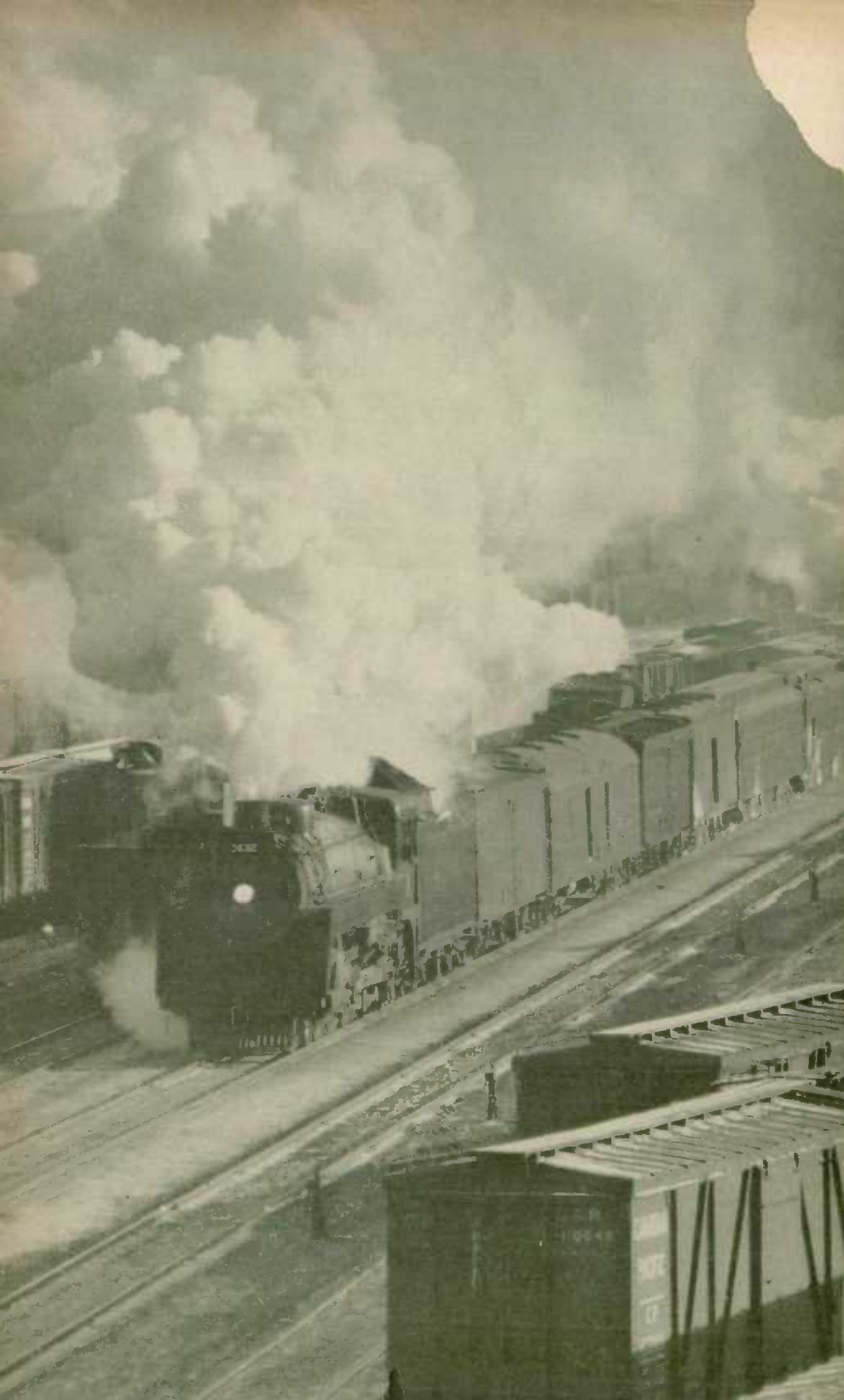
Post Offices are established for the transaction of all kinds of postal business at places where the population warrants. Letter-carrier delivery, twice daily to residential districts and three times to business districts, is given in 105 towns and cities by some 5,000 letter carriers. An extensive organization distributes mail to the rural districts of the country: 4,943 rural mail routes are covered by mail couriers over 113,000 miles of territory, serving 348,000 rural mail boxes. Isolated points are served by motor-vehicle and stage services. The rural mail routes are laid out in circular patterns, each about 25 miles in circumference, and the couriers, who provide all the requisite equipment, are employed on the tender system.

The Post Office delivers an estimated 2,400,000,000 items of mail annually, and to do so utilizes the most up-to-date mechanical handling devices, including conveyor belts and electric cancelling machines, etc., in its larger offices. There were, in all, 11,930 post offices in operation across the country on Mar. 31, 1949. Money order offices numbered 7,614 and postal notes were sold in 10,830 post offices. For the year ended Mar. 31, 1949, postage paid by means of postage stamps amounted to \$56,303,157 and Post Office Savings Banks, in operation in all parts of the country, had combined deposits of \$37,741,389.

The increase in postal business is one of the impressive features of Canada's economic development during the past 15 years. From \$30,367,465 in 1934, the net income increased year by year to \$80,618,402 by Mar. 31, 1949, the gross revenue for the latter year being \$95,957,469, an all-time high.

Post Office employees recording articles lost in the mails through improper packaging, incorrect or insufficient address and no identification as to sender.





Trade

★ Domestic Trade

THE diverse resources of the various parts of the country have led to a vast exchange of products and the task of providing goods and services where they are required for consumption or use by a population of 13,549,000, very unequally distributed over half a continent, accounts for a greater expenditure of economic effort than that required for the conducting of the nation's great volume of foreign trade, high though Canada ranks among the countries of the world in this field.

Domestic trade is broad and complicated, including as it does the transportation and distribution of goods within the country through the medium of railways, steamships, warehouses, wholesale and retail stores, and other agencies. It also includes all services such as those performed by doctors, hospitals, theatres, schools, banks, insurance companies and innumerable others. All such activities, even if not productive of material goods, add substantially to the national income.

Unfortunately, owing to the many ramifications of domestic trade, its statistical measurement presents great difficulties. Nevertheless, some idea of its extent may be gathered from the fact that, in 1948, the national income arising from productive operations was estimated at \$15,450,000,000, while the value of domestic exports was \$3,075,000,000 in that year.

Merchandising and Service Establishments

The distribution of goods, at both the wholesale and retail levels, and the provision of those services that cater to the needs of Canadians as consumers, is a phase of the economy in which increasing interest is being shown. Its ramifications are extensive and not easily treated statistically because of the large number, and endless variety, of the business institutions involved. Distribution, in its many aspects, has been analysed statistically only in census years, the last of which was in 1941. Plans are under way for the conduct of the 1951 Census, the results of which will offer a valuable background for study of the changes in this field that took place between 1941 and 1951.

Retail stores absorb a large proportion of the consumer dollar, and it is the retail segment of the distribution structure that has received the most attention statistically. Current monthly and annual figures produced are estimates based on sampling methods which are under constant revision as new techniques are developed.

During the post-war period, merchandising has experienced many changes. A backlog of demand for many types of durable merchandise created by wartime shortages has now largely been met and shelves are plentifully stocked with a wide and attractive variety of merchandise. The anticipated return of brisk competitive conditions when some degree of normalcy returned created an awareness on the part of merchants of the need for improved selling methods, store modernization and layout, and more



Quick cash-and-carry service is provided by most laundry and dry-cleaning establishments.

attention to public relations and salesmanship than had been necessary for some years.

Projects designed to measure the number of businesses in existence have been undertaken and, although results are not yet available, there is evidence that the number of retail merchants in Canada was higher in 1948 and 1949 than the 137,331 stores which were in operation in 1941.

Canadians spent almost \$8,000,000,000 in retail stores during 1949 which marked the eleventh consecutive year in which retail trade moved upward. Per capita sales were in the neighbourhood of \$600 in 1949 compared with an estimated average national per capita expenditure of \$299 in 1941.

About one-sixth of all Canadian expenditures on goods is made in food stores. Total estimated sales of food stores were \$1,270,000,000 in 1949,* of which \$300,000,000 was made by chain stores which are an important medium of distribution in the retail food trade in Canada. Department stores are also large-scale distribution organizations; they accounted for sales of

* Such expenditures made in food stores are far from being the total expenditures on food. Foods are also sold in departmental stores, country general stores, etc. At p. 105 it will be seen that total expenditures on food are estimated at \$2,796,000,000 for 1948.

\$860,000,000 in 1949, including the mail-order sales made by the larger firms classified within the category. The following table summarizes the sales volumes for a few of the more important trades in 1941, 1948 and 1949¹.

Retail Store Sales, for Selected Kinds of Business, 1941, 1948 and 1949¹

Selected Trades	Sales			P.C. Change 1948-49	P.C. Change 1941-49
	1941	1948	1949 ^a		
	\$'000,000	\$'000,000	\$'000,000		
Grocery and combination.....	567.3	1,204.6	1,270.0	+ 5.4	+123.9
Department.....	377.8	804.6	860.0	+ 6.9	+127.6
Motor-vehicle dealers.....	360.2	707.2	830.0	+17.4	+130.4
Country general.....	213.3	451.6	450.0	- 0.4	+111.1
Garages and filling stations.....	205.1	386.3	430.0	+11.3	+109.7
All other trades.....	1,713.1	3,722.1	3,880.0	+ 4.2	+126.5
Totals¹.....	3,436.8	7,276.4	7,720.0	+6.1	+124.6

¹ Exclusive of Newfoundland, Yukon and the Northwest Territories.

Although the prevailing trend of sales remains upward for most kinds of stores, increases have recently been more moderate than those experienced during the past several years. This is the case with such items as apparel, furniture and other types of household goods. In many cases, price increases account for all of the additional sales volumes being reported and physical turnover of many types of merchandise is therefore changing little compared with earlier years.

In the case of motor-vehicles, the post-war shortage has not yet been overcome. The demand for new motor-vehicles is still fairly substantial and there is no evidence that the market for new vehicles has yet stabilized. This has resulted in a marked expansion in sales by motor-vehicle dealers, their reports showing much larger sales increases than those of any other type of retail merchandiser.

Many of the motor-vehicles purchased immediately after the War were bought for cash, but there is an increasing tendency for a higher proportion of new vehicle sales to be made on the instalment plan.

Sides of beef being moved from a cold-storage warehouse.



New Passenger-Car Sales and Financing, 1947, 1948 and 1949^a

Province	1947			1948			1949 ^a		
	Sold	Financed		Sold	Financed		Sold	Financed	
	No.	No.	p.c.	No.	No.	p.c.	No.	No.	p.c.
Maritimes.....	12,232	2,223	18.2	11,142	2,510	22.5	15,400	4,900	31.8
Quebec.....	28,833	6,463	22.4	26,266	7,164	27.3	36,400	12,200	33.5
Ontario.....	73,160	11,593	15.8	67,000	12,927	19.3	88,400	22,600	25.6
Manitoba.....	8,467	1,619	19.1	8,190	1,524	18.6	10,800	2,200	20.4
Saskatchewan..	10,511	1,169	11.1	9,562	1,322	13.8	12,500	2,400	19.2
Alberta.....	11,952	2,050	17.2	10,959	2,139	19.5	14,500	4,100	28.3
Br. Columbia...	14,050	2,292	16.3	12,536	2,337	18.6	19,000	5,100	26.8
Totals.....	159,205	27,409	17.2	145,655	29,923	20.5	197,000	53,500	27.2

Chain Stores.—Chain store sales in 1948 amounted to \$1,335,735,000, a gain of 13 p.c. over the 1947 sales volume of \$1,177,323,000. These 1948 sales made through a yearly average of 6,821 chain store units constituted 18 p.c. of all retail trade in Canada during 1948. Firms considered as 'chains' are those operating four or more stores under the same ownership with the exception of department stores. Department stores are classified as independants regardless of the number of stores operated.

Chain Store Statistics, 1930 and 1941-48

Year	Stores	Retail Sales	Salaries to Store Employees	Stocks on Hand, End of Year		Accounts Outstanding, End of Year
				Stores	Warehouses	
	Av. No.	\$'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	105,041	43,546	31,493
1948.....	6,821	1,335,735	107,450	119,132	46,330	40,378

Retail Consumer Credit.—Current trends in retail consumer credit were first published by the Bureau of Statistics in 1948 showing the trends by half-year periods for ten trades up to December, 1947. At the beginning of 1948 the survey was extended to include 16 retail trades and was changed to a quarterly basis. Results are presented as a series of indexes based on 1941 sales and accounts receivable.

Consumer credit regulations administered by the Wartime Prices and Trade Board became effective on Oct. 14, 1941, and were maintained until Jan. 13, 1947. These controls seemed to help curb inflation and discourage the buying of goods in short supply by such techniques as limiting repayment periods of accounts outstanding and setting minimum down-payments on goods purchased on the instalment plan.



Pulpwood, loaded on a freighter at Buctouche, N.B., is destined for the mill at Three Rivers, Que.

These regulations had the effect of reducing the proportion of instalment sales which dropped from 11.4 p.c. of total sales in 1941 to a low of 4.1 p.c. in 1945 and climbed back to 8.1 p.c. by the first quarter of 1949. Cash sales and charge-account sales reached a high proportion in 1945 but these ratios have since been reduced gradually by increasing instalment purchases. Unpaid accounts from instalment sales were greatly reduced by the regulations and, since the relaxation of controls, have not increased to the same extent as have sales.

Retail Consumer Credit Statistics, 1941, 1948 and 1949

Period	Sales during Period				Accounts Receivable at end of Period		
	Cash	Instalment	Charge	Total Credit	Instalment	Charge	Total
INDEXES—							
1941—Average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1948—Jan.—Mar.....	166.1	99.2	165.1	145.9	79.2	125.1	108.0
1949—Jan.—Mar.....	170.2	111.4	170.3	153.2	107.4	138.5	126.9
PERCENTAGE COMPOSITION—							
1941—Average.....	60.8	11.4	27.8	39.2	37.6	62.4	100.0
1948—Jan.—Mar.....	62.9	7.2	29.9	37.1	31.8	68.2	100.0
1949—Jan.—Mar.....	62.9	8.1	29.0	37.1	33.2	66.8	100.0

Wholesale Trade.—Monthly index numbers of sales in several branches of wholesale trade have been prepared since 1935. Indexes of sales (on the base, 1935-39=100) are calculated each month for nine wholesale trades, based on reports received from a sample of firms whose sales made up about 68 p.c. of the total volume of business done by wholesalers proper in those trades in 1941. The sample of reporting firms is limited to wholesalers proper, i.e., wholesale establishments that perform the complete functions of jobbers and wholesalers, buying merchandise in large quantities on their own account and selling in broken lots. In addition, the trades selected are those engaged principally in supplying retailers and include the following: automotive supply and equipment, drugs, clothing, footwear, dry goods, fruits and vegetables, groceries, hardware, and tobacco and confectionery.

The dollar volume of wholesale sales in Canada in 1948, measured by the composite index of sales in the nine lines of trade for which figures are available, was 4 p.c. higher than in 1947, 99 p.c. higher than in 1941, and 183 p.c. above the average for the base period, 1935-39. The average index unadjusted for price changes for the 12 months of 1948 (on the base, average for 1935-39 = 100) stood at 283.2 as compared with 272.0 for 1947 and 142.0 for 1941. Tobacco and confectionery and drug wholesalers, with gains of 12 p.c. and 11 p.c., respectively, were the only trades to register greater increases over 1947 than occurred in 1947 over 1946. Increases in these trades, however, were larger in the earlier part of the year than in the later part. In all other trades surveyed, there was some indication of the lowering of the rate of increase that has been in evidence over the past several years.

**Annual Indexes of Wholesale Sales, by Types of Business, 1941
and 1944-49**

(1935-39 = 100)

Type of Business	1941	1944	1945	1946	1947	1948	1949 Jan. to Sept.	P.C. Change 1948 from 1947	P.C. Change Jan.-Sept. 1949 from Jan.-Sept. 1948
Automotive equip- ment.....	157.8	197.2	242.8	334.0	369.8	379.9	402.7	+ 2.7	+ 6.0
Drugs.....	145.2	201.9	222.1	245.2	254.6	281.8	308.3	+10.7	+ 9.4
Clothing.....	142.8	183.1	186.3	229.3	255.4	265.1	250.5	- 3.8	- 5.5
Footwear.....	141.6	188.8	224.0	279.4	300.8	286.8	285.9	- 4.7	- 0.3
Dry goods.....	141.8	165.9	161.9	197.5	244.5	264.7	244.8	- 8.3	- 7.5
Fruits and vegetables	131.2	222.0	262.4	291.2	274.7	237.2	273.7	-13.7	+15.4
Groceries.....	134.7	169.3	180.2	208.9	244.2	254.0	259.1	+ 4.0	+ 2.0
Hardware.....	165.2	183.8	212.0	277.4	325.0	359.7	382.4	+10.7	+ 6.3
Tobacco and confec- tionery.....	150.6	230.1	258.1	296.9	317.1	354.8	372.5	+11.9	+ 5.0
Totals, Wholesale Trade.....	142.0	186.0	205.4	244.0	272.0	283.2	295.4	+ 4.1	+ 4.3

In the first nine months of 1949, a further reduction in the upward movement of wholesale sales was indicated in most trades. Wholesale sales for the nine trades combined, however, advanced 4 p.c. over the dollar volume for the corresponding period of 1948. Dealers' sales of fruits and vegetables recovered from the recession that had continued throughout 1947 and 1948 and, in the first nine months of 1949, were 15 p.c. in excess of the sales for

the same period of 1948. Wholesalers' sales of footwear, clothing and dry goods were lower in dollar volume than in the corresponding period of 1948, with the other six trades registering moderate increases ranging between 2 p.c. and 9 p.c.

Co-operative Associations

While the marketing of farm products is the major activity of co-operative associations in Canada, recent developments have focussed attention on the application of co-operative techniques and methods to other forms of economic endeavour. In British Columbia, fishermen have come together to market, process and sell their product at home and abroad. In that Province groups have been formed to provide transportation on a co-operative basis for industrial workers in certain areas of the interior. In Alberta there has been increased activity in the co-operative distribution of consumer goods and farm supplies, especially petroleum. In addition, there have been more than 75 rural electrification co-operatives organized in Alberta during the past two years.

In Saskatchewan, with considerable experience in marketing and purchasing, co-operative leaders are venturing into co-operative life insurance, flour milling, co-operative use of farm machinery, co-operative farming and co-operative production of furs and edible farm products.

Manitoba has made progress in supply and distribution of consumer goods and farm supplies. The Provincial Government has recently appointed a Director of Co-operative Services under the Minister of Agriculture. In Ontario, the provincial co-operative wholesale reorganized only a year ago and took a new name—United Co-operatives of Ontario. This Province has also taken the lead in the organization of co-operative plans for prepaid

An agricultural co-operative store in Quebec, typical of the 1,071 scattered across the country which reported a sales volume of \$50,000,000 in 1947.



hospital care and there are now 41 such groups in the Province with 36,000 members.

Quebec has always been one of the major provinces in co-operative business and recently there has been great activity in the field of co-operative housing and rural electrification.

The Maritime Provinces are progressing in all fields with conspicuous success in co-operative housing and have recently set up a co-operative medical service in the mining areas of Cape Breton Island. Little information is available on co-operative development in the Province of Newfoundland but to date the main emphasis has been on credit unions and co-operative fish marketing.

For the crop year ended July 31, 1948, 2,249 co-operative organizations reported on their business which amounted to \$780,084,955. Membership recorded was 1,127,229. Associations marketing farm products numbered 1,123 and the value of their sales amounted to \$616,347,477. Co-operatives handling consumer goods and farm supplies reported sales of \$157,874,045. It is estimated that sales of farm products by co-operatives in Canada account for about 33 p.c. of all farm commodities entering into commercial trade channels. Sales of merchandise and farm supplies are still small in comparison to the business done by the marketing associations but in 1948 there was an increase of 24 p.c. over 1947. Some of this increase is, of course, attributable to an increase in the general level of prices but some is the result of more accurate returns by more co-operatives handling such goods.

Retailing.—Total sales volume of 631 co-operative retail stores in Canada for the year 1947-48 was reported as \$74,687,177. Approximately 50 p.c. of this amount was accounted for by sales of food products while sales of feed and fertilizer ranked second in volume with total reported sales of \$13,642,648. Sales of petroleum products through co-operatives amounted to \$7,879,409 and were made mainly in the three Prairie Provinces. Alberta alone reported sales of over \$3,000,000.

Co-operative Wholesaling.—Ten co-operative wholesales reported for the year 1947-48. They served 1,650 member associations and reported total sales of merchandise valued at \$42,096,580. Sales of farm products through these wholesales amounted to \$52,316,972. Total assets of the co-operative wholesales amounted to \$17,395,214. Plant value less allowance for depreciation was \$3,941,515 and members' equity totalled \$7,683,100.

Manufacturing.—Co-operatives have recently entered the field of manufacturing. Interprovincial Co-operatives, Limited, which is a federation of provincial and regional wholesales, now owns and operates a bag factory at Montreal. The Canadian Co-operative Implements, Limited, manufactures farm machinery at a plant at Winnipeg and the Saskatchewan Wheat Pool opened a flour mill at Saskatoon during 1948 which has a capacity of 1,000 bbl. per day. In Western Canada some co-operatives own coal mines and have recently ventured into exploration and drilling for oil. Seven successful wells are now co-operatively owned in Alberta.

Insurance.—Provision of fire insurance on a co-operative or mutual basis to farmers has been for years a major activity in this field. Within recent years, however, co-operatives in life insurance, automobile, live-stock transit, burglary and faithful performance have been organized throughout the country.

*Loading a coastal freighter
at Fisherman's Co-operative
Federation Dock,
Vancouver, B.C.*



Fishermen's Co-operatives.—Co-operatives for the marketing of fish and fish products are found mainly in the Maritime Provinces and in British Columbia but recently there has been some interest in co-operative organization by fresh-water fishermen in Ontario, Manitoba and Saskatchewan. Total business done by 87 fishermen's co-operatives in Canada during 1947-48 amounted to \$16,959,389. Five large fish marketing and purchasing groups in British Columbia provided over 60 p.c. of this total.

Credit Unions.—In 1948 there were 2,608 credit unions in Canada with a membership of 850,608 and total assets amounting to \$253,584,282. Loans made during 1948 to members for provident and productive purposes amounted to \$130,285,237.

Most of these credit unions are grouped together into leagues or federations and they have also formed central credit unions as repositories for their surplus funds from which loans can be made to credit unions, to co-operatives and, in some cases, to individuals. There are 21 such central credit unions across the country—at least one in each province. There are eight in Quebec, three in Ontario, and two in New Brunswick. Total assets of these centrals at the end of 1948 amounted to \$30,595,011.

Wholesale Prices

The general wholesale index is a measurement of commodity price change mainly at the production and primary distribution levels of the Canadian economy. It includes over 500 price series which are not restricted to the



Toronto's railway yards, with the Union Station in the foreground and the terminal warehouse on the waterfront.

wholesale level in the literal sense. The great majority represent commodities at terminal markets or processing plants. Items priced are for the most part either in the raw or semi-manufactured stage. Continuity in the pricing of finished goods presents formidable difficulties, although a considerable number of these are included. Commodity weights correspond to the base year value importance of the various items marketed, whether they are imported or produced in Canada.

Users of wholesale price indexes are frequently concerned with special groups or classes of commodities. Wholesale price indexes, therefore, have been constructed for numerous groups following the chief component material, origin and purpose principles of classification. Field and animal farm products may be compared, or farm and industrial commodities, producer and consumer goods, etc., as well as prices of individual commodities. Such indexes may be obtained upon request.

December, 1948, marked a turning point in the post-war advance of the general wholesale index. For that month, it stood at 159.6, after rising from 143.5 for December, 1947. In the first ten months of 1949, the index showed a general decline. During these months, prices were not consistent in their behaviour. While the majority moved downward, as indicated by the total

index, an appreciable group remained unchanged, and a number of others increased. Among the most important decreases were those registered by fats and oils, cocoa, wood-pulp, copper, lead, zinc and organic chemicals. The most important increases occurred in flour and bread, reflecting the removal of the flour subsidy.

The index of Canadian farm products followed a pattern similar to that of the general wholesale index.

Monthly Index Numbers of General Wholesale Prices and Wholesale Prices of Canadian Farm Products, 1948 and 1949

(1926 = 100)

Year and Month	General Wholesale Prices	Canadian Farm Products	Year and Month	General Wholesale Prices	Canadian Farm Products
1939					
August.....	72.3	58.4	November.....	159.4	149.9
			December.....	159.6	148.9
1948			1949		
January.....	147.1	147.7	January.....	159.3	148.2
February.....	147.4	145.7	February.....	158.1	145.1
March.....	147.3	145.1	March.....	157.6	145.8
April.....	148.9	148.1	April.....	157.5	147.6
May.....	150.4	151.0	May.....	156.4	148.0
June.....	152.1	155.2	June.....	156.3	149.6
July.....	152.2	154.2	July.....	156.6	150.9
August.....	158.3	151.2	August.....	155.5	146.0
September.....	158.4	149.7	September.....	155.4	145.7
October.....	159.3	149.3	October.....	157.1	145.0

Door-to-door selling of attractively packaged staple foods has its advantages for both the consumer and the producer.



Cost of Living

The Dominion Bureau of Statistics cost-of-living index measures the change in prices of goods and services purchased by typical Canadian urban wage-earner families. In terms of pre-war prices (1935-39=100), it records in percentage form the month-to-month changes in expenditure required to purchase a budget of goods and services based upon a 1938 study of actual expenditures of such families.

Price behaviour of consumer goods is of general interest and importance. Prices affect everyone in their daily living and, along with income, determine to a large extent both the quantity and quality of the things that people buy. The cost-of-living index is, therefore, of considerable significance to many individuals and organizations. Both labour and management use it extensively in wage negotiations and government officials also watch it closely.

Construction methodology and the data used in compiling the index have received wide publicity and details of construction may be obtained by writing to the Dominion Statistician. Basically, the index is compiled by multiplying constant quantities of goods and services (quantities purchased) by prices being charged to consumers on the first business day of each month. The resultant values for each budget item are added together and total dollar amounts divided by the average 1935-39 total. These figures are then multiplied by 100 to express them in index number form. The following example, using only two commodities, illustrates the procedure:—

Item	Budget Quantity (Weekly)	1935-39		January, 1949	
		Average Price	Average Cost	Average Price	Average Cost
	lb.	cts.	cts.	cts.	cts.
Bread.....	12.1	6.4	77.44	9.6	116.16
	qt.				
Milk.....	10.5	10.6	111.30	17.6	184.80
TOTALS.....	...	...	188.74	...	300.96

The January, 1949, index for the above two commodities is therefore $300.96 \div 188.74 \times 100$ or 159.5.

The year 1949 has been a period of relative stability in consumer price levels. Opening at 159.6 in January, the cost-of-living index registered little change until July, when a rise to 162.1 occurred. This reflected mainly seasonal factors, notably advances in potatoes and eggs. The August index reached 162.8 but by September price recessions from previous seasonal peaks were sufficient to drop the index 0.5 points to 162.3. These movements were narrower than in any year since 1945 when wartime price controls were still generally in effect.

The relatively narrow change in the index over the past year is in sharp contrast to the behaviour of prices following the First World War. Then, post-war inflation culminated in a sharp peak reached in 1920. During that year, the cost-of-living index rose from 136.8 in January to 150.6 in July, and then fell steadily to 143.0 in December. The full decline was not completed, however, until the summer of 1922. Post-war experience since 1945 suggests that a considerably different pattern of price behaviour is materializing.

Index Numbers of Living Costs, 1939-49, and by Months, 1949

(Av. 1935-39 = 100)

Year and Month	Food	Rent	Fuel and Light	Clothing	Home Furnishings	Services	Total
1939.....	100.6	103.8	101.2	100.7	101.4	101.4	101.5
1940.....	105.6	106.3	107.1	109.2	107.2	102.3	105.6
1941.....	116.1	109.4	110.3	116.1	113.8	105.1	111.7
1942.....	127.2	111.3	112.8	120.0	117.9	107.1	117.0
1943.....	130.7	111.5	112.9	120.5	118.0	108.0	118.4
1944.....	131.3	111.9	110.6	121.5	118.4	108.9	118.9
1945.....	133.0	112.1	107.0	122.1	119.0	109.4	119.5
1946.....	140.4	112.7	107.4	126.3	124.5	112.6	123.6
1947.....	159.5	116.7	115.9	143.9	141.6	117.0	135.5
1948.....	195.5	120.7	124.8	174.4	162.6	123.4	155.0
1949.....	203.0	123.0	131.1	183.1	167.6	128.8	160.8
1949—							
January.....	202.2	121.7	130.0	181.9	167.0	126.6	159.6
February.....	200.4	121.7	130.8	181.8	167.8	128.1	159.5
March.....	199.1	121.7	131.0	182.7	167.9	128.1	159.2
April.....	198.5	122.4	131.0	183.2	168.0	128.4	159.3
May.....	199.5	122.4	129.1	183.3	168.1	128.4	159.5
June.....	202.9	122.4	128.7	183.3	167.7	128.4	160.5
July.....	207.2	123.4	129.1	183.3	167.5	128.5	162.1
August.....	209.2	123.4	129.5	183.2	167.4	128.9	162.8
September.....	207.0	123.9	130.1	183.5	167.4	128.9	162.3
October.....	205.0	123.9	134.1	184.1	167.2	130.2	162.2
November.....	203.3	123.9	135.1	183.7	167.1	130.2	161.7
December.....	201.9	125.0	135.2	183.7	167.1	130.5	161.5

Dry dock at Lauzon, Que.





★ Foreign Trade*

In spite of increasing difficulties in international trade, Canadian trade, due to high levels of production, consumption and prices, succeeded in 1948 in mastering temporarily many of the difficulties encountered, as far as the general result is concerned. Influenced by the policies adopted, by making use of the expanding market in the United States, and with overseas purchases partly sustained by the European Recovery Program, total trade attained unprecedented high levels; in comparison with the year 1938, the total trade turnover increased 3·8 times (imports 3·9, exports 3·7 times). The average amount of transactions per calendar day of \$4,200,000 in 1938, increased to \$15,700,000 in 1948.

In value, the level of imports attained an all-time high. The peak for exports was in the years 1944 and 1945 because of the large outflow of war materials. For the peace years, however, the 1948 exports were at an all-time high. In that year, Canada, for the first time in peace years, ranked as the first country in both exports and imports of the United States and in imports of the United Kingdom.

The prices of goods, because of the general rise in price levels, were influenced by strong upward tendencies. Price indexes show that the prices of imported goods increased 13 p.c. on the average, whereas the rise in prices of exported goods was 10 p.c.

With the price levels of exported goods rising more slowly than the prices of imports, the terms of trade underwent an unfavourable change in contrast to the previous year. If the prices in 1938 were to be compared on a barter basis, assuming that for every 100 units of exports, 100 units of imports were obtained in 1938, these terms became somewhat more favourable in 1946, when 100 units of exports obtained 102·5 units of imports. This figure decreased to 101·3 in 1947. In 1948, the relative buying power of exports weakened and 100 units of exports were worth only 97·5 units of imports. This general relationship, of course, varied in the group and item prices movement.

Most notable in 1948 was the unprecedented increase in trade with the United States. Imports from that country accounted for 68 p.c. of the total, a reduction from 77 p.c. in the previous year. At the same time exports rose to an all-time high of 48 p.c. accompanied by declines in exports to the Sterling Area and European countries. This concentration of trade with one single country has rare counterparts in world trade.

Volume of Trade.—New comprehensive indexes of import and export prices have been computed by the Dominion Bureau of Statistics for the commodity groups and for single important commodities. Using these indexes as deflators, the volume indexes calculated show that on the average the volume of imports in 1947 equalled 199·5 (1938=100). In relation to this doubling of the pre-war volume, the year 1948 showed a drop of 9·3 p.c. (18·5 points) and the import volume for that year was estimated at 181 only. According to the same methods, the export volume for 1947 may be estimated at 171, from which position the 1948 exports showed an increase of 0·9 p.c. (1·5 points), resulting in an average volume of about 173.

* This material is summarized from the report "Review of Foreign Trade, 1948", published by the Dominion Bureau of Statistics, Ottawa. Price 75 cents.

These estimates show that the real or physical volume of trade in comparison with 1938 has not quite doubled, standing at 1·8 and 1·7, respectively. Nevertheless an increase of such proportions in a decade is remarkable.

Trade Policy.—Canada took an active part in the Geneva Conference, as a result of which tariff reductions were accorded by various countries. These reductions, especially (from the Canadian point of view) those of the United States, had a favourable effect on the development of exports.

Along with the contraction of trade with Europe and the countries of the Sterling Area, accompanying newly introduced restrictions in many overseas countries, the major influence on foreign trade was exerted by two important policy measures. (1) The emergency exchange conservation program of the Canadian Government, continued throughout the year, restricted the imports affecting Canada's dollar position from the United States and other countries not short of dollars: its prohibitions and quotas affected some 300 items and were instrumental in holding back or changing the source of supply of these imports. (2) The embargoes on exports of cattle, meat and coarse grains to the United States were lifted. These measures decisively reversed the position of trade and changed its direction.

Another important influence was the Marshall Plan. This enabled Western Europe to maintain a level of consumption and imports that would otherwise have been impossible, and this affected Canadian trade. Canadian credits to overseas countries, of course, were also a factor. Even with this financial assistance overseas purchases from Canada were reduced.

In the field of manufactured products, most spectacular, though non-recurring, was the contribution of Canadian shipyards. Shipbuilding and repairing were very low in 1938, and the value of exported ships in 1948 represented an increase of 407 times, proportionately the largest increase among principal products. This increase was due, however, to a concentration of deliveries under building contracts for France, Brazil and China, and cannot be maintained.

Farm-machinery exports increased tenfold and all other machinery fourfold. Among other metals, the highest increase (18-fold) was shown by ferro-alloys. Rolling-mill products and non-ferrous metals, zinc and its products, and lead and its products, increased from four to fivefold. Such increases for this year were outstanding because the general exports of non-ferrous metals and products, although increased in value, dropped almost 50 p.c. in their proportional importance. The increases of zinc and lead were, of course, due to the short-lived inflationary rise in prices.



Coffee beans newly arrived at Montreal from Brazil.



Canadian Government Exhibition Commission display at the British Industries Fair, London, England, showing the flow of goods from the United Kingdom to Canada and the location of Canada's natural resources.

While some of these increases are temporary, many of them are quite characteristic of new trends in Canadian exports which show a certain diversification as compared with 1938. Farm machinery and many minerals and their products, for instance, have already a firm market in the United States, while cattle, the commodity most dependent on that market, was exported there almost exclusively. Large proportions of metals and fertilizers were also directed to the United States.

At the same time, the loss of vital markets to some of Canada's manufacturing industries, like automobiles, due to restrictions in the Sterling Area and elsewhere, has not yet found an alternative solution. The diversification in the agricultural products was greater than in 1947, although some of these exports might be of a temporary character, and the overseas markets for some commodities have either disappeared or been sharply reduced. The well-developed trend during the four decades before the War to export more in the form of finished products appears reversed, at least temporarily.

Imports from the United Kingdom also increased. This tendency is one of the basic aims of the United Kingdom economic policies and is considered most necessary also in this country. Imports from Latin America, though not so large in absolute amounts, increased proportionally 14 times the amount of 1938 due mainly to increased purchases of petroleum from Venezuela.



Goods in transit
piled in a Canadian Pacific
Steamship warehouse.

Imports, Exports and Total Trade of Canada, 1938-49¹

(Millions of Dollars)

Year	Imports	Exports			Total Trade	Excess Exports
		Domestic Produce	Foreign Produce	Total		
1938	677.5	837.6	11.1	848.7	1,526.2	+ 171.2
1939	751.1	924.9	11.0	935.9	1,687.0	+ 184.8
1940	1,082.0	1,178.9	14.3	1,193.2	2,275.2	+ 111.2
1941	1,448.8	1,621.0	19.5	1,640.5	3,089.3	+ 191.7
1942	1,644.2	2,363.8	21.7	2,385.5	4,029.7	+ 741.3
1943	1,735.1	2,971.5	29.8	3,001.3	4,736.4	+1,266.2
1944	1,758.0	3,440.0	43.1	3,483.1	5,242.0	+1,724.2
1945	1,585.8	3,218.3	49.1	3,267.4	4,853.2	+1,681.6
1946	1,927.3	2,312.2	27.0	2,339.2	4,266.4	+ 411.9
1947	2,573.9	2,774.9	36.9	2,811.8	5,385.7	+ 237.9
1948	2,636.9	3,075.4	34.6	3,110.0	5,747.0	+ 473.1
1949 ¹	2,073.9	2,146.0	21.0	2,167.0	4,241.0	+ 93.1

¹ First nine months.

Exports

The basic structure of Canadian exports, consisting predominantly of large quantities of specialized products, has not changed during the past twelve years. The table of principal exports, reduced to 31 commodities (p. 252), shows even a little more advanced concentration (from 79.5 in 1938 to 81.7 in 1948).

Newsprint, paper and wood-pulp were nearly 17 p.c. of exports in 1938 and increased to 20 p.c. in 1948. If to this were added lumber (planks and boards) as well as pulpwood, the share of bulky forest products is found to exceed 28 p.c. in 1948. With the further addition of the most important agricultural export—wheat and wheat flour—the share of the principal large items appears to have increased from 36 p.c. in 1938 to 40 p.c. in 1948, with an even higher proportion (45 p.c.) in 1947.

Exports, by Stage of Production, 1938-48

(Values in Millions of Dollars)

Year ¹	Raw Materials		Partly Manufactured		Fully or Chiefly Manufactured		Total Value
	Value	P.C. of Total Exports	Value	P.C. of Total Exports	Value	P.C. of Total Exports	
1938.....	277	28.4	269	27.5	430	44.1	977
1939.....	231	27.8	221	26.6	379	45.6	831
1939 ¹	274	29.6	247	26.7	404	43.7	925
1940.....	261	22.1	337	28.6	581	49.3	1,179
1941.....	322	19.9	427	26.3	872	53.8	1,621
1942.....	300	12.7	488	20.6	1,577	66.7	2,364
1943.....	519	17.5	498	16.7	1,955	65.8	2,971
1944.....	764	22.2	488	14.2	2,188	63.6	3,440
1945.....	858	26.7	536	16.6	1,824	56.7	3,218
1946.....	603	26.1	512	22.1	1,197	51.8	2,312
1947.....	645	23.3	722	26.0	1,408	50.7	2,775
1948.....	812	26.4	818	26.6	1,445	47.0	3,075

¹ Figures for 1938 and 1939 are for the years ended Mar. 31; those for 1939 to 1948 are for calendar years.

Exports, by Leading Countries, 1938 and 1946-49¹

Note.—Countries arranged in order of importance in 1948.

Rank in—			Country	1938	1946	1947	1948	1949 ²
1938	1946	1947		\$'000	\$'000	\$'000	\$'000	\$'000
2	1	1	United States.....	270,461	887,941	1,034,226	1,500,987	1,034,204
1	2	2	United Kingdom.....	339,689	597,506	751,198	686,914	523,980
10	3	3	France.....	9,152	74,380	81,058	92,963	31,690
7	4	4	British South Africa.....	15,547	68,633	67,139	83,860	63,393
11	8	7	Newfoundland.....	8,403	38,229	55,085	55,055	9,229
8	10	6	Netherlands.....	10,267	33,883	55,940	43,684	9,699
21	6	9	India.....	2,863	49,046	42,947	41,473	58,593
3	9	5	Australia.....	32,982	38,194	60,294	38,257	25,765
9	5	8	Belgium.....	9,555	63,626	52,749	33,035	37,434
27	13	11	Italy.....	1,745	20,387	35,688	32,379	8,399
20	7	12	China.....	2,885	42,915	34,984	29,128	12,162
18	11	14	Brazil.....	3,522	24,602	31,660	28,601	14,130
12	14	16	Norway.....	7,854	19,267	20,320	23,429	16,538
46	30	21	Switzerland.....	736	8,636	14,196	19,389	20,916
6	17	10	New Zealand.....	16,371	16,110	37,386	18,375	10,323
17	15	15	Trinidad and Tobago.....	3,714	19,140	26,354	17,105	10,197
36	21	23	Venezuela.....	1,256	11,086	12,989	16,935	18,069
14	20	13	Argentina.....	4,675	14,039	31,697	16,680	2,179
23	23	24	Mexico.....	2,340	10,536	11,701	15,045	10,484
5	34	37	Germany.....	18,261	6,867	6,690	13,214	22,091
15	18	17	Jamaica.....	4,442	15,500	18,214	12,350	6,810
19	24	22	Czechoslovakia.....	3,164	9,871	13,779	11,395	2,478
37	37	33	Cuba.....	1,186	5,270	7,502	10,987	9,626
51	19	25	Egypt.....	396	15,086	10,922	10,205	4,275
30	29	26	Philippine Islands.....	1,465	8,901	10,448	9,810	9,132
28	25	40	Greece.....	1,565	9,738	5,440	9,663	1,920
22	46	33	British Malaya.....	2,448	3,224	7,464	9,288	4,606
16	32	18	Ireland.....	4,439	7,956	17,598	9,257	6,001
35	28	28	Colombia.....	1,270	8,930	9,950	8,406	5,907
24	39	38	Hong Kong.....	2,223	4,362	6,398	8,256	6,649
Totals, Above Countries.....				784,876	2,133,861	2,572,016	2,906,125	1,988,990
Grand Totals, Exports (Domestic).....				837,584	2,312,215	2,774,902	3,075,438	2,146,025

¹ First nine months.

² January-March, 1949.

³ Includes Luxembourg.



Canadian Pacific
liner "Beaverglen"
discharging cargo
at the Royal Vic-
toria Dock, Lon-
don, England.

Principal Exports, 1938 and 1946-49¹

Note.—Commodities arranged in order of importance in 1948.

Commodity	1938	1946	1947	1948	1949 ¹
	\$'000	\$'000	\$'000	\$'000	\$'000
Newsprint.....	104,615	265,865	342,293	383,123	310,180
Wheat.....	89,394	250,306	265,200	243,023	312,273
Wood-pulp.....	27,731	114,021	177,803	211,564	124,796
Planks and boards.....	35,887	125,391	208,375	196,023	108,611
Wheat flour.....	17,638	126,733	196,578	125,151	74,440
Aluminum and products.....	23,744	56,030	63,956	102,046	73,247
Fish and fishery products.....	26,530	86,486	82,359	85,028	62,255
Ships and vessels.....	218	18,822	23,965	81,448	36,603
Copper and products.....	53,315	37,005	59,298	79,036	65,889
Grains, other than wheat.....	12,892	44,724	50,103	75,321	29,009
Cattle.....	9,232	18,015	14,980	73,899	36,054
Nickel.....	52,496	55,205	60,443	73,802	70,367
Farm machinery and implements	7,790	28,662	42,238	73,760	78,452
Bacon and hams.....	30,906	66,389	62,081	69,960	10,941
Meats, other than bacon and hams.....	5,403	62,547	40,776	63,399	26,211
Automobiles, trucks and parts....	24,914	78,304	91,639	55,086	29,536
Seeds.....	3,011	13,228	16,693	49,748	26,552
Pulpwood.....	13,642	28,731	34,529	43,573	23,107
Zinc and products.....	9,816	27,769	30,193	42,496	42,215
Asbestos and products.....	13,317	24,481	32,969	41,979	22,303
Machinery, except farm.....	9,783	15,535	41,022	40,539	23,565
Eggs, shell and processed.....	9,498	26,772	36,968	39,163	13,650
Fertilizers.....	7,066	32,108	34,386	36,374	30,211
Lead and products.....	8,983	16,846	30,945	34,684	31,368
Paper, other than newsprint.....	8,258	21,573	30,840	33,559	14,978
Rubber and products.....	14,905	22,477	33,125	33,151	20,382
Alcoholic beverages.....	10,942	36,296	28,478	29,278	24,604
Precious metals, except gold.....	22,955	21,469	22,581	25,478	20,426
Furs and products.....	14,097	32,291	29,048	24,118	17,400
Ferro-alloys.....	1,306	9,485	21,545	24,057	16,032
Rolling-mill products.....	4,769	7,528	10,935	23,773	10,146
Totals, Above Commodities	666,053	1,771,094	2,216,344	2,513,639	1,785,803
Grand Totals, Exports (Domestic)	837,584	2,312,215	2,774,902	3,075,438	2,146,025

¹ First nine months.

Imports

The range of goods imported is much more complex than that of exports. The number of statistical categories included in the imports in the latest publications of the Dominion Bureau of Statistics consists of more than 2,200 items as against about 850 in the exports. But for purposes of comparison, this whole variety of goods may be usefully concentrated to a small list. In fact, the table on p. 255 with its 30 items, contains almost all important single commodities. Many others are, of course, sum-totals of sub-items of commodity groups.

In the year 1938, these 30 commodities amounted to nearly 69 p.c. of total imports. Similar proportions in 1947 and 1948 were 73 and 76 p.c., respectively. From this, it might be concluded that the general pattern of essential imports is not only being maintained but the concentration is even more apparent during the latest years.

Percentages of the Largest Imports to Total Imports, 1938 and 1947-49¹

Note.—Commodities in order of importance in 1948.

Item	1938	1947	1948	1949 ¹
	p.c.	p.c.	p.c.	p.c.
Petroleum and products.....	8.2	8.0	11.4	9.6
Machinery, except farm.....	5.4	8.0	8.2	7.9
Coal and products.....	5.8	6.0	7.8	5.7
Farm implements and machinery...	3.0	4.1	5.3	6.8
Cotton and manufactures.....	4.4	7.0	5.1	5.1
Automobiles, trucks and parts.....	5.5	6.5	4.9	5.9
Wool and manufactures.....	3.7	3.3	4.4	4.0
Totals.....	36.0	42.9	47.1	45.0

¹ First nine months.

Analysis reveals that these key products are mostly producer goods, being either producer equipment (farm implements and machinery, and other types of machinery), materials for auxiliary use in industry and direct consumption (petroleum and products, coal and products), or producer materials

Molasses from Barbados on the wharf at Quebec.



and related goods (cotton and manufactures, wool and manufactures). To these materials are added transportation means (automobiles, trucks and parts) which also pertain more to the producer or durable than to consumer goods.

On the other hand, imports of consumer goods were definitely reduced by the restrictions and quotas on imports from ten countries (mainly from the United States). These restrictions led to these countries acquiring a sub-normal proportion of the total, as well as to the changing of the sources of goods imported under quota.

Analyzing the imports by groups, the most far-reaching increase was found in the non-metallic minerals and products group, the 1948 figure being about five times that of 1938 and 50 p.c. higher than the 1947 total. This advance was due to increases in the imports of coal and petroleum and products. The increase in iron and its products group was almost entirely due to the increases of farm implements and machinery.

All other groups, especially agricultural products, fibres and textiles, and miscellaneous commodities, decreased in volume more than the figures of value suggest because of increases in prices. Most of these decreases were the result of import restrictions on consumer goods imported from the United States.

Imports, by leading Countries, 1938 and 1946-49¹

Note.—Countries arranged in order of importance in 1948.

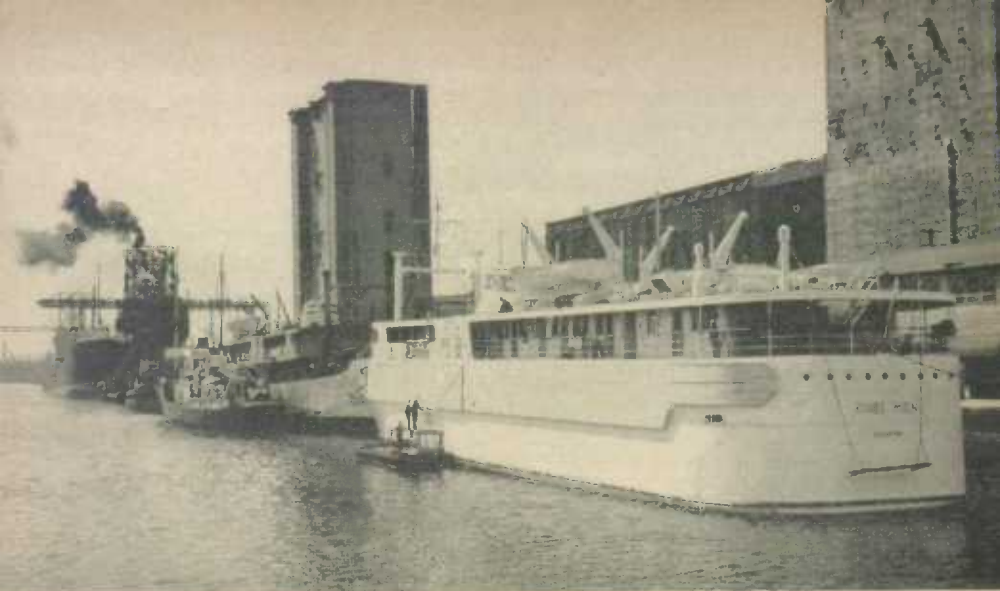
Rank in—			Country	1938	1946	1947	1948	1949 ²
1938	1946	1947						
				\$'000	\$'000	\$'000	\$'000	\$'000
1	1	1	United States.....	424,731	1,405,297	1,974,679	1,805,763	1,470,583
2	2	2	United Kingdom...	119,292	201,443	189,370	299,502	240,713
30	4	3	Venezuela.....	1,469	26,886	46,688	94,758	68,314
6	3	4	India.....	8,181	27,877	42,250	34,706	20,340
5	5	9	Australia.....	9,044	19,754	14,222	27,415	17,626
37	7	7	Mexico.....	576	14,610	16,980	27,258	13,888
40	10	5	Cuba.....	440	13,228	23,751	22,606	4,197
3	19	8	British Malaya....	10,278	5,871	16,908	21,878	13,126
34	9	10	Brazil.....	769	14,018	13,888	20,559	13,574
106	21	21	Dominican Republic.....	2	7,127	8,186	17,270	3,775
7	11	11	British Guiana....	7,113	12,187	12,358	15,380	13,429
10	25	15	Belgium.....	6,181	4,429	10,120	13,661	14,800 ³
11	23	19	France.....	6,105	4,610	8,755	12,648	9,915
13	12	14	New Zealand.....	4,562	11,956	10,831	11,603	7,276
15	28	13	Ceylon.....	3,679	3,745	11,653	11,182	9,145
24	16	17	Newfoundland.....	2,194	9,268	9,427	11,091	9,181
36	21	26	Gold Coast.....	631	5,381	6,493	9,751	5,965
68	64	42	Denmark.....	174	157	1,455	9,585	1,515
9	14	27	Jamaica.....	6,192	10,484	6,371	9,557	14,072
29	29	24	British East Africa, Trinidad and Tobago.....	1,735	3,603	7,683	9,543	2,361
8	15	18	Colombia.....	2,352	4,137	5,654	9,027	13,370
21	31	31	Fiji.....	6,903	9,708	9,197	8,668	8,714
60	22	16	Guatemala.....	2,394	3,123	4,178	8,275	5,599
16	13	12	Switzerland.....	85	2,928	9,488	8,209	4,647
108	30	20	Netherlands Antilles.....	3,488	11,149	11,941	7,444	6,597
18	33	32	Italy.....	2	3,186	8,648	7,286	2,128
41	38	22	Philippine Islands.	2,631	2,704	3,872	6,981	6,862
26	20	23	Barbados.....	386	2,058	8,063	6,442	2,854
73	6	25	Honduras.....	2,132	5,548	7,776	6,387	4,347
				38	15,573	6,999	6,182	207
Totals, Above Countries.....				633,755	1,862,035	2,507,884	2,560,617	2,000,947
Grand Totals, Imports.....				677,451	1,927,279	2,573,944	2,636,945	2,073,927

¹ First nine months.

² Less than \$500.

³ Includes Luxembourg.

⁴ January-March, 1949.



Outfitting the "Kuei Men" at Quebec Harbour. This ship, one of nine to be built for a Chinese industrial firm at Shanghai, contains over 2,000,000 lb. of aluminum. Practically everything above the deck is made of the metal, including the bulkheads, king posts and davits.

Principal Imports, 1938 and 1946-49¹

Note.—Commodities arranged in order of importance in 1948.

Commodity	1938	1946	1947	1948	1949
	\$'000	\$'000	\$'000	\$'000	\$'000
Petroleum and products.....	55,607	123,743	207,194	301,782	199,817
Machinery, except farm.....	36,916	130,286	206,011	217,091	164,540
Coal and products.....	39,172	133,082	153,689	206,227	118,332
Farm implements and machinery	20,320	68,352	105,405	139,993	141,751
Cotton and manufactures.....	29,535	119,158	179,894	135,347	105,070
Automobiles, trucks and parts...	37,442	98,155	167,972	128,564	122,579
Wool and manufactures.....	25,185	64,569	84,463	115,066	82,837
Rolling-mill products, steel.....	25,470	53,376	77,970	83,929	85,563
Sugar and products.....	20,581	39,879	57,420	71,752	48,038
Electrical apparatus.....	13,054	47,788	68,773	62,127	49,716
Fruits.....	20,948	98,496	77,477	59,561	49,252
Engines and boilers.....	7,789	29,462	43,882	50,285	46,215
Rubber and products.....	11,290	20,079	28,730	31,607	21,244
Books and printed matter.....	15,277	30,737	31,935	31,268	25,356
Nuts.....	3,499	22,591	22,050	31,027	16,529
Clay and products.....	7,660	17,825	24,059	30,773	25,085
Grain and products.....	17,274	20,197	36,453	30,565	15,059
Artificial silk and products.....	3,734	22,103	34,493	29,680	25,357
Flax, hemp, jute and products...	8,543	23,142	37,873	27,259	15,184
Glass and glassware.....	6,670	23,258	28,626	25,925	18,179
Furs and products.....	5,651	27,292	22,451	24,568	14,924
Coffee and chicory.....	3,932	16,162	14,382	23,914	18,874
Vegetable oils.....	11,870	15,062	25,642	20,912	16,351
Stones and products.....	6,880	14,676	18,357	20,084	17,593
Pipes, tubes and fittings.....	1,972	8,411	13,464	18,598	23,926
Tea.....	9,570	10,208	20,655	17,739	16,975
Aluminum and products.....	4,899	14,693	17,183	17,662	13,320
Scientific equipment.....	4,352	13,582	17,330	17,594	15,192
Paper.....	7,520	18,834	23,027	17,213	14,673
Cocoa and chocolate.....	2,065	5,626	7,415	16,460	11,751
Totals, Above Commodities	464,677	1,327,824	1,854,275	2,004,572	1,539,282
Grand Totals, Imports.....	677,451	1,927,279	2,573,944	2,636,945	2,073,927

¹ First nine months.

Canadian Balance of International Payments

Foreign exchange difficulties of a world-wide character have become prominent in recent years. Typical of these dislocations have been the exchange problems of European nations arising from their unprecedented needs for commodities from the countries of the Western Hemisphere like Canada and the United States at a time when their ability to supply the North American countries with goods and services in payment is impaired by the effects of the recent war. The impaired financial position of the United Kingdom and other overseas nations has been particularly significant for Canada since Canada exports much more to overseas countries than she purchases, the United States being the chief source of Canadian imports. Because of the unprecedented needs for Canadian commodities Canada has had large export balances with the United Kingdom, other Commonwealth countries, and Europe at a time when the balance of imports of goods and services by Canada from the United States has also been of record size.

But the European nations have not been able to pay Canada in exchange which could be converted into United States dollars for all of the goods and services supplied by Canada to this group of nations. Large loans and export credits were extended by the Canadian Government to the United Kingdom and other governments in the early post-war period to assist and develop Canadian trade and to assist in covering the balance of payments deficits of the United Kingdom. Drawings on these loans and export credits financed a considerable part of Canada's trade with these countries, particularly in 1946 and 1947 when the net drawings were \$750,000,000 and \$563,000,000, respectively. In addition the Canadian Government provided assistance through contributions to UNRRA and post-UNRRA. But the effect of these various types of assistance was to reduce the amounts received for exports in convertible exchange. Yet Canada's own needs for United States dollars to meet the current deficit with the United States were growing sharply as Canadian purchases from that country rose.

Canada's current deficit with the United States reached a peak of \$1,135,000,000 in 1947 when imports rose very sharply, being stimulated by higher levels of Canadian prosperity and economic activity and affected also by rising prices in the United States and an increasing range of goods becoming available. In addition other current payments acted to swell the current deficit, including larger dividends and increased payments for services like transportation and tourist expenditures. This large current deficit with the United States was an important contributor to the loss in official reserves of \$743,000,000 in 1947 as receipts of exchange from overseas were reduced by the size of drawings on Canadian loans to overseas countries. Other capital transactions also led to the use of official reserves in that year.

To alleviate the balance of payments problem a series of remedial measures was introduced towards the end of 1947 with the object of reducing Canadian imports from the United States and other expenditures and encouraging the development of Canadian sources of United States dollars. The more extensive of the measures were the restrictions upon imports which took the form of prohibiting imports of a variety of consumer goods and other articles and a reduction in the volume of imports of a number of other commodities which were placed under quota. Certain relaxations in the restrictions were made towards the end of 1948 and in 1949.

In 1948 a very great improvement occurred in Canada's international accounts. Reserves of United States dollars and gold rose \$491,000,000, reflecting among other things an expansion in Canada's current account surplus with other countries which rose from \$47,000,000 in 1947 to \$453,000,000 in 1948. This surplus yielded more convertible exchange as exports financed by the Canadian loans in 1948 were reduced to \$126,000,000 net. Other capital requirements led to fewer needs for exchange, likewise, in contrast to 1947 when there were large outflows for redemptions of securities and other purposes. In addition the Canadian Government sold a long-term loan of \$150,000,000 to insurance companies in the United States in the summer of 1948.

The great increase in the size of the current surplus in 1948 was mainly due to a rise in current receipts with only a slight change in current expenditures. Even wider changes occurred in Canada's accounts with individual countries and areas. The largest changes occurred in the account with the United States where the current deficit declined from \$1,135,000,000 in 1947 to \$401,000,000 in 1948 due principally to a spectacular rise in the value of goods and services exported to that country, combined with a decline in the value of imports which were reduced by the import restrictions. At the same time there were appreciable declines in the export surplus with the United Kingdom, with other countries of the Sterling Area, and other overseas countries. The current surplus with all overseas countries declined from \$1,220,000,000 in 1947 to \$873,000,000 in 1948 even though many of these countries received assistance under the European Recovery Plan. Even with that aid most of them found it necessary to extend or reintroduce restrictions upon purchases in Canada.

A British freighter loads lumber at a Vancouver, B.C., wharf.



In 1949 the current surplus was much less than in 1948 due principally to a reduction in the balance of merchandise exports, higher income payments, and a sharp reduction in net receipts from tourist expenditures. The trend in the commodity account was due to a rise in the value of imports and a contraction in the value of exports, the volume of imports rising in the early part of the year while that of exports declined in comparison with 1948. In the nine months ended September, 1949, net exports were about \$93,000,000 compared with \$261,600,000 in the same period of 1948. Most of this deterioration occurred in the commodity trade balance with the United States where there was an appreciable increase in imports, expanding the balance of imports in the nine months to about \$433,000,000 compared with \$265,600,000 in the same period in 1948. At the same time the export balance with the United Kingdom was slightly lower as imports were higher. But the export balance with the other countries of the Sterling Area was higher than in the same period of 1948 due to an increase in exports, particularly notable in trade with a few countries like British South Africa, India and Pakistan. With other overseas countries the balance of exports was lower, that with Continental Europe continuing to decline even with ECA aid.

Net exports of non-monetary gold in the nine months showed an increase reflecting improved production, being over \$97,000,000 compared with \$87,500,000 in the same period of 1948. The sharp decline that occurred in Canada's net receipts on tourist account resulted from the rise in Canadian expenditures in the United States (see p. 261). Another notable adverse trend in 1949 has been the substantial increase in net payments on income account due to the expansion in dividend payments by Canadian subsidiaries to parent companies in the United States.

In the same nine-month period of 1949 only a slight change occurred in the level of Canada's official reserves of United States dollars and gold, which were \$985,300,000 at the end of September, 1949, exclusive of the proceeds of a loan of \$100,000,000 sold by the Canadian Government in the United States in September to refinance several issues of Canadian securities being redeemed. At the end of 1948 the official reserves were \$997,800,000.

Other notable changes in the capital account in 1949 were an increase in drawings by the United Kingdom on the 1946 credit, these rising to an annual rate of \$120,000,000. But as there were no further drawings on export credits this rate of drawing was somewhat less than was drawn in 1948 on all loans. Other capital movements continued to be diverse. Redemptions of Canadian securities owned, apart from government issues refinanced, were lower in comparison with recent years and there continued to be appreciable inflows of capital for direct investment in Canada.

Tourist Trade

Tourists and other travellers entered Canada in greater numbers in 1949 than in any previous year. There was a moderate advance over 1948 in the number of visitors from the United States and a much larger advance proportionately in the number of visitors from overseas countries. Automobile entries from the United States on traveller's vehicle permits during the year were close to 2,000,000 as compared with 1,800,000 in 1948. From a regional point of view more than half of the increase occurred in Quebec and Ontario, but in proportion to the volume of traffic entering each province the greatest gains were in the Prairie Provinces and in New Brunswick. There was little

change in the number of arrivals by train, bus and boat while traffic by aircraft increased substantially.

Average expenditures in Canada per visitor were lower than in 1948 for some automobile travellers but were higher for passengers arriving by train, bus, boat and aircraft. The drop in spending by motorists was greater in the local or non-permit traffic which in 1948 included numerous shopping visits to Windsor, Niagara Falls and other border points. During 1948 these visits were stimulated by the favourable differential which existed in prices of food and other commodities in Canada during the greater part of the year. However, price levels commenced to decline in the United States in the autumn of 1948 and continued to drop during the remainder of the year and the early part of 1949, whereas Canadian prices remained relatively stable. It is reasonable to infer that while travelling expenses of these short-term motorists may not have varied a great deal from the year before their purchases are likely to have decreased considerably.

Although more visitors entered Canada in 1949 than in 1948, net expenditures of these travellers in Canada, after deducting expenditures of Canadian travellers in other countries, were considerably smaller than in the year before. This was due to the fact that Canadians travelled to other countries in much greater numbers, and that the increase in the number of Canadian travellers far outstripped the increase in the number of foreign travellers in Canada. The advance was reflected in all types of traffic, reach-

The Chateau Frontenac and Lower Town from the King's Bastion in Quebec, Canada.





The old oaken bucket still hangs at Evangeline's Well—a link with Acadian life and romance of past days in Nova Scotia.

ing a peak in the long-term automobile traffic remaining out of the country for more than 24 hours, which increased 69 p.c. in the first eight months. The greater part of the gain in this traffic was at Windsor, Fort Erie, Niagara Falls and other border points adjacent to United States cities. This and the large volume of imports by Canadian tourists suggest that many of the Canadian cars were on shopping visits caused by declining United States commodity prices and the return of the \$100 customs exemption which had been suspended from November, 1947, to the end of 1948. The combined effect of heavier traffic, more shopping and freer spending was to raise Canadian travel expenditures during the first nine months of 1949 by approximately one-half over the comparable period of 1948.

Overseas travel, both by non-residents and residents, recorded a greater increase in 1949 than in any year since the War.

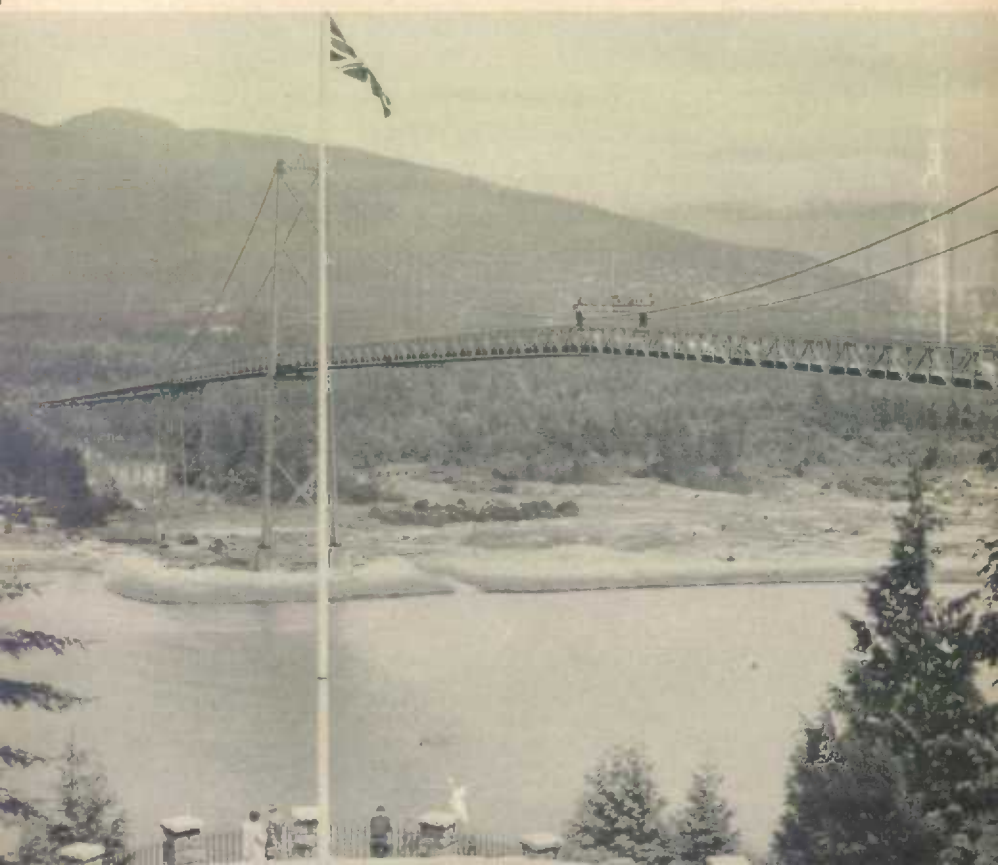
The balance of payments on travel account between Canada and all countries for the years 1939-48 is given in the following statement.

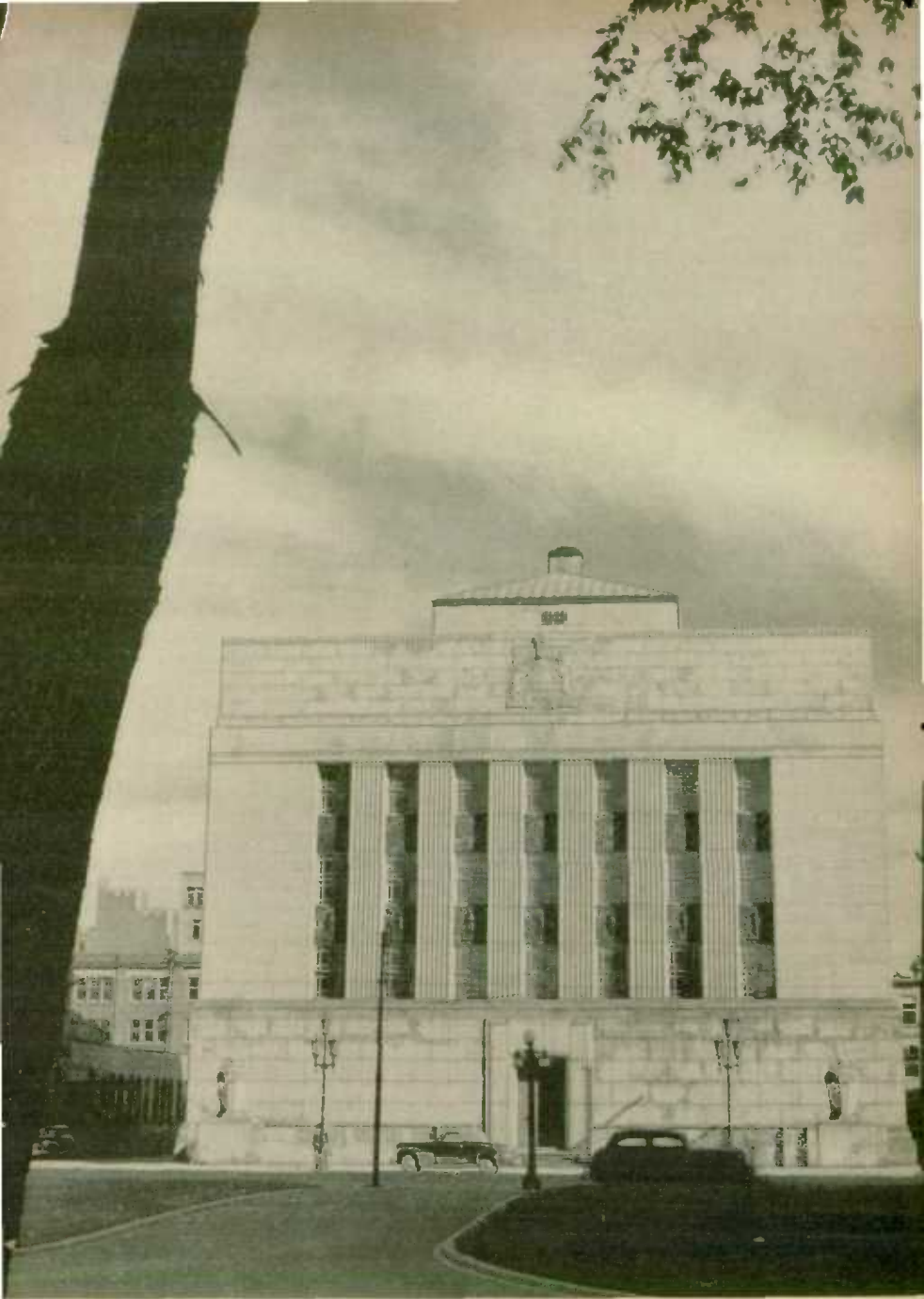
<u>Year</u>	<u>Credits</u>	<u>Debits</u>	<u>Net</u>	<u>Year</u>	<u>Credits</u>	<u>Debits</u>	<u>Net</u>
	(Millions of Dollars)				(Millions of Dollars)		
1939.....	149	81	+68	1944.....	120	60	+60
1940.....	105	43	+62	1945.....	166	83	+83
1941.....	111	21	+90	1946.....	222	136	+86
1942.....	82	27	+55	1947.....	251	167	+84
1943.....	89	37	+52	1948.....	283	134	+149

An analysis of expenditures of travellers between Canada and the United States, classified by means of travel, illustrates the recovery from the effects of wartime restrictions.

<i>Means of Travel</i>	<i>1943</i>	<i>1944</i>	<i>1945</i>	<i>1946</i>	<i>1947</i>	<i>1948</i>
	(Millions of Canadian Dollars)					
EXPENDITURES IN CANADA OF TRAVELLERS FROM U.S.—						
Automobile.....	17.0	24.4	56.9	98.0	118.4	141.9
Rail.....	49.0	67.2	64.3	61.4	56.6	55.9
Boat.....	6.0	7.9	13.0	17.3	22.1	16.0
Through bus.....	5.0	6.3	12.9	15.8	16.7	20.8
Aircraft.....	3.0	3.2	5.6	10.3	13.1	12.1
Other (pedestrians, local bus, etc.).....	7.0	7.5	10.6	13.3	14.2	23.1
TOTALS.....	87.0	116.6	163.3	216.1	241.1	269.8
EXPENDITURES IN U.S. OF TRAVELLERS FROM CANADA—						
Automobile.....	1.9	3.8	7.5	21.7	32.6	25.1
Rail.....	22.0	33.1	39.4	49.6	52.2	35.9
Boat.....	0.7	1.1	1.8	3.2	4.1	3.1
Through bus.....	3.2	8.7	17.0	28.5	34.6	25.5
Aircraft.....	1.2	2.4	4.1	8.8	9.0	7.3
Other (pedestrians, local bus, etc.).....	4.7	7.9	11.0	18.1	19.8	16.3
TOTALS.....	33.7	57.1	80.9	129.9	152.3	113.2

Burrard Inlet from Prospect Point, Stanley Park, Vancouver, B.C.





The Bank of Canada, Ottawa, the Government's banker whose primary function is the regulation of credit and currency and the promotion of the economic and financial welfare of Canada.

Finance

★ Public Finance

THIS section presents public finance statistics for all levels of government in Canada—Federal, Provincial and Municipal. It should be noted that, under the first heading, the revenue and expenditure tables exclude inter-governmental transfers, subsidies, and payments from the Federal Government to the provinces under the Dominion-Provincial Taxation Agreement Act. In addition, the revenues and expenditures are shown on a "net" basis, shared-cost contributions of other governments, institutional revenue and certain other sales of commodities and services, and interest revenue being treated as offsets to corresponding expenditures. Other main headings deal in more detail with the salient aspects of Federal, Provincial and Municipal finance.

Combined Statistics for all Governments

Combined Revenues and Expenditures. — Combined revenues of all governments exclusive of inter-governmental transfers amounted to \$3,511,000,000 for 1946, or over 339 p.c. of the 1939 total of \$1,033,000,000. Expenditures amounted to \$3,097,000,000 for 1946, equal to 252 p.c. of the \$1,231,000,000 total for 1939. In the same period the gross national product rose from \$5,598,000,000 in 1939 to \$11,936,000,000 in 1946, when it amounted to 213 p.c. of the 1939 figure. A comparison of the index of change in these three factors (using 1939 as the base year) which reflect the rapid expansion and acceleration in governmental finances as a whole, as well as in the general economy of the country, during the war years is as follows:—

<i>Year</i>	<i>Gross National Product</i>	<i>Total Revenues</i>	<i>Total Expenditures</i>
1939.....	100	100	100
1941.....	151	196	189
1942.....	188	261	381
1943.....	202	301	448
1944.....	213	292	444
1945.....	210	326	435
1946.....	213	340	252

Prior to the War, the revenues and expenditures of Provincial and Municipal Governments together exceeded those of the Federal Government. In 1939, federal revenues accounted for only 46 p.c. of the combined total, while in 1946 they represented 78 p.c. of the total; federal expenditures correspondingly changed from 46 p.c. of the total for 1939 to 72 p.c. of the total for 1946. This is accounted for by the fact that the burden of financing Canada's war effort fell upon the Federal Government. At the same time, the aim of the Federal Government was to finance as large a part as possible of the cost of carrying on a total war effort out of current revenues.

The period from 1939 to 1946 also brought about a change in the relative weight of various federal revenues. In the year 1939 the greatest single

Combined Debt.—The combined total of direct and indirect debt (exclusive of inter-governmental debt) of all governments in Canada amounted to \$21,435,216,000 at the close of their fiscal years ended nearest to Dec. 31, 1946.

Combined Federal, Provincial and Municipal Direct and Indirect Debt, 1942-46

NOTE.—Figures are for fiscal years ended nearest to Dec. 31.

Item	1942	1943	1944	1945	1946
	\$'000	\$'000	\$'000	\$'000	\$'000
Direct Debt—					
Federal.....	8,676,110	11,784,569	15,104,888	18,089,359	18,048,660
Provincial.....	1,892,182	1,827,213	1,805,770	1,804,335	1,817,524
Municipal.....	1,101,077	1,031,429	980,674	946,263	936,835
Totals.....	11,669,369	14,643,211	17,891,332	20,839,957	20,803,019
Less Inter-governmental Debt	217,447	216,602	248,686	239,199	229,645
Combined Direct Debt...	11,451,922	14,426,609	17,642,646	20,600,758	20,573,374
Indirect Debt—					
Federal.....	885,203	822,904	737,668	592,810	621,058
Provincial.....	189,980	192,310	189,180	175,549	220,459
Municipal.....	49,830	48,497	46,686	45,865	45,994
Totals.....	1,125,013	1,063,711	973,534	814,224	887,511
Less Inter-governmental Debt	59,555	56,541	25,000	22,656	21,710
Combined Indirect Debt..	1,065,458	1,007,170	948,534	791,568	865,801
Grand Totals, Direct and Indirect Debt	12,517,380	15,433,779	18,591,180	21,392,326	21,439,175

Large increases in the federal debt as a result of war financing overshadowed reductions in both provincial and municipal debt. However, this increase was largely in bonds outstanding, representing additions to internal rather than to external debt, as the Federal Government was able to finance the War without recourse to the issue of foreign-pay bonds. Federal direct and indirect foreign-pay bonds declined by more than \$930,000,000 in the period 1940-46, a large part of this reduction being due to the repatriation of sterling issues.

Buoyant revenues resulting in over-all surpluses, together with curtailed capital expenditure programs, the result, in part, of wartime restrictions, have made it possible for Provincial Governments to reduce their outstanding debt, some by fairly substantial amounts. Similarly, the general curtailment by municipalities of capital undertakings and works requiring debenture financing and increased tax collections resulting from general improvement in economic activity have resulted in progressive reductions in municipal debt.

Finances of the Federal Government

The Federal Government's accounts for the fiscal year ended Mar. 31, 1949, showed a surplus of revenues over expenditures amounting to \$595,502,743, compared with a surplus of \$676,120,000 for the previous fiscal year.

Revenues declined for the third successive year while expenditures, which reached their peak in 1943-44, also continued their declining trend.

One of the most interesting aspects of federal finance to the ordinary citizen is the growth in the net debt of Canada and, in this regard the following table is of particular interest since it shows the trend from Confederation down to the latest year, 1949. At Confederation the total net

debt of Canada was only \$76,000,000 and represented \$21.58 per head of the population. The First and Second World Wars caused staggering increases; the net debt which was \$336,000,000 in 1914 increased to \$2,341,000,000 in 1921, or from \$42.64 per capita to \$266.37 per capita. By the end of the Second World War in 1946, net debt had reached the stupendous total of \$13,421,000,000 or \$1,090.55 per head of the population. The Budget surpluses of the three fiscal years ended in 1947, 1948 and 1949 have reduced the net debt to \$869.41 per head of the population.

Finances of the Federal Government, Years Ended Mar. 31, 1868-1949

Year	Total Revenue	Per Capita Revenue ¹	Total Expenditure	Per Capita Expenditure ¹	Net Debt at End of Year	Net Debt Per Capita ¹
	\$	\$	\$	\$	\$	\$
1868.....	13,687,928	3.90	14,071,689	4.01	75,757,135	21.58
1871.....	19,375,037	5.25	19,293,478	5.23	77,706,518	21.06
1881.....	29,635,298	6.85	33,796,643	7.82	155,395,780	35.93
1891.....	38,579,311	7.98	40,793,208	8.44	257,809,031	49.21
1901.....	52,516,333	9.78	57,982,866	10.80	238,480,004	49.99
1911.....	117,884,328	16.36	122,861,250	17.05	340,042,052	47.18
1921.....	436,292,184	49.65	528,302,513 ²	60.12	2,340,878,984	266.37
1931.....	357,720,435	34.48	441,568,413 ²	42.56	2,261,611,937	217.97
1939.....	502,171,354	44.57	553,063,098 ²	49.09	3,152,559,314	279.80
1940.....	562,093,459	49.39	680,793,792 ²	59.82	3,271,259,647	287.43
1941.....	872,169,645	75.79	1,249,601,446 ²	108.59	3,648,691,449	317.08
1942.....	1,488,536,343	127.73	1,885,066,053 ²	161.75	4,045,221,161	347.11
1943.....	2,249,496,177	190.44	4,387,124,118 ²	371.41	6,182,849,101	523.44
1944.....	2,765,017,713	230.90	5,322,253,505 ²	444.45	8,740,084,893	729.86
1945.....	2,687,334,799	221.75	5,245,611,924 ²	432.84	11,298,362,018	932.29
1946.....	3,013,185,074	244.84	5,136,228,505 ²	417.34	13,421,405,449	1,090.55
1947.....	3,007,876,313	239.06	2,634,227,412 ²	209.36	13,047,756,548	1,037.02
1948.....	2,871,746,110	222.91	2,195,626,453 ²	170.43	12,371,636,893	960.31
1949.....	2,771,395,075	204.61	2,175,892,332 ²	203.69	11,776,134,152	869.41

¹ Per capita figures for census years are based on census populations and for intervening years on official estimates. ² Includes non-active advances to railways and transfers from active to non-active assets.

Revenue from taxation accounted for 90 p.c. of total revenues in 1948-49, compared with little more than 85 p.c. in 1947-48. Despite the lower personal income tax rates, revenue from income taxes, sustained by the buoyant condition of the national economy, increased by \$238,000,000 over the previous year. Non-tax revenues, continuing the upward trend of the past eleven years, were \$35,000,000 higher than in 1946-47.

Demobilization and reconversion expenditures were \$209,000,000 less in 1948-49 than in the previous year. Partially offsetting this decrease were increases of \$193,000,000 in ordinary expenditures, of \$21,000,000 in government-owned enterprises, and of \$3,000,000 in capital expenditures.

Some of the major items of ordinary expenditure were: interest on the public debt, which increased from \$455,000,000 in 1947-48 to \$465,000,000 in 1948-49; old age pensions, which increased from \$58,000,000 to \$67,000,000; family allowances, which increased from \$263,000,000 to \$271,000,000; and expenditures by the Veterans Affairs Department, which increased from \$97,000,000 to \$183,000,000. The increase in expenditures on account of government-owned enterprises arose chiefly from the increase of \$17,600,000 in the deficit of the Canadian National Railways.

**Summary of Total Revenues and Expenditures, Years Ended
Mar. 31, 1945-49**

Item	1945	1946	1947	1948	1949
	\$'000	\$'000	\$'000	\$'000	\$'000
Revenues					
Customs Import Duties.....	115,091	128,876	237,355	293,012	222,975
Excise Duties.....	151,922	186,726	196,044	196,794	204,652
Income Tax ¹	977,758	932,729	939,458	1,059,848	1,207,999
Excess Profits Tax ¹	341,305	426,696	442,497	227,031	44,792
Sales Tax.....	209,390	212,247	298,228	383,012	390,174
War Exchange Tax.....	98,164	41,198	338	.....	.....
Other taxes.....	260,997	273,886	313,741	292,378	275,550
Totals, Revenues from Taxation	2,154,627	2,202,358	2,427,661	2,452,075	2,436,142
Non-tax revenues.....	145,471	160,804	160,870	177,771	212,948
Totals, Ordinary Revenues....	2,300,098	2,363,162	2,588,531	2,629,846	2,649,090
Special receipts and other credits.	387,237	650,023	419,345	241,900	122,305
Totals, Revenues.....	2,687,335	3,013,185	3,007,876	2,871,746	2,771,395
Expenditures					
Ordinary expenditures.....	767,376	1,061,902	1,236,235	1,380,002	1,573,450
Capital expenditures.....	3,164	4,508	11,200	15,656	18,473
War, demobilization and recon- version expenditures (special)...	4,418,446	4,002,949	1,314,798	634,421	425,574
Other special expenditures.....	7,506	17,358	31,926 ²	63,141 ³	34,813 ⁴
Government-owned enterprises...	1,358	1,334	10,682	18,695	39,663
Other charges.....	47,762	48,177	29,386	83,711	83,919
Totals, Expenditures.....	5,245,612	5,136,228	2,634,227	2,195,626	2,175,892
Deficits or Surplus.....	-2,558,277	-2,123,043	+373,649	+676,120	+5,503

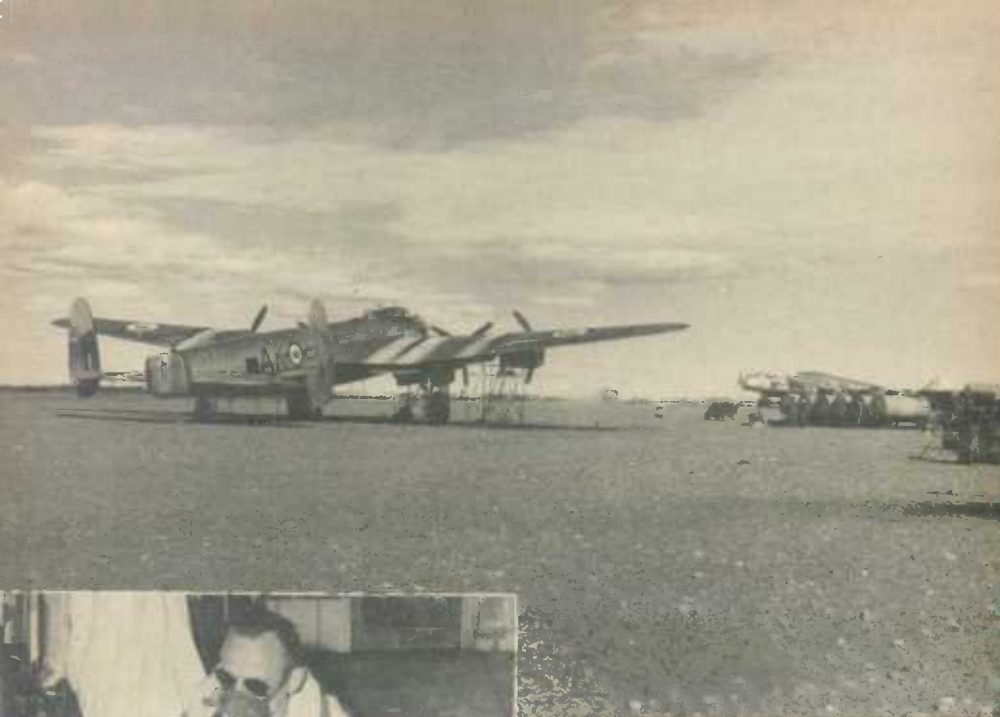
¹ Excludes refundable portion. ² Includes \$20,562,264 for de-
accounts of the Canadian Wheat Board. ³ Includes \$31,711 for certain special
special accounts of the Canadian Wheat Board and \$13,963,211 for certain special
oats and barley used as feed for live stock. ⁴ Includes \$4,451,230 for deficits in certain
special accounts of the Canadian Wheat Board.

The 1949-50 Budget.—The Budget for the fiscal year ending Mar. 31, 1950, was presented to Parliament on Mar. 22, 1949. Parliament was dissolved before the provisions of the Budget were passed and it was reintroduced to the new Parliament with minor modifications on Oct. 20, 1949. The most significant feature of the Budget was the substantial abatement of personal income and excise taxes.

In the personal income-tax field exemptions were raised for persons with single status from \$750 to \$1,000, for persons with married status from \$1,500 to \$2,000, for children eligible for family allowance from \$100 to \$150, for other dependants from \$300 to \$400. The rates of the graduated rate schedule were substantially lowered.

Provision was made also for the allowance of a credit of 10 p.c. of the amount of dividends received from shares of Canadian taxpaying corporations against the personal income tax of a shareholder.

In the corporation income-tax field the rate of tax on the first \$10,000 of income was reduced from 30 p.c. to 10 p.c. Taken in conjunction with the 10 p.c. tax credit noted above this change removed substantially all of the double taxation of those corporations whose earnings were not in excess of \$10,000. The rate of tax on corporation income over \$10,000 was raised to



Increasing expenditures are being devoted to aerial surveys by the Federal Government. Utilizing the facilities of the R.C.A.F., detailed information of great importance on the topography and resources of the country is being secured, and at the same time practical training is given to Air Force personnel.

33 p.c. The carry-forward of losses was extended from three years to five years. The regulations on depreciation were changed to recognize obsolescence.

The excise tax structure was greatly simplified by repealing taxes on some commodities (soft drinks, candy, transportation tickets, etc.) and by imposing a straight ad valorem tax of 10 p.c. at the manufacturer's level on other

commodities (jewellery, luggage, etc.) previously taxed at various rates. A few commodities were exempted from sales tax, the most important being fuel oils (not including those used in internal combustion engines).

After taking into account the tax changes proposed, a surplus of \$85,000,000 was forecast for the fiscal year ending Mar. 31, 1950, revenues being estimated at \$2,545,000,000 and expenditures at \$2,460,000,000.

Borrowings.—During the fiscal year ended Mar. 31, 1949, the Federal Government reduced its outstanding funded debt by \$472,000,000. Total redemption of debt during the year, excluding the recurring issues of treasury bills, amounted to \$3,082,000,000, of which \$2,373,000,000 was financed through renewals or conversions, and \$335,000,000 was raised by the sale of new issues to individuals for cash. Such new issues consisted of \$150,000,000 of 15-year 3 p.c. bonds which were sold to United States insurance companies; \$235,000,000 was raised by the sale of a new issue of 2½ p.c. Canada Savings Bonds, Series III, for cash. In addition, \$90,000,000 of one-, two- and three-year 2½ p.c. notes were disposed of to the Export-Import Bank of Washington.

Income Tax.—The Income War Tax Act was introduced during the War of 1914-18 as part of what was known as war-tax revenue. However, it was a war tax in name only, for even before the outbreak of the Second World War it had become a permanent and important part of the taxation structure, and the chief means of raising ordinary revenue. Effective Jan. 1, 1949, the Income War Tax Act was replaced by the Income Tax Act.

Before the outbreak of war the burden of income tax was shared by approximately 250,000 persons; this was expanded to over 2,366,000 by 1947. In order to secure as much revenue from taxation as was desirable for the prosecution of the Second World War, the income tax base was broadened and the rates increased. The lowering of exemptions was, of course, the prime influence in expanding the body of Canadian income taxpayers but the higher level of employment and of wage scales also had an important effect. Taxes on income reached a peak in 1943, but a portion of the tax was refunded after the War. Since 1943 there has been a gradual reduction in rates and a raising of the minimum exemptions. In 1949 the minimum exemptions were raised to the pre-war level of \$1,000 for persons taxed as single and \$2,000 for those taxed as married. Although income tax rates have been substantially reduced since 1943, they remain well above the pre-war rates.

During the Second World War the business profits occurring in an expanded wartime economy were heavily taxed through the Excess Profits Tax Act and increased rates of corporation income tax. Taxes on business profits remained at a peak from the latter part of 1942 until 1945, after which the rates were reduced. The Excess Profits Tax was terminated for individuals on Jan. 1, 1947, and for corporations on Jan. 1, 1948.

Analyses of individual and corporation income and excess profits tax for recent taxation years are given in the following tables. A taxation year is a period of time during which income is received and becomes subject to tax. In the case of an individual it is almost always a calendar year, and in the case of a corporation it is the calendar year in which the company's fiscal year ends. Under the present system of collection, a substantial portion of the taxes is collected during the year in which the income was earned and the balance almost entirely in the two following years.



Government buildings at Ottawa. This view from the Peace Tower of the Parliament Buildings shows the West Block, the Confederation Building, the Justice Building and, on the extreme right, the New Supreme Court Building. Beyond that are temporary government buildings erected during the War.

Collections of Income and Excess Profits Tax, Taxation Years 1939-49

Taxation Year	Individuals and Individual Businesses			Corporations		
	Income Tax	Excess Profits Tax	Total	Income Tax	Excess Profits Tax	Total
	\$	\$	\$	\$	\$	\$
1939...	54,781,130	...	54,781,130	90,498,381	...	90,498,381
1940...	152,245,616	4,533,451	156,779,067	151,394,634	102,518,315	253,912,949
1941...	329,333,512	10,148,521	339,482,033	224,471,245	252,371,160	476,842,405
1942...	391,193,438	18,543,654	409,738,092	270,204,989	396,478,331	666,683,320
1943...	825,781,811	25,375,690	851,157,501	278,507,805	458,896,881	737,404,686
1944...	809,113,007	27,850,327	836,963,334	231,004,405	431,502,987	662,507,392
1945...	710,478,191	30,417,265	740,895,456	191,072,297 ¹	407,618,086 ²	598,690,383 ²
1946...	742,754,945	17,416,950	760,171,895 ¹	207,126,115 ²	372,346,637 ²	579,472,752 ²
1947...	613,410,939	1,820,404	615,231,343	453,423,086	185,695,765	639,118,851
1948 ¹	578,942,595	...	578,942,595	395,852,655	19,449,402	415,302,057
1949 ¹	93,871,091	...	93,871,091	30,508,395	...	30,508,395

¹ The accounts for these taxation years are not yet closed and the figures are therefore not complete. There will be a small change in the 1947 account and substantial additions to the 1948 and 1949 accounts.

² Refunds arising out of renegotiation of war contracts and applicable in varying amounts to the war years 1941 to 1944 have, of necessity, been deducted from the 1945 and 1946 figures. The true 1945 and 1946 collections are therefore higher and the 1941 to 1944 collections lower than shown above.

**Number of Taxpayers, Total Income and Tax Collected Thereon, by
Income Classes, 1947**

Income Class	Taxpayers	Total Income	Total Tax
	No.	\$	\$
Below \$1,000.....	213,290	187,444,000	4,372,000
\$1,000 - 2,000.....	1,025,270	1,577,658,000	98,985,000
2,000 - 3,000.....	773,780	1,869,220,000	137,761,000
3,000 - 4,000.....	186,400	640,405,000	71,851,000
4,000 - 5,000.....	63,400	283,578,000	40,061,000
5,000-10,000.....	76,190	513,550,000	95,002,000
Over \$10,000.....	28,126	509,103,000	174,295,000
Totals.....	2,366,456	5,580,958,000	622,327,000

**Number of Taxpayers, Total Income and Tax Collected Thereon, by
Occupational Classes, 1947**

Class	Taxpayers	Total Income	Total Tax
	No.	\$	\$
Primary producers.....	55,389	147,912,000	15,795,000
Professionals.....	23,046	133,438,000	29,361,000
Employees.....	2,060,946	4,404,072,000	402,659,000
Salesmen.....	20,800	80,024,000	12,081,000
Business proprietors.....	140,997	565,124,000	98,170,000
Financial.....	61,999	241,873,000	62,218,000
Estates.....	1,541	3,309,000	1,062,000
Decedent.....	1,137	4,145,000	883,000
Unclassified.....	601	1,061,000	98,000
Totals.....	2,366,456	5,580,958,000	622,327,000

Provincial Finance

Commencing with 1946, the basis for the classification of revenues and expenditures has been revised and extended. Expenditures for debt retirement are now included in both the "gross" and "net" tables. Likewise, non revenue and non-expenditure items such as refunds and advances are also included. These two factors account for the chief differences.

**Gross General Revenues and Expenditures of Provincial Governments,
by Provinces, 1944-46**

NOTE.—Figures are for fiscal years ended nearest Dec. 31.

Province	Gross General Revenues			Gross General Expenditures		
	1944	1945	1946	1944	1945	1946
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Prince Edward Island.....	2,564	2,904	4,017	2,907	3,203	3,857
Nova Scotia.....	22,526	24,367	27,645	20,252	23,187	24,331
New Brunswick.....	17,875	19,454	24,420	17,318	18,981	22,200
Quebec.....	122,308	137,617	173,427	118,306	122,929	146,754
Ontario.....	140,627	159,665	180,605	139,503	151,729	169,450
Manitoba.....	25,669	28,259	28,725	20,641	22,628	23,170
Saskatchewan.....	37,551	41,570	45,198	29,607	34,810	40,112
Alberta.....	32,560	40,651	43,167	25,002	28,034	33,408
British Columbia.....	47,295	53,468	65,101	40,619	45,607	54,893
Totals.....	448,975	507,955	592,605	414,155	451,108	518,175

Net General Revenues and Net Combined General and Capital Expenditures of Provincial Governments, 1944-46

Province	Net General Revenues			Net General and Capital Expenditures		
	1944	1945	1946	1944	1945	1946
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Prince Edward Island	2,183	2,529	3,511	2,769	3,323	4,065
Nova Scotia	17,810	19,207	21,659	15,156	18,401	24,614
New Brunswick	14,246	15,605	20,055	15,901	17,352	25,547
Quebec	103,281	117,236	151,372	107,928	110,970	148,670
Ontario	115,712	132,911	150,732	113,486	124,777	161,752
Manitoba	21,325	24,199	22,729	14,572	16,958	19,218
Saskatchewan	31,002	34,992	37,370	22,707	27,851	35,337
Alberta	27,416	34,490	36,598	22,623	23,480	32,353
British Columbia	40,962	46,057	57,763	34,773	39,505	57,322
Totals	373,937	427,226	501,789	349,915	382,617	508,878

* Includes certain capital revenues offset against expenditures in 1946.

Analysis of Revenues of Provincial Governments, 1946

Source	Amount	P.C. of Total	Source	Amount	P.C. of Total
	\$'000			\$'000	
Taxes	172,018	34.28	Other revenue	1,778	0.35
Privileges, Licences and Permits—			Sub-Total	498,092	99.26
Motor-vehicles	37,944	7.56	Non-revenue and surplus receipts	3,697	0.74
Other	65,654	13.08	Totals	501,789	100.00
Sales and services	14,539	2.90			
Fines and penalties	1,643	0.33	Summary of Liquor Control Revenue—		
Other Governments—			Taxes	8,854	
Dominion-Provincial Taxation Agreement	83,982	16.74	Permits	13,737	
Dominion subsidies	15,134	3.02	Fines and penalties	299	
Municipalities	1,376	0.27	Profits	100,300	
Government enterprises	104,024	20.73	Confiscations	23	

Analysis of Combined General and Capital Expenditures of Provincial Governments, 1946

Function	Amount	P.C. of Total	Function	Amount	P.C. of Total
	\$'000			\$'000	
General government	21,133	4.15	Local government planning and development	782	0.15
Protection of persons and property	23,900	4.70	Debt charges	73,296	14.40
Transportation and communications	135,133	26.56	Contributions to Municipal Governments—		
Health and Social Welfare—			Shared-revenue	5,244	1.03
Health	56,472	11.10	Subsidies	3,270	0.64
Social welfare	44,148	8.68	Contributions to government enterprises	2,571	0.51
Recreational and cultural services	2,397	0.47	Other expenditures	1,061	0.21
Education	88,463	17.38	Sub-Total	506,179	99.47
Natural resources and primary industries	45,502	8.94	Non-expense and surplus payments	2,699	0.53
Trade and industrial development	2,807	0.55	Totals	508,878	100.00

Direct and Indirect Liabilities of Provincial Governments (less Sinking Funds), by Provinces, 1944-46, with Combined Details for 1946

Province	1944	1945	1946	Detail	1946
	\$'000	\$'000	\$'000		\$'000
Direct Debt—				Direct Debt—	
P.E.I.	9,667	10,415	10,817	Bonded debt.....	1,672,225
N.S.	88,722	95,603	96,430	Less sinking funds.....	223,330
N.B.	93,403	99,128	102,550		
Que.	376,082	366,429	354,618	Net bonded debt.....	1,448,895
Ont.	646,715	639,547	649,150	Treasury Bills (held by)—	
Man.	99,897	94,122	93,893	Federal Government....	175,712
Sask.	205,441	194,463	200,767	Others.....	34,831
Alta.	147,519	159,042	157,075		
B.C.	140,749	147,985	152,324	Total, Treasury Bills	210,543
				Savings certificates and	
Totals, Direct				deposits.....	64,343
Debt.....	1,808,195	1,806,734	1,817,524	Temporary loans and	
				overdrafts.....	3,111
Indirect Debt—				Bonds due ¹	608
P.E.I.	162	92	50	Bond interest due ²	10,295
N.S.	2,729	2,721	2,574	Accounts Payable, etc.—	
N.B.	2,256	1,866	1,972	Government enterprises	574
Que.	36,814	38,157	93,236	Trust funds and other	
Ont.	127,734	117,705	113,301	deposits.....	26,954
Man.	2,531	2,313	1,506	Other.....	33,636
Sask.	1,824	1,852	788		
Alta.	6,254	1,935	1,193	Total, Accounts	
B.C.	8,877	8,908	5,839	Payable, etc.....	61,164
				Accrued interest, etc....	18,565
Totals, Indirect				Total, Net Direct Debt	1,817,524
Debt.....	189,181	175,549	220,459		
				Indirect Debt—	
				Guaranteed bonds ³	178,534
				Less sinking funds.....	2,975
				Net guaranteed bonds³..	175,559
				Guaranteed bank loans...	7,775
				Other Guarantees—	
				Municipal Improvement	
				Assistance Act loans....	5,215
				Other.....	31,910
				Total, Other Guarantees	
				.....	37,125
				Total, Net Indirect	220,459
				Debt.....	
Grand Totals....	1,997,376	1,982,283	2,037,983	Grand Total.....	2,037,983

¹ Includes, in Prince Edward Island, \$50,000 Provincial Sanatorium Commission and, in Ontario, \$578,000 Niagara Parks Commission, which were excluded in previous years.

² Excludes \$2,766,943 sinking funds held by Nova Scotia Power Commission in respect of bonds issued by the Province and 1944 and 1945 figures revised to agree with treatment applied in 1946.

³ Or debentures.

Gross Provincial Bonded Debt, by Currency of Payments, 1943-46

Payable in—	1943	1944	1945	1946
	\$'000	\$'000	\$'000	\$'000
Canada only.....	978,401	979,545	967,965	1,030,826
London (England) only.....	45,530	45,413	37,215	36,912
London (England) and Canada.....	25,609	20,214	16,214	16,214
New York only.....	19,519	33,905	31,905	21,905
New York and Canada.....	348,835	355,426	353,205	335,395
London (England), New York and Canada.....	261,652	238,963	230,423	226,237
Other.....	4,736	4,736	4,736	4,736
Totals.....	1,684,282	1,678,202	1,641,663	1,672,225



Forest lookout station on Mount Eisenhower, Alta. The Federal and Provincial Governments expend considerable funds on the conservation of forest resources.

Total direct and indirect debt of Provincial Governments increased only moderately in 1946. Gross bonded debt, however, which amounted to \$1,672,225,000 in 1946, represented an increase of \$30,562,000 over the total for 1945. This was the first year since 1940 that provincial bonded debt increased over the previous year's total.

Municipal Finance

Most of the settled portion of Canada is organized into municipal corporations under the jurisdiction and control of the Provincial Governments. Each province has its own characteristic municipal system, controlled in all but Prince Edward Island by a department of the government. Urban municipalities are incorporated as cities, towns and villages, while the rural municipalities have varying designations in different provinces such as counties, municipalities, municipal districts, parishes, townships or districts. In 1947 there were 3,987 incorporated municipalities in Canada.

Municipal Assessments and Tax Levies.—The major source of municipal revenue in Canada is direct taxation. Taxation revenue in turn

is largely derived from levies on the assessed values of real property. Both assessed values and tax rates have been increasing steadily since the beginning of the Second World War with a resultant growth in tax levies. Buoyant economic conditions have resulted in the collection of high percentages of current levies and the reduction of arrears in all provinces.

Municipal Revenue.—Estimated municipal revenue for 1947 was \$415,500,000 of which \$300,200,000, or 72.2 p.c., was derived from taxes on real property, \$46,500,000 or 11.2 p.c. from other taxes, and the remaining \$68,800,000 or 16.6 p.c. from other sources, including licences and permits, public utility contributions, provincial subsidies, and amounts received under Dominion-Provincial Taxation Agreements.

Municipal Expenditure.—Support of local schools again required the largest expenditure by municipal governments, totalling \$116,200,000 or 27.6 p.c. of all expenditure. Other services cost \$239,100,000 or 56.8 p.c. and debt charges together with provision for debt repayment \$65,900,000 or 15.6 p.c. Total expenditures were \$421,200,000. The 1939 total expenditure of \$329,038,000 was divided as follows: 25.0 p.c. for school support, 48.3 p.c. for other services and 26.7 p.c. for debt charges and debt retirement.

Bonded Debt and Other Direct Liabilities.—The rapid growth of municipalities, together with increased demands and responsibilities for improvements, schools and other services, has resulted in the incurring of a heavy burden of debt.

Reductions in recent years have been due to general curtailment of capital undertakings requiring debenture financing, the extension of provincial



Municipal policemen of Montreal patrol Sherbrooke Street on horseback.

control over municipal borrowings and the fact that the greater part of the total municipal debt is represented by serial or instalment-type debentures requiring yearly repayments of principal. While the benefits of debt reduction are of course manifold, certain expenditures have been sorely needed in many communities for the rehabilitation of existing assets and for new improvements necessitated by normal expansion and development. These were sacrificed in the earlier years in the interests of the taxpayers and later, under wartime conditions, the policy of deferment was continued in order to free the financial market to the Federal Government for war-financing needs.

Municipal Assessed Valuations, Tax Levies, Collections and Receivables, by Provinces, 1947, with Totals for 1941-46

Year and Province	Valuations on which Taxes were Levied	Tax Levy	Tax Collections (Current and Arrears)	Percentage of Levy	Total Taxes Receivable and Property Acquired for Taxes
	\$'000	\$'000	\$'000		\$'000
Totals, 1941.....	7,859,415	272,458	237,680 ¹	104.6 ¹	237,133
Totals, 1942.....	7,892,698	275,983	239,110 ¹	105.0 ¹	208,406
Totals, 1943.....	7,906,826	278,697	298,196	107.0	192,777
Totals, 1944.....	7,963,405	281,403	257,188 ¹	109.2 ¹	154,757
Totals, 1945.....	8,155,068	291,693	..	..	134,021
Totals, 1946.....					
1947					
Prince Edward Island	16,082	446	456	102.4	233
Nova Scotia.....	208,808	12,055	11,437	94.9	3,913
New Brunswick.....	257,804	8,023	7,673	95.6	2,799
Quebec.....					
Ontario.....	3,346,367	135,402	133,406	98.5	16,021
Manitoba.....	481,159	22,913	22,495	98.2	8,329
Saskatchewan.....	849,843	29,337	28,712	97.9	20,997
Alberta.....	590,048	26,291	26,474	100.7	17,790
British Columbia.....	487,636	25,474	25,093	98.5	9,401
Totals, 1947.....					

¹ Excludes Quebec cities and towns.

Municipal Bonded Debt and Sinking Funds, Selected Years 1919-45, and by Provinces, 1932 and 1947

Year	Gross Bonded Indebtedness of Municipalities ¹	Total of Sinking Funds	Province	Gross Bonded Indebtedness of Municipalities	
				1932 ²	1947
	\$'000	\$'000		\$'000	\$'000
1919.....	729,715	3	P.E.I.....	2,129	2,997
1925.....	1,015,950	3	N.S.....	31,606	34,821
1930.....	1,271,390	3	N.B.....	24,753	26,519
1935.....	1,372,026	267,709	Que.....	463,614	
1938.....	1,302,201	269,736	Ont.....	504,756	227,631
1939.....	1,280,856	272,010	Man.....	92,471	45,827
1940.....	1,244,001	259,343	Sask.....	59,238	26,408
1941.....	1,196,491	261,459	Alta.....	76,892	40,222
1942.....	1,136,897	258,064	B.C.....	129,333	110,648
1943.....	1,074,777	254,864			
1944.....	1,006,936	178,780	Total.....	1,384,792	..
1945.....	965,450	168,365			

¹ Not entirely comparable due to incompleteness of data prior to 1939.

² Debt for rural schools in the Maritimes not included.

to 1934; Alberta showed net debt to 1928.

³ Sinking fund totals not available previous

Direct and Indirect Liabilities of Municipal Governments (less Sinking Funds), by Provinces, 1944-47

Item	1944	1945	1946	1947
	\$'000	\$'000	\$'000	\$'000
Direct Debt—				
Prince Edward Island ¹	2,396	2,276	2,174	2,179
Nova Scotia ¹	20,396	18,864	20,419	22,247
New Brunswick ¹	16,802	19,214	18,350	20,387
Quebec.....	455,457	449,881	..	..
Ontario.....	241,879	224,271	213,460	243,445
Manitoba.....	46,509	43,444	42,874	50,266
Saskatchewan.....	71,818	60,984	51,724	34,077
Alberta.....	48,259	48,452	47,838	57,817
British Columbia.....	77,158	78,877	82,078	86,786
Totals, Direct Debt.....	980,674	946,263	..	..
Indirect Debt—				
Prince Edward Island.....	..	..	..	..
Nova Scotia.....	854	699	674	636
New Brunswick.....	214	199	148	167
Quebec.....	2,992	2,754	..	..
Ontario.....	21,420	21,480	20,056	17,856
Manitoba.....	9,830	9,417	9,059	8,029
Saskatchewan.....	..	..	..	..
Alberta.....	..	..	..	..
British Columbia.....	11,376	11,316	13,797	14,440
Totals, Indirect Debt....	46,686	45,865	..	..
Grand Totals.....	1,027,360	992,128	..	..

¹ Excludes rural schools in Prince Edward Island and Nova Scotia.

★ Banking

The Bank of Canada.—The keystone of the Canadian banking structure is the Bank of Canada, incorporated in 1934 as a central bank of issue and rediscount. Its function is "to regulate credit and currency in the best interests of the economic life of the nation, to control and protect the external value of the national monetary unit and to mitigate by its influence fluctuations in the general level of production, trade, prices and employment, so far as may be possible within the scope of monetary action, and generally to promote the economic and financial welfare of the Dominion".

The Bank regulates the statutory cash reserves of the chartered banks, which are required to maintain 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 also acts as the fiscal agent of the Government of Canada and may, by agreement, act as banker or fiscal agent for any province. It manages the public debt and has the sole right to issue notes for circulation in Canada. The Bank is empowered to buy and sell securities on the open market; to discount securities and commercial bills; to fix minimum rates at which it will discount; and to buy and sell bullion and foreign exchange.

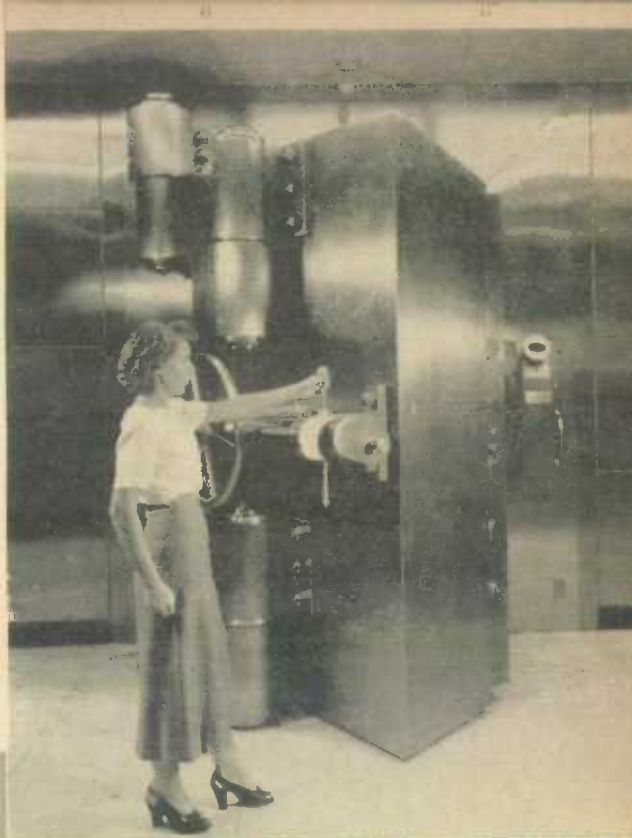
The Bank is managed by a Board of Directors appointed by the Government and composed of a Governor, Deputy Governor and eleven directors, the Deputy Minister of Finance being a member of the Board.

*New Bank of Montreal, Bay
and King Streets, Toronto.*

*The 40-ton steel door, which
guards the contents of 3,000
safety deposit boxes, swings
easily because of its delicate
balance.*



*The banking rooms are spa-
cious and airy, designed to
meet the rapidly expanding
banking needs of Toronto.*



The Industrial Development Bank.—The Industrial Development Bank, which commenced operations on Nov. 1, 1944, is a subsidiary of the Bank of Canada but operates as a separate entity. Its function is to supplement the activities of the chartered banks and other lending agencies by supplying the medium and long-term capital needs of small enterprises; the bank does not engage in the business of deposit banking. The capital stock of \$25,000,000, now completely paid-up, was subscribed by the Bank of Canada. In addition, the Industrial Development Bank may borrow up to three times the amount of its paid-up capital stock and reserve fund, by the issue of bonds and debentures, thus providing total resources of \$100,000,000.

The following table shows the classifications of authorized and outstanding loans and investments as at Sept. 30, 1949.

Loans and Investments of the Industrial Development Bank, by Provinces and Industries, as at Sept. 30, 1949

Classification	Authorized	Out-standing	Classification	Authorized	Out-standing
	\$	\$		\$	\$
Provincial Classification—			Industrial Classification—cont.		
P. E. Island.....	60,000	42,842	Paper products (incl. pulp).....	4,100,700	3,725,248
Nova Scotia.....	492,808	412,921	Printing, publishing and allied industries.....	672,300	500,546
New Brunswick.....	945,300	656,740	Iron and steel products (incl. machinery and equipment).....	4,140,409	2,772,490
Quebec.....	11,188,212	7,835,903	Transportation equipment.....	1,016,558	803,370
Ontario.....	11,046,818	8,776,572	Non-ferrous metal products.....	31,500	7,230
Manitoba.....	1,251,250	932,719	Electrical apparatus and supplies.....	405,000	273,311
Saskatchewan.....	1,025,158	567,810	Non-metallic mineral products.....	1,959,291	1,295,457
Alberta.....	1,750,500	1,076,416	Products of petroleum and coal.....	890,000	490,002
British Columbia and Territories.....	4,344,900	3,273,703	Chemical products.....	2,357,000	1,990,392
Totals.....	32,094,946	23,575,626	Miscellaneous manufacturing industries.....	713,500	540,761
Industrial Classification—			Refrigeration.....	2,736,808	2,049,205
Foods and beverages.....	4,413,700	3,177,938	Generation or distribution of electricity.....	95,000	65,500
Rubber products.....	25,000	24,180	Totals.....	32,094,946	23,575,626
Leather products.....	645,509	491,348			
Textile products (except clothing).....	3,101,012	1,923,696			
Clothing (textile and fur).....	867,500	357,303			
Wood products.....	3,924,159	3,087,649			

Commercial Banking.—While the aggregate supply of money is determined by the central bank, it rests with the chartered banks to provide the individual credit requirements of commerce and industry of the public generally. There are ten banks chartered under the Bank Act and only they, and two long-established savings banks, in addition to the Bank of Canada, are legally entitled to call themselves "banks" or to use the word "banking" in connecting with their business.

The branch bank is perhaps the most distinctive feature of the Canadian system as it exists to-day and, for a country such as Canada, vast in area and with a small population, the plan has proved a good one. There has been no bank failure since 1923 and note holders have experienced no losses whatever since 1881.

The ten commercial banks have over 3,400 offices spread out over the country, many located in small villages which would be quite unable to support an independent bank. The head offices of the banks neither take nor lend money—all the banking business is done by the branches, each branch enjoying considerable independence. But the fact that these branches are linked has a very important bearing on the country-wide economic situation.

The primary function of the bank is to provide a safe repository for savings and surplus funds and to furnish credit for carrying on the business of the country. Credit is given in various ways. Direct loans are made, the proceeds of which customers use for purchasing raw materials, paying wages and other operating expenses or for the purchase of goods for resale. Letters of credit are issued to finance the importation of goods. In this way the bank exchanges its well-known and acceptable credit for the less-known credit of its customers. Apart from the deposit and loan facilities provided, the banks render innumerable services to the communities in which they serve.

**Statistics of Individual Chartered Banks as at Oct. 31, 1949,
with Totals for Selected Years from 1930**

NOTE.—Annual figures are averages from the respective monthly statements except in the case of the numbers of branches which are as at Dec. 31.

Bank and Year	Branches in Canada and Abroad ¹	Total Assets	Liabili- ties to Share- holders	Liabili- ties to the Public	Loans and Dis- counts	Total Deposit Liabi- lities ²
	No.	\$ '000,000	\$ '000,000	\$ '000,000	\$ '000,000	\$ '000,000
Bank of Montreal.....	486	2,140	84	2,055	535	1,964
Bank of Nova Scotia.....	329	806	36	768	340	728
Bank of Toronto.....	199	454	20	432	149	420
Provincial Bank of Canada.....	133	154	6	148	54	145
Canadian Bank of Commerce.....	504	1,646	60	1,583	526	1,507
Royal Bank.....	677	2,341	79	2,260	654	2,134
Dominion Bank.....	138	427	17	408	169	389
Banque Canadienne Nationale.....	230	422	14	408	140	402
Imperial Bank of Canada.....	190	519	17	500	193	476
Barclay's Bank (Canada).....	4	34	3	31	6	23
Totals, as at Oct. 31, 1949..	2,890	8,943	336	8,593	2,766	8,188
Totals, 1948.....	2,811	8,324	327	7,981	2,520	7,601
Totals, 1947.....	2,718	7,865	327	7,528	2,298	7,115
Totals, 1945.....	2,619	6,743	282	6,439	1,505	6,160
Totals, 1942.....	2,642	4,400	281	4,102	1,370	3,834
Totals, 1939.....	2,861	3,592	279	3,298	1,244	3,061
Totals, 1930.....	3,598	3,237	305	2,910	2,065	2,517

¹ As at Dec. 31 of previous year. Does not include sub-agencies which numbered 661 in 1948, including four outside Canada.

² Excluding inter-bank deposits.

Cheque Payments.—Business operations consist of innumerable individual transactions, the great majority of which employ money either in the form of currency or cheques drawn against bank deposits. It is estimated that about 80 p.c. of the commercial transactions are financed by cheques which serve as an excellent index of the business trend at any given time.

In 1948, the amount of cheques cashed in clearing centres was the highest ever recorded in the history of the country. Contributing factors were the marked advance in prices, the replenishment of shortages in consumer goods



Premium accounting department of a life insurance company. The insurance business is Canada's greatest co-operative enterprise, providing protection and advantages to the individual through the pooling of resources by the many.

and record investment in housing, plant and equipment. Each of the five economic areas established a new record in 1948, indicating that the high level of business activity was general throughout the country.

Compared with 1947, the greatest relative increase occurred in the Prairie Provinces, followed closely by the Maritimes, while Quebec showed the smallest gain. As the Canadian total rose by more than 8 p.c. over the preceding year, Quebec and British Columbia lost in relative importance while the other three areas, having shown greater advances than the aggregate, gained in this connection.

Increases in cheques cashed were progressive for ten consecutive years, the level reached in 1948 having been far above that of the years prior to the War. The total was 160.9 p.c. higher than in 1938 and nearly 73 p.c. above that of 1929, the banner year of the inter-war period. Indicative of the continuing high level of business activity, the total of cheques cashed in the first nine months of 1949 was nearly 9 p.c. higher than the corresponding period of 1948. All five economic areas advanced in this comparison, and it is probable that the Canadian total will show a substantial increase for the twelve months.

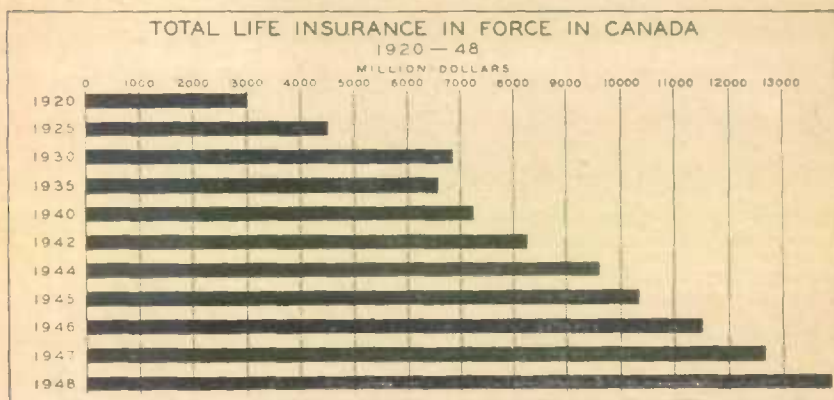
Cheques Cashed at Clearing-House Centres, 1944-48

Economic Area	1944	1945	1946	1947	1948
	\$	\$	\$	\$	\$
Maritime Provinces.	1,327,660,964	1,553,590,758	1,604,018,266	1,750,654,723	1,970,079,395
Quebec.	17,222,287,360	19,309,332,983	20,749,359,813	22,919,909,358	23,689,833,048
Ontario.	26,902,944,561	31,543,361,615	30,401,955,884	30,433,876,385	33,381,605,192
Prairie Provinces	11,488,439,812	11,562,164,231	11,124,679,682	12,853,736,283	14,602,310,298
British Columbia	3,735,621,710	4,416,363,574	5,367,593,788	6,539,916,229	7,043,619,628
Totals.	60,676,954,407	68,384,813,161	69,247,607,433	74,498,092,978	80,687,447,561

★ Insurance

Life Insurance.—The life insurance business was introduced into Canada by companies from the British Isles and the United States about the middle of the nineteenth century. By 1875 there were at least 26 companies competing for the available business in Canada, as against 51 active companies registered under the Acts of Canada and a few provincial companies in 1948. Of the 51 active companies so registered, 30 were Canadian, 5 British, and 16 foreign.

As a result of the adaptation of life insurance policies to the needs of the public and of the growing wealth of the country, the increase in the amount of life insurance in force has been remarkable. The life insurance in force in Canada in 1869 was less than \$36,000,000 as compared with \$13,895,000,000 at the end of 1948, the latter figure including \$381,000,000 carried by provincial life companies and \$408,000,000 by fraternal benefit societies. Thus the total life insurance in force in Canada at the end of 1948 was \$1,078.55 per capita. The premium income from such business increased from \$97,000,000 in 1920 to \$230,000,000 in 1930, and to \$344,000,000 in 1948.



Fire Insurance.—As at Dec. 31, 1948, there were 274 fire insurance companies registered under the Insurance Acts of Canada and doing business in Canada, of which 63 were Canadian, 76 were British, and 135 were foreign companies, whereas in 1875, the first year for which authentic records were collected by the Insurance Department, 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 to 77 p.c. of the total number is a very marked point of difference between fire and life insurance in Canada, the latter being carried on very largely by Canadian companies.

The enormous increase that has taken place throughout the years of record in the amount of fire insurance in force is due partly to the growth of the practice of insurance; it is also important as an indication of the growth of the value of insurable property in the country, and thus throws light upon the expansion of the national wealth of Canada. In 1869 the

amount was \$200,000,000, by 1900 it had increased to nearly \$1,000,000,000, by 1920 to just under \$6,000,000,000, by 1940 to over \$10,700,000,000, and by 1948 to over \$23,000,000,000; with the business of provincial companies and the business of Lloyds in Canada added, the 1948 figure exceeded \$25,600,000,000.

Casualty Insurance.—Casualty insurance includes: accident (personal accident, public liability and employers' liability); combined accident and sickness; aircraft; automobile; boiler (*a*) boiler, (*b*) machinery; credit; earthquake; explosion; falling aircraft; forgery; guarantee (fidelity and surety); hail; impact by vehicles; inland transportation; live stock; personal property; plate glass; real property; sickness; sprinkler leakage; theft; weather; and windstorm. In 1948 there were 266 companies reporting such insurance, of which 59 were Canadian, 73 British and 134 foreign.

Of the classes of business mentioned those accounting for the largest and the most rapidly increasing premium income are automobile, personal accident and sickness (including combined accident and sickness), and personal property for which the premiums written were less than \$36,000,000 in 1941 and over \$106,000,000 in 1948. In the same period the premiums for all the casualty classes increased from \$48,340,334 to \$132,497,876. Premium income of fraternal benefit societies, provincial companies and Lloyds brings the total to \$154,878,735.

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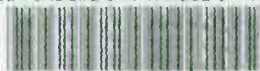
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