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THE CANADA GOOSE—

a large slow-flying grey-brown bird well-known to the sportsman. Though highly variable in size and shading, it is always recognizable by its black head and neck and conspicuous white cheek patches. It migrates everywhere across the continent but breeds mainly in Canada—its V-form flight is very common to the Canadian scene.





C. Robert Taylor

The Royal Road to Mount Revelstoke National Park on the summit of Mount Revelstoke, B.C., affords many spectacular and unforgettable views of surrounding mountain peaks and the Columbia River Valley.



The
OFFICIAL HANDBOOK
of
PRESENT CONDITIONS
and
RECENT PROGRESS

Prepared in the
CANADA YEAR BOOK
SECTION
INFORMATION SERVICES
DIVISION
DOMINION
BUREAU OF STATISTICS
Ottawa

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THE RIGHT HONOURABLE C. D. HOWE
Minister of Trade and Commerce

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Foreword

THE Canada Handbook was instituted in 1930 to give Canadians and peoples in other lands a concise, balanced, factual account of the annual progress of the Canadian nation and economy. In text, in table, in map and picture, *Canada 1955* (twenty-sixth in the series) seeks to portray the present conditions of the Canadian people, their country, government, cultural development and welfare. It endeavours to present the recent progress of the many-sided Canadian economy of to-day, the operation and achievements of which are based upon the rich natural wealth of Canada, the skill and enterprise of its business and industrial community, the far-flung network of transport and communication facilities, and the nation's specialized banking and financial methods. Many features of Canada's progress are an outgrowth of the country's continental heritage, geographic location and historic background, and differ from those developed in other countries.

Canada 1955 draws heavily from the same sources as the *Canada Year Book* for its facts: the several divisions of the Dominion Bureau of Statistics are a prime supplier and the various departments of government and non-governmental yet authoritative sources supplement the basic data. The illustrations are drawn from a wide range of governmental, commercial, press and private interests.

The Handbook is edited and produced in the Information Services Division, under the supervision of the Director of the Division, by Miss Margaret Pink, Assistant Editor of the *Canada Handbook*, and Mr. John F. McVea, Chief of the *Canada Year Book* Section.

H. Marshall

Dominion Statistician

Dominion Bureau of Statistics,
Ottawa, March 31, 1955

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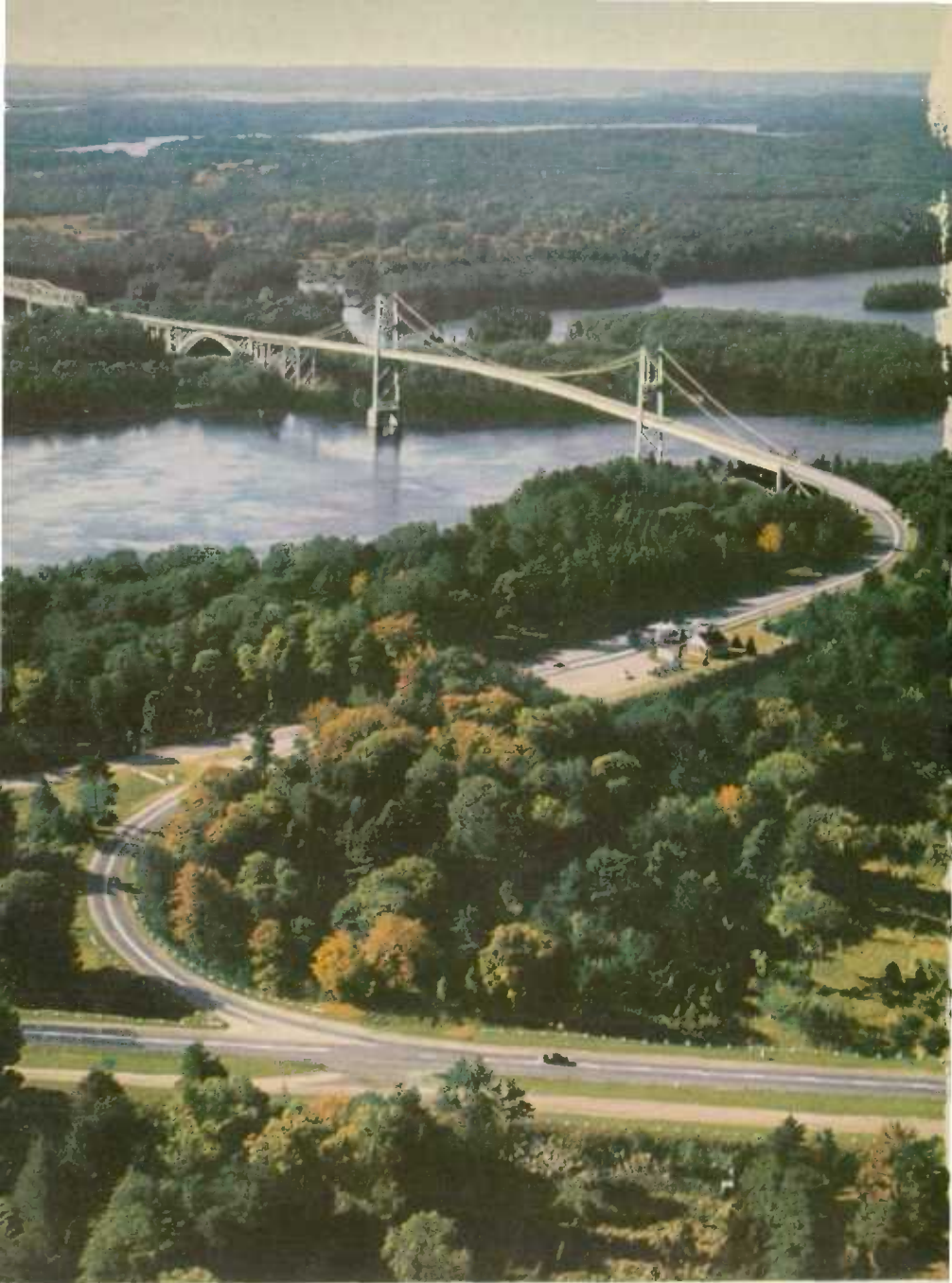
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Symbols

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

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



Photographic Survey Corporation

The beautiful Thousand Islands Bridge spans the St. Lawrence River and forms a much-travelled link between the Province of Ontario and the State of New York. Two islands of the St. Lawrence Islands National Park serve as stepping stones for the bridge as it reaches the Canadian shore and connects with the scenic section of the Montreal-Toronto highway between Brockville and Gananoque.

THE COUNTRY AND ITS GOVERNMENT

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From the earliest days of exploration, adventure and settlement, the name Canada has carried the aura of the vast mysteriousness and stark beauty of the "unknown country" that beckoned ever west and north—Croesus-rich in natural wealth, Atlas-like in enduring power.

Canada, in many ways, is still an unknown country; still—even in the crowded twentieth century—"the great lone land".

But today we watch the continued advance of the Canadian people to the uttermost confines of their continental heritage. Challenging extremes of distance, of climate, of natural barriers have been conquered and the last frontiers of Canada's Arctic North and the inmost reaches of the Precambrian Shield are yielding to the latest assault of a people on their destined march.

Even as the wonder of a Canadian spring tears the bounteous land with fervent sunshine from winter's grip, the snows dissolve in countless millions of flooding freshets, and the ice "goes out" with a roar on the huge inland seas and mighty waterways of Canada's vast interior, so Canada hastens into the summer of its maturity—its economic, social and political foundations stable beneath the floodtide of its progress.

The Country

CANADA is a northern country, occupying all that part of the North American Continent between the United States border and the North Pole, except for Alaska and Greenland which belong to the United States and Denmark, respectively, and the two small French possessions of St. Pierre and Miquelon in the Gulf of St. Lawrence. Westward from the Atlantic, Canada begins at Cape Spear, a promontory on the rugged coast-line of Newfoundland just east of the city of St. John's and the most easterly point of North America. The farthest west point is Mount St. Elias in Yukon Territory, the second highest elevation in Canada; between it and the Pacific Ocean lies the narrow strip of Alaskan Territory known as "the panhandle".

Canada's most southerly point is Middle Island, Ontario—a dot in Lake Erie—situated at 41°41' North latitude. The nearest mainland point to Middle Island is Point Pelee, a National Park and vacation centre. The northernmost point of land is Cape Columbia on Ellesmere Island, N.W.T., but the most northerly settlement is a little to the southeast of this, at Alert, a weather station 500 miles from the North Pole.

In all, Canada's territory covers 3,845,774 sq. miles; only the Union of Soviet Socialist Republics has a larger area. But size alone should not be considered without qualification. Only a small portion of this area lies south of the 49th parallel of latitude which forms the major part of the boundary between Canada and the United States, and about one-third of it lies north of the 60th parallel, the southern border of Yukon Territory and the mainland portion of the Northwest Territories. The developed part of the country is probably not more than one-third of the total, the occupied farm land is only 7.6 p.c. and the currently accessible forested land 16.1 p.c. Yet Canada, whose 15,195,000 people make up only two-thirds of one per cent of the world's population, ranks sixth among the industrial nations of the world.

Approximate Land and Fresh-Water Areas of the Provinces and Territories

Province or Territory	Land	Fresh Water	Total
	sq. miles	sq. miles	sq. miles
Newfoundland (incl. Labrador).....	147,994	7,370	155,364
Prince Edward Island.....	2,184	—	2,184
Nova Scotia.....	20,743	325	21,068
New Brunswick.....	27,473	512	27,985
Quebec.....	523,860	71,000	594,860
Ontario.....	348,141	64,441	412,582
Manitoba.....	219,723	26,789	246,512
Saskatchewan.....	220,182	31,518	251,700
Alberta.....	248,800	6,485	255,285
British Columbia.....	359,279	6,976	366,255
Yukon Territory.....	205,346	1,730	207,076
Northwest Territories.....	1,253,438	51,465	1,304,903
Canada.....	3,577,163	268,611	3,845,774

The physical structure of a country is the basis of its development, governing the occurrence of its resources and therefore the location of its industries and the distribution of its population. The territory of Canada falls naturally into eight physiographic divisions as shown on the map on pp. 4 and 5.

tapering to 100 miles at the mouth of the Mackenzie River. The plains have three levels, sloping eastward from an elevation of 4,000 feet in western Alberta to about 500 feet in southern Manitoba. The three steps are united by the great arms of the Saskatchewan River flowing from the Rockies to Lake Winnipeg and also by the soil zones which form broad west-east arcs. This is Canada's great wheat-growing area and contains as well the vast oil, gas and coal resources of Western Canada.

The Canadian Appalachians are part of the great range of old mountains extending from the island of Newfoundland through the Maritime Provinces and southeast Quebec and into the United States. Elevation over the whole area is moderate, not more than 4,200 feet—the elevation of Mount Jacques Cartier in central Gaspé. The river valleys, with the fertile plains of the sheltered basins, are particularly valuable for cultivation. Important deposits of base metals, coal and asbestos occur in widely separated areas and the hills of the region are forest-clad, providing diversified industries for this eastern area.

The Western Cordilleras comprise the mountainous country bordering the Pacific Ocean. The region has an average width of 400 miles and an area of 600,000 sq. miles and is made up of three zones. On the east is the Rocky Mountain Range with elevations of from 10,000 to 12,000 feet; on the west the Coast Range rises abruptly from the coast to peaks of from 7,000 to 19,850 feet; and between the two is a belt of upland and mountainous country. The Western Cordillera is complex in structure and has a wide range of resources. Most important are the copper, lead and zinc metals, which are found in abundance, as well as coal and oil. To this wealth of minerals may be added a vast hydro-electric potential and dense, extensive forests. Intensive agriculture is limited except on the Fraser delta and in some of the interior valleys.

Low-lying areas bordering the west and south coasts of Hudson Bay and most of the Canadian Arctic islands form the other three regions: the Northern Interior Lowlands, the Arctic Ranges, and the Arctic Coastal Plain. These areas are at present of little economic value.

• Water Resources

The fresh-water area of Canada is very extensive, constituting almost 7 p.c. of its total area. The greater portion of the country is lavishly strewn with lakes of all sizes, from bodies of water hundreds of miles long and hundreds of feet deep to ponds lost to sight in the forest. The largest and most numerous lakes occur within five hundred to a thousand miles of Hudson Bay, the most outstanding being, of course, the Great Lakes whose combined area of 95,170 sq. miles is shared with the United States. But many other lakes, all of them within the Canadian Shield, have the right to be called "great lakes". Lake Winnipeg, Great Slave Lake and Great Bear Lake range in area from 9,000 sq. miles to 12,000 sq. miles. In fact many parts of the Shield have the appearance of a drowned area with only the ridge tops appearing, water from one basin simply spilling over into another below. In an area of 6,094 sq. miles, accurately mapped, south and east of Lake Winnipeg, there are 3,000 lakes. In the Western Cordilleran region, however, the lakes are long, narrow and deep, in reality sections of mountain valleys occupied by fresh water.

• Physical Features

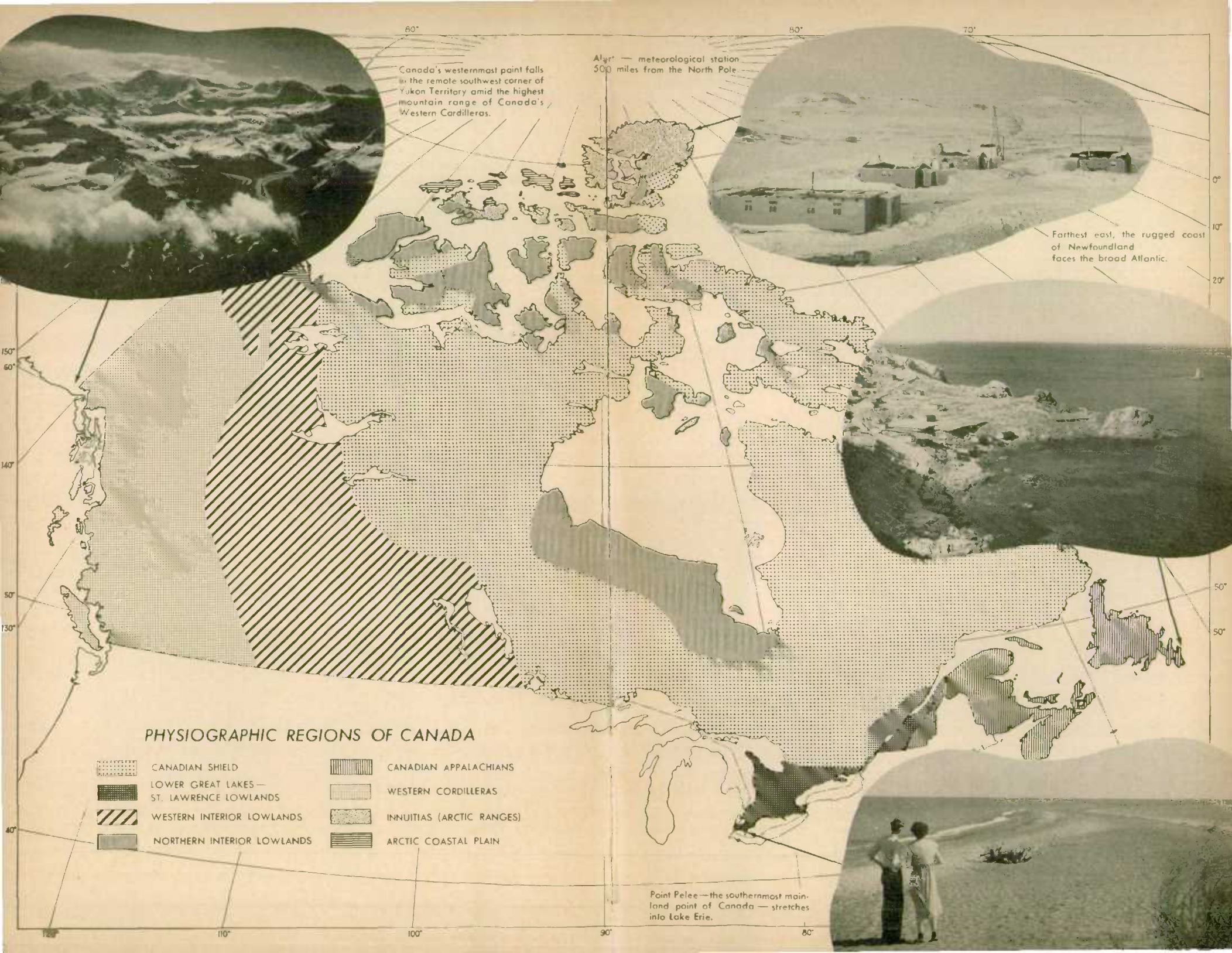
The Canadian Shield dominates the scene with its vast V-shaped area of 1,850,000 sq. miles surrounding Hudson Bay. Included in the Shield is the Labrador portion of Newfoundland and most of Quebec on the east, and northern Ontario on the south; the western boundary runs diagonally from Lake-of-the-Woods northwest to the Arctic Ocean near the mouth of Mackenzie River. The eastern edge of the region is tilted up to form the Torngat Mountains of Labrador and the mountains of Baffin Island, with heights of over 5,000 feet. In other parts the surface is hilly, the harder rocks rising as rounded knobs or ridges and the softer parts forming valleys generally occupied by lakes. The whole gives the appearance of a somewhat dissected plain, for all the hills rise to about the same level having a uniform skyline at the horizon. The Shield is Canada's principal source of iron, gold, nickel and radio-active metals and has, as well, important occurrences of copper, lead and zinc. It is generally higher on its outer edges and the rivers flowing outwards toward the Great Lakes, the St. Lawrence or the Atlantic follow precipitous courses and are the sources of hydro power for Ontario and Quebec. Advancing northward, the dense forests of the southern portions thin out until finally the timber line is reached around the 59th parallel of latitude. Beyond this are the tundra regions.

Flanking the Shield to the south and southeast is the Great Lakes-St. Lawrence Lowlands region, a flat and fertile plain that occupies the triangular area lying between Georgian Bay and Lake Ontario and taking in the St. Lawrence valley east as far as Quebec city. The real wealth of this district lies in its fertile soil and moderate climate, which permit the growth of all the products of temperate regions. In addition, the immense water-power potential of this area is a major asset. The Lowlands comprise Canada's smallest region but support nearly two-thirds of the country's population.

The Western Interior Lowlands region is part of the great plains of the interior of the continent that stretch from the Gulf of Mexico to the Arctic Ocean. In Canada the region occupies the depression between the Shield and the Rocky Mountains and is about 800 miles wide at the United States border,

A Federal Government palaeontologist examining fossils from the carboniferous rocks of southwestern Alberta, collected during the course of his normal field work.













Canada's westernmost point falls in the remote southwest corner of Yukon Territory amid the highest mountain range of Canada's Western Cordilleras.

Alyr — meteorological station 500 miles from the North Pole

Farthest east, the rugged coast of Newfoundland faces the broad Atlantic.

PHYSIOGRAPHIC REGIONS OF CANADA

- | | |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
|  CANADIAN SHIELD |  CANADIAN APPALACHIANS |
|  LOWER GREAT LAKES—ST. LAWRENCE LOWLANDS |  WESTERN CORDILLERAS |
|  WESTERN INTERIOR LOWLANDS |  INNUITIAS (ARCTIC RANGES) |
|  NORTHERN INTERIOR LOWLANDS |  ARCTIC COASTAL PLAIN |

Point Pelee—the southernmost mainland point of Canada—stretches into Lake Erie.



Moving westward across southern Alberta, the flat prairie gives way to rolling hills that gradually become more riotous until they blend into the majestic tumult of the Rocky Mountains.

In Eastern Canada, the Great Lakes and St. Lawrence drainage basin dominates all others and forms an unequalled system of navigable waterways through a region rich in natural and industrial resources for a distance of 2,280 miles into the heart of the continent. Its tributaries, most of which have lakes that serve as reservoirs, have large developed and potential power resources. This waterway has played a measureless part in the economic and political history of Canada and is destined for a role of still greater significance.

The greater part of Canada, however, drains into Hudson Bay and the Arctic Ocean; the Nelson River basin includes the Saskatchewan River systems and thus the most arable and the most settled part of Western Canada, but, like most of the rivers east of the Rockies, the Saskatchewan drains from the settled areas towards the cold northern salt waters, a fact that lessens its industrial utility. The Mackenzie River, which drains Great Slave Lake, is, with its headwaters, the longest river in Canada (2,635 miles) and its valley constitutes a natural transportation route to the Arctic Ocean.

The divide between the rivers flowing west and those flowing north and east is very sharp in the southern Rocky Mountains. The rivers flowing west into the Pacific are much shorter and reach the coast through deep valleys and canyons; these are the great sources of hydro power.

• Land Resources

Agricultural land in Canada has been developed on a substantial scale and is well distributed from east to west. It is characterized by a diversity of contour, soil and climate and is thus capable of producing a great variety

of crops to an extent well beyond domestic requirements. Of the total land area of 3,577,163 sq. miles, 15.5 p.c. is estimated as suitable for cultivation and of this area a little less than half is at present occupied. Most of the unoccupied land considered potentially suitable for agriculture is now under forest. Altogether about 42 p.c. of the land area of the country is forested and the remainder, which is classified as waste and other land, includes open muskeg, rock, road allowances, urban land, etc.

About 10 p.c. of the total land area of Canada has been alienated from the Crown and is now in private hands, 42 p.c. is under federal administration and the remainder is under provincial administration. The high percentage of federal land is accounted for by the fact that the Yukon and Northwest Territories, which comprise 40 p.c. of the land surface of the country, are under the jurisdiction of the Federal Government. Other federal lands include National Parks and historic sites, forest experiment stations, experimental farms, Indian reserves, ordnance lands, etc. All unalienated lands within the provincial boundaries are administered by the provincial governments.

National Parks.—Of outstanding importance in the recreational life of the country are Canada's National Parks, areas of natural beauty and special interest that have been set aside for the benefit and enjoyment of the Canadian people and visitors from other countries.

The Parks had their beginning in 1885 when an area of 10 sq. miles around the hot mineral springs at Banff, Alta., was reserved for public use. Since then the system has been extended to include an area of more than 29,000 sq. miles in 28 separate units—scenic and recreational parks, wild animal parks set aside for the protection and propagation of species in danger of extinction, and national historic parks. In addition, about 450 sites of historic importance have been marked. The Parks are supervised by the National Parks Branch, Department of Northern Affairs and National Resources. Many of them are easily accessible by highway, rail or air and offer every type of accommodation from camping facilities to palatial hotels and cosy cabins. Their names and areas are as follows:—

<u>Park</u>	<u>Area</u>	<u>Park</u>	<u>Area</u>
	sq. miles		sq. miles
Scenic		Wild Animal	
Jasper, Alta.	4,200.0	Wood Buffalo, Alta. and N.W.T.	17,300.0
Banff, Alta.	2,564.0	Elk Island, Alta.	75.0
Prince Albert, Sask.	1,496.0		
Riding Mountain, Man.	1,148.0	Historic	
Kootenay, B.C.	543.0		acres
Gliacier, B.C.	521.0	Fortress of Louisburg, N.S.	339.5
Yoho, B.C.	507.0	Fort Lennox, Que.	210.0
Cape Breton Highlands, N.S.	490.0	Fort Beauséjour, N.B.	81.4
Waterton Lakes, Alta.	214.0	Fort Prince of Wales, Man.	50.0
Mount Revelstoke, B.C.	100.0	Fort Battleford, Sask.	36.7
Fundy, N.B.	79.5	Fort Anne, N.S.	31.0
Prince Edward Island, P.E.I.	7.0	Fort Royal, N.S.	20.5
Point Pelee, Ont.	6.0	Lower Fort Garry, Man.	12.8
Georgian Bay Islands, Ont.	5.4	Fort Wellington, Ont.	8.5
St. Lawrence Islands, Ont.	189.4	Fort Malden, Ont.	5.0
	(acres)	Fort Chambly, Que.	2.5

Provincial Parks.—Six of the provinces have established Provincial Parks. Though many of them 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 area of provincial

park land is about 43,864 sq. miles, located by province as follows: Quebec, 20,244 sq. miles; British Columbia, 14,087 sq. miles; Ontario, 5,079 sq. miles; Saskatchewan, 1,685 sq. miles; Alberta, 117 sq. miles; and Newfoundland, 48 sq. miles. In Manitoba, park developments are being carried out in some of the Province's forest reserves.

Canada's National Capital.—In 1855, the community of Bytown, which had grown up at the junction of the Ottawa and Rideau Rivers around the headquarters of the Royal Engineers commissioned to build the Rideau Canal, was incorporated and its name changed to Ottawa. Two years later, Ottawa, then a city of 10,000 people, was selected by Queen Victoria as the seat of the Government of Canada. Quebec, Montreal, Kingston and Toronto had each been for a while the Capital of Canada and each aspired to become the permanent Capital but, though they were all at the time more important centres, "in the judgment of Her Majesty" Ottawa combined "more advantages than any other place in Canada for the permanent seat of government". However, it was not until 1865 that the public services were moved to the new buildings erected originally by the Province of Canada and a proclamation issued fixing the Capital permanently at Ottawa. In 1867, when the Provinces of Nova Scotia and New Brunswick were joined with the Province of Canada, Ottawa became the Capital of the new Dominion which, within a decade, was extended from sea to sea.

Ottawa is to-day a city of 205,000 people dwelling in an area of 27,220 acres. Its early growth was comparatively slow because it was a city of government workers and did not encourage industry to any extent. Even now, of its labour force of approximately 90,000 people, 30,000 are employed by the Federal Government.

Nova Scotia's new wildlife park at Shubenacadie, opened July 1, 1954, is a source of entertainment and education for thousands of visitors.



Ottawa is a self-governing municipality but, as the political Capital, its planning and development has long been the concern of the national government. The splendour of its natural setting high above the river from which it took its name and facing the rolling horizon of the Gatineau Hills has been enhanced by the beauty and dignity of its public buildings, its driveways and its parks, making it one of the more picturesque Capitals of the world. Now a new Ottawa within a beautified preserve of some 900 sq. miles is growing from a master plan approved by Parliament in 1951. The National Capital Planning Committee, under the Federal District Commission, has made considerable progress in planning new buildings, removing crosstown railway tracks, rebuilding a main artery on which are located several national buildings and residences, acquiring land and constructing parkways. Gatineau Park, a 45,000-acre area in the Gatineau Hills just north of the city, a district long loved and widely used for recreational purposes by the people of Ottawa, has been set aside as a park and game sanctuary.

In the course of the years, through this plan, loftily conceived and far-seeing, allying the aesthetic and the practical, there will emerge a Capital that will be worthy of Canada's achievements and of the international role that is her future.

• *The Climate*

Because of its great extent, there are many variations of climate in Canada. Coastal British Columbia has the most moderate temperature régime in the country, midwinter temperatures averaging just above freezing and midsummer temperatures around 60°F. In the southern interior of the Province, temperatures are more extreme, averaging around 20° in midwinter and 65° in midsummer. Precipitation is variable. Some coastal areas receive more than 100 inches annually, winter being the rainy season, but in the lee of the mountain ranges and in the interior valleys precipitation is light.

The three Prairie Provinces are noted for their extremes of temperature. Values of -40° are common in winter and temperatures in the 90's are expected in summer. January temperatures average near zero in the settled portions and July averages 65°. Precipitation generally averages between 15 and 20 inches and, fortunately, the wettest period is normally in early summer when the agricultural need is greatest. Winter precipitation is usually in the form of snow and its water equivalent amounts to less than 25 p.c. of the annual precipitation.

Wide ranges of temperature are experienced in Ontario and Quebec. The northern portions average -10° in midwinter and 55° in midsummer and the southern sections average 15° and 65°, respectively. Extremes of -60° have occurred in the north in winter and values of 95° to 100° are common in the south in summer. The precipitation régime is quite uniform in both Provinces, average amounts being 20 to 30 inches in the northern sections and 30 to 40 inches in the south. Snowfall is abundant, exceeding 100 inches per annum immediately in the lee of the Great Lakes in Ontario and throughout most of Quebec.

In the Atlantic Provinces, January temperatures average 10° to 25° and July temperatures 60° to 65°, with extremes as high as 100° and as low as

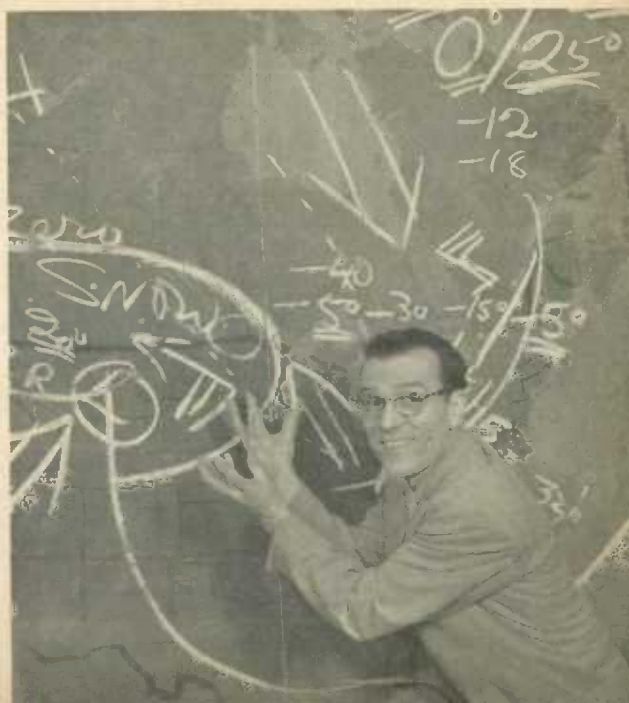
—40° in interior New Brunswick. Prince Edward Island, Nova Scotia and the Island of Newfoundland have less variation. Precipitation in the southern portion of the Atlantic Provinces averages about 50 inches annually, decreasing northward to about 20 inches in northern Labrador. The wettest seasons are autumn and winter.

Mean January temperatures in the Yukon and the Northwest Territories decrease from zero in the southern Yukon to below —30° on the far northern Arctic islands. In July the upper Mackenzie valley has temperatures which average over 60° while northwestern island temperatures average under 40°.

Temperature and Precipitation Data for Certain Localities in Canada

Station	Length of Record Yrs.	Temperature (deg. Fahrenheit)					Precipitation (inches)		
		Av. Annual	Av. January	Av. July	Extreme High	Extreme Low	Av. Annual	Driest Year	Wettest Year
Gander, Nfld.	14	39	19	62	91	-16	39.5	32.1	47.2
St. John's, Nfld.	20	41	24	61	89	-10	53.1	40.9	61.8
Charlottetown, P.E.I.	30	42	19	67	98	-23	42.2	31.0	51.6
Halifax, N.S.	30	44	24	65	94	-21	54.2	38.8	67.0
Sydney, N.S.	80	43	23	65	98	-23	50.6	32.5	62.3
Saint John, N.B.	30	42	20	62	93	-21	47.7	37.6	60.1
Arvida, Que.	19	37	4	65	95	-42	38.8	31.8	46.5
Montreal, Que.	30	44	15	70	97	-29	41.9	31.0	51.4
Port Arthur, Ont.	30	37	8	63	104	-41	27.6	17.1	40.8
Toronto, Ont.	30	47	24	71	105	-22	30.9	23.8	40.6
Churchill, Man.	20	19	-16	55	91	-50	14.4	8.6	22.1
Winnipeg, Man.	30	37	1	68	108	-44	19.7	14.0	24.5
Regina, Sask.	30	37	2	67	110	-54	15.1	8.6	22.5
Beaverlodge, Alta.	30	36	10	60	98	-53	17.3	10.0	23.4
Calgary, Alta.	50	39	16	62	97	-46	17.5	9.6	29.8
Nelson, B.C.	30	46	24	67	103	-17	28.5	18.1	38.9
Victoria, B.C.	30	50	39	60	95	6	20.2	17.3	37.2
Dawson, Y.T.	30	24	-16	60	95	-73	14.0	9.0	17.9
Cometburg, N.W.T.	19	12	-19	49	87	-58	10.9	7.8	19.7

Weather forecasts are issued at six-hour intervals by twelve regional weather offices across Canada. Bulletins are relayed to press agencies, radio stations and newspapers by teletype and are dramatized nightly over the CBC-TV network.





Her Majesty Queen Elizabeth the Queen Mother leaving the Parliament Buildings with the Hon. W. M. Robertson, Speaker of the Senate, and the Hon. L. R. Beaudoin, Speaker of the House of Commons, during her visit to Ottawa in November 1954

The Government

CANADA is a sovereign nation with a democratic system of government that combines the principles of federalism with the British parliamentary system of responsible or cabinet government. The distribution of power between the central governing body and the ten component provincial governments, as well as the jurisdiction of the courts, is set down in the British North America Act of 1867 and its amendments. Generally speaking, all matters of national concern are under the jurisdiction of the Federal Government, which is authorized to make laws for the peace, order and good government of the country and is given unlimited powers of taxation. The provinces have control over such items as education, the administration of justice, municipal institutions, provincial prisons and reformatories, hospitals and welfare institutions, the administration of public lands, property and civil rights and direct taxation within the province for provincial purposes.

The Parliamentary System

That the Canadian Constitution is founded on the British parliamentary system is evident in the fact that Parliament embraces the Queen, the Senate and the House of Commons; that the executive and legislative powers are in close identification through the control of administration by leaders of the parliamentary majority; and that the judiciary is virtually independent of control by either the executive or legislative branches of government. The Crown is the unifying symbol of all three spheres of power.

The Nation.—Though Her Majesty Queen Elizabeth II is "Queen of Canada", her personal participation in the function of the Crown for Canada is necessarily reserved to such rare occasions as a royal visit or the periodic appointment of a personal representative on the advice of her Canadian Ministers. The Queen reigns but does not rule; rather, she symbolizes the continuity of the ancient traditions of the British constitutional monarchy and indeed of the law and custom of the Canadian Constitution.

His Excellency the Right Honourable Vincent Massey, C.H., Governor General of Canada.



The personal representative of the Queen in Canada is the Governor General, appointed by Her Majesty entirely on the advice of the Prime Minister of Canada and usually for a term of five years. He exercises such formal authority as summoning, proroguing and dissolving Parliament and assenting to Bills in the Queen's name. Canada's present Governor General, the Right Honourable Vincent Massey, C.H., is the first Canadian to hold this high office. He was appointed on Jan. 24 and assumed office on Feb. 28, 1952.

The active Canadian executive authority for controlling the exercise of the powers of the Crown resides in the Cabinet or Ministry composed of Members of Parliament, who hold office so long as they possess the confidence of the elected representatives of the people in Parliament.

A new House of Commons is elected at least once every five years under an adult franchise conferred upon Canadian citizens or British subjects, male and female, who have been resident in Canada for twelve months prior to polling day. A readjustment of representation follows each decennial Census of Canada. Provincial representation is now as follows:—

Newfoundland.....	7	Alberta.....	17
Prince Edward Island.....	4	British Columbia.....	22
Nova Scotia.....	12	Yukon Territory.....	1
New Brunswick.....	10	Mackenzie District, Northwest Territories.....	1
Quebec.....	75		
Ontario.....	85		
Manitoba.....	14		
Saskatchewan.....	17	TOTAL.....	265

The leader of the national party that has won a majority of the seats in a newly elected House of Commons forms a Ministry or Cabinet, the members of which are appointed by the Governor General but selected by the Prime Minister from among his party colleagues in such manner as to ensure as far as possible representation of the several regions of the country and its principal cultural and religious and social interests. The Cabinet is responsible for determining all important policies and securing the passage of such legislation, financial measures and administrative provisions as their supporters may approve. Members of the Cabinet as at Jan. 1, 1955, and the portfolios held by them were as follows, listed according to precedence:—

Rt. Hon. Louis Stephen St. Laurent.....	Prime Minister and President of the Queen's Privy Council for Canada.
Rt. Hon. Clarence Decatur Howe.....	Minister of Trade and Commerce and Minister of Defence Production.
Rt. Hon. James Garfield Gardiner.....	Minister of Agriculture.
Hon. Paul Joseph James Martin.....	Minister of National Health and Welfare.
Hon. James J. McCann.....	Minister of National Revenue.
Hon. Milton Fowler Gregg.....	Minister of Labour.
Hon. Lester Bowles Pearson.....	Secretary of State for External Affairs.
Hon. Stuart Sinclair Garson.....	Minister of Justice and Attorney General.
Hon. Robert Henry Winters.....	Minister of Public Works.
Hon. Hugues Lapointe.....	Minister of Veterans Affairs.
Hon. Walter Edward Harris.....	Minister of Finance and Receiver General.
Hon. George Prud'homme.....	Minister of Mines and Technical Surveys.
Hon. Alcide Côté.....	Postmaster General.
Hon. James Sinclair.....	Minister of Fisheries.
Hon. Ralph Osborne Campney.....	Minister of National Defence.
Hon. William Ross Macdonald.....	Solicitor General of Canada and Leader of the Government in the Senate.
Hon. John Whitney Pickersgill.....	Minister of Citizenship and Immigration.
Hon. Jean Lesage.....	Minister of Northern Affairs and National Resources.
Hon. George Carlyle Marler.....	Minister of Transport.
Hon. Roch Pinard.....	Secretary of State of Canada.

The Senate or Upper House of the Parliament of Canada shares with the House of Commons the responsibility for the enactment of all federal legislation in that Bills must pass both Houses before receiving Royal Assent through the Governor General. Yet the influence of the Senate on legislation is immeasurably less than that of the Commons in which most public Bills are introduced by the Ministry and to which the latter is responsible. The most striking evidence of this fact is that any Bill for the expenditure of any public money or the imposition of any tax must originate in the *elected* House, by custom, through the Cabinet. Nonetheless, the Senate has the power to perform a valuable service to the nation in amending and delaying the passage of measures that might result from sudden shifts in public opinion or party strength.

Canadian Senators are summoned for life by the Governor General, on the nomination of the Prime Minister, with equality of representation for four regional divisions. The representation in the Senate by divisions and provinces is as follows:—

Ontario.....	24	Western Provinces.....	24
Quebec.....	24	Manitoba.....	6
Atlantic Provinces.....	30	British Columbia.....	6
Nova Scotia.....	10	Alberta.....	6
New Brunswick.....	10	Saskatchewan.....	6
Prince Edward Island.....	4		
Newfoundland.....	6	TOTAL.....	102

Yukon Territory and the Northwest Territories lack representation at present in the Senate.

While the Ministers of the Crown carry the political responsibilities of their respective departments, the Federal Civil Service forms the staffs of the twenty departments and of various boards, commissions, bureaux and other agencies of the Government. The day-to-day administration of a department is handled by a permanent head, usually known as Deputy Minister. The great majority of the civil servants are recruited, classified and promoted by the Civil Service Commission of Canada.

A discussion panel of the first group of senior Civil Servants to attend a special four-week course in government administration held during the summer of 1954 at Kemptville Agricultural School, Ont.



The Provinces.—Similar political institutions and constitutional usages operate in the governments of the ten provinces as in that of the nation as a whole. In each province the Queen is represented by a Lieutenant-Governor appointed by the Governor General in Council, usually for a term of five years. The powers of the Lieutenant-Governor in the provincial sphere are essentially the same as those of the Governor General in the federal sphere.

The Legislature of each of the provinces comprises, in addition to the Lieutenant-Governor, an elected Legislative Assembly and, for Quebec only, a Legislative Council of 24 members appointed for life by the Lieutenant-Governor in Council. The franchise in provincial elections is granted, generally speaking, to every adult 21 years of age or over, although in Saskatchewan, Alberta and British Columbia the age is 18, 19 and 19, respectively. The conventions of Cabinet government operate in the Legislative Assembly of each of the provinces as in the House of Commons at Ottawa.

The Territories.—The vast northern and sparsely populated regions of Canada lying outside the ten provinces and comprising Yukon Territory and the Northwest Territories have attained both elected representation in the House of Commons and a measure of local self-government. The local government of Yukon Territory is composed of a chief executive, styled Commissioner, appointed by the Federal Government, and a locally elected Legislative Council of five members. The government of the Northwest Territories is vested in a Commissioner (who is the Deputy Minister of the Department of Northern Affairs and National Resources) assisted by a Council of nine members of whom four are elected by popular franchise in the Territories and five are appointed by the Federal Government from among federal officials at Ottawa.



The leader of a provincial political party is chosen by delegates from the local party organization in each riding. The successful candidate continues as leader whether his party is in or out of power until he resigns or is replaced.



RT. HON. LOUIS S. ST. LAURENT
Prime Minister of Canada

Leaders of the Federal and Provincial Governments



HON. L. M. FROST
Ontario



HON. M. L. DUPLESSIS
Quebec

The leader of the national political party winning a federal general election becomes the Prime Minister of Canada. Similar constitutional convention operates in filling the office of Premier in a provincial administration.



HON. H. J. FLEMING
New Brunswick



HON. H. D. HICKS
Nova Scotia



HON. D. L. CAMPBELL
Manitoba



HON. W. A. C. BENNETT
British Columbia



HON. A. W. MATHESON
Prince Edward Island



HON. T. C. DOUGLAS
Saskatchewan



HON. E. C. MANNING
Alberta



HON. J. R. SMALLWOOD
Newfoundland



The Supreme Court of Canada, viewed from the Peace Tower of the Parliament Buildings.

Local Government.—As local government at the municipal level falls under the jurisdiction of the provinces, there are ten distinct systems of municipal government in Canada, as well as many variations within each system. The variations are attributable to differences in historical development and in area and population density of the 4,196 incorporated municipalities. Possessing the power exclusively to make laws respecting municipal institutions, the provincial legislature of each province has divided its territory into varying geographical areas known generally as municipalities and more particularly as counties, cities, towns, villages, townships, rural municipalities, or municipal districts. Municipalities are incorporated by provincial legislation and have various powers and responsibilities suited to their classification. A municipality is governed by an elected council whose head may be called the mayor, reeve, warden or overseer, and the other citizens who are its members may be known as controllers, aldermen or councillors.

The responsibilities of the municipalities are generally those most closely associated with the citizen's everyday life, his well-being and his protection. To maintain these services, the municipality is empowered to place substantial tax levies on the citizen's property.

The Judiciary.—The Canadian judiciary interprets the law and administers justice. The provinces are authorized to administer justice in the territories under their jurisdiction, including the organization of civil and criminal courts and the establishment of procedure in civil matters in those courts. Legislation concerning criminal law and the procedure in criminal matters is under the jurisdiction of the Federal Parliament.

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 Governor General in Council and their salaries, allowances and pensions are fixed and paid by the Parliament of Canada.

The Supreme Court of Canada is the court of final appeal in Canada, and exercises general appellate jurisdiction throughout the nation in civil

and criminal cases. The jurisdiction of the Exchequer Court extends to cases embracing claims made by or against the Crown in the right of Canada. The Chief Justice of Canada and the puisné judges of the Supreme and Exchequer Courts are appointed by the Governor General in Council.

• *Canada's External Relations in 1954*

During 1954, as in previous years, the principal factors in Canada's external relations were membership in the United Nations and in the North Atlantic Treaty Organization, the close relationships between Canada and the other members of the Commonwealth and the United States, and the country's continuing interest in the maintenance of a high level of international trade. Canada also accepted a heavy new international responsibility as a member of the International Supervisory Commissions in Indo-China.

The United Nations.—Canada continued full support to the United Nations. An encouraging development during 1954 was the agreement with the Soviet Union to resume private discussions in the Disarmament Commission Sub-committee, and a procedure was accepted for organizing international co-operation in the peaceful utilization of atomic energy. Canadian representatives played a prominent part in the consideration of both these matters. Canada also participated fully in the efforts of the United Nations to bring about a satisfactory Korean settlement.

NATO and Western Europe.—One of the most important developments of the year in Canada's relations with Europe was the successful conclusion of a settlement providing for the association of the German Federal Republic with the Western Community. Canada was represented at the Nine-Power Conference at London (Sept. 23-Oct. 3), which was initiated by the United Kingdom following the decision of the French National Assembly to reject the European Defence Community Treaty, and at the Ministerial Meeting of the North Atlantic Council (Oct. 22-23) to which the various agreements reached at London were submitted for information and decision.

Under the settlement, the occupation of the German Federal Republic will be terminated and its sovereignty restored. It will be invited to become

Greek Air Force men take charge of aircraft supplies on their way from Canada to Greece. The provision of 82 F-86E Sabre jets together with spare engines and other equipment to both Greece and Turkey is part of Canada's program of mutual aid to NATO countries.



a member of a new Western European Union (based on a modified version of the Brussels Treaty of 1948). This new organization is designed to serve as a focus for European unity and co-operation and will have important powers for controlling and limiting the armed strength of its members. NATO's machinery will be strengthened to cover the new arrangements.

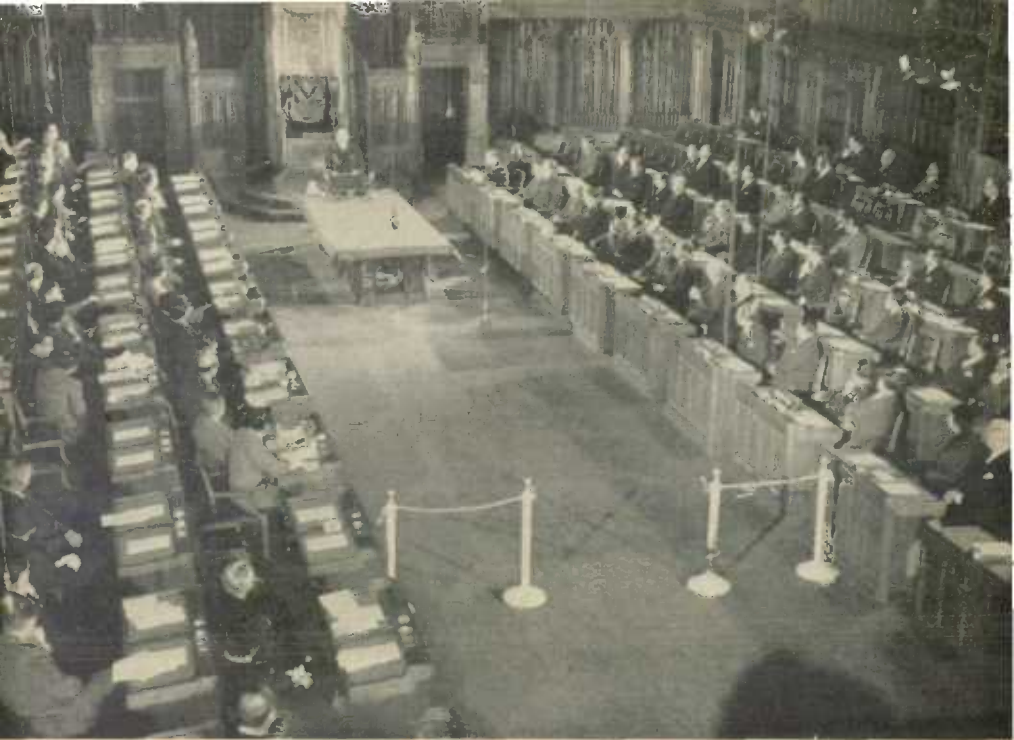
Canada's contribution of forces to NATO remained substantially the same in 1954 as in 1953. The RCN now has 36 ships in commission which will be assigned to NATO for the defence of the Canada-United States area and the protection of convoys. The Twenty-Seventh Canadian Infantry Brigade, stationed in Western Germany under the command of the Supreme Allied Commander in Europe, was replaced by the First Canadian Infantry Brigade. The First Canadian Air Division, also under the Supreme Allied Commander, was raised to 12 squadrons of jet fighters stationed in France and Germany. The cost of maintaining these forces is estimated at more than \$650,000,000 a year. In addition, Canada has contributed mutual aid to its European allies. Out of an appropriation of \$300,000,000 for the year ended Mar. 31, 1954, arms and equipment have been supplied—an increasing proportion from post-war production—and training provided in Canada for up to 1,200 NATO aircrew.

Commonwealth Affairs.—The Prime Minister, the Rt. Hon. Louis St. Laurent, paid visits to the three Asian members of the Commonwealth—Pakistan, India and Ceylon—during his trip around the world in February and March 1954. Mr. St. Laurent's visit served to strengthen further Canada's close relations with these countries and to emphasize the role of the Commonwealth as a bridge between the West and Asia.

It was announced on Nov. 4, 1954, that a meeting of Commonwealth Prime Ministers would be held at London beginning Jan. 31, 1955. These periodic meetings provide the heads of Commonwealth governments with an opportunity to review the international situation and to arrive at a deeper understanding of the approach of the various members to Commonwealth and to world problems.

Relations with the United States.—The most outstanding event of 1954 in the American field was that the St. Lawrence Seaway and Power Projects were finally begun after half a century of study and intermittent negotiations stretching over three decades. The Hydro Electric Power Commission of Ontario joined with the Power Authority of the State of New York to commence construction of power works in the International Rapids section of the St. Lawrence River and will develop 2,200,000 h.p., to be divided equally between the two bodies. Work on the 27-ft. waterway was also begun, following intergovernmental negotiations between Canada and the United States. Remedial works, to enhance and preserve the beauty of the falls at Niagara were also begun by the two countries.

The Far East.—At a meeting at Berlin in February, the Foreign Ministers of the United Kingdom, France, the United States and the USSR proposed a conference of their representatives at Geneva on Apr. 26 to reach a peaceful settlement of the Korean question. The conference would also include representatives of Communist China, the Republic of Korea, North Korea, and the other countries whose armed forces had participated in the Korean hostilities and who might desire to attend. The Canadian delegation to this



The 1954 meeting of the Consultative Committee on Co-operative Economic Development in South and Southeast Asia took place at Ottawa in October. Seventy delegates from fourteen Colombo Plan countries listen to the opening address in Canada's House of Commons.

Conference was headed by the Hon. L. B. Pearson, the Secretary of State for External Affairs. The Conference ended on June 15 as it was clear that the Communist representatives would neither recognize the legitimacy of the United Nations mission in Korea, nor accept a Korea unified on the basis of free elections under the supervision of an international agency genuinely neutral and acceptable to the United Nations, and that further consideration of the Korean question by the Conference would serve no useful purpose.

The Berlin Agreement also provided for consideration at Geneva of the Indo-China problem by representatives of the governments chiefly concerned. Canada, therefore, was not represented in this phase of the Geneva Conference. However, as the result of a decision reached there, Canada, India and Poland were invited to form International Supervisory Commissions to supervise the carrying out of three cease-fire agreements for Cambodia, Laos and Vietnam, and also to provide members for the subordinate bodies of these Commissions. The Canadian Government accepted the invitation as a means of serving the cause of peace and, at year's end, there were some 120 Canadian officers and men and about 20 civilians serving on the Commissions in Indo-China.

Economic Affairs.—Again in 1954 as in previous years, Canada attended most of the major International Conferences concerned with economic affairs, including those of the Commonwealth, the Colombo Plan, the United Nations



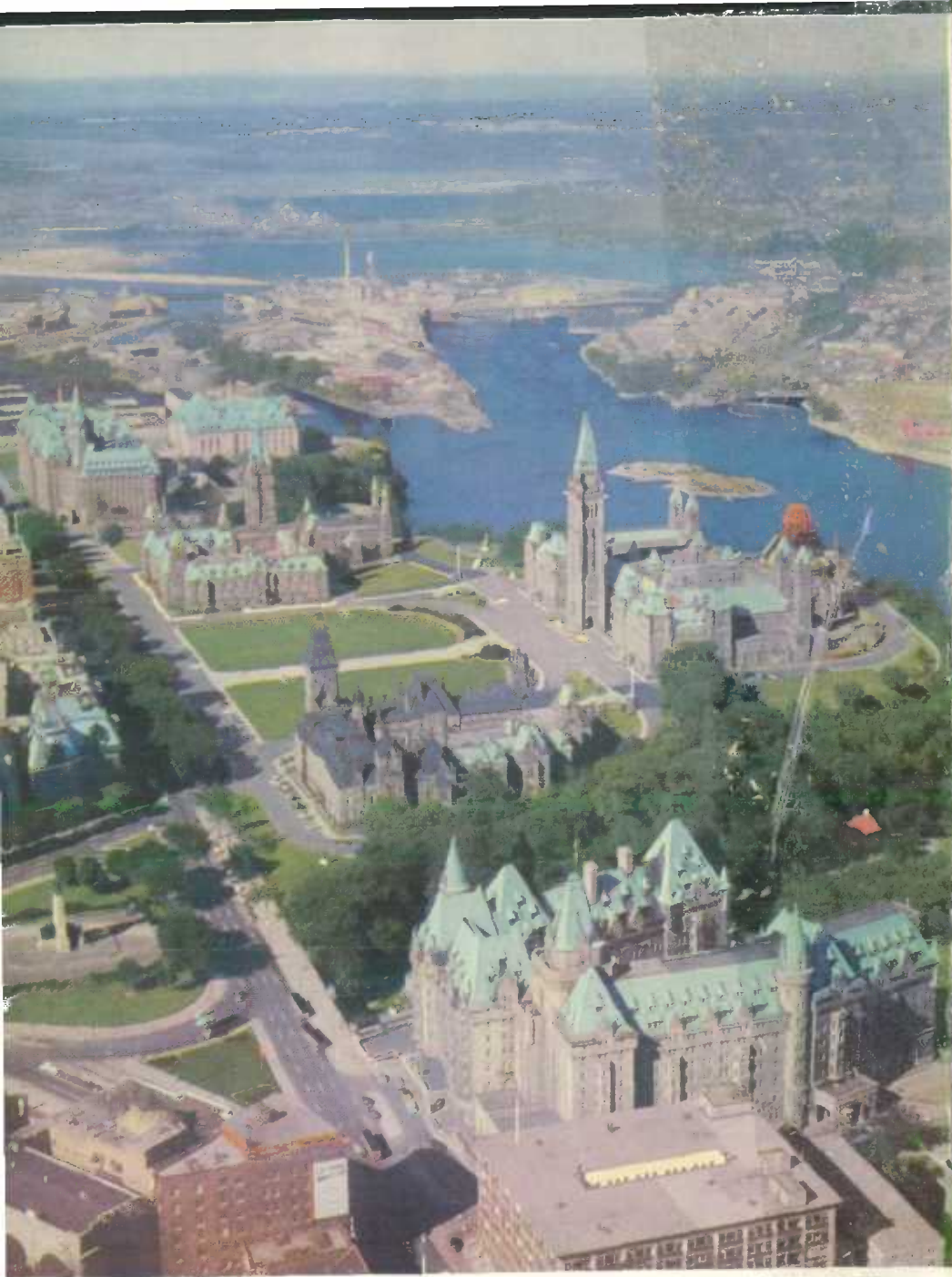
Manager of the Reactor Division of the Atomic Energy Project at Chalk River, Ont., explains the NRX Reactor to Colombo Plan Conference delegates.

and its Specialized Agencies, the Organization for European Economic Co-operation, the General Agreement on Tariffs and Trade and, in observer status, the ministerial economic meeting of the Organization of American States. The balance-of-payments position of a number of Canada's important trading partners continued to improve throughout 1954 and increased attention was devoted to the special problems that might arise in moving toward a freer multilateral system of trade and payments.

During 1954, a trade agreement was concluded with Japan providing for an exchange of 'Most-Favoured-Nation' treatment. Similar agreements were concluded with Spain and with Portugal. In March 1954, the first meeting of the joint Canadian-United States Committee on Trade and Economic Affairs was convened in Washington at which Ministers of the two Governments examined trade and economic problems of common concern. The Ninth Session of the Contracting Parties to the General Agreement on Tariffs and Trade opened at Geneva in the autumn of 1954. At this session, the Contracting Parties were to review the operation of the General Agreement and formulate generally acceptable rules of trade. Mr. L. D. Wilgress of the Canadian Delegation was re-elected Chairman for 1955.

As in each of the three preceding years, Canada made available \$25,400,000 in 1954 to provide economic and technical assistance to the under-developed countries of south and southeast Asia under the Colombo Plan. The meeting of the Consultative Committee of the Colombo Plan was held at Ottawa in October 1954. The Hon. Walter E. Harris, Minister of Finance, was Chairman of these meetings.

Missions Abroad.—Canada's diplomatic representation abroad was extended in 1954 by the opening of diplomatic missions in the Dominican Republic, Egypt, Haiti, Israel and Lebanon. In addition, full diplomatic relations were resumed with the USSR for the first time since 1946 with the appointment of an Ambassador to the Soviet Union. At the end of 1954 Canada, was represented abroad by the following missions:—



Photographic Survey Corporation

Ottawa—chosen in 1857 by Queen Victoria to be Canada's National Capital.

The Parliament Buildings, in their jewel-like setting, now crown the height that was bare "Barracks Hill" a hundred years ago. Since that time each successive generation has played its part in the building of a city of interest and beauty and in the development of its all-important function as the administrative centre of a great and growing nation.

Embassies (28)—

Argentina
Belgium
Brazil
Chile
Colombia
Cuba
Dominican Republic
Egypt
France
Germany
Greece
Haiti
Indonesia
Israel
Ireland
Italy
Japan
Mexico
Netherlands
Peru
Spain
Switzerland
Turkey
USSR
United States
Uruguay
Venezuela
Yugoslavia

Legations (9)—

Austria
Czechoslovakia
Denmark
Finland
Lebanon
Norway
Poland
Portugal
Sweden

Offices of High Commissioners (7)—

Australia
Ceylon
India
New Zealand
Pakistan
South Africa
United Kingdom

Consulates General or Consulates (11)—

Brazil:
São Paulo
Philippines:
Manila
United States:
Boston
Chicago
Detroit
Los Angeles
New Orleans
New York
Portland
San Francisco
Seattle

Permanent Delegations and Missions (4)—

Berlin (Military Mission)
Geneva (United Nations)
New York (United Nations)
Paris (North Atlantic Council and Organization for European Economic Co-operation)

Canada does not maintain missions in Iceland and Luxembourg, but the Minister to Norway is accredited to Iceland and the Ambassador to Belgium is accredited to Luxembourg.

Trade Commissioners were also situated in the Belgian Congo, Guatemala, Hong Kong, Singapore and Trinidad.

His Excellency Hubert Guérin, representative of the Government of France in Canada, and Mme. Guérin, photographed in the French Embassy at Ottawa. Exchange of representatives between France and Canada has been continuous since 1928—the first Canadian legation in Continental Europe was opened at Paris in that year.



SASKATCHEWAN—ALBERTA GOLDEN JUBILEE, 1905-1955

Fifty years ago, parts of Canada's vast Northwest Territories were organized as the two Provinces of Saskatchewan and Alberta. A half century of growth and accomplishment is being commemorated in 1955 by the citizens of these Provinces but, even as they celebrate the past and view it with pride, their eyes are turned toward the promising future.

SASKATCHEWAN

Wheatfields



Regina



▲ Uranium

Oil Refining ▼



ALBERTA

Cattle in the foothills. ►

Wheat and Oil ▲

Edmonton ▼



Coal ▼

Current ▲



THE PEOPLE, THEIR DEVELOPMENT AND WELFARE

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Canada is a mosaic of many peoples, whose native cultures add rich diversity and colour to the historic pattern formed by Canada's English-speaking and French-speaking races. In the last half-century, Canada has opened her gates from sea to sea to the tides of immigration. To-day, nearly one-fifth of the population—originating mainly in Continental Europe—is intermingling with the older-settled peoples to form a culture and allegiance distinctively Canadian.

The newest of the "new" Canadians have found a land whose people enjoy one of the world's highest living standards, where continued progress is aided by emphasis on popular education and on scientific research, where medical science, health and social security measures have helped achieve a low mortality rate, a high rate of natural increase and a high degree of life expectancy.

Enhanced personal and economic well-being is encouraging the development of the purely cultural aspects of Canadian life: painting, the theatre, ballet, folk music and literature are expressing the national consciousness and developing a community of spirit in a way which promises to transcend the limitations imposed by Canadian geography and to unite the varied racial backgrounds into a broad pattern of popular Canadian culture.

The People

• Population

CANADA has a population of 15,195,000 (June 1, 1954, estimate) so that for each square mile of its land area there are only about four persons (4.2 to be statistically correct). Even excluding the Yukon and Northwest Territories and Labrador, vast areas with little or no population, the average is still only between seven and eight per square mile.

The physiographic features, the climate and the distribution of natural resources have a definite effect on the pattern of settlement. The Island of Newfoundland, for instance, has an area of 40,559 sq. miles and an estimated population of 390,000, so that it has an average density of 9.6 per sq. mile. However, one-fifth of the people live in the metropolitan area of St. John's, the Island's one city, and the remainder are thinly spread along the coast. Fishing is the main occupation of the Island's people and at least 90 p.c. of them live beside the sea, mostly in small communities sheltered in the coves and bays. The resident population of Labrador is fewer than 8,000, also living mainly on the coast in small settlements. The largest single community is Goose Bay, about 100 miles inland at the south of Lake Melville.

The 105,000 people living in Prince Edward Island, on the other hand, are fairly evenly distributed over the Province and average 48 persons to the square mile. Almost half of them live on farms.

Nova Scotia has a fairly high average density of 32 persons to the square mile. More than one-third of the 673,000 people of the Province are concentrated in the metropolitan area of Halifax, the provincial capital and the largest Atlantic seaport, and in the metropolitan area of Sydney-Glace Bay, the main centre of the mining industry of Nova Scotia. Another 20 p.c. of the population reside in the counties bordering Northumberland Strait.

New Brunswick has an average of 20 persons for each square mile. The settlement of this Province has followed the coast-line and the river valleys and a large portion of the interior has very little population. For example, approximately 40 p.c. of the Province's 547,000 people are located in the St. John River Valley and one-third are located in the northeastern coastal counties of Restigouche, Gloucester, Northumberland and Kent. One-fifth of the total live in the metropolitan areas of Saint John and Moncton.

The Montreal area contains about one-third of the entire population of 4,388,000 in the Province of Quebec. Another million people live in the triangle to the south of the St. Lawrence River between Bellechasse County and the United States border. Most of the remainder are located within 35 miles of the Ottawa, St. Lawrence and Saguenay Rivers and Lake St. John. The vast area of Quebec north of the 49th parallel of latitude is very sparsely inhabited.

Almost 3,500,000 people, or about 68 p.c. of Ontario's population of 5,046,000, reside in the industrialized urban centres and rich farming areas south of a line running from about Oshawa just east of Toronto on Lake Ontario to Georgian Bay. Approximately one-third of these live in the metropolitan area of Toronto. Though this section has an area of about



The metropolitan area of Winnipeg, Man., has a population of over 350,000 and contains almost half the total population of the Province.

20,000 sq. miles, which is only about 5.7 p.c. of the Province's 348,141 sq. miles, it has a density of about 150 per sq. mile, or more than 35 times the national average. Another 20 p.c. of Ontario's population lives east of a line connecting Oshawa on the south and North Bay. The other 12 p.c. are located at the head of Lake Superior and in the northern mining districts.

The metropolitan area of Winnipeg contains almost half the population of Manitoba, and about 90 p.c. of the Province's people reside within 150 miles of the United States border. Agriculture occupies over half of the population of this portion of the Province, outside of the Winnipeg area, and the population density varies from 5 to 16 persons per sq. mile. Four-fifths of Manitoba's 219,723 sq. miles lies north of a line 150 miles from the International Boundary, but only 75,000 persons live in this vast area, some 12,000 of whom are in the mining areas of Flin Flon and The Pas.

Almost 50 p.c. of the 878,000 people in Saskatchewan live on farms and another 20 p.c. live in rural non-farm areas. This population is spread fairly evenly over an area stretching 300 miles from the United States boundary, while only 20,000 persons live in the northern half of the Province. The main aggregations of population are in the cities of Regina and Saskatoon. The average density for the whole province is about four persons per sq. mile.

Alberta's over-all population density is a little higher. The central section of the Province, a belt about 100 miles wide extending roughly 200 miles from Calgary to Edmonton, contains over half the population of 1,039,000. This is the great oil and grain producing area. To the south, the agricultural population is more scattered. The favourable climatic and soil conditions in the Peace River area have attracted considerable population farther north in this Province than in any other.

British Columbia's population is concentrated in the Vancouver-Howe Sound area where over 40 p.c. of the Province's 1,266,000 people live. About 180,000 persons live in the adjoining Lower Fraser Valley and another 200,000 in the southern part of Vancouver Island. In other words, about three-quarters of British Columbia's population lives in about 5 p.c. of the Province's area. Half of the remainder are in the southeastern corner, occupied in agricultural and mining pursuits.

Population of Canada, by Province, 1941, 1951 and 1954

NOTE.—Figures for 1941 and 1951 are Census figures and those for 1954 are estimated as at June 1, 1954.

Province or Territory	1941	1951	1954
	No.	No.	No.
Newfoundland.....	...	361,416	398,000
Prince Edward Island.....	95,047	98,429	105,000
Nova Scotia.....	577,962	642,584	673,000
New Brunswick.....	457,401	515,697	547,000
Quebec.....	3,331,882	4,055,681	4,388,000
Ontario.....	3,787,655	4,597,542	5,046,000
Manitoba.....	729,744	776,541	828,000
Saskatchewan.....	895,992	831,728	878,000
Alberta.....	796,169	939,501	1,039,000
British Columbia.....	817,861	1,165,210	1,266,000
Yukon Territory.....	4,914	9,096	10,000
Northwest Territories.....	12,028	16,004	17,000
Canada.....	11,506,655	14,009,429	15,195,000

Intercensal estimates cover only population by province, as shown above for 1954, and by sex and age groups. The high birth rates of recent years are reflected in the age and sex figures for 1954. In that year there were 231 persons under the age of ten years for every 1,000 of total population as compared with 223 in 1951, 182 in 1941 and 213 in 1931. The trend toward "aging" is indicated by the fact that 112 persons per 1,000 of population were 60 years or over compared with 114 in 1951, 102 in 1941 and 84 in 1931.

Census Information

The Census of Canada is the source of information on the detailed characteristics of Canada's population, and the latest census is that of 1951. It is possible to give here only very brief information on certain phases of the more important analyses.

Rural and Urban.—Census figures show that on June 1, 1951, 38 p.c. of Canada's population was established in rural localities and about 52 p.c. of those rural dwellers lived on farms. Thus the farm population constituted about 20 p.c. of the nation's total. In 1941 the proportion of the population

residing in urban areas was 57 p.c., and in rural areas 43 p.c. The recent trend towards urbanization in Canada is no exception to that noted in many other countries. In the 1941-51 decade, the urban population, exclusive of Newfoundland, increased 30 p.c. and the rural population 3 p.c.

The growth of the metropolitan areas and of the urban centres with more than 15,000 population in 1951 is shown in the following tables.

Population of Census Metropolitan Areas, 1941 and 1951

Area	1941	1951	Area	1941	1951
	No.	No.		No.	No.
Montreal, Que.	1,145,282	1,395,400	Windsor, Ont.	123,973	157,672
Toronto, Ont.	909,928	1,117,470	Calgary, Alta.	93,021	139,105
Vancouver, B.C.	377,447	530,728	Halifax, N.S.	98,636	133,931
Winnipeg, Man.	299,937	354,069	London, Ont.	91,024	121,516
Ottawa, Ont.	226,290	281,908	Victoria, B.C.	75,560	104,303
Quebec, Que.	224,756	274,827	Saint John, N.B.	70,927	78,837
Hamilton, Ont.	197,752	259,685	St. John's, Nfld.	59,474	67,749
Edmonton, Alta.	97,842	173,075			

¹ Census of Newfoundland, 1945; figure for 1941 not available.

Populations of Incorporated Urban Centres with 15,000 or More Inhabitants, 1941 and 1951

Urban Centre	1941	1951	Urban Centre	1941	1951
	No.	No.		No.	No.
Belleville, Ont.	15,710	19,519	Ottawa, Ont.	154,951	202,045
Brandon, Man.	17,383	20,598	Outremont, Que.	30,751	30,057
Brantford, Ont.	31,948	36,727	Owen Sound, Ont.	14,002	16,423
Calgary, Alta.	88,904	129,060	Peterborough, Ont.	25,350	38,272
Cap de la Madeleine, Que.	11,961	18,667	Port Arthur, Ont.	24,426	31,161
Charlottetown, P.E.I.	14,821	15,887	Prince Albert, Sask.	12,508	17,139
Chatham, Ont.	17,369	21,218	Quebec, Que.	150,757	164,016
Chicoutimi, Que.	16,040	23,216	Regina, Sask.	58,245	71,349
Cornwall, Ont.	14,117	16,899	St. Boniface, Man.	18,157	26,342
Dartmouth, N.S.	10,847	15,037	St. Catharines, Ont.	30,275	37,984
Edmonton, Alta.	93,817	159,631	St. Hyacinthe, Que.	17,798	20,236
Forest Hill, Ont.	11,757	15,305	St. Jérôme, Que.	11,329	17,685
Fort William, Ont.	30,585	34,947	St. Johns, Que.	13,646	19,305
Fredericton, N.B.	10,062	16,018	St. John's, Nfld.		52,873
Galt, Ont.	15,346	19,207	St. Laurent, Que.	6,242	20,426
Glace Bay, N.S.	25,147	25,586	St. Thomas, Ont.	17,132	18,173
Granby, Que.	14,197	21,989	Saint John, N.B.	51,741	50,779
Guelph, Ont.	23,273	27,386	Sarnia, Ont.	18,734	34,697
Halifax, N.S.	70,488	85,589	Saskatoon, Sask.	43,027	53,268
Hamilton, Ont.	166,337	208,321	Sault Ste. Marie, Ont.	25,794	32,452
Hull, Que.	32,947	43,483	Shawinigan Falls, Que.	20,325	26,903
Jacques Cartier, Que.		22,450	Sherbrooke, Que.	35,965	50,543
Joliette, Que.	12,749	16,064	Stratford, Ont.	17,038	18,785
Jonquière, Que.	13,769	21,618	Sudbury, Ont.	32,203	42,410
Kingston, Ont.	30,126	33,459	Sydney, N.S.	28,305	31,317
Kitchener, Ont.	35,657	44,867	Theftord Mines, Que.	12,716	15,095
Lachine, Que.	20,051	27,773	Three Rivers, Que.	42,007	46,074
Leaside, Ont.	6,183	16,233	Timmins, Ont.	28,790	27,743
Lethbridge, Alta.	14,612	22,947	Toronto, Ont.	667,457	675,754
London, Ont.	78,134	95,343	Valleyfield (Salaberry del), Que.	17,052	22,414
Medicine Hat, Alta.	10,571	16,364	Vancouver, B.C.	275,353	344,833
Moncton, N.B.	22,763	27,334	Verdun, Que.	67,349	77,391
Montreal, Que.	903,007	1,021,520	Victoria, B.C.	44,068	51,341
Moose Jaw, Sask.	20,753	24,355	Welland, Ont.	42,500	15,382
New Westminster, B.C.	21,967	28,639	Westmount, Que.	26,047	25,222
Niagara Falls, Ont.	20,589	22,874	Windsor, Ont.	105,311	120,049
North Bay, Ont.	15,599	17,944	Winnipeg, Man.	221,960	235,710
North Vancouver, B.C.	8,914	15,687	Woodstock, Ont.	12,461	15,544
Oshawa, Ont.	26,813	41,545			

¹ Not incorporated in 1941.

Birthplace.—Of the 14,009,429 people in Canada on June 1, 1951, 11,949,518 were born in Canada, 912,482 in the United Kingdom, 20,567 in other Commonwealth countries, 801,618 in Europe, 282,010 in the United States, 37,145 in Asia and 6,089 elsewhere.

Origin.—In 1951, British Isles and French origins, traditionally the largest cultural groups in Canada, accounted for more than 78 p.c. of the nation's total population. Compared with 1901, the British Isles group dropped from 57.0 p.c. of the total to 47.9 p.c., while the percentage of persons of French origin was very slightly higher at 30.8 p.c. as against 30.7. In the same comparison, the percentage of those with ancestry in continental Europe (other than France) more than doubled from 8.5 to 18.2 and Asiatics showed a slight increase from 0.4 p.c. of the total to 0.5 p.c. Numerically, the seven leading origins were represented in Canada as follows:—

	No.		No.
British Isles (English, Irish, Scottish and Welsh).....	6,709,685	Scandinavian (Danish, Iceland- ic, Norwegian and Swedish).....	283,024
French.....	4,319,167	Netherlanders.....	264,267
German.....	619,995	Polish.....	219,845
Ukrainian.....	395,043	Other.....	1,198,403

Religious Denominations.—Religious denominations in Canada are many and diverse. However, in 1951 more than 92 p.c. of the population belonged

Torontonians following in the wake of the parade celebrating the re-opening of downtown Yonge Street on Oct. 29, 1954. On that day, the five years of excavations, detours, mud and barricades suffered during the building of Toronto's subway came to an end.





▲
Uranium City in the northwest corner of Saskatchewan is the central settlement that serves the mines exploiting Canada's greatest known concentration of uranium. Every one of its 700 inhabitants is vitally interested in uranium and all the land within 30 miles of it is staked. Since the area opened up in 1950, about \$65,000,000 has been spent in developing claims.



▶
Setting up a diamond drill for the further testing of a pitchblende occurrence.

or adhered to one of the seven numerically largest religious denominations as follows:—

	No.		No.
Roman Catholic.....	6,069,496	Baptist.....	519,585
United Church of Canada....	2,867,271	Lutheran.....	444,923
Church of England in Canada	2,060,720	Jewish.....	204,836
Presbyterian.....	781,747	Other.....	1,060,851

Dwellings, Households and Families.—In 1951 there were approximately 3,400,000 occupied dwellings in Canada and 3,287,000 resident families compared with about 2,600,000 dwellings and 2,500,000 families in 1941. The increases were shared by all provinces. Because dwellings and family units increased at a faster rate than population generally, the average number of persons per household in 1951 was 4.0 compared with 4.3 in 1941 and the

average per family 3.7 compared with 3.9. The average size of rural farm families in 1951 was 4.4 persons, rural non-farm 3.9 persons, and urban 3.5 persons. In about 90 p.c. of all families, the family head was also head of the household. Some 320,645 families, or about 10 p.c., were living as relatives or lodgers in the households of other persons. At the Census date, 6.7 p.c. of the households in Canada contained two or more families; among the cities of 100,000 or more population, 10.5 p.c. were in this category.

Dwellings, Households and Families, and Persons per Household and Family, by Province, 1951

Province	Population	Dwellings		Families	Persons per Household ²	Persons per Family
		Total ¹	Occupied ²			
	No.	No.	No.	No.	No.	No.
Nfld.	361,416	78,024	70,980	74,858	5.0	4.4
P.E.I.	98,429	24,114	22,454	21,381	4.3	4.0
N.S.	642,584	159,795	149,555	145,127	4.2	3.9
N.B.	515,697	120,639	114,007	111,639	4.4	4.1
Que.	4,055,681	898,914	858,784	856,041	4.6	4.2
Ont.	4,597,542	1,232,081	1,181,126	1,162,772	3.8	3.4
Man.	776,541	210,565	202,398	191,268	3.7	3.6
Sask.	831,728	237,406	221,456	196,188	3.7	3.7
Alta.	939,501	266,939	250,747	223,326	3.6	3.7
B.C.	1,165,210	356,651	337,777	299,845	3.3	3.3
Canada	13,984,329 ³	3,585,128	3,409,284	3,282,445 ³	4.0	3.7

¹ Includes institutions, hotels and camps as well as vacant dwellings and dwellings under construction. ² Excludes institutions, hotels and camps. ³ Figures for Canada

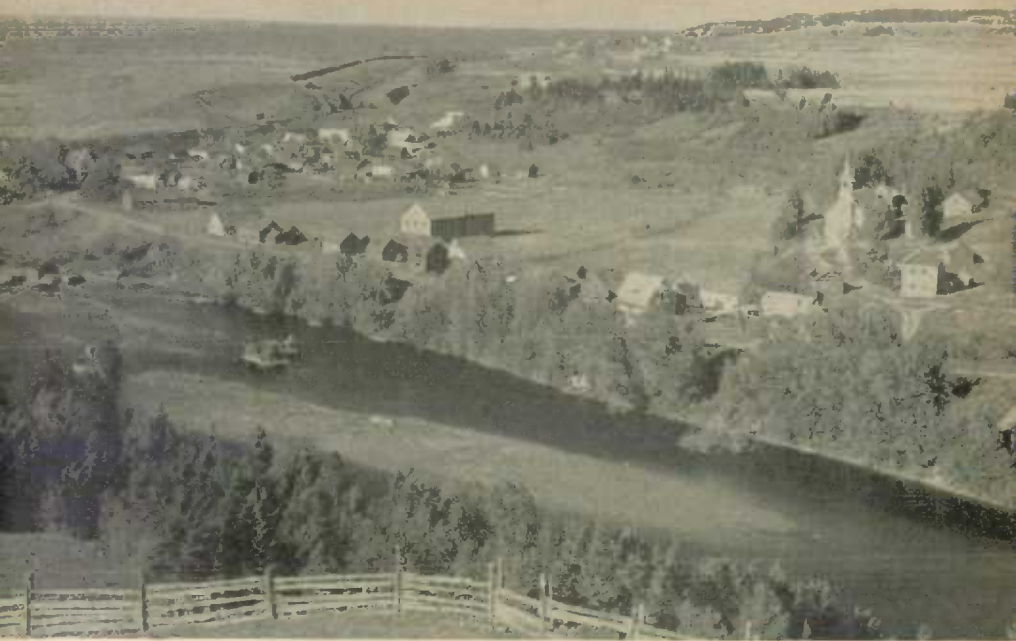
are exclusive of 25,100 persons and 4,939 families located in the Yukon and Northwest Territories; comparable figures for dwellings are not available.

A rising standard of living during the 1941-51 decade is indicated by the housing statistics for that period. By 1951, more than nine homes in every ten had a radio and almost 75 p.c. had a powered washing machine. The greatest improvement was shown in refrigeration facilities. In 1941, one household in every five had a refrigerator; by 1951, every second household had one. Plumbing and heating facilities also showed improvement.

Facilities and Living Conveniences in Canadian Households, 1941 and 1951

NOTE.—Taken from 20 p.c. sample census. Exclusive of Newfoundland and the Territories.

Item	1941		1951	
	No.	p.c.	No.	p.c.
Households with—				
Electric lighting	1,780,667	69.1	2,929,450	87.8
Furnace heating	997,588	38.7	1,623,275	48.9
Running water	1,558,586	60.5	2,503,080	75.0
Flush toilet (exclusive use)	1,342,198	52.1	2,170,815	65.0
Bath or shower (exclusive use)	1,169,760	45.4	1,926,455	57.7
Electric or gas range	1,019,421	39.6	1,696,130	50.8
Electric or gas refrigerator	538,535	20.9	1,589,625	47.6
Powered washing machine			2,452,905	73.5
Electric vacuum cleaner	624,178	24.2	1,409,090	42.2
Telephone	1,037,298	40.3	2,013,640	60.3
Radio	2,002,889	77.8	3,086,695	92.5
Passenger automobile	944,591	36.7	1,435,925	43.0
Total Number of Households	2,575,744	100.0	3,338,315	100.0



Trois Pistoles is typical of the many small communities scattered along the south shore of the St. Lawrence River below the city of Quebec. The land is fertile and well cultivated, supporting an industrious farming population.

Aborigines

Indians.—There are in Canada, according to the Census of 1951, 155,874 persons of Indian origin, that is, persons with a paternal ancestor of Indian race. However, many of these have long been assimilated into the white population and have lost their identity as Indians. The number of persons considered as Indians under Indian legislation was placed at 136,407 in 1949. They are divided into about 600 bands and live on some 2,200 reserves set aside for their use and benefit. Their welfare is the responsibility of the Indian Affairs Branch of the Department of Citizenship and Immigration.

The Federal Government demonstrated its confidence in the abilities of Canadian Indians by passing, in 1951, a new Indian Act which gave them more responsibility in handling their own affairs. This Act was drawn up following lengthy discussions with Indian representatives from every part of Canada and in 1951 and again in 1953 Indians gathered in council at Ottawa to inform the Government on how the Act was operating.

This might not have happened if the Indian had not proved himself efficient and hard-working in promoting his own welfare. Indians to-day are building their own homes, repairing the roads on their reserves, or joining forces in some other worthwhile undertakings. The band councils, most of them chosen in democratic elections set up under the provisions of the new Act, pass bylaws for the good of their communities and operate as efficiently as do most town councils, using band funds wisely and well. In 1954, Indians built 972 houses and repaired 2,108 homes, the Indian Trust Fund was



A pure Chipewyan Indian working with his geiger counter in a blasted rock trench. Indians everywhere are moving out of their hereditary occupations of trapping and fishing and are proving their abilities in competition with others in modern industry.

increased by more than \$490,000, and in the Prairie Provinces the amount of land under cultivation was increased by 38,000 acres as compared with the previous year and more than 4,000,000 bu. of grain were harvested.

Indians everywhere are becoming more interested in good education and training as aids to better living. They are moving out of their hereditary occupations and proving their abilities in competition with others in modern agriculture, in industry, and in a variety of professions. Where Indians attend provincial schools, they have no trouble in keeping pace with the other students. In the 1953-54 academic year, 1,644 Indian students attended secondary schools, colleges and special courses; 38 of these pupils were taking trades courses, 37 commercial courses, 28 nurse-training courses and nine were studying at teacher-training schools.

Adults are learning, also. During 1954, the Welfare Division of the Indian Affairs Branch conducted its first series of study groups in which representatives of most Indian districts were able to study social welfare and community leadership. Study groups were held at Calgary for Alberta and British Columbia Indians, at Regina for Saskatchewan and Manitoba Indians, at North Bay for Ontario, Eel Ground Reserve, N.B., for the Maritimes, and Quebec City for Quebec. The conferences were very successful and the participants returned to their communities full of ideas and enthusiasm.

The success of community organizations such as the Homemakers' Clubs on the reserves indicates that they will have no lack of support in their efforts to improve community welfare. The 169 active Homemakers' Clubs were responsible for many home improvements on the reserves, and took leadership in sewing, welfare, and social activities on all reserves. Two new clubs were formed in 1954 and others were being organized.

In 1954, 789 Indians were enfranchised, that is, they elected to be considered on a full citizenship basis as are other Canadian citizens and gave up their special rights under the Indian Act.

Eskimos.—The Canadian Eskimos numbered about 9,600 in 1951 and all evidence indicates that their numbers are increasing. In the main they inhabit that part of the country lying north of the treeline. When first discovered, the Eskimos were a hunting and fishing people who had developed a specialized culture that enabled them to live farther north than any other people. They were nomadic, following the animals on which they depended for food and clothing. Their first contact with European civilization was in the nineteenth century through visits of explorers and whalers, followed by the advent of fur traders and missionaries into the northern regions. The Canadian Eskimos quickly became accustomed to the use of firearms and other equipment they obtained in exchange for white fox fur, and trapping accordingly assumed a growing importance in their economy.

Since the end of World War II, however, the rising prices of the goods they now buy and the marked decline in their income from fur trading has resulted in a difficult economic situation which the institution of Family Allowances and Old Age Assistance has helped to alleviate. The Department of Northern Affairs and National Resources, which is charged with the general administration of the Arctic and of Eskimo affairs, makes continuing studies of the situation and endeavours to meet the problems created by changing conditions. In this it has the co-operation of other government departments and outside organizations directly concerned with Arctic affairs. Developments of this nature must necessarily be long-term, following the policy that the Eskimos should enjoy the same advantages as other Canadians.

The most immediate problems are to protect the health of the Eskimos, who have built up no immunity against many of the diseases to which they are now for the first time exposed; to diversify and improve their economy; and to educate and train them so that they may play a full part in the development of northern Canada. Hospitals, nursing stations and schools

Eskimos at Pangnirtung are shown objets d'art produced by other Eskimos at Cape Dorset.



have been established at a number of strategic points and, wherever practical, steps are being taken to introduce handicrafts and other local industries to increase their income. Groups are also assisted in moving to areas where they may either make a better living in the traditional ways or obtain suitable employment and at the same time receive further education and technical training.

Immigration

The present policy of the Federal Government is to foster the growth of the population of Canada by the encouragement of immigration in a manner that, by necessary legislation and vigorous administration, will ensure the careful selection and permanent settlement of such numbers of immigrants as can be absorbed advantageously in the national economy.

The number of immigrants entering Canada in the post-war period, Jan. 1, 1946 to Sept. 30, 1954, totalled 1,084,999. British immigrants from overseas countries led in this influx, with a total of 329,073. Immigrants of North European origin numbered 316,084, the leading individual cultural groups being German and Austrian 142,674, Netherlander 106,826, and French 21,490, while those from the United States numbered 77,809.

In the nine months ended Sept. 30, 1954, Canada received 126,853 immigrants, 1,755 more than in the corresponding period of 1953. In the 1954 period, British immigrants from overseas numbered 36,111, a 2-p.c. increase over the same months of 1953. Immigrants from the United States increased by 11 p.c., the comparative totals being 7,559 in 1954 and 6,788 in 1953. Entries of North European races declined from 53,867 to 50,564 in the same comparison. Immigrants of all other races numbered 32,619 in 1954, as against 28,870 in the first nine months of 1953.

The responsibility of all immigration matters under the provisions of the Immigration Act (R.S.C. 1952, c. 42) rests with the Minister of Citizenship and Immigration. A primary objective of the administration is to assist immigrants to become quickly and satisfactorily settled in the Canadian community and the Federal Government continues its interest in them through the work of several agencies.

Citizenship

All persons born in Canada are Canadian citizens and cannot be deprived of their citizenship unless they themselves take definite steps to acquire another nationality. Immigrants who are naturalized in Canada become citizens and retain their citizenship so long as they remain domiciled in Canada or have authority for absence from Canada and do not commit acts that result in revocation. A Canadian citizen holds also the status of a British subject.

Results of the 1951 Census show that 96.8 p.c. of all the people of Canada at that time were Canadian citizens, 0.7 p.c. were citizens of other Commonwealth countries, 1.7 p.c. of European countries, 0.1 p.c. of Asiatic countries and 0.6 p.c. of other countries. In 1951, 98.0 p.c. of the persons of British Isles origin and 99.7 p.c. of those of French origin owed allegiance to Canada. Corresponding percentages for other European and Asiatic countries were 89.3 p.c. and 78.7 p.c., respectively.



Canada's past becomes alive and her future exciting to young folk viewing historic relics and plans for development. Old No. 40, a woodburner built in 1872, is now a museum train carrying exhibits dating back to the early days of railroading Students look over a model of their National Capital of the future. Bringing young people to Ottawa from all across Canada is part of a service-club-sponsored good-citizenship program.



An applicant for citizenship is required to have resided in Canada for five years. Besides showing those qualities of character that would lead him to be a hard-working law-abiding citizen, he must have an adequate knowledge of the English or French languages and also a knowledge of Canadian history, geography, form of government, and of the responsibilities of a good citizen.

The Department of Citizenship and Immigration administers the Canadian Citizenship Act, 1947, and provides leadership in the building of true citizenship among all Canadians. The Department co-operates with provincial departments of education and national, provincial and voluntary organizations in the development of citizenship programs designed to assist in the adjustment of newcomers to the Canadian way of life and to develop among established citizens an appreciation of the customs, culture and contributions of the new residents. During the year ended Mar. 31, 1954, certificates of Canadian citizenship were issued to 23,061 persons.

• *Vital Statistics*

Registration with the civil authorities in each province of every birth, death and marriage occurring in Canada is compulsory. Every registration is filed permanently in the office of the Provincial Registrar. Certificates issued to individuals from these records are almost essential for modern social and legal purposes. Birth certificates are generally required and accepted to establish birthplace, birth date, citizenship, parentage and relationship to other members of the family, and are used for such purposes as the settlement of estates, identification, establishing legal dependency, eligibility for employment and pension and social welfare benefits. Similarly, death certificates are required for settling insurance claims, establishing right to remarry, tracing ancestry and so on.

National statistics have been compiled since 1921 through a co-operative arrangement with the provincial vital statistics authorities, under whose jurisdiction the registration of vital events has always remained. There is hardly a facet of the country's economy, whether at the national, provincial, municipal or small-community level, that does not depend on accurate vital statistics. The Canadian registration system is regarded as one of the most complete and accurate in the world.

Births.—One of the characteristic phenomena of births in Canada is that there is constant excess of male over female births—about 1,060 males are born each year for every 1,000 females. From 1921 to about 1940 the number of births recorded fluctuated around a quarter of a million a year, with a birth rate varying from 20 to 29 for each 1,000 population. A rate of 20 is considered relatively high for most major countries of the world. The influence of World War II was reflected in a sharp increase in births, both in new and established families, up to a record of 416,825 in 1953 and a rate of 28.2. The birth rate has remained remarkably steady at 27 to 28 since the War.

Deaths.—Canada has one of the lowest death rates in the world. A record low of 8.6 was set in 1953, a marked reduction from the crude rate of 11.5 in 1921, despite an increase in the proportion of aged persons in the population, which naturally tends to increase the death rate.

In 1953, 416,825 new Canadians arrived by birth—one every 53 seconds. The annual birth rate in Canada, at about 28 per 1,000 population, is relatively high compared with other countries.



If deaths under one year of age are excluded, the average age at death is now about 64 for males and 67 for females. Life expectancy at birth has risen during the past decade from 63 for males and 66 for females to 66½ years for males and almost 71 years for females.

Of about 127,000 deaths in 1953, arteriosclerotic and degenerative heart disease, which is associated with aging, caused 33,274 deaths. Other forms of heart disease accounted for an additional 8,031 deaths; cancer 19,120; cerebral hæmorrhages and other circulatory disturbances 14,107; 6,838 died from pneumonia, influenza and bronchitis and 9,600 died from conditions associated with birth or early infancy. Over 3,100 persons died as a result of motor-vehicle accidents and 5,521 from other accidents, while 1,052 committed suicide.

Mortality from most of these conditions has increased in recent years but there have been notable reductions in mortality from other diseases. In 1953, for example, only 1,810 persons died from tuberculosis as compared with about 7,800 annually 25 years previously; mothers now rarely die as a result of childbirth—in 1953 only 324 mothers died as a result of conditions associated with delivering some 417,000 children; infant mortality has fallen from a rate of 102 per 1,000 live births in 1926 to 35 in 1953, the lowest in Canadian history. However, the reduction in mortality among children who

failed to reach four weeks of age has not kept pace with that for all infants up to one year of age. Of the 14,764 infants who died in 1953 before reaching their first birthday, three-fifths or almost 8,900 died within the first four weeks of life.

Natural Increase.—At almost 20 per 1,000 population, Canada has one of the highest natural increase rates in the world. Natural increase—the net gain when deaths are subtracted from births—was constant at an annual 100,000 to 150,000 from 1921 (the first year of record) to 1940. Since that time, increases in births and declines in deaths have raised the natural increase quite considerably, the number added in 1953 being almost 290,000.

Marriages.—The depression of the early 1930's exercised a marked influence on marriages, causing a steep downward movement, but from 1933 to 1942 a fairly steady increase took place and the rate rose from 6 to almost 11 per 1,000 population. The peak was reached in 1946 with 134,088 marriages and another high point was reached in 1953 with 130,837.

Births, Marriages and Deaths, 1926-53

(Exclusive of the Yukon and Northwest Territories; Newfoundland included from 1949)

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
Av. 1941-45...	276,832	23.5	113,936	9.7	115,144	9.8	791	2.9
Av. 1946-50...	354,869	27.4	126,687	9.8	119,975	9.3	523	1.5
1951.....	380,101	27.2	128,230	9.2	125,454	9.0	405	1.1
1952.....	402,527	27.9	128,301	8.9	125,950	8.7	374	0.9
1953.....	416,825	28.2	130,837	8.9	127,381	8.6	324	0.8

¹ Per 1,000 population.

² Per 1,000 live births.

Births, Marriages and Deaths, by Province, 1953

(Exclusive of the Yukon and Northwest Territories)

Province	Births		Marriages		Deaths		Maternal Deaths	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹	No.	Rate ²
Nfld.....	12,797	33.4	2,771	7.2	2,733	7.1	19	1.5
P.E.I.....	2,737	25.8	647	6.1	926	8.7	2	0.7
N.S.....	18,276	27.6	5,378	8.1	5,808	8.8	14	0.8
N.B.....	16,458	30.7	4,232	7.9	4,637	8.7	16	1.0
Que.....	128,719	30.2	35,968	8.4	34,469	8.1	136	1.1
Ont.....	129,771	26.5	45,954	9.4	45,242	9.2	69	0.5
Man.....	21,242	26.3	7,277	9.0	7,015	8.7	16	0.8
Sask.....	23,703	27.5	7,186	8.3	6,687	7.8	13	0.5
Alta.....	31,376	31.3	10,126	10.1	7,646	7.6	21	0.7
B.C.....	31,746	25.8	11,298	9.2	12,218	9.9	18	0.6
Canada...	416,825	28.2	130,837	8.9	127,381	8.6	324	0.8

¹ Per 1,000 population.

² Per 1,000 live births.



Education



Canada's Schools

Canada is served to-day by more than 114,000 teachers in over 32,000 schools, colleges and universities. Of these 32,000, all but 2,000 are public primary or secondary schools; the remainder include some 800 private schools, 225 business colleges, five schools for the blind and eight for the deaf, and 262 institutions of higher learning, 29 of which grant degrees. In addition to 18 faculties of education in universities, there are 112 teacher-training schools.

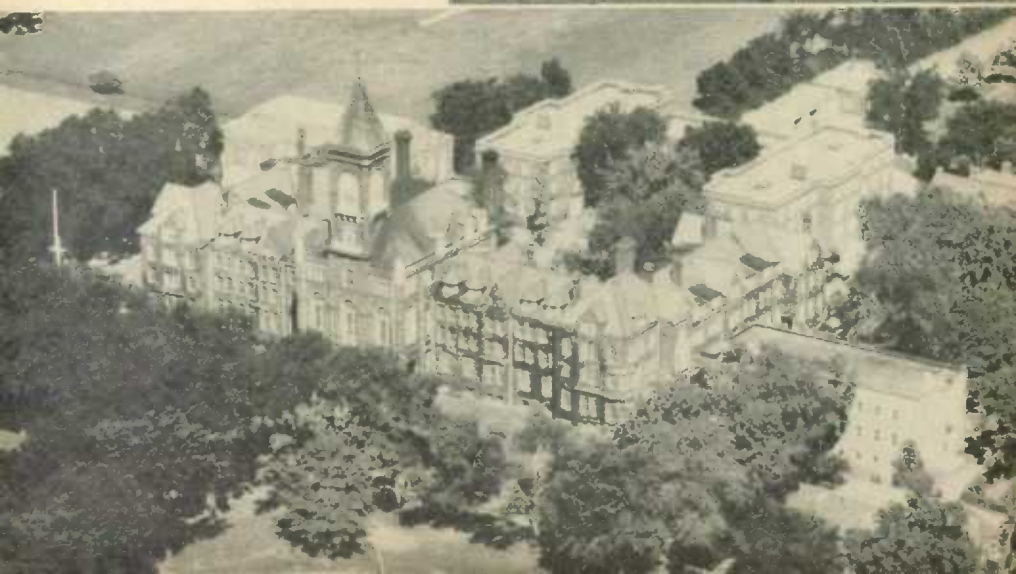
Many of Canada's nearly 3,000,000 school children attend up-to-date, functionally-designed and well equipped schools. Because of this country's vast size and scattered population, one- and two- room rural schools are still quite common. Even the "log schoolhouse", a feature of an





earlier pioneer time, has not entirely vanished from the Canadian scene.

These pages show representative schools to-day: rural, urban (and suburban); the private college; the "railway car", which through short stays at rail sidings in the northern Ontario bush serves a wide constituency, and one of several schools providing a Canadian education for children of Canadian servicemen overseas.





Education is Free

With few exceptions, education in Canada's public primary and secondary schools is free. Money for the support of public education is derived mainly from local taxation in the municipality and from provincial grants and assistance. Of the \$516,000,000 spent on all forms of education, public and private, in Canada in 1951—the latest year for which total figures are available—some four-fifths or nearly \$400,000,000 was spent on public primary and secondary education, and of this amount \$244,000,000 came from local taxation and \$146,000,000 from provincial grants.

Provincial Control

The Province in Canada has authority over education. Except for federal control over the education of Indians and Eskimos in the provinces, and of all children in the Yukon and Northwest Territories and in military establishments, nine provincial Departments of Education, each under a provincial Minister of the Crown, administer the educational programs; the exception is Quebec, where education comes under the Provincial Secretary's Department. In Quebec, two systems are in operation: the Roman Catholic, predominantly French, and the Protestant, predominantly English. Alberta, Saskatchewan and Ontario make provision for separate schools, mainly



Roman Catholic, and in Newfoundland, most schools are denominational. In accordance with provincial legislation, local school boards, mainly elected, though some are appointed, build and operate the schools and hire the teachers.

The Pattern is Set

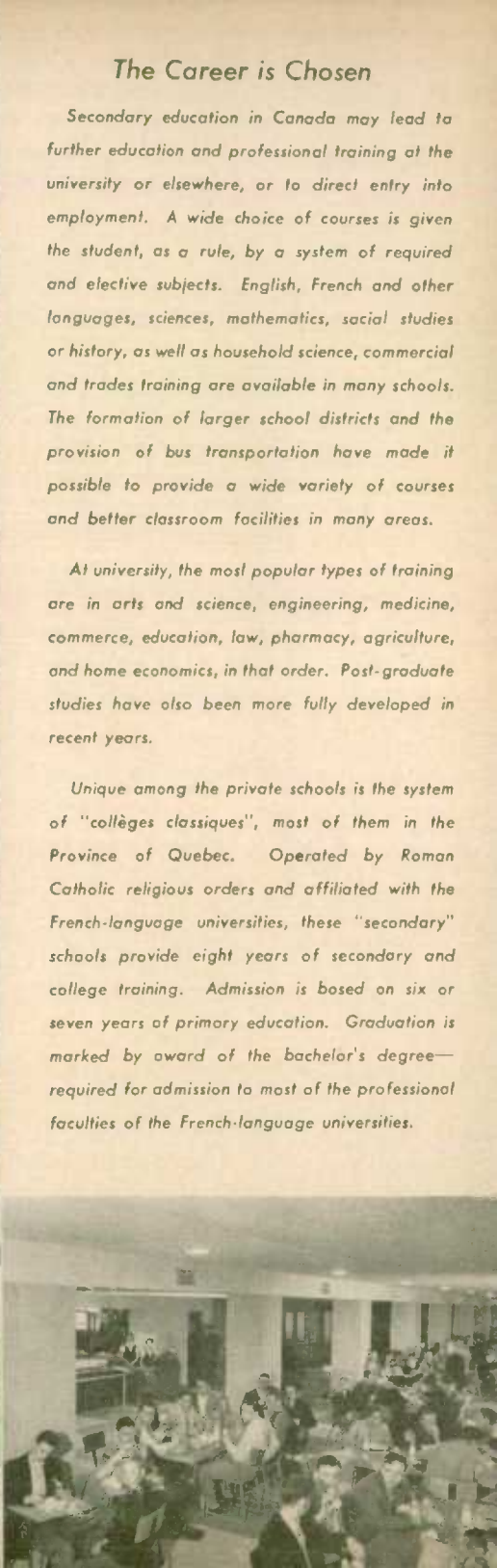
The Canadian child may complete 11 to 13 years of schooling from the time he or she begins primary school to the time secondary school is completed. In most provinces, the curriculum is divided into elementary, intermediate and secondary stages; in the others, elementary and secondary only.

Where kindergarten classes are provided, children learn to take part in organized play, receive training in simple art and craft work, and in music, and are given some basic preparation for the learning of reading and arithmetic. In the elementary grades, the three R's—reading, writing and arithmetic—are basic; but social studies, general science, health, arts and crafts, music, home economics and industrial arts are included. Curricula are broadened to include a variety of subjects in the intermediate years—often classed as junior high school—and then become specialized in the final secondary school years.

Correspondence lessons are available for those who cannot attend school; special classes and institutions are provided for the handicapped, and a variety of privately controlled schools offer nursery and kindergarten facilities and primary education.

The pictures on these pages show something of the characteristics of primary education in Canada: how nature study, health and athletic activity, visual aids, manual skills and group enterprise are brought into the classroom and help prepare the pupil to meet the responsibilities of everyday life.





The Career is Chosen

Secondary education in Canada may lead to further education and professional training at the university or elsewhere, or to direct entry into employment. A wide choice of courses is given the student, as a rule, by a system of required and elective subjects. English, French and other languages, sciences, mathematics, social studies or history, as well as household science, commercial and trades training are available in many schools. The formation of larger school districts and the provision of bus transportation have made it possible to provide a wide variety of courses and better classroom facilities in many areas.

At university, the most popular types of training are in arts and science, engineering, medicine, commerce, education, law, pharmacy, agriculture, and home economics, in that order. Post-graduate studies have also been more fully developed in recent years.

Unique among the private schools is the system of "collèges classiques", most of them in the Province of Quebec. Operated by Roman Catholic religious orders and affiliated with the French-language universities, these "secondary" schools provide eight years of secondary and college training. Admission is based on six or seven years of primary education. Graduation is marked by award of the bachelor's degree—required for admission to most of the professional faculties of the French-language universities.



Education is Life-long

But education in Canada is not confined to the schools. It spreads into the home, the community, the trade union, and the larger business concern. Adult education, actively fostered by education authorities, helps enrich the intellectual life of the individual, promotes community development and leadership qualities. Through it, also, the "new Canadian" finds a guide to a new life in a new country.

The pictures on these pages and the one following show some of the aspects of secondary and higher education, and of adult education activities in Canada. They include the learning of commercial, manual and domestic skills, a secondary school science class, a student cafeteria, a university campus, business executives arriving for a summer course in labour relations, an adult craft group in action, and a class of "new" Canadians learning "basic" English. Bus transportation has made feasible the larger school district—and in the final picture, students are seen leaving one of the many beautiful and modern secondary schools in Quebec Province. The Canadian educational system has brought about, in Canada, one of the highest literacy rates in the world. It is a system designed to fit the student—young or old—to make a livelihood and to play the part of a good citizen in the community.





Brief Facts of Canadian Education—in Figures Academic Year 1951-1952

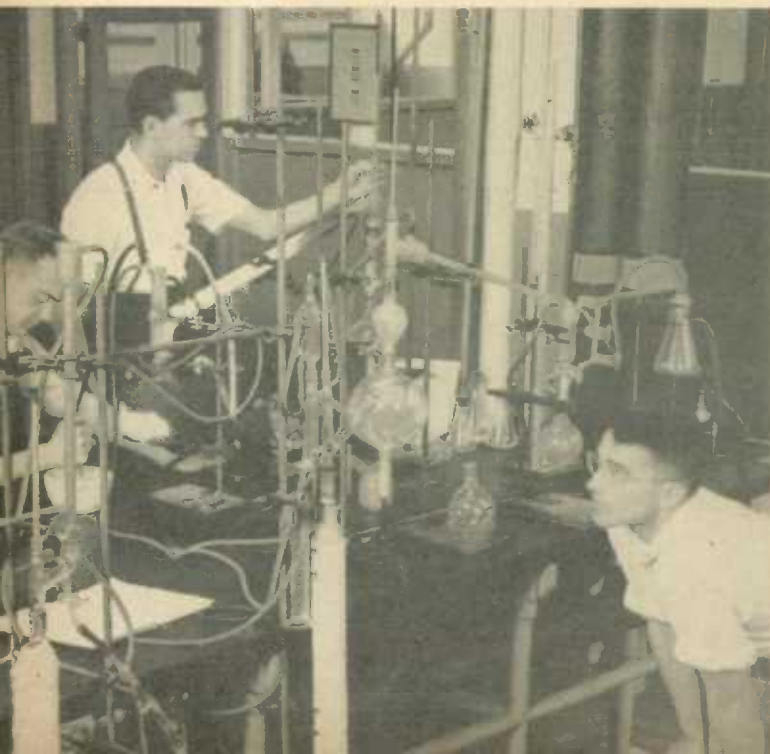
Type of Training	Schools	Teachers	Pupils
	No.	No.	No.
Elementary and secondary schools.....	31,946	101,556	2,676,833
Regular public.....	30,753	93,778	2,529,382
Regular private.....	1,180	7,467	145,425
Schools for the blind and deaf.....	13	311	2,026
Teacher training.....	130	1,389	15,203
Normal schools.....	112	1,205	11,463
University faculties.....	18	184	3,740
Evening classes.....			230,629
Indian schools.....	446	916	25,590
Universities and colleges (not specified elsewhere).....		10,779	122,856
Full-time university grade.....	262	6,098	59,759
Other.....		4,681	63,097



The work of the *Pure Chemistry Division* bears close resemblance to university research studies in chemistry and is directed towards a similar objective—adding to the sum of human knowledge of chemical science. Calorimetric investigations are being made of the thermo-dynamic properties of simple gases; the chemistry of liquid ammonia solutions is being elucidated. New data have been obtained on rotational isomers; studies of critical temperature phenomena have led to a better understanding of the liquid-vapour transition; mercury-photosensitized reactions of ethane and amines, and related problems in photochemistry have been studied.

The major function of the *Applied Chemistry Division* is long-term research on the development of Canadian resources. Pilot-plant operations are under way on projects of industrial importance, such as the recovery of oils from the tar sands at McMurray, Alta., and the oxidation of ethylene to ethylene oxide, from which a long line of industrial organic chemicals may be produced. Of immediate practical interest are investigations on corrosion, textiles and rubber. Interesting studies in metallurgical chemistry are concerned with methods of preparing synthetic gems such as sapphires and rubies.

The *Physics Division* covers a wide range of work from cosmic rays and spectroscopy to temperature and radiation, colorimetry, and standards of weights and measures. In the pure physics branch, a study is being made of the very penetrating cosmic ray particles arriving at the earth in a horizontal direction. In spectroscopy, discoveries of international interest have been made in regard to the atmospheres of Neptune and Uranus, and in the structure of certain molecules, to mention only two of many research projects. X-ray diffraction powder patterns of more than eighty pure narcotics have



Research workers in one of the laboratories of Shawinigan Chemicals Limited, Shawinigan Falls, Que. This firm has the largest industrial chemical research organization in Canada.

Scientific Research

BEHIND the dramatic story of Canada's tremendous industrial expansion are the pioneers of the laboratory—the men and women who day by day extend the nation's frontiers of scientific knowledge. Long recognized as basic to progress, scientific research is no newcomer to the Canadian scene. In the years when raw materials formed the bulk of Canada's exports the research accent was on natural resources; in recent years, the emphasis has shifted to applied industrial research.

Although the changeover has been characterized by a growing awareness by Canadian industry of the value of scientific research and although each year more and more companies are investing heavily in research facilities, most of the industrial research has been done by government. On the national level, the central organization is the National Research Council, which investigates problems in practically every field. There are also several provincial research councils that stimulate and support research on problems of special provincial significance. A number of federal departments—notably Agriculture, Fisheries, Northern Affairs and National Resources, Mines and Technical Surveys, National Defence, and National Health and Welfare—have permanent staffs that do research in such fields as soil problems, crops, breeding and testing animals, ocean and mollusk fisheries, processing and marketing, silviculture and forest products, hydrography, extractive and physical metallurgy, military weapons, food and nutrition, medical care, and cosmetics, drugs and pharmaceuticals. The Board of Grain Commissioners maintains laboratories for research in milling, baking and malting, and the Dominion Observatories carry out research in such fields as solar physics, astrophysics, seismology, terrestrial magnetism and gravity.

Canada's universities also form an important part of the Canadian pattern of research, mostly along fundamental lines. Assistance in certain fields is given by a number of research foundations, including the Ontario Research Foundation (technological problems), the Banting Research Foundation (medicine) and the Rockefeller Foundation (the medical, natural and social sciences and public health).

The efforts of the scientists of government, university and industry on major problems of national scope are co-ordinated by the National Research Council through a system of associate committees. Their members, who serve without salary, are drawn from the ranks of federal, provincial, university and industrial organizations. At present there are 22 of these associate committees working in such diverse fields as aquatic biology, dental research, food preservation, grain research, oceanography, parasitology, soil and snow mechanics, synthetic rubber and wildlife.

National Research Council.—Since its inception in 1917, NRC has had a profound effect upon Canadian research. Its first act was to establish a system of grants and scholarships to stimulate research in universities and to assist students in financing post-graduate training—still an important part of the Council's activities. (More than 3,000 scholarships have been granted to date.) The next step was to set up the associate committee mechanism to co-ordinate research of a national character.

Engineering Research Laboratories of the National Research Council located on a 400-acre site just east of Ottawa.



It was not until 1925 that NRC began laboratory work on its own. This at first was on a small scale, but in 1932 a central laboratory housing four divisions (Physics and Engineering, Biology and Agriculture, Chemistry, and Research Information) was opened on Sussex Street in Ottawa. The Mechanical Engineering Division was established in 1936, and in 1939 a 130-acre building site was acquired on the Montreal Road near Ottawa, a site that has now been extended to 400 acres.

World War II brought a ten-fold expansion to NRC—in 1945 it had more buildings than it had scientists in 1939. In all, 21 laboratories were opened from coast to coast during the War. Their interests ranged from cold weather research to aeronautical engineering and atomic energy. NRC was engaged in almost every field of war research and contributed much to the war effort. For example, more than 30 types of radar equipment were designed and wartime production of these was worth over \$300 million. Canadian radar gear protected not only the cities and coasts of Canada but also the Panama Canal Zone and the cities of the United Kingdom. Canada also provided the Commonwealth's navies with two of the most important types of radar gear used in the later years of the War.

NRC's growth was continued in the post-war era—1946 saw the establishment of the Medical Research Division and the transfer of the atomic energy project from the University of Montreal to Chalk River in Ontario; 1947, the formation of the Building Research Division and the Radio and Electrical Engineering Division; 1948, the beginning of the Prairie Regional Laboratory at the University of Saskatchewan in Saskatoon; 1952, the opening of the Maritime Regional Laboratory at Dalhousie University in Halifax.

To-day, the staff of NRC numbers 2,000, of whom about 500 are scientists (average age is 34). About half of NRC's scientists hold degrees at the doctorate level and the remainder hold degrees at the master's or bachelor's level; about 150 of these scientists are also engineers. The Council operates on an annual budget of about \$15 million, of which \$14 million comes from the Federal Government and \$1 million from royalties and fees (NRC also does special research for industry on a fee basis). Foundation work (scholarships, assisted research grants, associate committees) takes about \$2 million and the laboratories the remainder of the Council's funds. An Advisory Council, responsible to a committee of seven Cabinet Ministers, has direct and final authority on grants and scholarships, and formulates the broad policy that governs the operation of the laboratories. Most of the Council's 21 members are drawn from the senior scientific staffs of universities; others represent labour and industry.

At present, NRC's laboratories are organized in eight divisions. The *Applied Biology Division* is chiefly concerned with food investigations in their biological, biochemical and engineering aspects. For example, improved designs and operating procedures are being worked out for railway refrigerator cars. Other projects concern the utilization of agricultural or forest by-products, such as the production of butylene glycol from beet molasses or sulphite liquor, and the production of citric acid by deep fermentation; the acclimation of animals to various temperatures as a source of information on the probable effect of cold on human beings subjected to Arctic conditions; studies of photosynthesis, which are yielding useful data on the way plants convert their food materials into plant tissue; and the constitution of plant gums from wheat flour and wheat straw.



The Canadian Joint Commission on Oceanography, which pools the efforts of government departments having an interest in the sea, carries on exploration of the waters adjacent to the Canadian coast.

been obtained as part of a survey of physical methods for identification of these substances. On the applied side, work is proceeding on problems in acoustics, electricity, metrology, optics, photogrammetry, colorimetry and radiology, as well as on temperature and radiation. A new type of fog horn has been designed and put into use. Equipment has been built and is in use to measure brightness and contrasts which occur in typical outdoor photographic scenes on the ground. Film-resolving power of photographic film is being studied. Optical relay systems have been designed for use with the gunsight in fighter aircraft. Colour codes for steel bars and colour selections for aeronautical maps used in aircraft have been worked out.

The *Building Research Division*, in close co-operation with the construction industry and Central Mortgage and Housing Corporation, is conducting an extensive program of research in building materials, house heating, insulation, fire research, building physics, design characteristics and soil mechanics. Investigations extend to all parts of the country: a station at Norman Wells, N.W.T., operated in conjunction with Imperial Oil Limited, is providing useful information on Arctic problems; seven test huts are being operated in different locations to determine the insulating value of various building materials under differing climatic conditions. The National Building Code has been revised and brought up to date.

The *Mechanical Engineering Division* embraces many branches of aeronautical research, together with certain phases of hydraulic and mechanical engineering and naval architecture. The division includes units for work on aerodynamics, engines, fuels, lubricants, structures, and instruments; operates



The Professional Institute of the Public Service of Canada recognizes the outstanding contribution of Dr. Karl A. Clark of the Alberta Research Council to the development of a commercially feasible extractor plant for the recovery of oil from the fabulously rich Athabasca tar sands. Dr. Clark (left) receives the 1955 gold medal from the Institute's past president, Mr. J. H. Lowther.

a flight research station where equipment produced in the laboratories can be tested in actual flight; functions as a research organization for the Armed Services; and provides Canada's aviation industry with research, development and testing facilities. For example, the Division's wind tunnels were used to provide the de Havilland engineers with information required in designing the *Otter*, which is now flying and is one of the most successful aircraft of its type characterized by short take-off run, manoeuvrability with heavy loads and sturdy construction. High-speed wind tunnels are used to study aircraft characteristics at supersonic speeds. A thermodynamics laboratory has begun work on combustion, compressors and turbines. The work of the low temperature laboratory includes a continuing study on aircraft icing.

The *Radio and Electrical Engineering Division* is currently working on several military projects in co-operation with the Defence Research Board. Considerable basic research is also being carried on in radio-physics and in radio and electrical engineering. Four sections are concerned with subjects of civil rather than military interest, including testing and development work for electrical manufacturers; electronic work associated with a program of electromedical research in progress at the University of Toronto; civil radar techniques, especially in their application to air and sea navigation and aerial survey problems; and solar noise observations, radio-frequency mass spectrometers, and antenna design.

The *Medical Research Division* promotes medical research through scholarships and grants-in-aid to workers in Canadian medical schools. Many different fields of medical research are being supported, including studies relating to the central nervous system, endocrinology, properties of the blood, metabolism, and shock.

Atomic Energy Research.—All matters concerning atomic energy in Canada are controlled by the Federal Government through the Atomic Energy Control Board, and the operation of atomic reactors, atomic research and the processing and marketing of reactor by-products is carried out by a Crown corporation, Atomic Energy of Canada Limited. Two heavy-water reactors are in operation at Chalk River, Ont. A low-energy reactor known

as ZEEP was built in 1944-45 and has proved to be an invaluable research tool. In 1947 a second reactor NRX was completed, having the highest neutron flux of any known reactor and, like ZEEP, using natural uranium as a fuel and heavy water as a moderator. This reactor produces radioactive isotopes with a high specific activity now in use in many Canadian industries, hospitals and universities and which have also been shipped to the United States, the United Kingdom and various European and South American countries. Construction is progressing on NRU, a new more powerful reactor which will provide facilities for research related to the production of electric power from atomic energy.

By 1954, the work at Chalk River had reached the point where it was believed possible to produce electricity within an economical cost range, and it was felt necessary to join, through the incorporation of a holding company,

H.R.H. The Duke of Edinburgh inspecting a model of a St. Lawrence seaway lock, built in the Hydraulics Section of NRC's Radio and Electrical Engineering Division.



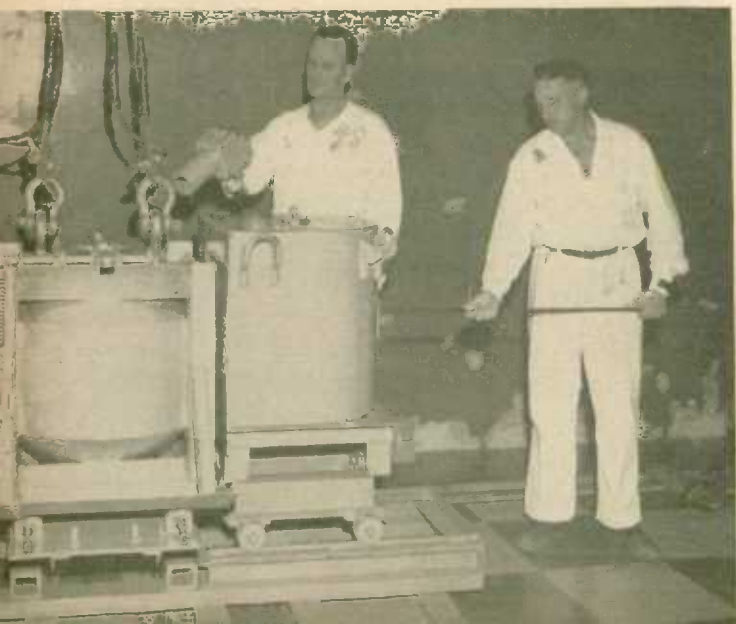
The soil mechanics laboratory of the Building Research Centre.



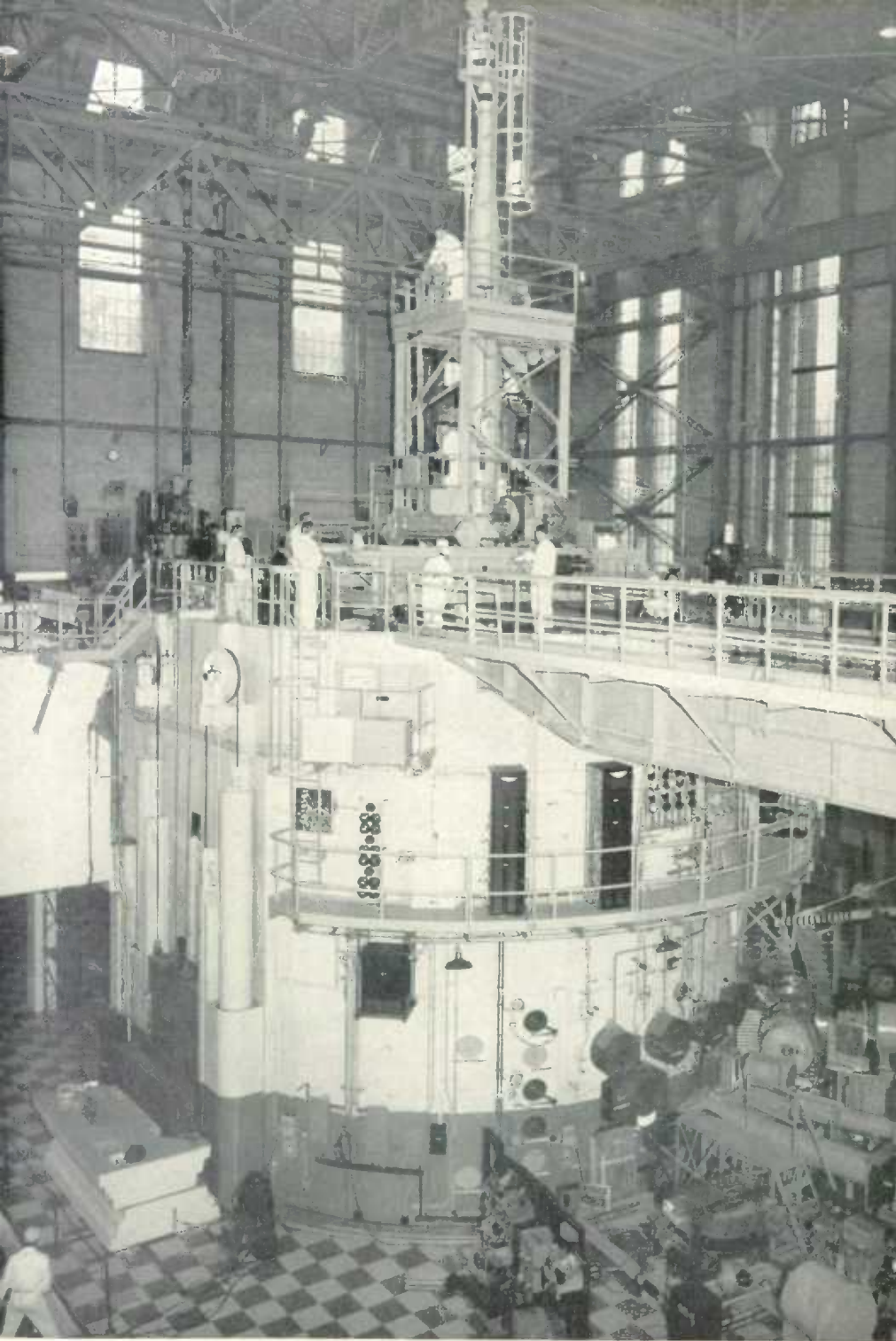
the Crown corporation responsible for the supply of uranium (Eldorado Mining and Refining Limited) and the company responsible for the research and development aspects of the atomic energy program (Atomic Energy of Canada Limited). This holding company reports to Parliament through a Cabinet Minister—the Chairman of the Committee of the Privy Council on Scientific and Industrial Research. The Government also set up an Advisory Committee on Atomic Power Development, consisting of senior executives of power companies throughout Canada. The Committee will keep Canadian power producers informed of the nature and scope of the program at Chalk River and will assist in evaluating the economic importance of possible atomic power in the various regions of the country. A "feasibility study group" was established in co-operation with several public utilities and private companies; its immediate goal is the production of specifications for a pilot power reactor and the evaluation of cost per kilowatt of the electricity produced by such a reactor.

During 1954, experiments were continued and additional knowledge gained of nuclear energy output and of the structure of the atomic nucleus. New and improved electronic instruments were designed for use with the NRX reactor and continue to be studied in the search for greater reliability and reduced size. Studies are being made of the use of plutonium as a nuclear fuel and of new arrangements of fuel elements for power reactors. Radioactive isotopes are being used to study deficiency diseases in mammals and the synthesis of essential constituents of living cells, and studies of the mechanism by which radiation affects living material are being continued.

The Commercial Products Division of the Corporation, located at Ottawa, handles the marketing of radioactive isotopes produced at Chalk River. More than 100 different isotopes may be purchased, their industrial use ranging from the testing of welds to the control of thickness of material. Agriculture and medicine are also served. Even though the production of isotopes ceased during 1953 when the NRX reactor was being reconstructed after breakdown, the Division made more than 1,000 shipments during 1953-54.



Highly radioactive cobalt-60 pellets being moved from the transfer case on the right to the 2 1/2 ton shipping case on the left.



The NRX reactor of the atomic energy project Chalk River, Ont.



Health conditions among Canada's rapidly growing population are being maintained at a high level. Infant and maternal health are favourable and health problems of middle age and later life are now receiving attention from medical and health workers.

Health and Welfare

GOVERNMENT expenditure in the fields of health, welfare and social security is now larger than expenditure for any other peacetime purpose and ranks second only to expenditure for national defence. Though definitions vary as to what should or should not be included in any tabulation of health, welfare or social security expenditure, it may safely be estimated that the total of federal, provincial and municipal expenditure in these fields stands currently at not less than \$1,300,000,000 annually and may be as high as \$1,500,000,000.

• Public Health Services

Responsibility for the planning and supervision of public health services in Canada has rested largely with provincial and local authorities, with assistance from voluntary agencies. In recent years, however, the Federal Government, in keeping with the trend towards shifting at least part of the financial burden to the authority with greater taxing powers, has offered to assist with the costs of capital construction in connection with hospitals and other health facilities and with the extension of specific services through the National Health Program. It has also extended other health services.

The Dominion Council of Health, composed of the Deputy Minister of National Health, the chief health officer of each province and five other members, meets twice a year to co-ordinate federal and provincial activities and to plan the extension of public health programs throughout Canada.

Federal Health Services.—The Department of National Health and Welfare provides consultative services to the provincial health departments and other agencies in such fields as child and maternal health, mental health, nutrition, dental health, environmental health and epidemiology. In addition, it co-ordinates medical research conducted through grants of the National Health Program and conducts research studies on the socio-economic aspects of health care. Important programs are also administered by other departments: Veterans Affairs provides medical and hospital care for veterans; National Defence is responsible for the health of the Armed Forces; the National Research Council makes grants for medical research; and Agriculture has certain responsibilities in connection with food production.

The Federal Government, through the Department of National Health and Welfare, administers many protective measures including the exclusion of infectious diseases at seaports, the medical examination of immigrants, the care of sick mariners, the safeguarding of boundary and other waters against pollution, the distribution of narcotics, and control of the quality of food, drugs and patent medicines offered for sale. The Department is also concerned with the health of Indians and Eskimos and of Federal Government employees. Financial assistance is provided by the Federal Government for remedial services for blind pensioners.

Under the National Health Program, funds are made available to the provinces for the extension of health services and facilities. The program includes grants for general public health, tuberculosis control, mental health, venereal disease control, cancer control, services for crippled children,

professional training, public health research, hospital construction, laboratory and radiological services, medical rehabilitation and child and maternal health. Grants are also paid to many non-government agencies engaged in health work.

**Federal Health Program Funds Available, by Province,
Year Ended Mar. 31, 1955**

Province or Territory	Hospital Construction Grant ¹	Other Health Grants	Total ²
	\$	\$	\$
Newfoundland.....	261,263	966,433	1,227,696
Prince Edward Island.....	107,077	298,788	405,865
Nova Scotia.....	1,074,736	1,441,203	2,515,939
New Brunswick.....	1,359,071	1,210,029	2,569,100
Quebec.....	4,149,584	9,211,923	13,361,507
Ontario.....	4,939,802	9,745,142	14,684,944
Manitoba.....	923,037	1,730,390	2,653,427
Saskatchewan.....	1,220,206	1,816,953	3,037,159
Alberta.....	1,015,474	2,095,880	3,111,354
British Columbia.....	1,610,391	2,600,053	4,210,444
Northwest Territories.....	43,311	46,610	89,922
Yukon Territory.....	25,746	27,936	53,682
Canada.....	16,729,698	31,191,341	47,921,039

¹ Includes a carry-over of \$10,016,038 from previous five-year period.

² Excludes public health research grant amounting to \$512,900 which is not allotted by province.

Provincial and Municipal Health Services.—Although basic local health services such as sanitation, communicable disease control and registration of births, deaths and marriages are generally the obligation 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.



Almost half of the active civilian physicians in Canada are in general private practice, 25 p.c. in specialist private practice, 15 p.c. in hospitals and 11 p.c. in other phases of medicine.

Cities and towns provide a wide range of basic health services such as public health nursing, sanitary inspection, communicable disease control and health education. Financial and administrative responsibility is shared by the provincial and local authorities involved.



Public nursing service in the Yukon and Northwest Territories is provided by the Federal Government.



Diagnostic and treatment clinics are provided in various provinces for such diseases as tuberculosis, venereal diseases, cancer, poliomyelitis and mental illness. Vaccines, sera and other special drugs are, on occasion, supplied by provincial laboratories to practising physicians as well as to public health officials. Other activities of the local and provincial health departments include dental services, school medical services, epidemiology and industrial hygiene. Public hospitals for acute diseases receive provincial grants, frequently supplemented by aid from municipalities and private benefactors. Most provinces operate tuberculosis sanatoria or contribute to their maintenance, but mental hospitals are usually wholly provincial institutions.



Municipally organized clinics, through the administration of vaccines and through general health education, help considerably in combating infant ills.

Free treatment for all illnesses is given to indigents and, in some provinces, to all residents for certain diseases such as tuberculosis. In Alberta a maternity hospitalization service is provided by the Province. There is a provincial government prepaid hospitalization program in Saskatchewan supported by an annual tax on each resident with a maximum payment for a family, and one in British Columbia supported by a sales tax. The Newfoundland Government operates cottage hospitals in outport areas and, in conjunction with these, medical and hospital care is provided upon payment of an annual fee. Private prepaid medical care and hospital insurance plans have been developed extensively throughout Canada.

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 wartime blood-donor service 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 Canadian Mental Health Association operates similarly in its field. The Department of National Health and Welfare was instrumental in forming the National Cancer Institute and the Canadian Arthritis and Rheumatism Society. These and other national health agencies have been established for purposes of education, publicity, research and other services.

Statistics on Institutions.—The statistical data on the institutional aspects of health, published annually by the Dominion Bureau of Statistics, include detailed information on the different types of institution, on size, ownership, costs of operation, sources of revenue, movement of patients, personnel and services rendered. Because mental illness and tuberculosis are especially important in the public health field, additional details are given on the patient population in mental institutions and tuberculosis sanatoria.

In 1953, Canadian hospitals had 1,116 beds for every 100,000 of the population. Of this bed capacity, 88.6 p.c. was available in public hospitals, that is, in hospitals that are not operated for profit, that accept all patients regardless of ability to pay, and that are recognized as public hospitals by the province in which they are located. Private hospitals, those that ordinarily restrict their admissions to patients paying for the care provided at rates

Technician putting the finishing touches on a brain model of wood and plastic. The model will be used as a teaching aid for students at the Neurological Institute, Montreal.



A nurse checks her records in a ward at the Neurological Institute.





Culture room at the Connaught Medical Research Laboratory, Toronto. The technician is drawing off the medium containing poliomyelitis virus, the last stage in the manufacture of the virus to be used for the preparation of poliomyelitis vaccine.

determined by the management, accounted for 2.0 p.c. of the bed capacity. The remaining 9.4 p.c. was in federal hospitals, which are those operated for special purposes related to federal departmental administration, such as care of war veterans, members of the Armed Forces, Indians and immigrants, as well as for quarantine and other purposes.

Summary Statistics of Hospitals, 1953

Item	General	Special	Mental	Tuberculosis	Total
	No.	No.	No.	No.	No.
Public Hospitals—					
Number reporting.....	751	59	69	60	939
Bed capacity.....	72,943	8,809	49,290	15,150	146,192
Average daily population.....	55,939	7,280	56,308	14,130	133,657
Admissions.....	2,115,695	56,661	18,938	16,376	2,207,670
Private Hospitals—					
Number reporting.....	51	92	4	1	148
Bed capacity.....	836	2,055	435	15	3,341
Average daily population.....	2,338	...	419	2	2,759
Admissions.....	47,959	...	2,848	...	50,807
Federal Hospitals—					
Number reporting.....	40	7	—	9	56
Bed capacity.....	11,297	2,198	—	1,942	15,437
Average daily population.....	10,594 ¹	...	—	1,825	12,419
Admissions.....	80,065 ¹	...	—	1,405	81,470
All Hospitals—					
Number reporting.....	842	158	73	70	1,143
Bed capacity.....	85,076	13,062	49,725	17,107	164,970
Average daily population.....	68,871	7,280	56,727	15,957	148,835
Admissions.....	2,243,719	56,661	21,786	17,781	2,339,947

¹ Includes general and special hospitals.

Of the 2,339,947 admissions in 1953 to Canadian hospitals, 2,243,719 or 95.9 p.c. were to general hospitals, 0.9 p.c. were to mental institutions and 0.8 p.c. to tuberculosis institutions. However, only 46.3 p.c. of the average

daily population of all hospitals was in general hospitals. Mental institutions accounted for 38.1 p.c. and tuberculosis institutions for 10.7 p.c. These differences in proportion are explained by the greater turnover of patients in general hospitals where the average stay was approximately ten days as compared with over ten months in tuberculosis institutions. The average stay of patients who were discharged from mental institutions in 1953 was 9.6 months, and 16.8 p.c. of those who died in such institutions in 1953 had been there for an average of almost seven years.

• Welfare and Social Security

Voluntary groups and local authorities provided the first welfare services in Canada. Early provincial participation was highlighted by the first modern

Occupational therapy aids recovery in the Hospital for Sick Children, Toronto.





Social workers from forty countries came to Canada in the summer of 1954 to discuss with Canadian representatives world-wide social problems and to add to and gain from the pool of knowledge in their field of mutual interest—human welfare.

child protection Act passed by Ontario in 1893, the Ontario Workmen's Compensation Act of 1914 and the Manitoba mothers' allowances legislation of 1916. Since then, provincial welfare services have been developed, extended and improved through the establishment of provincial departments of welfare, or of health and welfare.

The Federal Government entered the social security field in 1927 when the federal-provincial scheme for the provision of old age pensions was instituted. Extension of federal social security activities has gradually taken place and now includes pensions for the blind, unemployment insurance, agricultural relief, family allowances, universal old age pensions, assistance for needy older persons and allowances for disabled persons. Some of these measures are undertaken jointly with the provincial governments.

Federal Welfare and Income Maintenance Programs.—Most Federal Government welfare programs are under the jurisdiction of the Department of National Health and Welfare, whose main functions in the field of welfare include the promotion of social security and the social welfare of the people of Canada, investigation and research, and co-operation with provincial authorities with a view to co-ordinating all efforts in the welfare field. The welfare activities of that Department are outlined below but, in addition, certain programs are administered by other government departments: unemployment insurance is administered by the Unemployment Insurance Commission (*see* p. 256); welfare services for veterans by the Department of Veterans Affairs (*see* p. 73); and the welfare of Indians and Eskimos by the Department of Citizenship and Immigration and the Department of Northern Affairs and National Resources, respectively (*see* pp. 35-38).

Family Allowances.—In general, all children under 16 years of age resident in Canada, including Indians and Eskimos, are eligible for allowances. The allowances, which were introduced in 1944, involve no means test. Though they are not considered as income for tax purposes, the deduction at present allowed a taxpayer on taxable income for a child in receipt of family allowance is \$150 as against \$400 for a dependent child ineligible for the allowance. Allowances are paid by cheque at the following monthly rates: children under 6 years of age, \$5; children 6 to 9 years of age, \$6; children 10 to 12 years of age, \$7; and children 13 to 15 years of age, \$8. Current disbursements under the Family Allowances Act amount to about \$362,000,000 annually.

Family Allowance Statistics, by Province, Month of June 1954

Province or Territory	Families Receiving Allowances	Total Children	Average Allowance per Family	Average Allowance per Child	Total Allowances Paid, June 1954
	No.	No.	\$	\$	\$
Newfoundland.....	55,518	164,875	17.77	5.98	986,391
Prince Edward Island.....	13,210	35,582	16.29	6.05	215,259
Nova Scotia.....	96,211	234,650	14.77	6.05	1,420,771
New Brunswick.....	75,445	206,815	16.53	6.03	1,247,473
Quebec.....	590,723	1,578,616	16.19	6.06	9,566,396
Ontario.....	719,635	1,508,564	12.58	6.00	9,056,290
Manitoba.....	117,103	256,489	13.15	6.00	1,540,406
Saskatchewan.....	124,803	284,432	13.81	6.06	1,723,540
Alberta.....	156,708	346,068	13.27	6.01	2,079,052
British Columbia.....	182,345	371,807	12.30	6.03	2,243,345
Yukon and Northwest Territories.....	4,456	10,199	13.79	6.02	61,452
Canada	2,136,157	4,998,097	14.11	6.03	30,140,375

Old Age Security.—A pension of \$40 a month is paid to all persons aged 70 or over, subject to a residence qualification of at least 20 years. This universal pension is financed by a 2-p.c. sales tax, a 2-p.c. tax on net corporation income, and a 2-p.c. tax not to exceed \$60 a year on the net taxable income of individuals required to pay income tax. In the year ended Mar. 31, 1954, pension payments exceeded the special tax revenue by about \$46,000,000; the difference was met by a loan from the Consolidated Revenue Fund.

Old Age Security Statistics, by Province, Month of June 1954

Province	Pensioners	Total Net Payments	Province or Territory	Pensioners	Total Net Payments
	No.	\$		No.	\$
Newfoundland.....	15,364	617,349	Manitoba.....	43,248	1,729,720
Prince Edward Island...	6,728	271,000	Saskatchewan.....	43,302	1,738,240
Nova Scotia.....	37,455	1,506,182	Alberta.....	43,609	1,749,015
New Brunswick.....	26,690	1,071,320	British Columbia.....	86,339	3,471,370
Quebec.....	154,471	6,155,220	Yukon and N.W.T.....	484	19,517
Ontario.....	267,549	10,747,750	Canada	725,239	29,076,683

Old Age Assistance.—The provinces and territories have signed agreements with the Federal Government to provide joint assistance to needy persons aged 65 to 69 years, who have resided in Canada for at least 20 years. The

maximum assistance is \$40 monthly per person, except for a \$30 limit in Newfoundland. Total annual income, including the assistance, cannot exceed \$720 for a single person and \$1,200 for a married couple or \$1,320 if the spouse is blind. The Federal Government pays 50 p.c. of the amount of the assistance up to the maximum, but some provinces and municipalities supplement this from their own funds.

Old Age Assistance, by Province, Month of June 1954

Province or Territory	Recipients	Average Monthly Assistance	Pensioners to Population Age 65-69	Federal Government's Contribution
	No.	\$	p.c.	\$
Newfoundland.....	5,107	29.22	55.5	74,702
Prince Edward Island.....	607	26.58	17.3	8,081
Nova Scotia.....	5,245	33.55	26.9	88,380
New Brunswick.....	5,790	36.99	39.7	107,597
Quebec.....	32,356	37.45	32.4	610,508
Ontario.....	21,798	36.84	13.5	407,190
Manitoba.....	4,772	37.70	16.9	93,871
Saskatchewan.....	4,712	36.78	16.2	89,476
Alberta.....	5,039	36.59	16.7	95,774
British Columbia.....	8,090	37.81	15.5	157,020
Yukon Territory.....	7	38.57	3.8	155
Northwest Territories.....	69	37.48	40.1	1,293
Canada.....	93,592	36.50	20.9	1,734,047

Allowances for the Blind.—All provinces and territories have signed agreements with the Federal Government under which a maximum means-test allowance of \$40 a month is paid to blind persons 21 years of age or over. The maximum yearly income limits, including the allowance, are: \$840 for a single person, \$1,040 for a single person with one or more dependent children, \$1,320 for a married couple one of whom is blind, and \$1,440 for a married couple both of whom are blind. The residence requirement is at least ten years. The Federal Government contributes 75 p.c. of \$40 a month or of the allowance, whichever is less, and the program is administered by the provinces.

Allowances for the Blind, by Province, Month of June 1954

Province or Territory	Recipients	Average Monthly Pension	Recipients to Population Age 20-69	Federal Government's Contribution
	No.	\$	p.c.	\$
Newfoundland.....	332	39.68	0.175	9,892
Prince Edward Island.....	87	37.10	0.160	2,420
Nova Scotia.....	714	38.39	0.200	20,482
New Brunswick.....	731	39.40	0.265	22,192
Quebec.....	2,928	39.01	0.123	86,681
Ontario.....	1,722	38.76	0.058	50,791
Manitoba.....	408	39.16	0.086	12,252
Saskatchewan.....	382	38.67	0.078	10,920
Alberta.....	402	38.33	0.069	11,928
British Columbia.....	488	39.10	0.066	14,493
Yukon Territory.....	2	40.00	0.035	60
Northwest Territories.....	14	39.29	0.165	502
Canada.....	8,210	38.91	0.096	242,613

Allowance for Disabled Persons.—In June 1954, Parliament passed the Disabled Persons' Act under which a joint federal-provincial allowance, not exceeding \$40 a month, will be paid to totally and permanently disabled persons who are not in hospital or an institution. The residence requirement is at least ten years and the income limit, including the allowance, is \$720 a year for a single person, \$1,200 for a married couple and \$1,320 where the spouse is blind. By the end of 1954, nine provinces had indicated their intention of participating in the program, which will operate from January 1955.

Provincial Programs.—The care and protection of neglected, dependent and delinquent children, care of the aged, social assistance or relief, and other special programs are governed by provincial legislation, although in many areas responsibility for such services rests with municipal or voluntary organizations. Provincial Departments of Welfare are taking increasing responsibility for the co-ordination and supervision of welfare services. Though the programs and the methods of financing vary considerably, most provinces share the costs of some or all of the municipal services in organized areas and assume the total cost in unorganized territories.

Mothers' Allowances.—All provinces enacted legislation between 1916 and 1949 providing allowances to certain categories of needy mothers with dependent children under the age of 16 years. When the child is physically or mentally incapacitated, or attending school, the age limit may be extended in some provinces. "Needy mothers" include widows, foster mothers and wives whose husbands are mentally incapacitated. In some provinces, they also include deserted, divorced, legally separated and unmarried mothers and, in most provinces, those whose husbands are physically incapacitated.

Eligibility requirements vary by province and include a means test, one to five years residence, Canadian or British citizenship (in six provinces), and some require that the mother be of good moral character. Total costs of the program are paid from provincial treasury funds, except in Alberta where a small portion of the allowance is charged to the municipality of residence.

Scholastic achievement among blind pupils is high. Courses are standard with the addition of braille and typing and in most cases these handicapped children leave school equipped to become self-supporting and useful citizens.



The maximum allowance for a mother and one child varies from \$25 a month in Newfoundland and Prince Edward Island to \$62.50 a month in British Columbia, although the actual amount paid depends on the circumstances of the individual applicant. An additional amount is paid for each subsequent child and, in most provinces, for a disabled father living at home. In certain provinces a maximum allowance is set for a family, varying from \$50 in Prince Edward Island to \$150 in Manitoba. Where special need is apparent, supplementary allowances are usually available.

Workmen's Compensation.—For accidents occurring in the course of employment, compensation is payable to workers or, in fatal cases, to their dependants in accordance with the law of each province. The cost of compensation and medical aid is borne by employers through a collective liability scheme administered by the province. Monthly pensions at a fixed rate are paid to widows and children. Injured workmen receive from two-thirds to three-quarters of their earnings during total disablement. For partial disablement, the benefits are related to earning capacity before and after the accident.

Other Welfare Services.—There are many voluntary organizations in existence 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. In areas where they have been set up, welfare councils co-ordinate and encourage local activities and community chests centralize financial campaigns. 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 services cannot



Thousands of young Canadians each year learn safety rules in and around the water from volunteer Canadian Red Cross Society instructors, many of them schooled in special instruction courses.

Civil defence welfare organizations are being set up in many cities and towns. Volunteers, working under the direction of their local public welfare departments, are developing plans and establishing operational organizations in emergency feeding, clothing, lodging, etc.



be overlooked nor can the work of the many nationally organized service clubs. Most of the activities of these organizations are not susceptible to statistical measurement. The Canadian Red Cross Society, the Victorian Order of Nurses, and the Order of St. John, also perform many welfare services, though they are more properly designated as public health organizations.

Welfare Institutions

In 1950 there were 533 charitable, benevolent and welfare institutions operating in Canada, including 218 homes for adults, 102 homes for adults and children, 170 orphanages and Children's Aid Societies, and 43 day nurseries. Welfare organizations that do not operate institutions are not included in this number nor are licensed boarding homes for welfare patients. Of the total institutions reporting, 52 p.c. were operated by religious organizations, the provincial percentages of institutions thus operated ranging from a high of 88 in Quebec to a low of 32 in Nova Scotia, Ontario and British Columbia. Boards operated about 30 p.c., the provincial percentages ranging from 44 in Ontario to 10 in Quebec. The institutions operated with a total full-time staff of 9,573 and part-time personnel numbering 1,041. At the end of 1950 there were 39,681 persons under care, the average length of stay being 178 days. Most of the patients are either under 20 years of age or over 60.

Statistics of welfare institutions are collected once every five years.

• Veterans Affairs

The Department of Veterans Affairs administers the legislation relating to allowances, treatment, rehabilitation and welfare, and land settlement for veterans. The Canadian Pension Commission administers the Pension Act and the Civilian War Pensions and Allowances Act, under which pensions are paid for disability and death caused by the wars in which Canada has participated. Administration is decentralized through 18 district offices in

Canada, located in all provincial capitals and most large cities, and one district office at London, England.

Disability pensions and pensions to the dependants of deceased servicemen amounted to approximately \$126,000,000 in the year ended Mar. 31, 1954. In the same year, nearly \$55,000,000 was paid in allowances to veterans and the dependants of veterans.

Medical treatment for veterans is provided by the Department in its own institutions and in a number of wings or pavilions in public general hospitals. As at Mar. 31, 1954, the Department was operating 12 active treatment hospitals with 9,082 beds, two health and occupational centres for convalescents with 365 beds and one tuberculosis sanatorium with 200 beds. Eleven of these hospitals have been approved by the Royal College of Physicians and Surgeons of Canada for advanced post-graduate teaching in internal medicine and general surgery, and seven are also approved for advanced post-graduate teaching in specialties. An extensive program of medical research is carried on, two of the current major projects being concerned with atherosclerosis and geriatrics.

To provide domiciliary care for physically handicapped and aging veterans, the Department operates four homes with 327 beds and, in addition, has allocated wings in several of its hospitals to this purpose. The Veterans

The east block of the Veterans Memorial Buildings, located on Wellington Street, Ottawa, was completed late in 1954 and now houses the Department of Veterans Affairs. The west block is under construction.





The 325-bed hospital at Ste. Foy, Que., opened by the Prime Minister on May 16, 1954, is the newest link in the country-wide chain of DVA hospitals.

Hospitalized veterans are encouraged to help themselves by learning and engaging in useful and pleasant pastimes.



Welfare Services Branch gives special attention to the training and rehabilitation of seriously disabled veterans, to the employment of older veterans and to the social problems of veterans.

Approximately 65,000 veterans have been assisted to settle on farms, small holdings and commercial fishing establishments under the provisions of the Veterans' Land Act, involving an investment of public funds of over \$300,000,000. At the end of March 1954, 18,549 new houses had been completed, or were under construction, since the inception of the Act in 1942. New houses started during the year numbered 1,876, about 85 p.c. of which were under contract to the veterans themselves. The Act has recently been amended to provide assistance to veterans wishing to build their own homes on lots suitable for single-family dwellings. The Veterans' Land Act Branch has eight district offices and 35 regional offices to serve veterans throughout Canada.



Frances Hyland as Isabella and Lloyd Bochner as the Duke in the 1954 Stratford Shakespearean Festival production "Measure for Measure".

Social and Cultural Relationships

In all parts of the country Canada is enjoying a period of cultural growth and comparative well-being. The widespread evolution of many forms of artistic activity, and the acceptance of this evolution as a normal factor in the Canadian way-of-life, have been particularly notable since the end of World War II. From the earliest times, Canada has had a tradition of both indigenous and derived literature, music, art, dancing and handicrafts, but for nearly three hundred years the development of these arts faltered and was notably localized. In the period between the two world wars, with interest in foreign relationships expanding both politically and economically, Canada's intellectual and cultural growth speeded up; but the pace was still relatively slow. To a considerable extent, cultural activities were regarded as the amusement of social and ethnic minorities and there was little sense of national artistic heritage. Since 1945, however, Canada has been experiencing a period of cultural maturing and the growth of activity in the arts has kept pace with the country's general condition of economic prosperity. Activity in all the arts has increased manifold throughout the country and public interest has become very widespread. Of particular significance is the current tendency to recognize and develop national aspects of the arts, along with regional developments.

This tendency received great impetus in 1949 when the Federal Government appointed a Royal Commission to enquire into the matter of national development in the arts, letters and sciences. After an exhaustive examination of the country's cultural and intellectual resources, the Commission made a notable report. Among other things, it recommended the setting up, by the Federal Government, of a "Canada Council"—a body which would stimulate cultural developments as an aspect of official public policy. Although the establishment of the proposed Council has not yet occurred, the prospect of its coming into being has had favourable results. Canadians from the Atlantic to the Pacific, stimulated by a national radio broadcasting system and by an excellent network of independent newspapers and magazines, are taking an active interest in something which is not artistic nationalism but rather national artistic awareness. This is a definitely new and important development in Canada.

Creative writing by Canadians is probably the most obvious cultural activity having a tendency to knit the people of the nation more closely together and it has been effective for more than half a century. Other art forms are now making important contributions toward national unity—during 1954 this trend was clearly seen in such activities as the Dominion Drama Festival, the Stratford Shakespearean Festival, the Canadian Ballet Festival, the tour of Toronto's National Ballet Company, the circulating exhibitions of Canadian paintings and the work of the Canadian League of Composers.

Of great importance to Canada's cultural life is the newly expressed interest of the industrial and business community. Support of the arts, not as a form of patronage but as an act of mutual advantage, has recently become a definite part of the public relations programs of large Canadian

corporations. The commissioning of paintings and musical compositions, the purchasing of decorative sculpture, the financing of scholarships, the sponsoring of ballet and dramatic performances, and other similar activities, are now associated with the names of eminent business firms throughout Canada.

Another important source of impetus for the arts in Canada in recent years has been a number of cultural development boards set up and financed by the provincial governments. The Province of Quebec has always officially sponsored the arts within its borders, but in the English-speaking provinces the trend is a new one and an extremely important one. The Saskatchewan Arts Board, the Cultural Development Board in Alberta, Ontario's Community Planning Division and the Adult Education branch of the Nova Scotia Department of Education all initiated many imaginative cultural projects in 1954.

Literature

In the past ten years there has been observed a clear-cut development in Canadian creative writing—a trend away from purely 'local' literature toward writing from a more cosmopolitan and universal point of view. This development was particularly notable in 1954 when a number of books by Canadians attracted critical comment from foreign reviewers. The proportion of Canadian-made books, in relation to imported books, has been increasing in recent years and 1954 was no exception. An event of interest in Canadian literary circles was the celebration of its 125th anniversary by the famous Canadian publisher, the Ryerson Press. The selection of winners of the Governor General's awards for Canadian literature met with widespread agreement and approval in 1954—an occurrence which has been rare since the awards were initiated. It is a matter of satisfaction that the craft of writing is providing a comfortable livelihood for an increasing number of Canadians, including a rather significant number of recent immigrants.



"Sunshine Town", a musical play based on the stories of an Ontario town made famous by the late Stephen Leacock, will tour Ontario and Quebec in the autumn of 1955.

The Stratford Shakespearean Festival, in its two successful seasons, has given Canadian actors an opportunity to prove themselves on their home ground before an international audience. People came from every Province in Canada and every State in the United States as well as from England, Europe, South Africa and even Greenland.



Scene from the Festival production "Oedipus Rex", a Greek drama that has thrilled audiences for over 2,000 years. Masks and built-up shoes made this production larger than life, a device of the ancient classic theatre.

Theatre

The theatre situation in Canada is one of promise and encouragement, although 1954 was a spotty year with notable ups and downs. Again the Shakespearean Festival at Stratford in Ontario was the main centre of interest. The Festival wound up its eight-week second season with a net profit of \$36,000 and working capital of \$150,000. Plans for the 1955 Festival were announced early and they include a series of musical performances and a school of theatre, in addition to the production of plays. Throughout Canada amateur theatre has been thriving and the 22-year-old Dominion Drama Festival, a competitive culmination of theatre activities from coast to coast, proved to be a thorough-going success again in 1954. Summer theatres have sprouted in many parts of the country during the past several years and are providing work for a large number of Canadian actors. Professional theatres



A performance of the Montreal Junior Symphony Orchestra.

in Canadian cities are still a rarity and very few have succeeded in standing up to the economic difficulties year after year. Toronto's Crest Theatre had a successful 1954 but Ottawa's Canadian Repertory Theatre ran into box-office difficulties which threatened to close down the operation at the end of 1954. Civic concern over losing the theatre led to vigorous action by a group of citizens, however, and CRT's activities continued over into 1955. Notable success was gained by the Canadian Players—made up of actors associated with the Stratford Shakespearean Festival—when they toured Eastern Canada and parts of the United States with a stylized version of Shaw's *Saint Joan*. Montreal's Le Théâtre du Nouveau Monde experienced its fourth successful season in 1954, producing top-calibre shows and operating a school of the theatre. At the year-end it was announced that a new Canadian musical play, *Sunshine Town*, based on the famous stories by the late Stephen Leacock, would open at Montreal and Toronto early in 1955. The show involves fifty speaking parts, elaborate settings and costumes, fully orchestrated music scores and a group of sixteen ballet dancers.

Music

Since the earliest times, music has been an important and integral part of the Canadian way of life, and with the development of means of communication and the growing sophistication of the country this importance has not diminished. In all communities, large and small, musical organizations are thriving and in all the provinces the importance of musical education is emphasized. Public schools provide free musical training from the first grades throughout the child's entire school life. Advanced musical training is available in most universities and in several distinguished conservatories.

The Canadian Music Festival Association is an organization of national importance and under its aegis annual festivals, involving many thousands of contestants, are the musical highlights of a score of Canadian cities.

In a dozen cities, symphony orchestras are receiving generous public support and are rendering valuable services to their communities. Orchestras in Toronto, Montreal, Winnipeg and Vancouver are staffed with professional musicians of genuine talent and in these cities symphonic concerts of considerable merit are regular fare. The Canadian Broadcasting Corporation's Toronto orchestra is a top-flight musical organization; the CBC's policy of encouraging local orchestras is an important factor in the national music picture.

Since 1945 there has been a notable increase in the public interest in the performance of opera and well-established operatic organizations now flourish

The enjoyment of participating in the production of good music is universal and many people whose daily occupations are far removed from the cultural level find pleasure and relaxation in belonging to local musical organizations.



in Toronto, Montreal, Halifax, Winnipeg and Vancouver. The Opera Company of the Royal Conservatory of Music of Toronto staged its fifth successful festival in 1954 and a new company—the National Opera Company of Canada—was organized.

Of considerable importance is the recent success of Canadian composers, both at home and abroad. Recognition of their works by the music industry, the critics and the public is largely a result of the work of the Canadian League of Composers and its 1954 offspring, Canadian Music Associates. Until recently the works of Canadian composers rarely received attention or public performance but during the past several years this situation has been changed and Canadian works are frequently heard at concerts, over the radio and on recordings. As in the field of art, healthy controversy, serious and critical, is now developing with reference to the work of Canadian writers of music.

Ballet

In all the cities of Canada, schools of ballet are thriving and attractive ballet courses are offered at several of the country's best summer schools. A number of ballet experts have come to Canada from European countries since the end of the War and are making valuable contribution to the promotion of the art of dancing in their chosen homeland.

Canada's two major professional ballet companies experienced widely differing fortunes in 1954. The Royal Winnipeg Ballet, long-established and eminently successful, suffered a disastrous loss when fire destroyed all its physical assets—costumes, sets, books, scores, records and documents. Plans for 1954-55 activities had to be abandoned and many of the company's talented dancers were obliged to seek professional engagements elsewhere. Public sympathy from all parts of Canada and from cities in the United States where the Royal Winnipeg Ballet had performed could not repair the damage, however, and a Winnipeg citizens' committee immediately undertook to raise a fund of \$50,000 to re-establish the organization. Meanwhile, Toronto's National Ballet Company continued to gain public approval and the favourable regard of critics. Touring with a full ballet troupe and



A ballet performance combines the talents of the musical director, the artistic director, the choreographer and the dancers. The Classical Ballet Company of Ottawa prepares for a festival appearance.

Principals of the Royal Winnipeg Ballet, one of Canada's two major professional companies, which, before its recent misfortune, had gained wide recognition and prestige.



orchestra and a wide repertoire of both classical and modern dances, the Company had a successful season over a wide circuit stretching from Chicago to Quebec.

Arts

Throughout Canada all forms of the visual and plastic arts are thriving, with both public interest and public participation at a high level. The number of exhibitions offered to the public by Canadian galleries reached an all-time high in 1954 and attendance at art shows continued to increase. Of unusual interest is the growing number of small rural communities, in all the provinces, where touring collections of paintings are exhibited and where local groups of citizens have taken up painting as a leisure-time activity. Art schools are crowded; winter, summer, day and evening classes are all fully patronized. A great many professional artists in Canada are engrossed with the universal modern trends in art, involving the several degrees of non-representational communication or statement, a new media and experimentation. Of some importance was the significant number of artists who were invited to exhibit in noted galleries abroad during 1954. Critical interest and wholesome controversy was accorded the work of Canadian painters at home and in other countries during the year; two notable examples were the world tour of a collection of paintings of Canadian cities sponsored by a large commercial establishment and an exhibition of 150 miscellaneous Canadian paintings at London, England. The Canadian Government's competition for a sculptured memorial statue of the former Prime Minister, Sir Robert Borden, was won by Miss Frances Loring of Toronto, a former President of the Canadian Sculptors Society. Controversies involving artists,



An outstanding contribution to the development of the arts in Canada has been made by H. O. McCurry, LL.D., who retires as Director of the National Gallery of Canada on May 1, 1955. Dr. McCurry spent 36 of his 45 years of government service with the Gallery and has been its chief administrator since 1939. A full account of his work in the field of art is given in the Spring 1955 edition of "Canadian Art".

galleries, societies, curators and the public, were more numerous than usual in 1954 and this was regarded as further evidence of the artistic maturing process in the country.

The National Gallery of Canada, encouraged by a recently established policy of greater generosity on the part of the Government, is growing in stature and leadership throughout the country. The long-awaited construction of a new gallery came no nearer realization in 1954 and the present congested quarters of the institution tend to lessen its general effectiveness.

Cultural Organizations

Cultural organizations serving as focal centres for Canadian painters, musicians, writers, dancers, dramatists and others concerned with the arts, have grown in number and importance in recent years and for many of them 1954 was a banner year of activity. Most societies serve very effectively on a local basis but a number of them have national ramifications and exercise considerable influence in the moulding of public opinion. The Canadian Arts Council, which celebrated its tenth anniversary in 1954, is a federation of national organizations which dominate much of the professional cultural life of Canada, including: the Royal Architectural Institute of Canada, the Canadian Authors Association, La Société des Écrivains Canadiens, the Federation of Canadian Artists, the Canadian Music Council, the Canadian Handicraft Guild, Canadian Guild of Potters, Canadian Group of Painters,

Canadian Paintings from Travelling Art Gallery

Murals, depicting national and provincial park scenery from Nova Scotia to British Columbia, are part of the Canadian decorative theme in the new dome lounge cars now in transcontinental service on the Canadian Pacific Railway. The murals were sponsored by the Royal Canadian Academy of Arts and include the work of eighteen leading Canadian artists. Five of the paintings are reproduced here.



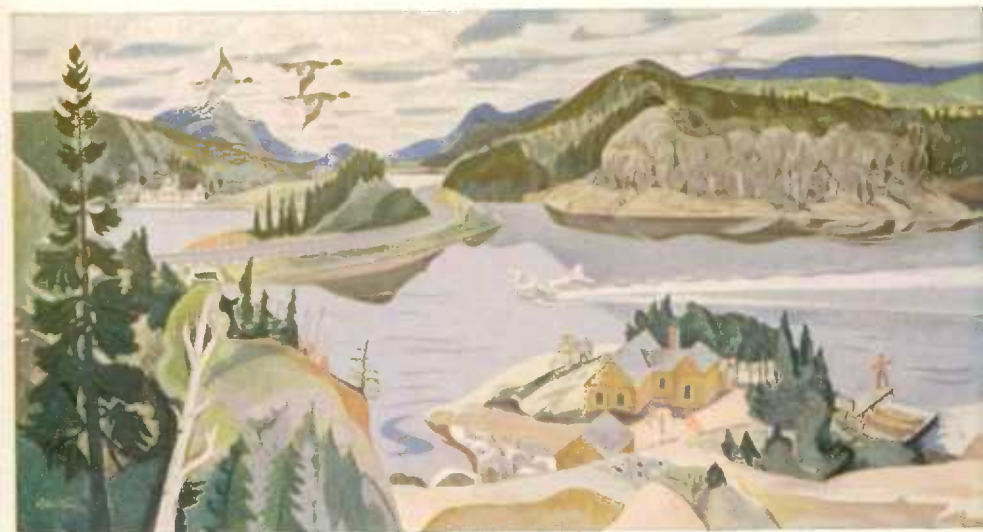
Prince Albert National Park
Saskatchewan

Fred J. Finley, A.R.C.A., O.S.A.



Fundy National Park
New Brunswick

Lawren P. Harris, Jr., A.R.C.A.



Laurentide Provincial Park
Quebec

Albert Cloutier, A.R.C.A.



Sibley Provincial Park
Ontario

Yvonne McK. Housser, R.C.A., O.S.A.



Kootenay National Park
British Columbia

George D. Pepper, A.R.C.A., O.S.A.



A. J. Casson, R.C.A. O.S.A., of Toronto, Ont., at work on his portrayal of Ontario's Algonquin Park. He has won many awards for his renditions of northern Ontario landscapes and villages. Mr. Casson is immediate past president of the Royal Canadian Academy of Arts and the Ontario Society of Artists.

Thumbnail sketches of the five artists whose work is reproduced here in colour—

FRED J. FINLEY, A.R.C.A., O.S.A., of Toronto, Ont., painted the mural of Prince Albert National Park in Saskatchewan. The main panel is a view near the resort town of Waskesiu looking towards Kingsmere Lake, and incorporates the wildlife of the area as well as Indian activities. Although a native of Australia, Mr. Finley is a long-time resident of Canada and has travelled extensively in Europe.

LAWREN P. HARRIS, JR., A.R.C.A., of Sackville, N.B., who painted Fundy Park on the north shore of the famous Bay, is Director of the Mount Allison School of Fine Arts. He studied in his native Toronto and in the United States, and during World War II served with the Canadian Army and was an official Canadian war artist.

ALBERT CLOUTIER, A.R.C.A., of Montreal, Que., executed the mural of Laurentide Park, north of Quebec city. He studied in Montreal and in 1941 was art director for the Wartime Information Board and later became an official war artist with the R.C.A.F. He is a member of the Canadian Society of Painters in Water-Colour.

MRS. YVONNE McK. HOUSSE, R.C.A., O.S.A., of Markham, Ont., portrayed Sibley Park in the Thunder Bay area of northwestern Ontario. She is a graduate of the Ontario College of Art and has studied in Paris, Italy, Vienna and the United States. She won the Purchase Award at the Canadian National Exhibition in 1953.

GEORGE D. PEPPER, A.R.C.A., O.S.A., of Toronto, Ont., in his painting of Kootenay Park in southern British Columbia used Mount Harkin in the background and a rich tapestry of the flora and fauna of the area in the foreground. He is vice-principal of the Ontario College of Art, from which he graduated in 1924. He has also studied in Europe and during World War II was an official war artist with the Army.

Canadian Society of Painter-Etchers and Engravers, Sculptors Society of Canada, Canadian Society of Graphic Arts, Canadian Society of Landscape Architects and Townplanners, the Arts and Letters Club, the Canadian Ballet Association and the Canadian Society of Creative Leathercraft. The Royal Canadian Academy of Arts is the officially sponsored prestige body in the field of fine art although most of the newer and more specialized art groups are vigorous and influential.

Summer schools of the arts in many parts of Canada were well patronized in the 1954 season. Some of the more noted are: the Banff School of Fine Arts at Banff, Alta.; the Doon School near Galt, Ont.; Maritime Summer School of Mount Allison University, Sackville, N.B.; Queen's University, Kingston, Ont.; L'École des Beaux-Arts, Quebec, Que.; and the Regina College Summer School at Emma Lake, Sask.

Handicrafts

The promotion and encouragement of handicrafts is highly developed throughout Canada, and organization is in the form of voluntary societies and government-sponsored groups at the national, provincial and local levels. Some of the skills and crafts have been practised in Canada since the earliest times when the actual needs of pioneer life demanded home manufacture of furniture, rugs, cloth, dishes, utensils, clothing and ornaments. To the knowledge and skill of indigenous crafting has been added the handicraft talent of immigrant peoples from every country in Europe, with a resultant variety probably not equalled elsewhere.

The use of wood as a medium of artistic expression has been a specialty in the Province of Quebec since the days of colonization. Wood carvings produced to-day, by methods handed down generation after generation, are reminiscent of the rural life of those early times.





A co-operative enterprise in New Brunswick markets hand-woven articles made by women working at home. Wools used are of local origin, specially dyed to order.

Provincial governments and the extension departments of universities maintain staffs of highly trained and skilled handicraft workers who organize groups, train leaders and sponsor exhibitions. Many civic governments employ skilled craftsmen to teach and organize at community centres, and civic exhibitions of crafts are frequent. In most cities handicrafts are taught in the local schools. The Federal Government promotes handicraft activities among its wards—the Indian and Eskimo peoples.

The Canadian Handicraft Guild, with a number of provincial subsidiary branches, is a strong and vigorous citizens' organization devoted to the promotion of all forms of handicraft. A number of individual crafts are organized within the general handicraft network and promote the welfare of their particular groups. The Canadian Guild of Potters and the Canadian Leathercraft Guild, representing a fine arts aspect of their crafts, are members of the Canadian Arts Council.

Museums and Art Galleries

Although there are in Canada no museums and art galleries comparable with the wealthy and long-established institutions to be found in other leading nations, those in the national capital and in the larger cities offer encouragement to the smaller provincial and local ones through generous programs of travelling exhibitions, lecture tours, and reproductions, and in recent years a newly awakened consciousness of the significance of such institutions to the cultural life of the people has become evident at the federal, provincial and municipal levels.

The National Museum, although essentially a museum of natural history carrying on scientific research in zoology, botany and anthropology, has collected an extensive exhibit of Indian and Eskimo lore and many phonographic recordings of French-Canadian, English-Canadian and Indian songs. Other federally operated museums include the Canadian War Museum, the

nucleus of a historical museum housed in the Public Archives, a collection of aviation exhibits in the National Research Council, a farm implement exhibit at the Experimental Farm at Ottawa, and several historical museums situated in National Parks. All are modest in scope.

The Royal Ontario Museum is the largest and best-known of the provincial museums. It specializes in the field of archaeology and carries on extensive work in research and publication. The New Brunswick Museum, though smaller, is noted for its exhibits designed for school use. Laval University, McGill University, the University of Western Ontario and the University of British Columbia all have sizable collections, and certain private exhibits, such as that of the Hudson's Bay Company at Winnipeg and that of the Bell Telephone Company at Montreal, attract many visitors.

The National Gallery at Ottawa has assembled a permanent collection of paintings and sculpture, prints and drawings representative of past and present styles from various countries. The Canadian section is most inclusive and is made known to the whole country through catalogues, photographs, colour reproductions, films, radio broadcasts and, to a limited extent, by loans. The extension work of the Gallery includes organization of exhibitions from collections abroad and the fostering of Canadian industrial art. There are also important collections in a number of the larger cities such as Toronto, Montreal and Vancouver.

Museum artist working on the backdrop of a display depicting the life of Canadian plains Indians. The setting-up of such displays involves careful selection and arrangement of items.



The Public Archives of Canada at Ottawa has accumulated valuable collections of public and private papers, newspapers, manuscripts, maps and pictures concerned with Canadian history. Several provincial governments also support archival collections, some in collaboration with universities located at the capital cities, as at Halifax and Toronto.

Libraries

Public library service in Canada is conducted through large urban libraries and their branches in metropolitan areas, sometimes augmented by book-mobile service to outlying districts; small association libraries in villages and hamlets; regional service established on a county or wider basis; and mail service to remote areas. Through these mediums, 75 to 80 p.c. of the population have access to library service.



Mobile units are being added to many main libraries so that borrowers who had stopped using the libraries because of inconvenience of location are again scanning the shelves for their favourite writers or subjects.



Children's section of a city branch library.



The proposed design for the new National Library, as it will appear from Wellington Street, Ottawa, just west of the Supreme Court Building. The rear of the Library will overlook the Ottawa River and afford an unobstructed view of the Gatineau Hills.

A survey of libraries in 1953 covered a total of 759 establishments, of which 86 were in centres of over 10,000 population. These larger libraries accounted for 70 p.c. of the circulation of books in that year and regional service, which is in operation in most of the provinces, accounted for 13 p.c. Through the regional system of distribution, books are delivered regularly to deposit stations, thus giving the people of smaller communities access to a larger selection of books and also giving them the benefit of services made possible through larger budgets and trained librarians.

Statistics of Public Libraries, by Province, 1953

Province	Volumes	Circulation	Borrowers	Expenditures	Full- and Part-Time Staff
	No.	No.	No.	\$	No.
Newfoundland.....	179,362	278,999	25,385	122,353	27
Prince Edward Island....	85,995	304,008	13,500	47,389	34
Nova Scotia.....	204,511	984,480	80,042	224,015	86
New Brunswick.....	137,147	218,574	27,711	59,960	34
Quebec.....	1,101,286	1,830,825	93,440	697,739	266
Ontario.....	4,911,782	18,811,520	991,174	4,503,187	1,738
Manitoba.....	195,320	988,343	44,519	259,979	133
Saskatchewan.....	340,045	1,048,085	60,117	291,039	136
Alberta.....	505,427	2,022,310	119,493	467,740	246
British Columbia.....	752,925	4,292,684	217,393	1,138,063	428
Totals.....	8,413,800	30,779,828	1,672,774	7,811,464	3,128

Total expenditures of public libraries in 1953 amounted to \$7,811,464, volumes in stock numbered 8,413,800, circulation 30,779,828 and borrowers 1,672,774; thus expenditures on library service worked out to 93 cents per volume in stock and 25 cents per book borrowed. In centres of over 10,000

population reporting library expenditures, which accounted for 78 p.c. of the total amount spent, expenditures amounted to \$1.22 per capita of population.

Services other than book lending are also provided by public libraries. Many of them have stocks of films and records which may be borrowed by individuals or used for the instruction and entertainment of local audiences. Story hours and puppet shows for children are often conducted and art exhibitions arranged or sponsored. Young Canada Book Week is sponsored each year by the libraries in co-operation with the Canadian Library Association to promote interest in reading among Canadian children and to acquaint them with the services provided by libraries.

Special interest is at present being centred on the National Library of Canada. Plans for the building have been prepared and a site approved. Although the acquisition of book stock is limited until permanent quarters are available, the library has two major projects under way. The preparation of the National Union Catalogue, which will record all material in Canadian libraries, has proceeded to the point where it is now the key to 53 libraries. *Canadiana*, a comprehensive list of Canadian publications, is now being issued monthly.

The 1953 data for university and college libraries and federal and provincial government libraries have not yet been compiled; in the 1951 survey the former group reported 7,388,000 volumes in stock and the latter group 2,701,170 volumes.

Media of Mass Communication

The Canadian Press.—The Canadian Press, a co-operative organization owned and operated by Canada's daily newspapers, provides its 92 members with world and Canadian news and news photographs. It provides news to three-quarters of Canada's radio and television stations, and has a service of news and features available to weeklies. It is, in effect, a partnership through which each member newspaper provides to its fellow-members the news of its particular area. It is also a partnership through which the general news of the world is brought to Canada. Cost of editing and transmission is divided among members according to the populations of the cities in which they publish. Eleven dailies in three provinces receive news in French from CP.

CP editors in eight bureaux across the country handle news exchange, trimming copy to the needs of the regions served and where necessary supplementing the report by direct information. At Ottawa, for instance, CP maintains its own staff to report independently the news of Parliament. CP gets world news from Reuters, the British agency, and from the Associated Press, the United States co-operative, and these agencies depend on CP for their coverage of Canada.

In 1954, CP's news report was made available to 80 of its 92 members by transmission methods which make possible the automatic setting of type. Of these, 56 were setting type from teletypesetter tape; the others set their type from teletype copy by type-setting machines operated by hand.

CP maintains wirephoto transmitters in eight key Canadian centres and has a day-and-night wirephoto network linking 13 newspapers in eight Eastern Canada cities. Other cities are served by airmail.

The Canadian Parliamentary Press Gallery, located in the House of Commons, covers parliamentary and other government news. Seventy full-time correspondents represent Canadian, British and foreign daily newspapers and ten associates represent specialized papers and periodicals. The Press Gallery, though subject to the Speaker's jurisdiction, is responsible for its own internal organization.



Press Statistics.—Daily newspapers alone contribute 60 p.c. of the value of periodical publications, totalling \$220,000,000, produced in Canada each year, of which amount 71 p.c. is realized from advertising and 29 p.c. from sales. Printed and bound books are produced to the value of over \$28,600,000, with fiction, non-fiction, scientific and text books making up somewhat less than half that amount. Recorded imports of books and other printed matter greatly exceed recorded exports, the former amounting to over \$56,000,000 and the latter to about \$3,700,000 in 1952. Hence, it appears that the per capita expenditure of Canadians on books, pamphlets and periodicals is in the neighbourhood of \$18 a year.

About 95 daily newspapers, counting morning and evening editions separately, are published in Canada, with an aggregate reported circulation of more than 3,650,000—about 82 p.c. in English and the remainder in French, except for a few in Yiddish or Chinese. Ten of the papers enjoying circulations in excess of 100,000 account for more than half of the circulation. Well over 90 p.c. of all newspaper circulation is in urban centres.

Weekly or monthly publications include a considerable variety of foreign-language publications including Ukrainian, German, Yiddish, Polish, etc. Weekly newspapers serve more people in rural communities than do the dailies.

The combined circulation of Canadian magazines is over 11,200,000. In order of popularity, magazines classified as home, social and welfare come first, agriculture second, trade and industry third and religion fourth.

Purchases of books and other printed matter from the United States are significant, recorded imports having increased from \$28,585,000 in 1948 to \$63,084,000 in 1953. Imports from the United Kingdom have shown a

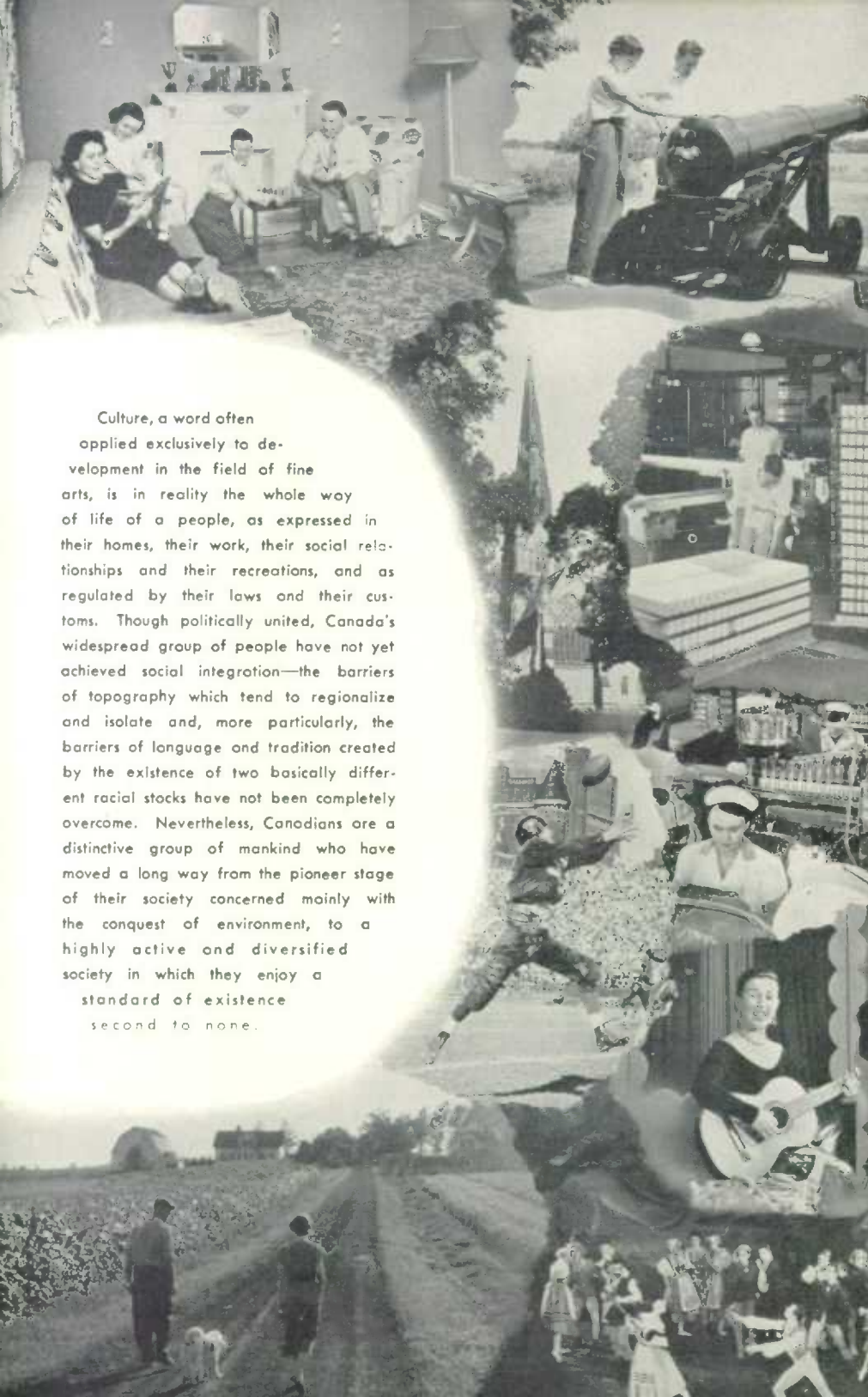
small annual increase in post-war years to about \$2,830,000 in 1953. In the same year, imports from France were valued at \$1,528,000.

Radio and Television.—Radio broadcasting and television in Canada are dealt with at pp. 280-285. The number of radio receiving sets made available in Canada through domestic production and imports has averaged about 650,000 a year since the end of World War II. From a high of 836,419 in 1947, Canadian domestic sales by distributors declined to 620,860 in 1953 and further declined to 487,200 in 1954.

The establishment of television service by the Canadian Broadcasting Corporation in 1952 greatly increased the demand for television receiving sets. Producers domestic sales mounted from 29,623 sets in 1950, to 39,185 in 1951, 137,236 in 1952, 366,498 in 1953 and approximately 624,000 in 1954.

Motion Pictures.—In 1953 there were 1,906 motion-picture theatres in Canada with a seating capacity of 978,000, 174 drive-in theatres, 669 community halls offering screenings, and 805 halls serviced by itinerant operators. On the average, each Canadian attended 17 motion-picture programs and paid \$8.30 in admissions. Most of the films shown were produced in the United States although a small but increasing number of films came from the United Kingdom and a few from France and other European countries. In 1953, Canadian motion-picture studios made over \$3,000,000 worth of film for industry and government and proved themselves capable of producing the highest quality of documentary and educational films. Canadian film production in 1953 was divided between private industry (32 firms) and nine federal and provincial government agencies. The former produced two theatrical features and 11 theatrical shorts in addition to 297 non-theatrical films of five minutes or longer, and 1,161 theatre trailers. Most of the non-theatrical films were in colour with sound and in English—109 of the sound films were in French. Canadian Government agencies produced 44 theatrical shorts and 184 non-theatrical films as well as eleven theatre trailers, 78 newsreel stories for theatres and television and 36 filmstrips. Of the non-theatrical films, 116 were produced primarily for television use. Canadian Film Awards, sponsored by the Canadian Association of Adult Education, the Canadian Film Institute and the Canada Foundation, provide a means of calling public attention to the nation's achievement in this young industry, recognizing Canadian creative effort and fostering higher standards of film production.

The National Film Board, whose production activities are included above in the references to government agencies, plays a significant role in non-theatrical film distribution through the co-operation of provincial and municipal agencies. During the year ended Mar. 31, 1954, the Board reached a Canadian non-theatrical audience of 14,000,000 at 200,900 showings. Distribution was facilitated through 391 libraries and depots, aided by 419 film councils representing 10,478 film-using groups and by 423 film circuits embracing 5,476 showing points. Through the co-operation of provincial Departments of Education and the universities, NFB films and filmstrips are distributed extensively to rural and urban schools. During the year, a total audience of 6,285,000 viewed 86,800 school showings.



Culture, a word often applied exclusively to development in the field of fine arts, is in reality the whole way of life of a people, as expressed in their homes, their work, their social relationships and their recreations, and as regulated by their laws and their customs. Though politically united, Canada's widespread group of people have not yet achieved social integration—the barriers of topography which tend to regionalize and isolate and, more particularly, the barriers of language and tradition created by the existence of two basically different racial stocks have not been completely overcome. Nevertheless, Canadians are a distinctive group of mankind who have moved a long way from the pioneer stage of their society concerned mainly with the conquest of environment, to a highly active and diversified society in which they enjoy a standard of existence second to none.



National Film Board

Alberta cattle ranch. The native prairie grass, which originally provided the basis for the extensive cattle-ranching industry, has been generally replaced in the live-stock areas by cultivated forage crops.

THE ECONOMY

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At the onset of the twentieth century, Canada was a nation immense in territory, meagre in population, its economy based on agriculture and the primary extractive industries. At mid-century, Canada is a country whose economy is broadly based on both manufacturing and primary industry, its home markets an ever-growing counterbalance to its dependence on export trade, its unpeopled spaces yielding to development and—often—settlement, as the population increases.

Canada has to-day achieved a position among the forefront of the nations, in part, by reason of its economic strength, founded on profusion of natural wealth of forest, field and stream, its advance in mechanization, emphasis on technological and scientific research, the high productivity of its labour, the enterprise of its business community and the intimate role of government with industry under a system of free enterprise.

The rate of Canada's advance to-day is a promise for its future—in a world where unparalleled power developments and the broadening of the frontiers of knowledge through scientific advance have opened new vistas for the human race.

Agriculture

AGRICULTURE is Canada's leading *primary* industry, one whose continued growth and importance is felt in every sector of the economy. In 1953, Canadian farmers realized a cash income of \$2,741,000,000, a bare 3 p.c. below 1952's all-time high. Moreover, though agriculture has declined as a field of employment relatively to other sectors of the economy, notably manufacturing (which, of course, includes processing of farm products)—and this decline has been pronounced in the past half century—farm output has actually increased. At the beginning of the century, 40 p.c. of those gainfully employed were engaged in agriculture; to-day less than 20 p.c. are so employed. Farm output has increased some two and one-half times over that attained at the century's opening. Land under cultivation, perhaps the best measure of the significance of agriculture in the economy, has tripled in the past fifty years, and is now nearing 100,000,000 acres. Agriculture is one of Canada's biggest businesses. Recent estimates put the value of farm lands and buildings, implements and machinery, and live stock, representing the capital invested in some two-thirds of a million individual farms, at near the 10,000,000,000 dollar mark.

Nonetheless, in the past half century agriculture has ceded its premier position to manufacturing as Canada has changed from a nation predominantly agricultural to a nation predominantly industrial. To-day, finished goods make up a greater proportion than ever before of Canada's production for sale at home and abroad, as the raw materials of this country's rich primary resources receive a constantly rising degree of processing and manufacture.

Canada's farms, in the past fifteen years especially, in keeping with the national trend, have undergone an industrial revolution of their own. Spurred by heavy domestic and foreign demand for Canadian foodstuffs and generally improved price levels, Canadian farmers embarked upon a program of mechanization more sweeping than anything before in their history. From 1947 to 1950 alone, for example, they spent an average \$304,000,000 a year on new equipment in contrast to an annual average of \$94,000,000 between 1926 and 1929, and \$59,000,000 between 1936 and 1939. In the post-war period, to 1950, five out of every six dollars of capital investment by the farmer were spent on the purchase of machinery and equipment.

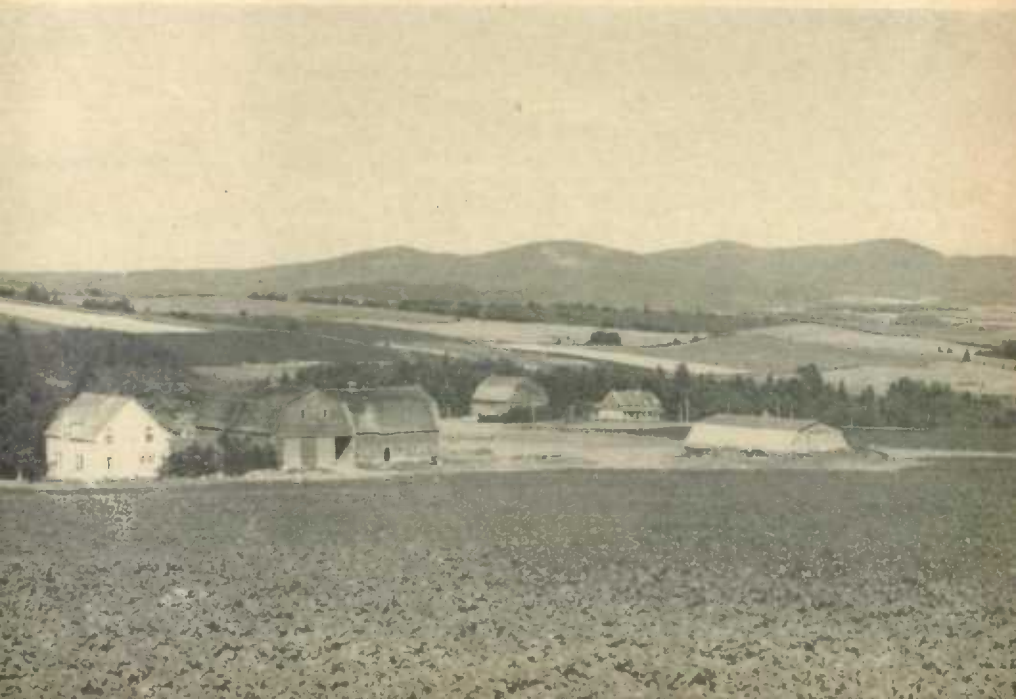
Rapidity and extent of Canada's conversion to large-scale mechanized operations may be gauged from the figures for selected farm machinery as shown by the Censuses of 1941 and 1951. In 1941 there were nearly 160,000 tractors on Canadian farms; in 1951, this figure had risen sharply to just under 400,000. Grain combines for harvesting rose from 19,000 in 1941 to 90,000 ten years later. The farmers of Canada have also become highly "mobile": the day of the horse-drawn wagon and sleigh, the cutter and the buggy is well-nigh over. Their place, and that of millions of horses, has been taken by some 330,000 automobiles, 196,000 motor trucks—and by the tractor.

The scientific study of farming has long been practised in Canada, but the problems of present-day farming have entailed a higher degree of concentration, in a scientific sense, than ever before. In part, farm mechanization sprang from the application, not only of modern technological and engineering



Wheat is the major farm enterprise in the greater part of the open plains area of southern Saskatchewan.

Production of certified seed potatoes and high-grade table stock is one of the most important phases of New Brunswick agriculture.



techniques to the broad requirements of domestic agriculture, but from the new concepts of dry-land farming especially. In this, the agricultural scientist has played a significant role. Improved methods of tillage in Canada's western plains were demanded in answer to soil and climatic conditions, and new equipment or adaptations of earlier types were developed to meet these conditions.

The prairies were quickly settled. The lure was land and the urgent European demand for Canada's western spring wheat—to-day among the finest in the world. But the farming methods of the day, adopted from the experience of settlers in the Great Plains of the United States mid-west proved unsuited to Canadian conditions, and during the drought years of the 1930's, Western Canada gave promise of becoming a "dust bowl" of frightening potential proportions. Too much submarginal land—properly, grazing land—had been brought under the plough and too little heed given to the low incidence of rainfall over much of the prairie wheatland—insufficient in most years to guard against drought.

The central and southern prairies are still heavily grain farming—mainly wheat farming. Under the Prairie Farm Rehabilitation Administration, set up in 1935, much submarginal land has been returned to pasture (over 1,600,000 acres to 1955), and extensive irrigation projects have been developed. Coupled with the application of better dry-land cultivation techniques, these practices have redeemed huge areas of the country to progressive use which takes realistic account of the chronic lack of sufficient rainfall for grain-growing in certain areas. Tillage methods adopted include retention of the trash cover—roughly broken soil mixed with stubble—on summerfallowed land, which aids in retaining moisture and presents a less-pulverized surface to wind erosion, as well as strip-farming—summerfallow interspersed in strips with the regular cereal crop.

Study of soil structure, crop rotation, irrigation, and the tillage practices mentioned have all helped to broaden production horizons in areas favourable to grain growing, have helped diversify the crops that may be grown in a given area, and have enabled entirely new crops to be introduced.

Modern farming methods and modern scientific agricultural knowledge have been brought to bear upon the problems of other Canadian regions where agriculture is practised, or where changes in the farming pattern are sought. In Eastern Canada, native specialties have been developed for a world market and the potatoes of New Brunswick and Prince Edward Island, the apples of Nova Scotia, the cheese, honey, maple syrup and fruit of Ontario and Quebec have achieved high repute.

Though live-stock production is common to nearly every region in Canada, the swing to mixed farming in the West, especially in marginal areas, is adding to the traditional cattle production from prairie ranches, and diversifying the range of production. Eastern Canada has long been noted for the excellence of its cattle, hogs and poultry, and there the climate and soils are specially suited to diversified farming.

But the frontiers of Canadian agriculture are still being pushed outward. Development of hardier cereal strains has meant extension northward, and recent progress in surveying and assessing hitherto little-known outlying areas has extended the range of agriculture generally. The Alpine meadows



The value of southern Ontario's 1954 grape crop is estimated at \$4,000,000. More than 22,000 acres in the Niagara district are planted in a wide variety of grapes.

Grape crusher and stemmer at a St. Catharines winery handles 40 tons an hour.



of the Western Cordillera, the remote northern areas of the Peace River country, the Great and Lesser Clay Belts, many areas where unfavourable soil is found or a short growing season prevails, are now contributing to total farm production. For the never-ending march of scientific study goes on: new varieties and strains, new methods of culture and care, new ways of preserving and marketing are all adding volume, value and variety to Canadian farm production.

Canadian agriculture, as it developed in the early years of the twentieth century, applied the methods of co-operative buying and selling, so that to-day, in both Eastern and Western Canada, co-operative creameries, cheese factories, fruit canning and similar establishments are as characteristic of

Canadian agriculture generally as the famed prairie Wheat Pools whose elevators, side by side with those of the regular commercial companies, stand sentinel-wise on the often bleak horizons of the western flatlands.

During and since World War II, wheat has been marketed under government supervision. Delivery quotas help distribute storage space more equitably and allow wider producer participation in marketing opportunities. First, the United Kingdom and later, International Wheat Agreements have aided in creating more stable export markets for wheat. Because of world conditions to-day, moreover, the Canadian Wheat Board, administrator of Canada's wheat-marketing legislation, is still essentially the agent of the grain farmer, though the co-operative and other agencies of marketing are integrated in the general scheme.

With the advent of widespread farm mechanization, with improved farm income in recent years, and the development of measures, such as farm support prices, to enable greater stability to be attained in an occupation noted for its vulnerability, not only in respect to crop growing but to export market fluctuations, the farmer in Canada to-day can enjoy a higher standard of living than ever before.

Mechanization has caused a notable shift in farm population; the lavish manpower that was a feature of Canadian farms a generation ago has been proportionately reduced. One result of the decrease in farm labour demand has been the migration of many members of farm families to the cities and to urban occupations, except perhaps in families which have taken advantage of mechanized assistance to increase their farm acreage. This has tended to offset the volume of migration to some extent.

The isolation of the Canadian farmer has also been lessened, as his ownership of automobile and radio has become more common. The growth, moreover, of social and cultural movements and educational opportunities, such as the women's institutes, the work of the extension departments of provincial universities and colleges and the adoption of the consolidated school district, have all meant, in effect, a widening of cultural outlook and an enrichment of social life and welfare.

Services Available to the Farmer.—The Federal Government, as well as the provincial governments, have long recognized the complexity of production and marketing problems facing the farmer and each government has established a department to administer a multitude of national and local services which assist the farmer in almost every field of his endeavour. These departments, along with their organization of scientists, technicians and fieldmen, work in close co-operation with each other. Representatives of the provincial governments meet annually with federal officials and delegates of organized farmers to consider broad plans for guiding agricultural production during the following season. These conferences afford opportunities for co-operative attacks on problems that confront Canadian farmers.

The work of the Federal Department of Agriculture may be divided into five main functions: research and experimentation; production and protection of crops and animals; marketing, including grading and inspection; price stability in marketing; and reclamation and development.



Inspectors of the Board of Grain Commissioners grading samples of western Canadian grain at Winnipeg.

Research and Experimentation.—Research and experimentation covers almost every kind of technical problem met by farmers in the production and marketing of their commodities as well as those problems involved in the processing, curing, storing and distribution of farm products.

To carry on this vast and varied work, the Federal Department of Agriculture has a chain of experimental farms and research laboratories located across the country. They are situated where they can best serve the needs of a wide variety of farming enterprises and of specialized areas of soil and climate. The work is co-ordinated through the headquarters of the Experimental Farms Service and the Science Service at Ottawa, where research is constantly under way. Among the best known results of the Department's research are the origination of many new varieties of field crops and horticultural plants, methods of controlling pests and diseases, and soil fertility findings which have improved production and lowered costs. Discoveries in the field of animal diseases include the development of vaccines and other controls which have contributed materially to a high level of health in Canada's live stock and poultry.

An important and often misunderstood aspect of this research is that it must be continuous, for new problems continually arise; indeed, the solution of one problem often leads to others. A typical example is the work



In the Central Experimental Farm growth chamber, wheat is fully headed six weeks after planting—quality and disease resistance of new varieties may be checked through five generations in the time of one outdoor growing season.

of the agricultural scientist in protecting Canada's wheat from stem rust. First reported in Canada in 1891, stem rust had by 1916 become a limiting factor in wheat production, destroying 100,000,000 bu. in that year. The average annual loss from 1916 to 1936, when stem rust-resistant varieties were introduced, was about 35,000,000 bu. Although chemical methods of control have not been overlooked, the breeding of rust-resistant varieties of wheat remains the only practical way of controlling the disease. Unfortunately, new 'races' of stem rust develop and the variety that is immune to known races may not be resistant to a new arrival. The year 1954 was a particularly bad one for rust of *race 15b*, but fortunately a new wheat variety (*Selkirk*) which plant breeders have been developing against this very eventuality, was available in considerable quantity for sowing in the spring. The use of this variety, which stood up well to the rust, undoubtedly prevented greater rust-damage to the wheat crop. An even greater quantity of this variety will be available for sowing in 1955. But breeders remain on the alert developing still other varieties, for another race of stem rust may appear against which *Selkirk* is not resistant.

Production and Protection of Crops and Animals.—The Health of Animals Division and the Plant Protection Division are concerned with protection against importation of disease and pests and carry on extensive testing and control work within the country to keep down the spread of disease. Control of tuberculosis and many other contagious diseases in animals is typical of this work. Over half of the cattle in Canada are now in accredited areas, that is, in areas in which not more than one-half of one per cent of the cattle were found to be affected with tuberculosis at the latest TB test. Slightly over one-half of the remaining cattle are in tested areas which have not yet reached accredited status or areas where the accreditation has expired. When the remaining cattle have been tested and the reactors moved, a second test will probably show that the entire country can be classed as an Accredited Area. All meat animals are subject to veterinary inspection both

before and after slaughter and regulations govern the methods used and sanitary conditions of meat and other processing establishments.

The promotion of the production of certified and registered seed and purebred live stock is also of great importance. Certification is maintained over registration and distribution. Standards are maintained which are widely accepted in other countries. Another type of activity is the enforcement of laws governing the sale of feeds, fertilizers, pesticides and many other products purchased by farmers.

Marketing, including Grading and Inspection.—Marketing activities, in general, consist of the establishment and enforcement of national standards for animal, dairy and poultry products, for canned foods, and for many fruits and vegetables. These standards are enforced by grading or inspection

Key organization in the training of future farmers is the Canadian Council on Boys' and Girls' Club Work. More than 65,000 farm young people and 8,000 local leaders participate in active programs directed towards the improvement of agricultural and home-making practices and the general enrichment of rural life.

Top: 4-H Club members being instructed in the methods of taking soil samples for testing.

Bottom: Gathering of Club members at a Maritime Winter Fair.





Hays, Alta., a village established as a result of the coming of irrigation. The Federal Government through PFRA has moved settlers from dried-out areas to the Hays district where there is sufficient irrigated land to settle over 300 farmers.

of commodities entering interprovincial and export trade. By arrangement and collaboration with provincial authorities, many commodities produced within provincial boundaries are inspected and graded. (See p. 222 for information on co-operatives.)

Price Stability.—Canada, like most agricultural countries, has measures designed to give price stability in marketing. Under the Agricultural Prices Support Act, 1944, the Federal Government may stabilize the price of any agricultural product (except wheat, which is handled separately) by outright purchase or by underwriting the market through guarantees or deficiency payments. This Act has been used to good purpose to stabilize the price of products such as butter and eggs which normally are subject to somewhat violent seasonal price fluctuations. It is also valuable in handling surpluses of a temporary nature. Farmers who market their products co-operatively can be assisted under the Agricultural Products Co-operative Marketing Act. Since 1939 the Act has aided farmers in pooling returns from the sale of their products by guaranteeing initial payments.

Another measure of considerable importance in price stabilization is the Agricultural Products Marketing Act, 1949. A number of provincial governments have established boards to control or regulate agricultural products produced and marketed within the province concerned. This Act enables such provincial marketing legislation, or any particular part of it, to be applied in the same way to the marketing of agricultural products, outside that province and in export trade. The Prairie Farm Assistance Act, 1939, gives financial aid to Prairie Province farmers who suffer partial or total crop failure during years of drought.

Reclamation and Development.—For many years the Federal Government has provided financial assistance in connection with land and water resources. The work is done under the Prairie Farm Rehabilitation Act, 1935. The administration of the Act is broad enough in its scope to meet the problems of rehabilitation, and flexible enough to enable formulation of joint policies with each provincial government, the rural municipalities or the farmer himself. The activities are classified as either intermediate or long-term. The intermediate program includes projects concerned with soil drifting on good lands; water developments for small farms; development of irrigation for feed production on a watershed basis; and community pastures. Water developments for small farms include dugouts, stock-watering and individual irrigation, the engineering and financial assistance for which extends to about

one-third of the cost. Long-term projects involve many years of study. Engineering surveys are only a part, and it is necessary to have surveys of soil, economical water supply, climate and all those matters that affect land and people. Such projects include the St. Mary River Dam, completed in 1951, a key structure to bring water, when and where needed, to about 500,000 acres of fertile land in southern Alberta. Mention should be made of the marshlands rehabilitation in Nova Scotia and New Brunswick, where the Federal Government, along with the two provincial governments, has undertaken on a joint basis to preserve, and in some areas to restore, the productivity of rich agricultural lands which are threatened by the sea in the Bay of Fundy. Some work has also been done in Prince Edward Island.

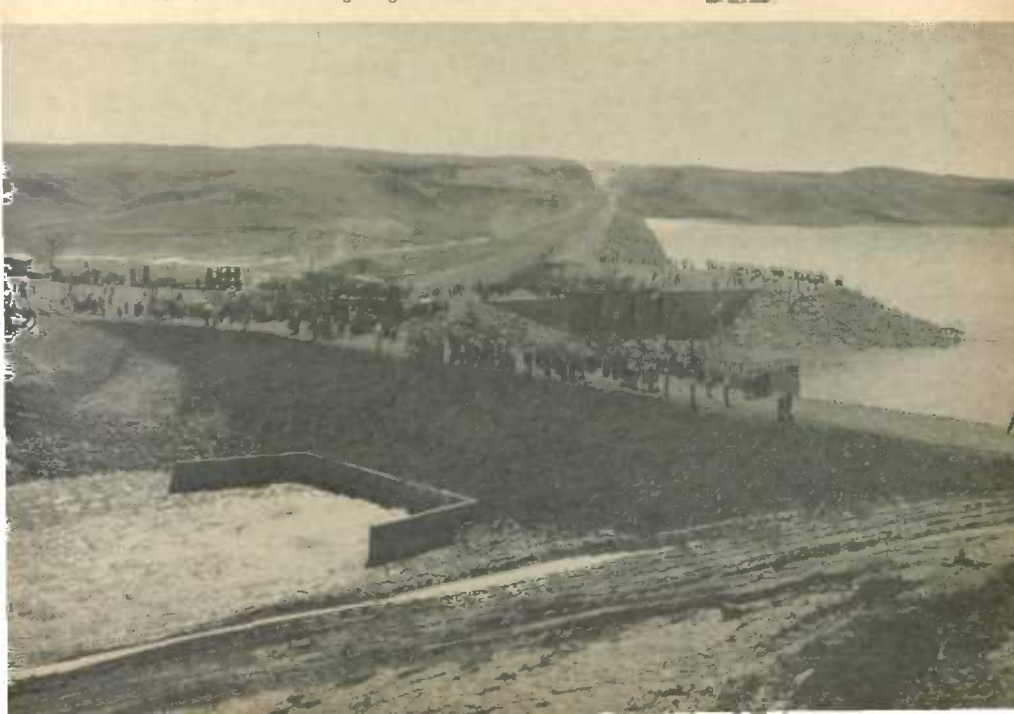
Farm Credit.—The Federal Government has made provision for the extension of credit to farmers under two Acts. The Canadian Farm Loan Act gives long-term and short-term farm mortgage credit and the Farm Improvement Loans Act provides intermediate-term and short-term credit to enable farmers to equip, improve and develop their farms.

• Statistics of Agriculture

Income of Farm Operators

The net income of Canadian farm operators (excluding those in Newfoundland) from farming operations in 1953 was estimated at \$1,656,564,000, a figure 13 p.c. lower than the estimate for 1952 and 23 p.c. lower than the

Travers Dam on the Little Bow River just north of Lethbridge, Alta., officially opened July 13, 1954, is another major milestone in the federal-provincial plan to bring 3,000,000 parched but fertile acres in southern Alberta "under the ditch". Eventually, man-stored water from 14 large projects and hundreds of small schemes will awaken these long-dormant lands to a bright agricultural future.





Hogs being moved down to the loading pens at an Alberta stock-yard.

record high estimated for 1951. The decline in 1953 was the result of a drop of 8 p.c. in gross farm income which more than offset a decline of 3 p.c. in farm operating expenses and depreciation charges. Lower returns from the sale of farm products and a very substantial drop in the value of year-end changes in farm-held stocks of grains and live stock, as well as a lower value placed on home-grown produce consumed on the farm, all contributed to the 8-p.c. decline in gross farm income.

Net Income of Farm Operators from Farming Operations, 1951-53

Item	1951	1952	1953
	\$'000	\$'000	\$'000
1. Cash income.....	2,816,461	2,826,616	2,741,252
2. Income in kind.....	408,613	413,496	401,126
3. Value of changes in inventory.....	353,379	237,742	50,885
4. Gross Income (Items 1 + 2 + 3).....	3,578,453	3,477,854	3,193,263
5. Operating expenses and depreciation charges..	1,434,282	1,582,206	1,538,271
6. Net income, excluding supplementary payments (Item 4 - 5).....	2,144,171	1,895,648	1,654,992
7. Supplementary payments.....	10,356	5,131	1,572
8. Net Income of Farm Operators from Farm- ing Operations.....	2,154,527	1,900,779	1,656,564

Cash income from the sale of farm products is, of course, the most important item of net farm income and represents receipts from all products sold off farms during the year together with participation payments on previous years' grain crops. The value of cash income in 1953 was 3 p.c. lower than the all-time high established in 1952. Higher income from the sale of wheat, dairy products, eggs, corn, sugar beets, hay and wool was more than offset by lower returns from other products.

Cash Income from the Sale of Farm Products, by Province, 1951-53

Province	1951	P.C. of Total	1952	P.C. of Total	1953	P.C. of Total
	\$'000		\$'000		\$'000	
Prince Edward Island...	26,640	1.0	31,627	1.1	22,435	0.8
Nova Scotia.....	44,395	1.6	39,757	1.4	40,566	1.5
New Brunswick.....	50,335	1.8	52,952	1.9	46,051	1.7
Quebec.....	437,006	15.5	412,583	14.6	387,075	14.1
Ontario.....	786,803	27.9	718,965	25.4	692,657	25.3
Manitoba.....	265,711	9.4	249,843	8.9	214,187	7.8
Saskatchewan.....	636,189	22.6	710,141	25.1	743,352	27.1
Alberta.....	459,949	16.3	506,529	17.9	491,529	17.9
British Columbia.....	109,431	3.9	104,219	3.7	103,400	3.8
Totals.....	2,816,461	100.0	2,826,616	100.0	2,741,252	100.0

Cash Income from the Sale of Farm Products, by Source, 1953

Source	Cash Income	Source	Cash Income
	\$'000		\$'000
Grains, seeds and hay.....	1,063,225	Miscellaneous farm products....	49,789
Vegetables and other field crops...	170,384	Forest products sold off farms...	83,637
Live stock.....	775,108	Fur farming.....	8,844
Dairy products.....	413,127		
Fruits.....	41,807		
Eggs, wool, honey and maple products.....	138,331	Cash Income from Sale of Farm Products.....	2,741,252

Young cabbages receiving careful attention in a market garden of the Niagara district.



As in 1952, a heavy year-end farm carryover of wheat enabled western farmers to market exceptionally large quantities during the first seven months of 1953. Although deliveries during the latter part of the year were below the 1952 level, the total for the year was well above that for 1952. Initial prices for specific grades were unchanged from 1952 but the higher grading of the grain delivered during the spring of 1953 resulted in a higher weighted average initial price. Total wheat participation payments in 1953 at \$125,353,000 were well below those of 1952. Final wheat payments, usually made before the end of the calendar year, were delayed until the closing of the 1952-53 pool on Jan. 30, 1954. Although prices of oats and barley were relatively unchanged in 1953, marketings were down.

The greatest reduction in receipts from the sale of field crops in 1953 was for potatoes. Potato prices dropped substantially from the unusually high levels of the previous year and income from this source was down by more than 50 p.c. A smaller crop and reduced prices resulted in lower returns from tobacco.

Lower prices for all live stock, except hogs, and smaller marketings of hogs and sheep combined to reduce income from the sales of live stock by about 6 p.c. from the 1952 level. A substantial increase in cattle marketings during 1953 reflected the build-up of the cattle population which started in 1950 and continued during the period of restricted export movement arising out of the outbreak of foot-and-mouth disease in Saskatchewan early in 1952. Support for cattle prices commenced in April 1952 and continued until the lifting of United States import restrictions on Mar. 1, 1953. Prices of good steers at Toronto fluctuated around the support price of \$23 per 100 lb. during the first two months of 1953 and then declined by approximately \$3 to a level which was maintained fairly consistently during the remainder of the year.

Early in 1953 hog marketings began to decline from the 1952 level and as the year progressed the difference between the two periods became more apparent. This decline was recorded in all provinces except Alberta. The weighted average price of all hogs sold in Canada in 1953 was the third highest on record, being exceeded only by prices established in 1949 and 1951. The favourable price position in 1953 is largely attributable to the strong market for hogs that prevailed in the United States.

Income from the sale of poultry and eggs was about 5 p.c. higher than in 1952, a decline in income from poultry meat being more than offset by increased returns from the sale of eggs. Total marketings of eggs were relatively unchanged from 1952 but average prices were substantially higher. Income from the sale of dairy products was about 4 p.c. above that of 1952—prices were lower but production increased as the result of a continued rise in the number of milk cows during the year.

The estimated value of year-end changes of farm-held grains and live stock amounted to \$50,885,000 as compared with \$237,742,000 for 1952 and the record high of \$353,949,000 for 1942. The grain inventory in 1953 was valued at \$26,553,000 as against \$127,963,000 for 1952 and the live-stock inventory at \$24,332,000 compared with \$109,779,000.

Total farm operating expenses in 1953 were estimated to be 3 p.c. below the peak reached in 1952 but were still 7 p.c. above the 1951 estimate. A substantial reduction in farmers' outlays for such items as rent, labour and feed more than offset increased expenditures for some of the more important items such as taxes, interest on indebtedness, fertilizers, repairs to machinery and buildings, and the operation of tractors, trucks and automobiles.

Field Crops

After an unprecedented three-year period of unusually high and, in some areas, record field-crop production, Canadian farmers in 1954 experienced what was in some respects one of the most difficult and disappointing seasons in many years. A late spring delayed seeding in many sections of the country, and the lateness of the crop was further aggravated by excessive rainfall, particularly in the Prairie Provinces, eastern Ontario and Quebec. Plant growth, however, was generally rapid and rank as the result of abundant moisture, and crop progress at the first of August pointed to the possibility of western grain crops being substantially above average for the fourth consecutive season. However, the rapid development of the most severe rust epidemic in Western Canada's history, together with serious sawfly infestation, widespread rain, wind and hail damage, and September frosts and snow caused serious crop deterioration. As a result, average per acre yields of all crops except tame hay, dry beans and rapeseed were below those of 1953. The sharpest declines were shown by spring wheat and all rye, each less than half the size of the 1953 crop; barley was down by one-third and oats and potatoes were each down by one-quarter. On the other hand, production of several crops, including flaxseed, mixed grains, grain corn, dry beans, soybeans, sunflower seed, rapeseed, sugar beets and tame hay, was above 1953 levels, largely as the result of increased acreages.

The heaviest damage was suffered by Prairie grain farmers but, for many, the effects were offset to some extent by reserve stocks of grain which

Prairie wheat farmer—owner, manager and worker.



had accumulated from the three preceding years. Despite abnormally heavy marketings during those years Canadian farm stocks of wheat, barley and rye at July 31, 1954, were the highest on record for the end of a crop year, while those of oats and flaxseed had been exceeded only once before. Although marketings and exports of Canadian grain during the 1953-54 crop year did not continue the record-breaking levels of the preceding two crop years, they were well above average in total volume. Marketings of the five major grains in Western Canada in 1953-54 totalled 610,100,000 bu. compared with 844,100,000 bu. in 1952-53 and the ten-year (1943-44—1952-53) average of 557,900,000 bu. Combined exports of the same grains (including wheat flour, rye flour, rolled oats and oatmeal in grain equivalent) amounted to 437,900,000 bu. as against 582,800,000 bu. in 1952-53 and the ten-year average of 381,800,000 bu.

The marketing of unprecedented quantities of western Canadian grain in recent years has necessitated a continuous review by the Canadian Wheat Board of methods considered most suitable to ensure adequate supplies of the various grains to meet both domestic and export commitments and, at the same time, ensure that producers have the opportunity of delivering grain in as equitable a manner as possible. To meet this objective the Board has continued its policy of delivery quotas. In 1953-54 initial quotas of three bushels per specified acre were established for individual producers on the basis of their specified acreage for wheat (other than Durums), oats, barley and rye. ("Specified acreage" means the producer's acreage seeded to wheat, other than Durums, oats, barley and rye, plus the producer's summerfallow acreage.) The initial quota was adjusted as conditions permitted, with all delivery points being on a seven-bushel quota by July 9, 1954. Durum wheat and flaxseed remained on an open quota basis throughout the crop year.

The delivery quota policy at the beginning of the 1954-55 crop year was designed, through the establishment of special quotas, to favour the delivery of oats and barley in quantities sufficient to meet the Board's requirements. As space became available initial delivery quotas permitting deliveries of wheat, oats, barley and rye up to limited amounts regardless of the producer's acreage were established and by Oct. 15 were in effect at all points. Subsequently, provision was made for establishing a general delivery quota on the basis of the producer's specified acreage as in 1953-54. By Dec. 7, 1954, out of 2,079 shipping points in the Western Division, the Board had been able to place 1,404 on a general quota of two bushels per specified acre. An additional 104 points were on a four-bushel quota while the remainder, 571 points, were still on the initial quota basis.

Although both yield and quality of the 1954 grain crop were generally low, combined stocks of the five major grains in all positions at July 31, 1954, were estimated at a record 876,200,000 bu., more than two and one-half times as great as the 1944-53 average of 325,000,000 bu. Most of these stocks of old-crop grain were of high quality, thus ensuring adequate supplies for both domestic use and export. Total supplies of the major grains for the 1954-55 crop year, consisting of the July 31, 1954, carryover and the 1954 crop, were estimated in millions of bushels as follows (1953-54 figures in parentheses): wheat, 881.6 (983.6); oats, 432.6 (551.4); barley, 321.4 (373.7); rye, 33.5 (45.0); and flaxseed, 13.8 (13.9).



Sheaves of oats swing from the binder as a farmer and his son harvest the crop on their land near Meaford, Ont.

Estimated Area, Yield and Production of Principal Field Crops, 1953 and 1954

Crop	Area		Yield per Acre		Production	
	1953	1954	1953	1954 ¹	1953	1954 ¹
	acres	acres	bu.	bu.	bu.	bu.
All wheat	25,512,600	24,266,800	24.1	12.3	613,962,000	298,909,000
<i>Winter wheat</i>	732,000	710,000	35.8	34.0	26,206,000	24,140,000
<i>Spring wheat</i> ¹	24,780,600	23,556,800	23.7	11.7	587,756,000	274,769,000
Oats for grain	9,830,000	10,160,600	41.4	30.2	406,960,000	306,793,000
Barley	8,911,100	7,855,900	29.4	22.3	262,065,000	175,509,000
All rye	1,494,200	850,500	19.3	16.7	28,775,000	14,176,000
<i>Fall rye</i>	1,031,200	672,500	20.6	17.7	21,225,000	11,922,000
<i>Spring rye</i>	463,000	178,000	16.3	12.7	7,550,000	2,254,000
Mixed grains	1,445,400	1,632,600	43.0	37.6	62,188,000	61,454,000
Corn for grain	362,000	418,000	57.6	53.4	20,854,000	22,339,000
Buckwheat	138,900	121,500	23.1	17.8	3,210,000	2,168,000
Peas, dry	60,400	49,800	20.0	17.6	1,210,000	880,000
Beans, dry	68,500	72,500	17.8	14.2	1,219,500	1,027,000
Potatoes	321,100	296,200	208.7	169.9	67,002,000	50,326,000
Flaxseed	972,000	1,206,000	10.2	9.3	9,912,000	11,238,000
Soybeans	216,000	254,000	20.4	19.5	4,406,000	4,953,000
			lb.	lb.	lb.	lb.
Sunflower seed	4,500	20,000	880	650	3,960,000	13,000,000
Rapeseed	29,500	46,000	877	880	25,875,000	40,500,000
			tons	tons	tons	tons
Tame hay	10,702,000	10,802,000	1.84	1.81	19,650,000	19,549,000
Folder corn	364,700	355,500	9.77	8.38	3,564,800	2,978,100
Field roots	43,200	42,800	11.04	10.28	477,000	440,000
Sugar beets	81,952	89,990	10.99	10.10	900,339	1,003,853

¹ Includes relatively small quantities of winter wheat in all provinces except Ontario.

Marketing of Wheat.—The extremely tight commercial grain storage position during 1953-54 was reflected in a substantial decline in farmers' wheat deliveries. Despite the sharp drop from 535,900,000 bu. in 1952-53 to 398,700,000 bu. in 1953-54, deliveries in the latter year were still well above the level of average marketings of 347,000,000 bu. for the 1943-44—1952-53 period.

Exports of wheat and flour in terms of wheat during 1953-54 which amounted to 255,100,000 bu. as against 385,500,000 bu. in the previous year and the ten-year average (1943-44—1952-53) of 290,400,000 bu. were still well above the pre-war (1935-36—1939-40) average of 183,000,000 bu. The drop in domestic disappearance in 1953-54 to a level of 145,800,000 bu. from 150,000,000 bu. in 1952-53 and a ten-year average of 156,000,000 bu. is attributable to reductions in the main categories of use—animal feed, seed and human consumption.

The 1953-54 crop year coincided with the first year of the new three-year International Wheat Agreement, under which Canada had a guaranteed export quota of 150,800,000 bu. for 1953-54. According to latest reports available on the year's transactions, Canadian sales under the Agreement totalled 90,900,000 bu. All but 14 of the 43 importing countries included in the pact purchased wheat or flour or both from Canada, the larger purchasers being Germany, 17,000,000 bu.; Belgium, 13,000,000; and Japan, 12,000,000. However, the major part of Canada's wheat trade during 1953-54 was in Class II wheat (i.e., wheat exported outside the provisions of the International Wheat Agreement). The principal customer was the United Kingdom which received exports of some 65,800,000 bu. of Canadian wheat and flour in terms of wheat. Combined exports during 1953-54 of 255,100,000 bu. of wheat and flour went to 83 countries, territories and colonies.

During 1953-54 prices for domestic wheat, with the exception of Durum, were the same as those for wheat sold under the International Wheat Agreement. Between Aug. 1 and Sept. 24, 1953, Durums for the domestic market were sold at the same price as for I.W.A., but on and after Sept. 25 an additional 10 cents per bu. was charged. During the first few weeks of the 1953-54 crop year Class II prices, excepting Durums, were fractionally above the I.W.A. and domestic sales levels but coincided for the remainder of the crop year. Throughout the season, Class II Durums sold at a substantial margin over Durums sold under I.W.A. or for domestic use. No. 1 Northern, basis Fort William-Port Arthur for I.W.A. and domestic sales averaged \$2.01½ per bu. during the month of August 1953, but had declined to an average of \$1.70½ by July 1954, the last month of the crop year.

The marketing of western Canadian wheat during the 1953-54 crop year was again conducted by the Canadian Wheat Board on a one-year pool basis with the initial payment set at \$1.40 per bu. basis No. 1 Northern in store Fort William-Port Arthur or Vancouver. The initial payment for No. 1 C.W. Amber Durum was established at \$1.50 per bu. as an incentive for farmers to expand production of this type for which a strong demand exists. An interim payment of 10 cents per bu. on all grades (amounting in total to some \$38,600,000) was announced on Nov. 6, 1954. Final payments to producers for wheat delivered to the 1953-54 pool will depend on the average prices at which the Board has been able to sell the various grades.

as well as on the costs incurred by the Board in carrying abnormally heavy stocks over an extended period of time.

Pricing arrangements for the 1954-55 crop year are similar to those in effect for 1953-54. The initial payment for No. 1 Northern is again \$1.40 per bu., with No. 1 C.W. Amber Durum at \$1.50 per bu. Durums sold domestically are priced 10 cents per bu. higher than for I.W.A. sales, while Class II Durums continue to hold a substantial margin over the domestic and I.W.A. quotations for Durums. Apart from Durums, current quotations for I.W.A., domestic and Class II sales coincide.

Production, Imports and Exports of Wheat, Years Ended July 31, 1946-55

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 (Previous Year's Crop)	Imports of Wheat and Flour	Exports of Wheat and Flour
	'000 bu.	bu.	bu.
1946.....	318,512	74,765	343,185,751
1947.....	413,725	15,584	239,420,837
1948.....	341,758	824,677	194,982,342
1949.....	386,345	288,881	232,329,345
1950.....	371,406	4,059	225,136,785
1951.....	461,664	11,884	240,960,846
1952.....	552,657	17,560	355,825,252
1953.....	687,922	17,066	385,526,541
1954.....	613,962	456,807	255,081,406
1955.....	298,909 ^a	..	..

Storage facilities for grain and oil at a Saskatchewan railway siding. At seeding and at harvest the oil agent is busiest supplying farmers with fuel to power their mechanized equipment.



The Canadian guaranteed export quantity under the second year (1954-55) of the current International Wheat Agreement is 150,900,000 bu. The maximum and minimum prices, \$2.05 and \$1.55, respectively, in U.S. funds remain unchanged from 1953-54.

Marketing of Other Grains.—Aside from wheat, the largest volumes of grain marketed are barley and oats. In Western Canada, these two grains are currently marketed through compulsory crop-year pools administered by the Canadian Wheat Board. As in the case of wheat, producers receive a fixed initial payment on a grade basis for oats and barley at the time of delivery and additional payments depending on the prices ultimately realized by the Board on its sales of the various grades. Other grains, of which the most important are rye and flaxseed, are sold on the open market in Western Canada.

In Eastern Canada where grains are not as extensively grown for sale as in the Prairie Provinces, facilities for grain marketing are less highly organized. Nevertheless, there are important cash markets, particularly in southwestern Ontario, for such crops as winter wheat, malting barley, soybeans, dry beans and shelled corn. Producer organizations exist for many of these and other "cash" crops and most of them take an active interest in storage and marketing arrangements.

From the standpoint of importance in terms of volume, however, marketing of western Canadian oats and barley is second only to that of wheat. Initial payments for both oats and barley in 1953-54 were the same as in 1952-53, i.e., on the basis of 65 cents per bu. for No. 2 C.W. oats and 96 cents per bu. for No. 3 C.W. Six-Row barley, in store Fort William-Port Arthur. No interim payments were made on either grain during the crop year but final payments for both were announced in October 1954.

Final payments on the 101,193,954 bu. of barley delivered to the 1953-54 pool averaged 9.71747 cents per bu. after deduction of payment expenses and the one per cent Prairie Farm Assistance Act levy. Total prices (basis in store Fort William-Port Arthur) realized by producers for representative grades, after deducting carrying charges in country and terminal elevators, Board administrative costs, etc., but before deducting the one per cent PFAA levy, were \$1.05985 per bu. for No. 3 C.W. Six-Row barley and \$0.95009 per bu. for No. 1 Feed barley. Final payments on the 89,725,291 bu. of oats delivered to the 1952-53 pool averaged 6.2759 cents per bu. Total prices realized by producers for representative grades, on the same basis as for barley, were \$0.70517 for No. 2 C.W. and \$0.66175 for No. 1 Feed oats.

Some 12,200,000 bu. of rye and 7,400,000 bu. of flaxseed were delivered by farmers in Western Canada in 1953-54, both these grains being sold on the open market.

Live Stock

The number of cattle on farms at June 1, 1954, was estimated at 9,954,000 head, about 2 p.c. more than at the same date of 1953. Milk cows increased nearly 3 p.c. as compared with a 6-p.c. increase in 1953 over 1952. Hogs on farms at June 1, 1954, estimated at 5,141,000 were 16 p.c.

above the total of 4,447,000 at June 1, 1953; in Western Canada the increase was 19 p.c. and in Eastern Canada 13 p.c. Sheep and lambs at 1,804,400 were about 5 p.c. higher than in 1953. Horses decreased 9 p.c. in the same comparison to 993,300—they were below the million mark for the first time since before 1881.

Live Stock on Farms, by Province, as at June 1, 1954, with Totals for 1953

Province	Milk Cows	Other Cattle	Hogs	Sheep and Lambs	Horses
	No.	No.	No.	No.	No.
Prince Edward Island	46,500	73,500	70,000	39,400	17,600
Nova Scotia	90,000	114,000	39,000	99,000	21,700
New Brunswick	96,500	98,500	67,000	66,000	26,000
Quebec	1,078,000	912,000	1,051,000	363,000	204,000
Ontario	1,045,000	1,966,000	1,560,000	410,000	176,000
Manitoba	198,000	462,000	360,000	60,000	91,000
Saskatchewan	276,000	1,111,000	539,000	156,000	229,000
Alberta	303,000	1,707,000	1,408,000	528,000	197,000
British Columbia	100,000	277,000	47,000	83,000	31,000
Totals, 1954	3,233,000	6,721,000	5,141,000	1,804,400	993,300
1953	3,146,200	6,616,000	4,447,000	1,721,300	1,096,200

Driving beef cattle to shipping point, Cariboo District, B.C.



Marketings of cattle and calves in 1953 through recorded commercial channels (registered stockyards, inspected packing plants and for export) were up sharply from 1952 totals; cattle marketings increased almost 24 p.c. and calves 31 p.c. Sheep and lamb marketings exceeded the 1952 totals by almost 4 p.c. and marketings of hogs were lower by 25 p.c. Average prices at Toronto* in 1952 and 1953 (1952 averages in brackets) were as follows: Steers up to 1,000 lb., good, \$20.25 (\$25.15), common, \$15.53 (\$19.85); Stocker and Feeder Steers, common, \$16.04 (\$20.15); All Calves, \$20.62 (\$24.00); Hogs, B1 dressed, \$30.40 (\$25.70); Lambs, good, \$23.37 (\$26.05).

The decline in pork production in 1953 and the consequent higher price in relation to other meats led to a decrease of pork consumption and favoured higher consumption of beef and veal.

* Source: *Livestock Market Review*, Marketing Service, Department of Agriculture, Ottawa.

Commercial Marketings of Live Stock, by Province, 1953 with Totals for 1952

Province	Cattle	Calves	Hogs	Sheep and Lambs
	No.	No.	No.	No.
Prince Edward Island	12,511	1,901	77,992	14,830
Nova Scotia	4,835	2,471	21,037	10,447
New Brunswick	9,915	23,807	38,120	15,703
Quebec	86,952	267,140	810,561	144,118
Ontario	594,994	248,009	1,844,653	167,915
Manitoba	174,806	81,754	321,260	32,802
Saskatchewan	369,895	91,427	419,997	46,678
Alberta	471,634	113,676	1,445,038	112,523
British Columbia	42,057	7,537	39,433	25,273
Totals, 1953	1,767,599	837,722	5,018,081	570,289
1952	1,427,993	637,863	6,699,056	550,340

Estimated Meat Production and Consumption, 1952 and 1953

Item	1952	1953	1952	1953
	Beef		Veal	
Animals slaughtered, No.	1,459,070	1,837,500	959,184	1,318,295
Animals exported, "	14,940	47,300	516	2,205
Meat production ¹ , '000 lb.	726,638	902,966	98,149	137,994
Total domestic disappearance, ..	645,192	873,196	96,693	134,998
Per capita disappearance, lb.	44.7	59.1	6.7	9.1
	Pork		Mutton and Lamb	
	1952	1953	1952	1953
Animals slaughtered, No.	8,861,118	6,892,145	595,939	679,253
Animals exported, "	703	21,124	661	2,347
Meat production ¹ , '000 lb.	1,181,593	915,204	26,195	28,984
Total domestic disappearance, ..	950,505	842,488	27,562	34,319
Per capita disappearance, lb.	65.9	57.0	1.9	2.3
	Offal		Canned Meat	
	1952	1953	1952	1953
Production, '000 lb.	83,128	83,009	144,183	55,494
Total domestic disappearance, ..	79,694	76,941	89,052	83,306
Per capita disappearance, lb.	5.5	5.2	6.2	5.6

¹ Production from animals slaughtered in Canada, basis cold dressed carcass weight excluding offal and, in the case of pork, tats and offal.

Registered Jerseys with high production records from a herd producing milk for the fluid market.



Milk for the bottled trade in the larger urban centres is usually shipped in cans and hauled by private or dairy trucks. The farmer pays the cost of transportation.



Dairying

Milk.—Total milk production in 1953 was estimated at 16,424,800,000 lb., 4 p.c. above the 15,734,603,000 lb. produced in 1952. In the first eight months of 1954 the output again increased, being 3 p.c. more than in the same months of 1953. This latter increase was the result of more cows being kept for milking as well as exceptionally good pasture conditions in all parts of Canada during the producing season. The number of cows milking on June 1, 1954, was 3,233,000, 3 p.c. more than on June 1, 1953.

Butter.—Creamery butter production, which had declined 34,000,000 lb. between 1947 and 1951, subsequently moved to higher levels. The output

of approximately 302,606,000 lb. in 1953 was 8 p.c. higher than in 1952 and the January-October output in 1954 was 4 p.c. above the same period of 1953. On the other hand, dairy butter production has declined steadily since 1949 and reached a low point of 21,289,000 lb. in 1953. The output for January-September 1954 showed a further decrease of 3 p.c. as compared with the same period of 1953. Stocks of butter in storage at the end of the 1954 producing season (Oct. 1) were 21,000,000 lb. higher at 115,306,000 lb. than those on the same date of 1953, which were, in turn, 17,000,000 lb. above those on Oct. 1, 1952. The domestic disappearance of butter, including creamery, dairy and whey butter, amounted to 308,674,000 lb. in 1953. This represented an average of 20.88 lb. per capita compared with 20.82 lb. in 1952, 22.33 lb. in 1950 and 28.73 lb. in 1948. The decline since 1948 followed the introduction of margarine early in 1949. Per capita domestic disappearance of margarine was 7.46 lb. in 1953.

Dairy Production, by Economic Area, 1951-53

Economic Area and Year	Milk		Manufactured Milk Products ¹			
	Fluid Sales	Total Milk Production	Butter		Cheddar Cheese	Ice Cream
			Creamery	Dairy		
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 gal.
Maritimes... 1951	314,228	1,046,817	16,859	4,820	2,209	2,676
1952	325,307	1,026,830	16,808	3,889	1,400	2,541
1953	334,915	1,099,047	19,794	3,804	1,324	2,436
Que. and Ont. 1951	3,310,982	10,010,180	158,500	7,674	82,112	14,451
1952	3,415,808	10,442,330	181,261	7,076	62,462	15,884
1953	3,562,228	10,875,056	194,801	5,833	69,021	17,262
Prairies... 1951	641,307	3,618,681	79,140	13,607	3,906	5,347
1952	666,593	3,607,834	79,007	12,062	3,490	5,873
1953	704,186	3,725,571	82,645	10,973	4,181	6,082
B.C.... 1951	351,993	634,293	2,666	729	557	2,892
1952	348,694	657,609	3,670	742	466	2,964
1953	359,710	725,126	5,360	679	659	3,058
Totals... 1951	4,618,510	15,309,971	257,165	26,830	88,784	25,366
1952	4,756,402	15,734,603	280,746	23,769	67,818	27,262
1953	4,961,039	16,424,800	302,506	21,289	75,185	28,838

¹ Not included in this table are: whey butter with a production of 1,738,000 lb. in 1953 and 1,713,000 lb. in 1952, other cheese with 6,475,000 lb. and 5,850,000 lb., respectively, and concentrated milk products with 439,911,000 lb. and 473,051,000 lb., respectively.

Cheese.—Cheddar cheese production in 1953 at 75,185,000 lb. was 11 p.c. higher than that in 1952, and the 1954 January-October production was 10 p.c. above the same months of 1953. The domestic disappearance of cheddar cheese in 1953 was 66,659,000 lb. and of other varieties of cheese (including imports) 11,906,000 lb., making a total of 78,565,000 lb. compared with 74,100,000 lb. in 1952 and representing 5.31 lb. and 5.14 lb. per capita, respectively. Exports of cheese in 1953 amounted to 16,429,000 lb. compared with about 2,000,000 lb. in 1952, 30,653,000 lb. in 1951 and 63,110,000 lb. in 1950. The January-September average price of cheese at Montreal was 32½ cents for the first grade Ontario product; the average for the same

period of 1953 was 31 cents. Cheese marketed by the Ontario Cheese Producers Marketing Board gave producers about 28 cents per lb. f.o.b. factory.

Concentrated Milk and Ice Cream.—The output of concentrated milk products in 1953 was 439,911,000 lb. compared with 473,051,000 lb. in 1952. The production of evaporated milk, the most important of these products, decreased from 305,715,000 lb. in 1952 to 272,009,000 lb. in 1953 and the output of skim-milk powder decreased from 88,229,000 lb. to 83,042,000 lb. in the same years. The production of ice cream at 28,838,000 gal. was 6 p.c. higher than in 1952 but in the January-October period of 1954 it decreased 2 p.c. compared with the same period of 1953.

Income.—Farm income from dairying in 1953 amounted to \$450,174,000 of which \$413,127,000 was cash income and \$37,047,000 income in kind. Prices of all products declined in 1953 as compared with 1952.

Poultry

The total number of poultry on farms in Canada (exclusive of Newfoundland) was 71,695,000 birds on June 1, 1954, an 8-p.c. increase over the 66,451,000 birds on June 1, 1953. Total hens and chickens increased 7.4 p.c. to 67,609,000, and turkey numbers were also substantially higher.

Egg production in 1953 was estimated at 353,199,000 doz. compared with 341,512,000 doz. in 1952 and the per capita consumption of eggs was 23.4 doz. in 1953 and 22.7 doz. in 1952. Poultry meat output, estimated at 385,064,000 lb. in 1953, decreased by about 5 p.c. from the 1952 production, and per capita consumption also decreased to 27.1 lb. from 29.6 lb. in 1952. The total value of eggs and poultry meat produced in 1953 was \$325,005,000.

Until recently a luxury fowl available only in the Thanksgiving and Christmas seasons, the turkey now appears on the market the year round in frozen state—eviscerated, nicely wrapped in transparent covering and ready for the oven.



Poultry on Farms, by Province, June 1, 1952-54

(Exclusive of Newfoundland)

Province and Year		Hens over Six Months Old	Total Hens and Chickens	Turkeys	Geese	Ducks
		'000	'000	'000	'000	'000
Maritime Provinces.....	1952	1,506	3,550	90	30	23
	1953	1,575	3,490	92	30	23
	1954	1,635	3,970	100	30	23
Ontario.....	1952	3,500	9,875	440	13	49
	1953	3,300	9,800	375	14	53
	1954	3,650	10,859	460	15	56
Ontario.....	1952	7,000	20,700	692	137	166
	1953	7,200	23,400	568	147	168
	1954	7,300	24,000	655	135	150
Prairie Provinces.....	1952	7,370	23,767	1,645	185	234
	1953	7,340	22,370	1,355	182	217
	1954	7,150	24,650	1,750	172	237
British Columbia.....	1952	1,320	3,840	300	21	25
	1953	1,280	3,900	225	15	27
	1954	1,500	4,130	265	14	24
Totals	1952	20,696	61,732	3,167	386	497
	1953	20,695	62,960	2,615	388	488
	1954	21,235	67,609	3,230	366	490

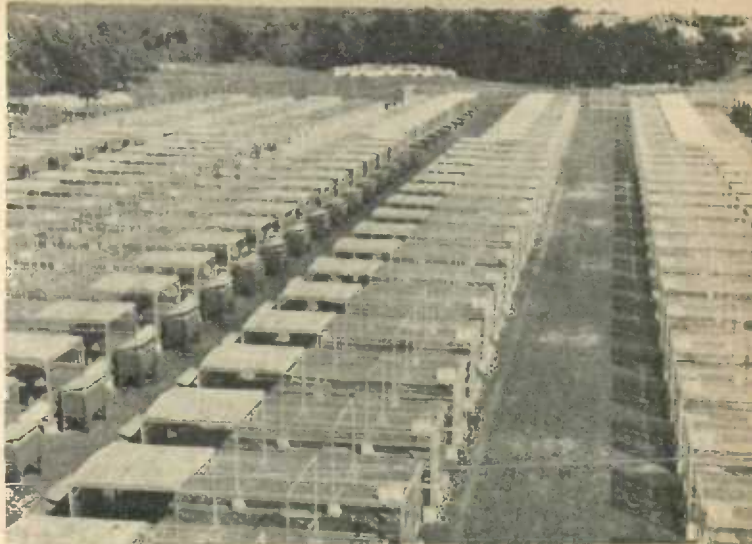
Quantity and Value of Eggs and Poultry Meat Produced, by Province, 1953

Province	Eggs		Poultry Meat	
	Production	Value	Production	Value
	'000 doz.	\$'000	'000 doz.	\$'000
Maritime Provinces.....	28,566	14,451	21,039	10,164
Quebec.....	55,242	28,011	72,718	34,983
Ontario.....	142,623	70,042	150,764	64,245
Prairie Provinces.....	99,889	38,445	110,882	38,164
British Columbia.....	26,879	13,579	29,661	12,921
Totals, 1953	353,199	164,528	385,064	160,477
1952	341,512	134,226	405,398	166,260

Fur Farming

The fur farms of Canada produce many types of fur-bearing animals but mink and fox are by far the most important. Of the 2,518 fur farms in operation in 1952, 2,089 reported 287,213 mink valued at \$7,284,860 and 380 reported 7,366 foxes valued at \$140,261. The decline in popularity of the long-haired furs and the increasing interest in mink in its various colour phases has effected a change in the fur-farm picture. The number of foxes on farms decreased from 157,053 in 1937 to 7,366 in 1952 while mink, both standard and mutation types, increased in the same period from 71,410 to 287,213. In 1952, mutation mink comprised 52 p.c. of the total on farms

Mink farm in Manitoba. While such farms are highly productive, animals trapped in the wild still provide about 57 p.c. of the income from raw furs.



Beavers heading for a new home in a northern Quebec lake. A long-term rehabilitation program has increased the beaver population of that Province to an estimated 150,000.



compared with 38 p.c. in 1951. The raising of mink is conducted now mainly on scientifically managed farms with the emphasis on quality and production of new colour phases. Of the total mink farms, 54 p.c. had 80 or more animals. Alberta had 280 farms in this group and Manitoba had 247. The introduction of the chinchilla by the fur-farming industry has created a new interest. These small fur-bearers, first brought in from South America in 1937, have increased on farms until 11,571 were reported in 1952 valued at \$2,123,000. The establishment of a market for chinchilla pelts is progressing.

The geographical distribution of farms has changed considerably over the years. Whereas the Maritime Provinces with their once-prosperous fox farms were the early centre of the industry, the recent widespread raising of mink in the other provinces has resulted in the bulk of the fur farms now being farther west. In 1952, British Columbia had 13 p.c. of the total fur farms, the Prairie Provinces 43 p.c., Ontario 25 p.c., Quebec 10 p.c. and the Maritimes 9 p.c.

The number of all pelts produced in 1952 was 691,127 valued at \$10,260,939 compared with 663,094 in 1951 valued at \$11,418,055. The average prices of the main kinds of pelts taken in 1951-52 were considerably lower than in the previous year, with the exception of mutation mink which rose from \$21.50 to \$24.82. A standard mink pelt brought \$12.53 and a silver fox pelt \$8.63.

Special Crops

Fruit.—Fruit is grown on a commercial scale in Nova Scotia, New Brunswick, Quebec, Ontario and British Columbia. The most important producing areas are in Ontario and British Columbia, the provinces which accounted for 44 p.c. and 33 p.c., respectively, of the value of all fruit produced in 1953. In most of the producing areas, particularly the Annapolis Valley of Nova Scotia, the Niagara Peninsula of Ontario and the Okanagan Valley of British Columbia, fruit-growing is the principal agricultural crop and its prosperity is of paramount importance to the economy of those areas.

Values of Fruits Produced, 1950-53, with Averages 1946-49

Fruit	Average 1946-49	1950	1951	1952	1953
	\$'000	\$'000	\$'000	\$'000	\$'000
Apples.....	17,057	12,467	13,893	17,391	16,978
Pears.....	1,899	1,877	2,238	2,371	2,576
Plums and prunes.....	1,302	1,016	865	1,033	1,198
Peaches.....	4,295	2,754	4,004	5,152	5,381
Apricots.....	410	77	116	342	401
Cherries.....	2,451	2,065	2,263	2,113	2,724
Strawberries.....	5,460	6,742	5,662	6,077	6,464
Raspberries.....	3,271	2,840	3,133	2,565	3,087
Grapes.....	2,825	3,543	2,813	3,052	3,508
Loganberries.....	208	166	147	158	236
Blueberries.....	—	—	—	3,384	3,180
Totals, All Fruits	39,487	33,547	35,134	43,638	45,733

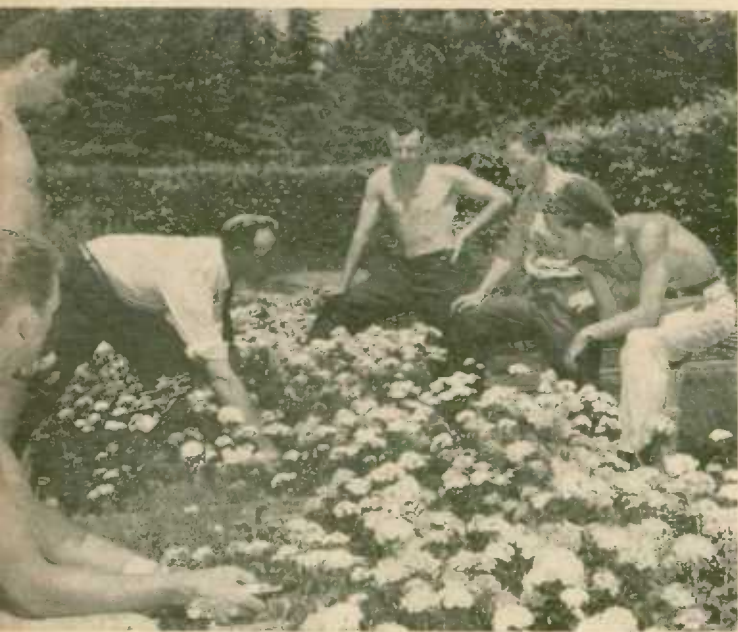
The apple is, of course, of major importance among the fruits grown, there being large plantings in each of the above-mentioned provinces. In considering trends in the apple industry, it is necessary to make comparisons over a period of years because of the length of time necessary for new orchards to come into bearing. The Canadian industry has experienced some changes since pre-war years with respect to relative importance of the different producing provinces and the marketing pattern. There has been a considerable decline in apple production in Nova Scotia but, on the other



Picking apple trees is a winter job in the Okanagan Valley, B.C., but spring is not far behind.

hand, Quebec and British Columbia are producing larger crops than they did in the 1935-39 period. The reduction of plantings in Nova Scotia was largely the result of the virtual loss of the overseas market caused by wartime shipping shortage and later by exchange difficulties. In the 1935-39 period an average of more than 6,000,000 bu. of fresh apples were exported annually: in the crop year 1953-54, exports were less than 2,000,000 bu. This decrease in exports was accompanied by an increase in the quantity of apples sold fresh on the domestic market. The volume processed rose during the later war and early post-war years but has since settled back to about the pre-war level. Estimates place the 1954 apple crop at 14,100,000 bu., an increase of 20 p.c. over 1953. Production was up in all apple-producing provinces except New Brunswick where there was a small decline.

Strawberries and raspberries are also grown in commercial quantities in the five fruit-producing provinces but production of pears, peaches, cherries, plums and prunes is very largely confined to British Columbia and Ontario. Ontario produces practically all the grapes grown in Canada and British Columbia is the only province in which apricots and loganberries are grown commercially. Production of all these fruits, except grapes, was lower in 1954 than in 1953 because of unfavourable weather conditions experienced during much of the growing season in both Eastern and Western Canada. November 1954 estimates of production, with final figures for 1953 in parentheses, were: pears 1,260,000 bu. (1,435,000); plums and prunes 754,000 bu.



Instructor at the Niagara Parks Commission School of Gardening demonstrates the commercial method of cutting flowers. The school offers a thorough three-year course in practical gardening.

(775,000); peaches 2,335,000 bu. (2,893,000); apricots 158,000 bu. (165,000); cherries 431,000 bu. (449,000); strawberries 28,429,000 qt. (30,075,000); raspberries 13,598,000 qt. (15,113,000); loganberries 1,601,000 lb. (1,687,000); and grapes 88,198,000 lb. (80,533,000).

Canning and processing industries have developed in the fruit-growing districts and although the importance of the processing market varies with different fruits it provides a valuable outlet for substantial proportions of most Canadian-grown fruit crops. Some canned fruits are exported.

Tobacco.—Production of all types of tobacco in 1954 was estimated at about 186,500,000 lb., an increase of more than 47,000,000 lb. over the 1953 total of 139,190,000 lb. Because of the prospect of increased purchases by the United Kingdom, the Flue-Cured Marketing Association of Ontario

The Farm Improvement Loans Act which assists farmers in securing credit for the improvement and development of their farms, is widely used in the tobacco areas of Ontario for the financing of portable sprinkler systems.



allowed the full base arrearage to be planted to flue-cured tobacco in 1954 as compared with 75 p.c. in 1953. In 1954 variable weather conditions were experienced in the tobacco-growing areas of Ontario and Quebec. Although soil moisture had been low in some of the Ontario districts, periodic light refreshing showers in late August and early September were extremely valuable in arresting loss. In addition, an increased number of growers took advantage of supplementary irrigation in 1954. Tobacco acreages in 1954, with data for 1953 in parentheses, were: Quebec 10,166 acres (9,020); Ontario 118,600 acres (91,996); and British Columbia 72 acres (72).

Honey.—Honey is produced commercially in all provinces of Canada, Ontario having the largest output. From 1951 to 1953 the annual farm cash income from the sale of honey decreased from \$6,445,000 to \$4,099,000. Preliminary estimates place the 1954 crop at 19,900,000 lb., about 25 p.c. lower than the 1953 crop of 26,400,000 lb. It was the smallest crop since 1926 and 43 p.c. below the 1943-52 average of 34,600,000 lb. Unfavourable

Harvesting sugar beets in Manitoba.





Off to the maple sugar bush—a spring activity that adds to the income of many farmers, particularly in the Eastern Townships of Quebec.

weather experienced throughout much of Canada in 1953 resulted in low average yields per colony everywhere except in Quebec. In 1954 the number of beekeepers increased by 6 p.c. to 14,740, which was the first upward change since 1945 when there was a record maximum of 43,300. Colony numbers, however, were down slightly in 1954 from 1953, particularly in Quebec and Ontario.

Sugar Beets.—Sugar beets are grown commercially in Quebec, Ontario, Manitoba and Alberta, and sugar-beet processing plants are located in each of these provinces. In 1954, 1,003,853 tons of sugar-beets were produced from 90,453 acres compared with 900,339 tons in 1953 from 81,952 acres. Harvested acreages in 1954, with data for 1953 in parentheses, were: Quebec, 6,473 (7,025), Ontario 23,504 (22,771), Manitoba 23,510 (17,455) and Alberta 36,966 (34,701). The increased acreage in Manitoba was mainly responsible for the larger crop in 1954—the fourth largest on record.

Maple Products.—In 1954, 2,304,000 gal. of maple syrup and 1,175,000 lb. of maple sugar were produced. The gross farm value of these products amounted to \$11,000,038, about \$3,700,000 higher than in 1953. The increase in value is attributable to both a large crop and higher prices, the prices reflecting in part the relatively good quality of the output and better offers for that portion exported. Quebec accounted for 88 p.c. of the total syrup production and 94 p.c. of the sugar production. Nova Scotia, New Brunswick and Ontario shared the remainder.



The farmer's boy is the lucky boy, with most of the home comforts and educational opportunities of the city lad—but with all outdoors for a playground.



La Cusé falls is the site of the first of the hydraulic works of the Great Bersimis River hydro-electric project now under construction in the Quebec wilderness, north of the St. Lawrence River.

Water Power

• Water Power and

Canada's Economic Development

CANADA'S extensive water-power resources have been a major factor in her economic development—industrially and geographically. As the source of large quantities of low-cost power, they have made possible the exploitation of her nation-wide forest, mineral and other primary resources on a scale unmatched elsewhere in the world. They have also been an important influence in the gradual industrialization of the country.

The development of power and the establishment of industry is coincident. In most sections of Canada, geological formations, climate and topography combine to create sources of hydraulic power. The Canadian Shield contains, in the basins and waters of its rivers, many falls and rapids and innumerable storage reservoirs either natural or capable of economical creation by artificial means. The most accessible and readily harnessed of the power sites—those in the settled areas of Ontario and Quebec—were the first to receive attention. As the demand for power increased, hydraulic development was extended and as more power became available, industry was extended to utilize it. Thus, the Great Lakes-St. Lawrence region of these two provinces, where native coal is not available but which abounds in many raw materials of industry, is now the most highly industrialized and densely settled portion of the country.

British Columbia, third among the provinces in population and production, is also third in developed water power. The rivers of this mountainous area offer many high-head sites for some of which storage and concentration of flow by the diversion of smaller streams provide great power possibilities. The economy of British Columbia was founded upon and still depends on the Province's vast forest and mineral resources; the development of the great pulp and paper plants and the smelters was coincident with the development of water power. The attraction of the power potential of British Columbia and of Yukon Territory to new industry is realized to be a future asset of first importance.

In the Atlantic Provinces, precipitation is moderately heavy and the rivers, though not large, afford many possibilities for moderate-sized developments which are gradually being constructed as required. Only the prairies of the south middle-west are without water-power resources, a lack compensated for by the large coal and oil reserves of that area.

Canada's installed capacity of 17,000,000 h.p. is higher than that of any other nation in the world, with the exception of the United States with its 35,000,000 h.p. As for per capita installation, Norway comes first with 1.3 h.p. and Canada second with 1.1 h.p. followed in order by Switzerland, Sweden and the United States. It is interesting to note, however, that the per capita installations of Quebec and British Columbia (both 1.8 p.c.) are above the Norway figure.



BERSIMIS POWER

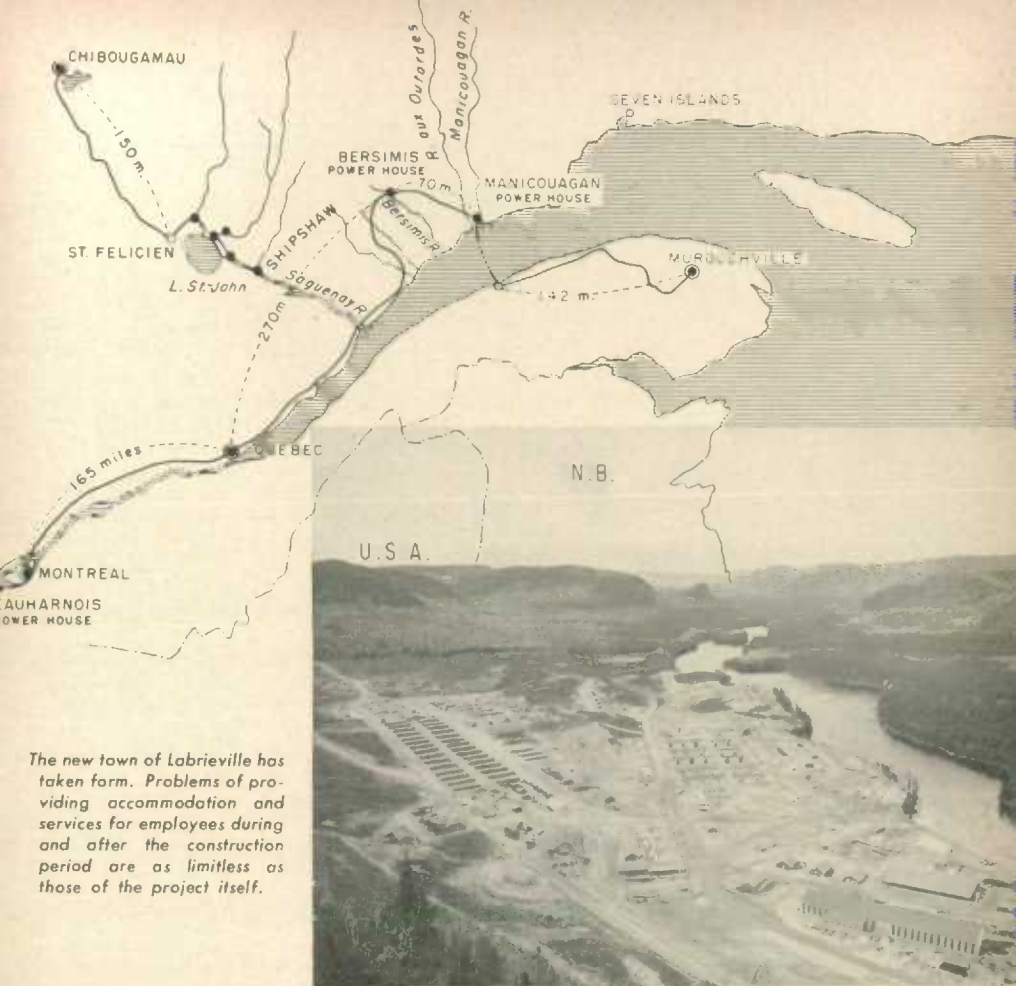
When terminated, the Bersimis development of the Quebec Hydro-Electric Commission will feature almost perfect control of the river and complete harnessing of its hydraulic resources. A high-tension transmission line will distribute the power to the Lake St. John - Quebec - Montreal system and eastward to the Gaspé peninsula.

Available and Developed Water Power, by Province, Jan. 1, 1955

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	958,500	2,754,000	323,150
Prince Edward Island	500	3,000	1,882
Nova Scotia	25,500	156,000	170,908
New Brunswick	123,000	334,000	164,130
Quebec	10,896,000	20,445,000	7,773,822
Ontario	5,407,000	7,261,000	4,845,486
Manitoba	3,333,000	5,562,000	756,900
Saskatchewan	550,000	1,120,000	109,835
Alberta	508,000	1,258,000	258,710
British Columbia	7,023,000	10,998,000	2,246,868
Yukon and Northwest Territories	382,500	814,000	32,440
Canada	29,207,000	50,705,000	16,684,131

Person for person, Canadians use about six times as much hydro-based power as do Americans. One reason for this difference is that Americans, because of location, must rely much more heavily on thermal sources (coal, oil and natural gas) to meet the expanding requirements of their main centres of population and industry. In Canada, 95 p.c. of all power produced for sale is generated hydraulically as compared with about 20 p.c. in the United States. Another and perhaps equally important reason for the higher per capita use of hydro power in Canada is low cost. Residential and commercial customers in Canada pay about half, and industry less than a third, of the rates charged for similar services in the United States. Rural power is the only exception; wide-spread farm electrification in Canada and the low density of population in country areas has resulted in more costly rural power.

This factor of lower price stems from a number of considerations. The major one is, of course, the abundance of economic water power coupled



The new town of Labrieville has taken form. Problems of providing accommodation and services for employees during and after the construction period are as limitless as those of the project itself.

with a great accumulation of experience in the related fields of engineering and operation. In addition, most of Canada's power utilities are large enough to have achieved well-balanced year-round operations. The others are mostly on-site power users whose transmission and distribution costs are held to a minimum. Time, too, has been a favourable factor since many Canadian power plants were built when construction costs were only a fraction of what they are to-day; also these plants have not had to contend with the inflationary effect of rising fuel costs—a common experience in most thermal power-using economies since the late 1930's.

Records show that water power was used for lighting sawmills in Ottawa as early as 1882, the same year in which electricity was offered for sale in London and New York. Before 1890 it was being distributed throughout a number of towns in Ontario and Quebec, and what was probably the first actual long-distance transmission line in the British Empire was constructed in southern Quebec in 1895. Improvement in the technique of transmission



Waneta power plant and dam, 11 miles south of Trail, B.C., was brought into operation in 1954. It has an ultimate capacity of double the 240,000 h.p. now installed.

together with the perfecting of the electric motor and the adaptation of electricity to metal-refining and the manufacture of electro-chemicals, provided the basis for Canada's great electric-power industry. Many power-using industries and major networks of to-day can trace their beginnings back to around 1900.

At first industry tended to concentrate on the production of electric power for its own use, factories and street railways preferring to run their own generating facilities rather than depend for their power on specialized utilities. But, as the problems associated with large-scale generation and transmission were solved, the economies inherent in load balancing and guaranteed service became evident, and transmission lines were gradually extended to comprise what have subsequently become giant power-transmission networks. Between 1910 and 1930 many large smelters and refineries and pulp and paper-making establishments were put into operation in widely separated sections of the country and the amount of purchased power grew rapidly. Well before the start of the depression of the 1930's, less than 10 p.c. of the nation's electric power was being produced by industries for their own use.

For a long time, electric lighting played the most prominent role in consumption of power. Twenty-four-hour operations did not become general until after World War I when better loading patterns were developed as a result of new applications for power in industry and the extension of household and commercial uses. Residential sales have since presented a record of almost uninterrupted expansion and, although sales to commercial and

manufacturing establishments have been modified by changing business conditions, power consumption for these purposes has rarely fallen off. Instead, the tendency for power to replace labour has increased during periods of recession. Productivity has been stimulated and this, in turn, has speeded the recovery of the more power-oriented industries in the Canadian economy. The history of power consumption may be traced by noting the dates on which certain milestones were passed. In May 1926, Canadian consumers first used more than one billion kilowatt hours in a month. Consumption passed its second billion early in 1936, its third in 1941, its fourth in 1948 and, in an astonishing spurt, its sixth billion a month late in 1953. The tempo of demand is still rising, and the upward trend of consumption will probably continue at about the same level until 1960.

Power for the mining and metallurgical industries of Gaspé peninsula.



The longest high-voltage submarine cable ever laid carries power from the north shore of the St. Lawrence River to the south shore east of Rimouski, to serve the Gaspé peninsula. Initial power from the Manicouagan River will be replaced by power from the Bersimis plant when completed. The cable was laid on July 29, 1954.



The growth of the generating capacity* of hydro plants has averaged a quarter of a million horse power a year during the past half-century:

1900	200,000 h.p.	1940	8,600,000 h.p.
1910	1,000,000 h.p.	1950	12,600,000 h.p.
1920	2,500,000 h.p.	1955 (est.)	17,200,000 h.p.
1930	6,100,000 h.p.		

Along with the advance in capacity has come a corresponding advance in the effective use of that capacity. At the end of 1950, the generating capacity of utilities was five times as great as in 1920, but the amount of power produced was nine times as great.

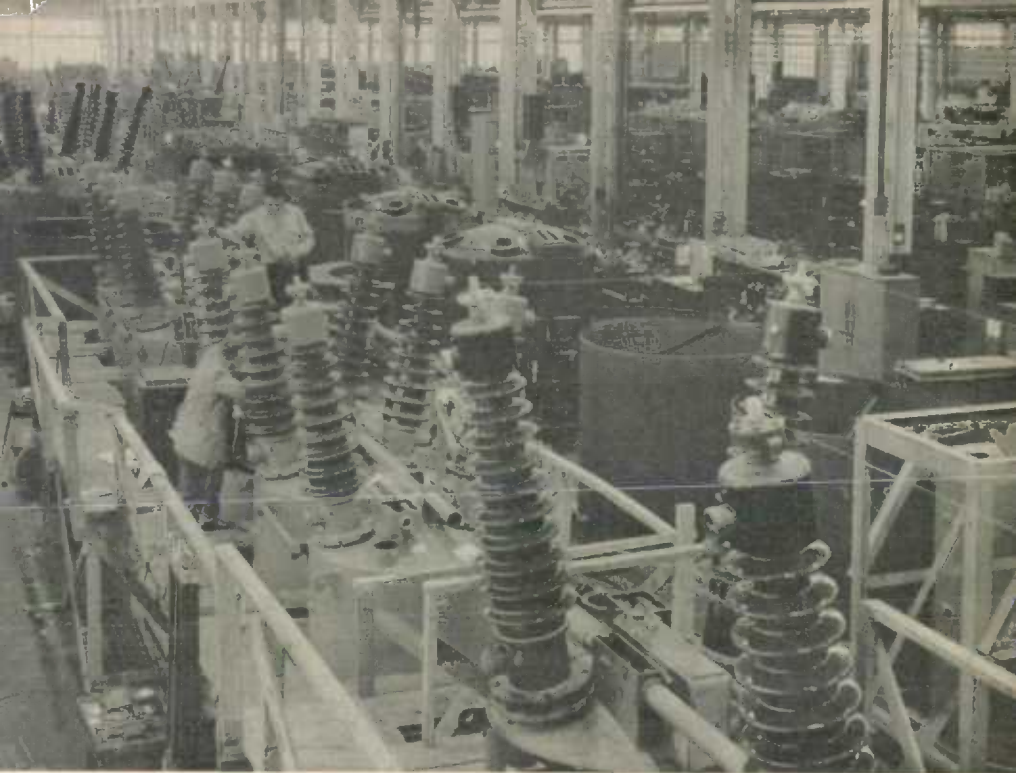
What has brought about this greater utilization of plant? Year-round, 24-hour operations in chemical and metallurgical type industries have helped to build up base loads. Refrigeration and thermostatically controlled space heating have worked in the same direction. Television is providing an element of continuity and new summer demands like air-conditioning are beginning to offset the high winter peak lighting and water-heating loads which formerly called for so much stand-by capacity.

Great improvements have also been made from the operational standpoint. Regulation of stream flow through the use of storage has multiplied the power potentialities of many river systems. Tributary and inter-basin connections have made it possible to offset their different generating characteristics. Borrowing or selling during peak demand periods has gone hand in hand with improved methods of long-distance transmission. Co-operation between systems, for reasons of economy, have become essential and have led to over-all river basin developments. Exports and imports (inter-regional, interprovincial or international) have often provided the only means by which stand-by capacity could be reduced and existing plants put to maximum use.

* Capacity for the generation of electric power is measured in horse power or kilowatts and the quantity delivered in kilowatt-hours. If generators could be operated continuously at maximum capacity throughout the year, the kilowatt-hours would be 8,760 times the kilowatts. For a number of reasons this cannot be done, principally because the need for electricity is not constant throughout the day, week or year.



A 50-year-old dream took its first form on Aug. 10, 1954, when the \$1,000,000,000 St. Lawrence power and seaway development got officially under way. A sad-turning ceremony performed by Prime Minister St. Laurent, Governor Dewey of New York and Premier Frost of Ontario launched the project.



Circuit breakers under construction. The electrical apparatus and supplies industry in Canada has an annual output of about \$250,000,000.

As a result, the ratio of actual usage to full-time capability of equipment has risen from 25 p.c. at the beginning of the century to 46 p.c. in 1950 and will probably be over 50 p.c. in 1955. Peak operations for a utility are reached only on those rare occasions when daily and seasonal peak demands coincide, but provision must be made for maximum load, including adequate allowance for repairs and periods when plant is not operating for other reasons. Thus full-time utilization of approximately one-half of generating capacity represents a noteworthy technological and administrative achievement.

Abundant supplies of cheap electricity have in the past fostered the establishment of large power-consuming industries, such as pulp and paper mills and non-ferrous metals smelters and refineries, which together consume two-thirds of all the power used in manufacturing in Canada. These industries have tended to migrate to areas in which large blocks of electric energy could be developed alongside either the necessary raw materials or avenues of transportation. For a long time, competing demands for electricity from small power users were not a factor and electricity was largely responsible for many of the single-industry towns that have become established across the country.

Long-distance transmission and the use of all electrical machinery have brought many advantages to the manufacturer. The productivity of labour has been increased immeasurably; it has been estimated that the present installed capacity, if operated at full load, is capable of producing energy at

a rate equal to the working capacity of 167,000,000 men. Power can now be brought to the factory so that greater flexibility is afforded as far as location is concerned. An industry is frequently free to base its choice of site on such other considerations as proximity to raw materials, markets and labour. Factory layouts have been made more efficient and employees provided with cleaner, safer working conditions. The installation of individual motors makes possible the isolation of breakdowns and the reliability of operations has been greatly increased.

The power industry has also been instrumental in encouraging the establishment and diversification of the electrical apparatus and electronic equipment manufacturing industries. The early construction period brought firms making heavy machinery such as turbines, generators and electric motors, several of the largest of which were branches of United States companies. In the late 1920's and the 1930's plants were built for the production of household appliances and radios. The electronics industry became established during World War II and, along with industries producing radar and television equipment and similar types of electrical apparatus and supplies, has continued to expand in terms of both value of production and quality of output.

The effect of the development of water power on Canada's economic growth cannot be measured in over-all terms but, for every dollar spent on the construction of new power capacity and transmission facilities, two dollars have gone into the building and equipping of new manufacturing plants. For every employee engaged by the power companies, 50 have found jobs in secondary industry and for each additional outlay on electric power, as a cost of production, the nation's output of manufactured goods has advanced a hundred fold.

It is therefore not surprising that great hopes are held for Canada's future. With projects totalling approximately 10,000,000 h.p. scheduled or proposed for completion by 1965, abundant electricity will be available for utilization, and the advance of this basic industry will help, through its very momentum, to carry along with it the rest of the Canadian economy. Thus, in innumerable and unforeseen ways, it will continue to do what it has accomplished so well in the past—stimulate industrial development in those resource and resource-allied fields in which Canada possesses its greatest natural advantage.

• *Hydro-Electric Construction during 1954*

Hydro-electric capacity brought into operation during the year 1954 reached a record high. New plants, with a total installation of 1,758,450 h.p. were well distributed across the country but the major developments were in British Columbia and Ontario. At the end of the year, projects having a total capacity of more than 3,000,000 h.p. were under construction or were definitely planned for construction within the next few years.

Ontario.—The Hydro-Electric Power Commission of Ontario completed the installation of seven units, each of 105,000 h.p., in its Sir Adam Beck Generating Station No. 2 on the Niagara River. The present plant, to be completed in 1956, is designed for 12 similar units but ultimately the total installation may be raised to 1,500,000 h.p. The power produced will serve



Sir Adam Beck Generating Station No. 2 project on the Niagara River has involved extensive intake works, two 45-foot tunnels $5\frac{1}{2}$ miles long, two miles of canals, headworks and a power house. Completion is scheduled for 1956.



to meet the growing needs of southern Ontario's diversified industries. In northwestern Ontario, the Commission completed two units each of 45,000 h.p. in its Pine Portage generating station on the Nipigon River, bringing capacity to 172,000 h.p. Progress was made on the initial stages of the 55,500 h.p. development at Manitou Falls on the English River for 1956 operation. Demand in this area is principally from mining and pulp and paper industries.

Final agreement was reached with United States authorities towards the development of the rapids on the international section of the St. Lawrence River and the Ontario Hydro, as the participating Canadian agency, began preliminary construction. The scheme involves the building of a dam and power house at the foot of Barnhart Island, a dam on the American channel at the Long Sault rapids and a control dam at Iroquois. Total installed capacity will be 2,400,000 h.p. in 32 units each of 75,000 h.p., equally divided between the two countries, and full operation is planned for 1958. Considerable flooding of land on the Canadian shore will involve major problems of re-location of highways, railroads and communities.

The Great Lakes Power Company completed its two-unit 15,000-h.p. development at McPhail Falls on the Michipicoten River, bringing the total capacity of the Company to 148,100 h.p. in six plants which serve principally the mining, steel and pulp and paper industries in the Sault Ste. Marie area.

Quebec.—Only a small amount of new capacity was brought into operation in Quebec in 1954, but the Quebec Hydro-Electric Commission was busy with the construction of its very large Bersimis River project designed for 1,200,000 h.p. in eight units, of which three are expected to be in operation in 1956. The scheme involves the construction of a 200-ft. dam, a $7\frac{1}{2}$ -mile tunnel $31\frac{1}{2}$ ft. in diameter, and an underground powerhouse. The power produced will be used initially to serve principally the mining and metallurgical industries in the Gaspé peninsula by means of a 69-kv. submarine cable $31\frac{1}{2}$ miles in length which was laid in 1954 across the bed of the St. Lawrence River, but interconnection will be made later with the Lake St. John and Shawinigan systems and with the Commission's network in the Montreal area. The transmission line from Bersimis to Montreal will be 400 miles long and carry power at 300-kv.

Plants completed during the year include: 32,000 h.p., Rapid II, Ottawa River, Quebec Hydro-Electric Commission; 17,000 h.p., Ste. Marguerite River, Ste. Marguerite Power Company, serving the Sept-Iles area; 4,500 h.p., Gayhurst site, Chaudière River, City of Mégantic; and 1,200 h.p., Lac des Sables, Petites Bergeronnes River, Quebec Rural Electrification Bureau. For 1955 operation, the Shawinigan Water and Power Company is installing one additional unit in each of its Rapide Blanc, La Trenché, and La Tuque plants, for a combined total of 158,500 h.p.

British Columbia.—The highlight of hydro-electric construction in 1954 was the completion of the first stage of the Kemano-Kitimat project of the Aluminum Company of Canada and the pouring of the first aluminum ingot at the new smelter. The first three turbines, each of 150,000 h.p., were brought into operation and power is being delivered at 287-kv. over the 50-mile transmission line to Kitimat. The planning and execution of this great development amid the snow-capped mountains of the Coast Range has caught the imagination of people everywhere; it has involved the reversal of the flow of rivers by the highest rock-fill dam in Canada, the creation of an immense storage reservoir, tunnelling for ten miles through mountains, the first underground power house in Canada, and the largest impulse turbines in operation anywhere. The development has an ultimate capacity of about 2,000,000 h.p. Present capacity of the smelter is 183,000,000 lb. of aluminum a year, with a potential of 1,100,000,000 lb., a production that will further

Two-thirds of all the power used in manufacturing is consumed by non-ferrous metal smelters and refineries and pulp and paper mills.



strengthen Canada's position as the most important source of this vital metal among the free countries.

The Consolidated Mining and Smelting Company completed the first stage of its Waneta development on the Pend d'Oreille River, bringing into operation two units each of 120,000 h.p. The British Columbia Electric Company finished installing 62,000 h.p. in its Bridge River plant and is proceeding with the development of 58,000 h.p. at Seton Creek. The British Columbia Power Commission continued work on the re-development of 35,000 h.p. at Puntledge River and is building a plant of 5,250 h.p. on the Spillimacheen River.

In northern British Columbia and southern Yukon, Northwest Power Industries Limited continued investigations towards a major hydro-electric development with an ultimate capacity of perhaps 4,300,000 h.p. The scheme involves the conversion of the large lakes in the headwaters of the Yukon River into a huge storage reservoir by the building of dams near Whitehorse and at other locations. The flow of the main Yukon River and of adjacent rivers and streams will then be diverted to the valleys south of Atlin Lake. In the first stage, Atlin Lake would be connected with Sloko Lake by tunnel and a small development of about 28,000 h.p. built on the Sloko River for construction purposes. A ten-mile tunnel would then be driven from Sloko Lake to the Nakonake Valley, providing a head of 1,100 ft. and allowing the development initially of 880,000 h.p. and ultimately of 2,800,000 h.p. Later, a third tunnel would convey the water to the Taku River valley near tidewater. The proposed industrial site is on the Taku River in British Columbia where smelters and refineries for metallurgical purposes would be located and a new city and port built.

Prairie Provinces.—Calgary Power Limited completed the installation of a new unit of 30,000 h.p. in its Ghost plant on the Bow River and also on its Bearpaw development of 20,750 h.p. near Calgary. The Manitoba Hydro-Electric Board brought into operation the first four units each of 10,000 h.p. in the 80,000-h.p. McArthur Falls development on the Winnipeg River with completion scheduled for 1955. A development of 300,000 h.p. on the Saskatchewan River is under consideration.

In addition to water-power development, the capacity of each of the steam plants at Saskatoon and Winnipeg was increased by 25,000 kw.

Atlantic Provinces.—Plants completed comprised only 9,000 h.p. on the Nictau River in Nova Scotia by the Nova Scotia Light and Power Company and 12,000 h.p. on the Ashuanipi River in Labrador by the Iron Ore Company. The New Brunswick Electric Power Commission has proposed undertaking, for 1957 operation, the development of the Beechwood site on the St. John River, the plant to contain initially two units and ultimately four units, each of 45,000 h.p. Power requirements in the Province are growing with the development of the mining and refining of base metals and the growth of the pulp and paper industry.

Investigations have been carried out by the British Newfoundland Corporation Limited with a view to the development of Grand Falls on the Hamilton River in Labrador. The Falls have a power potential of perhaps 3,500,000 h.p. with full storage on upper lakes and constitute one of the more important undeveloped sites in Canada.

• Central Electric Stations

Central electric stations represent the electric-power industry and are either commercial (privately owned) stations or are publicly owned, that is, operated by federal, provincial or municipal governments. They include both wholesale and retail distribution systems, whether the energy is generated in their own plants or purchased for resale. They are also classified according to the kind of power used—hydraulic or water-driven, fuel or steam, and non-generating or distributing only.

The 344 hydraulic stations in Canada generate almost 97 p.c. of the total output of central electric stations and are the major sources of power for the pulp and paper, aluminum, smelting and other manufacturing industries. Canadians enjoy the advantage of probably the cheapest electricity in the world, in great volume, with a turbine installation of almost 16,700,000 h.p. More than half the farms in Canada and the great majority of urban homes have the benefits of power service. Revenues of central electric stations in 1952 totalled over \$415,494,074. Based on monthly output data, the generation of central electric stations since 1929 was as follows:—

	1929	1939	1949	1953	1954
	(‘000 kwh.)				
Generated by—					
Water power.....	17,294,463	27,861,784	45,084,284	61,608,324	65,846,417
Thermal engines.....	331,464	489,730	1,588,930	3,880,929	3,290,167
TOTALS.....	<u>17,625,927</u>	<u>28,351,514</u>	<u>46,673,214</u>	<u>65,489,253</u>	<u>69,136,584</u>

Highlight of hydro-electric construction in 1954—completion of the first stage of the Kitimat project in British Columbia. The first three turbines in the underground power house were put in operation and power delivered over the 50-mile transmission line.





British Columbia logs brought from the cutting areas by truck are transferred to the water secured into booms and floated to the mill.

Forestry

IT IS DIFFICULT to give a complete picture of the value of Canada's forests to the national economy. They generate, directly or indirectly, at least one-fifth of the total national income. They provide direct employment for hundreds of thousands of persons and keep great armies of workers employed elsewhere, notably in the chemical, machinery and electrical equipment industries and also in the fields of transportation, agriculture and hydro-electric power. They account for almost one-third of the total exports of the country and capital expenditures of the forest industries have recently run to about \$35,000,000,000 annually. It cannot be over-emphasized therefore that Canada has no better asset and none more worthy of careful management. The lumber and the pulp and paper industries whose future is dependent upon the perpetuity of the forests, the provincial governments who administer most of the forested land within their boundaries and the Federal Government whose interest is in forestry matters of national importance are all concerned with the conservation and protection of this valuable resource.

The total forested area of Canada* is estimated to be 1,485,870 sq. miles, 42 p.c. of the country's total land area. More than 44 p.c. of this forested area is incapable of producing crops of merchantable timber because of adverse climatic, soil or moisture conditions; although this portion is of little significance at present to the forest industries, it still provides valuable protection for drainage basins and shelter for game and fur-bearing animals. The country's productive forests extend over some 827,162 sq. miles—23 p.c. of the land area of Canada and 39 p.c. of the land area of the ten provinces. A total of 578,000 sq. miles, or 70 p.c. of the productive area, is considered accessible for economic exploitation. Trees of merchantable dimensions occupy 60 p.c. of this accessible area and the remainder is occupied by young trees that will grow to merchantable size. The inaccessible productive forests, 249,000 sq. miles in extent, constitute a reserve for the future.

Of the total productive forests, approximately 63 p.c. is comprised of softwood, 25 p.c. mixed wood and 12 p.c. hardwood. There are more than 150 tree species in Canada, 31 of which are conifers.

Of Canada's occupied forest lands, 30 p.c. is privately owned, the remainder being still in the possession of the Crown in the right of either the federal or provincial governments. Forests lying within the boundaries of the provinces, as with other natural resources, are administered by the provincial governments. The Federal Government is responsible for administration of forests in the Yukon and Northwest Territories, the National Parks and forest experiment stations. The general policy of the different governments is to dispose of the timber under their jurisdiction by means of leases and annual licences to cut, rather than by the outright sale of timberland.

Primary wood products cut from the forests were estimated to average about 3,370,000,000 cu. feet in the five years 1948-52. Total depletion for that period averaged 4,125,000,000 cu. feet, including an estimated 255,000,000 cu. feet destroyed by fire and 500,000,000 cu. feet by insects and diseases.

* All figures in this section are exclusive of Labrador, for which information is not yet available.



Federal Government foresters are almost entirely engaged in research, provincial foresters mainly in administration of forested lands, and private industry foresters in management and protection. Here a provincial forester is making a temperature study of a log where birch seedlings are often found.

Of the wood utilized in 1952, 31.7 p.c. comprised logs and bolts, 27.7 p.c. pulpwood, 19.4 p.c. fuelwood and 3.0 p.c. other products. About 18 p.c. of the pulpwood and less than 1 p.c. of the logs and bolts was exported in unmanufactured form.

Forest growth is generally prolific in Canada and the saving of the woodlands ordinarily involves only proper management—adequate protection and the development of cutting methods that will encourage a maximum growth and yield. Much progress has been made during the past decade in scientific forestry and productivity is being increased by finding economic uses for a larger number of species and for hitherto waste material. Wherever possible, logs are diverted to the purpose to which they are best suited—lumber, plywood, pulp and other products. The different provinces are requiring lessees of Crown lands to establish and improve forest working plans in accordance with sound forestry principles; research is being intensified by both governments and industry; the Federal Government is assisting the provinces in the completion of their forest inventories and in the reforestation of Crown lands.



An average of 45 men are employed in a jobber's camp in the Gatineau woods of Quebec. Accommodation is as comfortable as possible and food plentiful and nutritious. The camps are inspected regularly by company officials and kept up to standard.

To-day, forest operations are thoroughly modern industrial undertakings in which up-to-date means of communication are used to direct tens of thousands of men over areas measured in tens of thousands of square miles. The wood is cut and moved by modern mechanical means. No longer is woods work a job only for those with strong backs and strong stomachs. Living conditions provided for the workers are good, food is good and no essential comforts are lacking. The number employed the year round in the forests is on the increase and where conditions permit, permanent forest communities have been set up and the surrounding woodlands are harvested on the basis of perpetual yield.

Forest Industries

The forest industries of Canada comprise woods operations, the lumber industry, the pulp and paper industry, and the wood-using and paper-using

Radio-equipped aircraft are used to good effect in many districts of Canada for the detection and suppression of forest fires.

Laying fire hose by helicopter. ►



Men and equipment are flown to the scene of a forest fire.



groups of industries, the latter groups using partially manufactured wood, pulp or paper as their raw materials. The net value of production for the forest industries was \$1,931,000,000 in 1952, which was 26 p.c. of the net value of production for all Canadian manufacturing industries.

In 1952, more than 362,000 men and women were directly dependent upon the forest industries for their livelihood—seven out of every 100 Canadian workers. The logging industry employed 149,000, the lumber industry 61,000, the pulp and paper industry 58,000 and the wood-using and paper-using industries 94,000.

Woods Operations.—East of the Rocky Mountains, logging operations are generally carried on by individual lumber companies and by pulp and paper companies, although the latter obtain a moderate part of their requirements from independent pulpwood loggers. In British Columbia most of the large lumber companies operate their own logging units. Truck logging has almost replaced railroad operations and, as a result, there has been some increase in the number of small independent truck loggers but their output is only a small proportion of the total for the Province. A not inconsiderable part of the country's primary forest production comes from farm woodlots; the chief product is fuelwood, but quite large quantities of pulpwood, sawlogs and wood products for use on the farm and for wood-using industries are also produced from these areas. The output of primary forest products declined slightly in volume but increased in value in 1952; production amounted to over 3,565,000,000 cu. feet valued at \$815,651,194.

Value of Primary Forest Production, 1951 and 1952

Product	1951	1952
	\$	\$
Logs and bolts.....	316,027,115	304,262,790
Pulpwood.....	381,920,846	396,102,104
Fuelwood.....	50,521,011	61,355,643
Heavy railway ties.....	612,583	1,292,636
Poles.....	13,249,988	16,961,456
Round mining timber.....	6,420,818	19,917,669
Fence posts.....	2,920,922	3,432,675
Wood for distillation.....	466,491	441,443
Fence rails.....	671,491	758,519
Miscellaneous.....	9,713,750	11,126,259
Totals.....	782,525,015	815,651,194

Domestic utilization of primary forest products runs at about 92 p.c. of the total output. Practically all logs, bolts and fuelwood produced are used within the country as well as between 80 and 90 p.c. of the pulpwood.

Lumber.—In 1952 the lumber industry led all other manufacturing industries in total employment, placed second in total wages and salaries paid and fourth in net value of products. The number of active sawmills was 8,283. These mills are widely distributed across the country—wherever merchantable trees grow and markets have been developed for lumber products. Most of the larger mills are in British Columbia where the handling of large trees requires specialized and massive mechanical equipment that, in turn, necessitates the building of permanent mills employing large staffs and



Sawmill at Port Arthur, Ont.

operating throughout the year. In contrast, the smaller trees of eastern forests make it economically feasible to build smaller and comparatively inexpensive mills that generally operate in the summer and autumn seasons.

Production of Sawn Lumber and All Sawmill Products, 1952

Province or Territory	Sawn Lumber Production		Total Sawmill Products
	'000 ft. b.m.	\$	\$
Newfoundland.....	55,100	3,469,111	3,743,603
Prince Edward Island.....	9,437	498,948	578,047
Nova Scotia.....	296,915	18,101,419	20,162,764
New Brunswick.....	259,906	17,273,232	20,816,235
Quebec.....	1,093,862	75,064,381	89,264,991
Ontario.....	840,484	65,325,145	83,158,216
Manitoba.....	61,052	4,001,844	4,207,534
Saskatchewan.....	78,478	4,518,638	4,857,183
Alberta.....	409,570	21,457,863	23,862,564
British Columbia.....	3,696,459	272,860,148	316,723,587
Yukon and Northwest Territories.....	6,331	624,594	648,424
Canada.....	6,807,594	483,195,323	568,023,148

The 1952 gross value of \$568,023,148 includes the following commodities: sawn lumber (\$183,195,323); shingles (\$19,269,747); sawn ties (\$18,516,170); processed pulpwood (\$10,867,068); box shooks (\$3,754,004); spoolwood

(\$2,448,653); flatted mine timbers (\$1,861,355); staves (\$1,457,340); lath (\$1,237,227); pickets (\$495,780); heading (\$556,691); and other wood products and by-products (\$24,363,790).

Over 49 p.c. of the sawn lumber produced in 1952 was exported and the remainder was used in Canada for structural work and by wood-using industries.

Pulp and Paper.—The production of pulp and its conversion into newsprint, other papers and paperboard is one of Canada's major manufacturing enterprises. This industry ranks first in gross and net value of products and in wage and salary distribution, and is second only to sawmills in employment. Its growth has been particularly marked since the end of World War II: pulp production has risen from 5,600,814 tons in 1945 to 9,077,063 tons in 1953, and the output of paper and paperboard has advanced from 4,359,576 tons to 7,376,526 tons during the same period.

Over one-fifth of the total pulp production is exported, and in this respect Canada leads all other countries. Such exports, consisting largely of the more expensive grades of chemical pulp, move chiefly to the United States market and in 1953 totalled 1,950,152 tons valued at \$248,674,880. Newsprint is the principal product made from the pulp retained in this country. Canada contributes more than half of the total world output of newsprint and for many years has been the largest exporter of this commodity, supplying more than four-fifths of the world's exports. Newsprint production in Canada has increased steadily since the end of the War, reaching new heights each year—from 3,324,033 tons in 1945 to 5,755,471 tons in 1953. Exports have shown corresponding gains, rising from 3,058,946 tons to 5,375,251 tons. Newsprint exports were valued at \$619,033,394 in 1953, over 90 p.c. going to the United States.

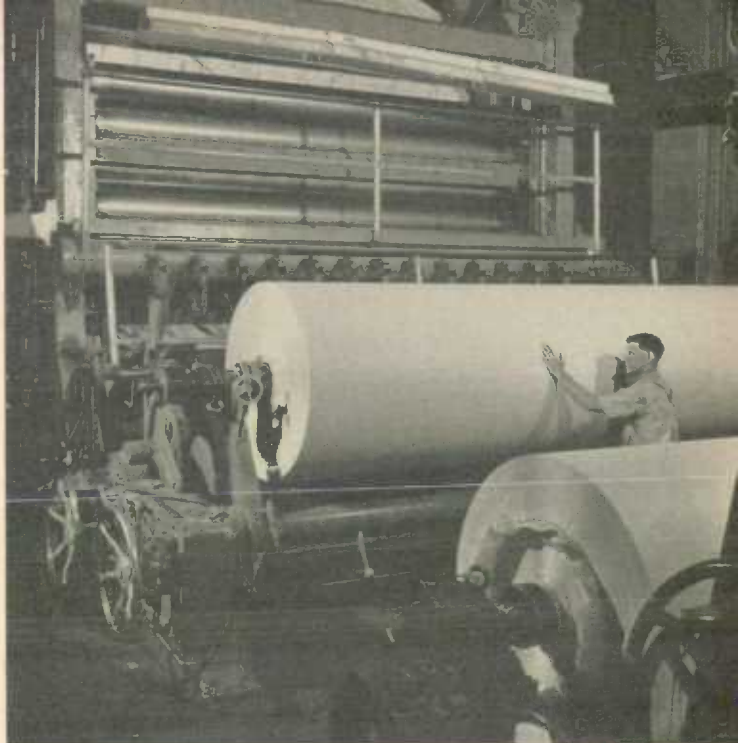
One-quarter of Canada's paper production comprises paperboard, fine papers of all kinds, wrapping paper, and various types of building paper and boards. While newsprint, like pulp, generally moves freely in world markets without tariff restrictions, these other grades of paper and of paperboard have been shut out of many markets abroad by tariffs; the mills producing these grades operate mainly to meet domestic requirements.

Several trends are noticeable in the pulp and paper industry. Increased capacity and production have been largely the result of technological improvements, such as the speeding-up of paper machines. The use of wood-waste in the making of pulp is increasing and some of the new pulp mills in British Columbia depend entirely on the by-products of sawmills, such as slabs and edgings, for their operation. Research has developed new pulping methods which give greater yields and also make possible the utilization of hardwood species in ever-increasing volume.

In recent years, the growth of the industry has been westward. Several new mills have been built in British Columbia, and Alberta's first pulp and paper mill recently came into production. Although the industry is still concentrated in the Provinces of Quebec and Ontario, it accounts for an important share of the industrial activity in Newfoundland, New Brunswick, Nova Scotia and Manitoba. There are no pulp and paper mills in Prince Edward Island and Saskatchewan but both provinces supply pulpwood to mills located elsewhere.

Canada's leading single industry is newsprint manufacturing and, with the exception of Prince Edward Island and Saskatchewan, every province shares in the production of this universally required commodity

Ocean Falls, B.C.



The effect of such an industry on Canadian commerce as a whole is perhaps best illustrated by its relationship with two fundamentals in the economy—power and transportation. In the first, pulp and paper accounts for a third of all the power consumed by all industry in Canada; and, as far as the railways are concerned, one of every nine revenue freight cars loaded in Canada is loaded with pulp, paper or pulpwood.

Principal Statistics of the Pulp and Paper Industry, 1930, 1940, 1952 and 1953

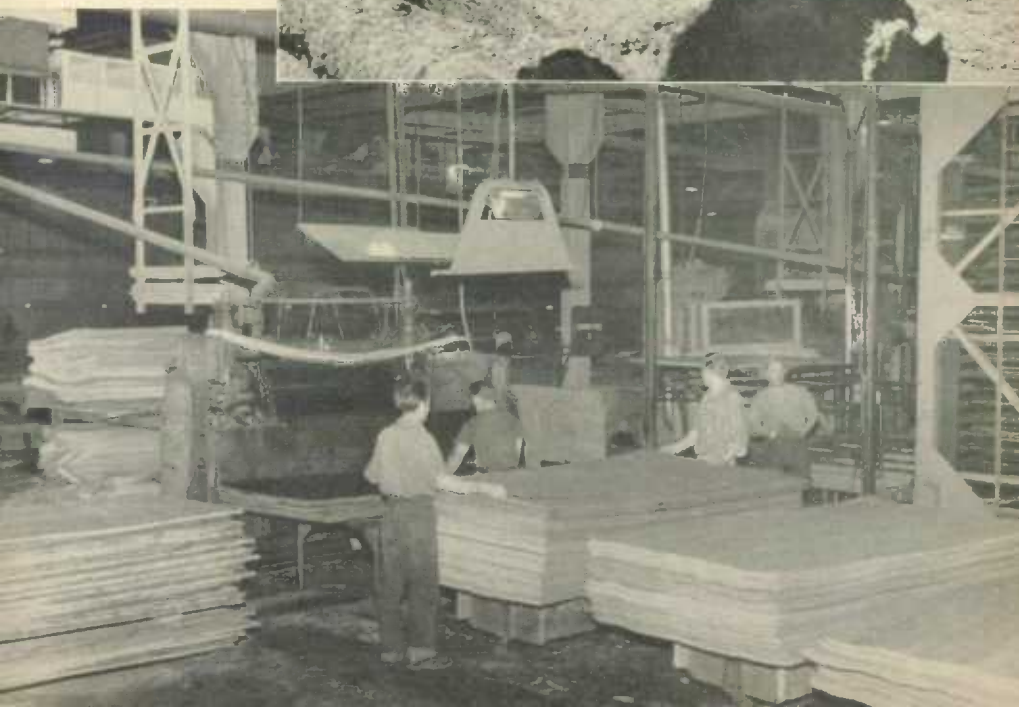
Item	1930	1940	1952	1953
Establishments.....No.	109	103	128	127
Employees....."	33,207	34,719	57,803	58,194
Salaries and wages.....\$	45,774,976	56,073,812	225,353,327	235,741,660
Gross value of products.....\$	215,674,246	298,034,843	1,157,887,657	1,179,665,443
Net value of products.....\$	107,959,927	158,230,575	584,101,072	599,934,934
Pulp produced.....tons	3,649,345	5,290,762	8,968,009	9,077,063
	\$ 112,355,872	149,005,267	650,021,180	624,865,504
Paper produced.....tons	2,926,787	4,319,414	7,201,800	7,376,526
	\$ 173,305,874	225,836,809	838,105,408	887,858,473
Pulp exported.....tons	762,220	1,068,516	1,940,582	1,950,152
	\$ 39,059,979	60,930,149	291,863,498	248,674,880
Newsprint exported.....tons	2,332,510	3,242,789	5,377,430	5,375,251
	\$ 133,370,932	151,360,196	591,790,209	619,033,394

Paper Production, by Province and Type, 1951-53

Province and Type	1951		1952		1953	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	\$	tons	\$	tons	\$
Quebec—						
Newsprint.....	2,884,877	290,191,574	2,968,627	310,734,055	2,961,997	323,660,876
Book and writing.....	84,140	24,997,828	71,334	21,764,740	75,949	22,496,508
Wrapping.....	148,849	27,428,551	130,365	25,624,071	138,384	27,389,223
Paper boards.....	297,177	33,530,407	260,671	31,034,164	279,217	32,427,940
Tissue paper.....	28,096	7,219,406	25,271	6,196,443	24,200	5,345,901
Other paper.....	68,540	6,186,727	58,725	5,309,906	63,240	5,184,687
Totals, Quebec	3,511,669	389,554,493	3,515,193	400,663,379	3,542,987	416,505,144
Ontario—						
Newsprint.....	1,285,925	133,024,418	1,296,793	136,953,516	1,297,687	144,359,672
Book and writing.....	168,941	38,792,431	153,149	35,698,881	170,083	38,899,082
Wrapping.....	66,741	15,055,396	56,533	13,751,679	61,894	14,979,801
Paper boards.....	442,490	51,424,489	408,038	47,938,021	434,733	51,984,621
Tissue paper.....	36,647	9,891,921	31,526	8,488,613	37,178	10,027,913
Other paper.....	18,491	3,729,956	17,364	3,884,944	17,268	3,158,789
Totals, Ontario	2,019,235	251,918,611	1,963,403	246,215,714	2,018,843	263,409,878
British Columbia	513,165	59,763,061	540,140	62,261,263	632,556	74,131,677
Nova Scotia, New Brunswick, Manitoba and Newfoundland	1,181,202	122,793,484	1,183,064	128,964,752	1,182,140	133,811,774
Canada—						
Newsprint.....	5,561,115	564,361,193	5,707,030	600,515,960	5,755,471	633,408,019
Book and writing.....	253,081	63,790,259	224,683	57,463,621	246,513	61,451,545
Wrapping.....	287,332	49,064,005	222,539	45,356,720	248,111	49,028,911
Paper boards.....	960,493	113,469,950	874,582	106,066,622	948,955	114,978,277
Tissue paper.....	89,583	21,574,730	79,974	18,620,728	86,523	19,198,013
Other paper.....	103,667	11,169,512	93,062	10,081,457	100,953	9,793,708
Grand Totals	7,225,271	824,029,649	7,201,800	838,105,108	7,376,526	887,858,473

Wood-Using and Paper-Using Industries.—In 1952 the industries producing furniture, finished lumber, sash and doors, and veneers and plywoods yielded over 79 p.c. of the net value of production for the wood-using group, which amounted to \$272,829,694. Net value of production of the smaller group of industries producing paper boxes and bags, roofing paper and miscellaneous products such as wallpaper amounted to \$152,116,070.

Softwood plywood is produced almost solely in British Columbia. Douglas fir is most commonly used because of the availability of large-diameter logs of this species from which large sheets of clear veneer can be obtained.





Iron ore being loaded from stockpile into ore cars for transportation to the docks at Sept-Îles, Que. In 1950 a small coastal steamer shipped into Sept-Îles and put ashore a bulldozer which cleared the brush for a construction camp. Since then, one of the most difficult railway construction jobs ever undertaken in Canada has been completed, a seaport has been built, two hydro plants constructed and two townsites laid out. Ore started moving out in mid-summer 1954.

Mines and Minerals

CANADA'S large and varied mineral estate has been clearly manifested by discoveries and developments in the past fifteen years—especially since World War II. Stimulated by a generous influx of post-war investment capital, rising metal prices, and a number of new developments, the mining industry attained the one-billion-dollar mark in value of production in 1950, and increased that value by one-third in 1953. After the discovery of the Leduc field in 1947, crude petroleum began to play an increasingly important part in the mineral picture, and in the year 1953 topped all other minerals in value of production. However, with the major exceptions of coal and gold, practically all branches of mining shared in the post-war expansion.

The importance of Canada's mineral progress lies not only in its production of primary materials but in the vast industrial network needed to process, manufacture (in varying degrees), and market the primary materials. Canada's mines help maintain the country's international balance of payments through exports, help diversify and stabilize the pattern of the economy, and provide a livelihood for hundreds of thousands of the population.

Only some of the highlights of the Canadian mining story in 1954 can be given here. They take no account of the multitude of smaller or related operations, new ventures, reactivation of older mine workings, the reconstruction of existing mine facilities to allow more efficient operation or development of additional orebodies.

Metals.—Probably the most notable development during 1954 was the ship loading at Sept-Iles of iron ore from the Quebec-Labrador deposits on July 31. Before the season closed, the shipments were expected to reach 2,000,000 tons of ore—just double the original estimate. The importance of the Quebec-Labrador region as a source of iron ore was further stressed by the discovery of large deposits west of Ungava Bay and in the extreme southwest portion of Labrador, near Wabush Lake.

A high level of iron ore activity was also maintained in Ontario. Expansion under way in the Steep Rock and Michipicoten areas in the northwestern part of the Province has been designed to greatly increase production within the next few years, and the Marmoraton property in southeastern Ontario is in initial production. An important iron-ore industry is also taking shape on the west coast, on Vancouver and Texada islands.

Highlight of metal-mining activity in the Maritimes during the year was the proving of one of Canada's largest base-metal orebodies—a zinc-copper-lead-silver complex—near Bathurst, N.B. Announcement of the original discovery early in 1953 started a great staking rush and opened up a new economic vista for the Province, which has had little metal production of consequence. Two major new orebodies were discovered later in the year within a five-mile radius of the original discovery and, late in 1954, another large deposit of high-grade lead-zinc-silver ore was located at Little River, about 30 miles northwest of Newcastle.

Several other significant base-metal developments in 1954 might be noted. In the Gaspé Peninsula of Quebec, a 70,000,000-ton low-grade copper

orebody was being developed towards production early in 1955. In the same Province, the copper-gold deposits of the Chibougamau region were being actively developed. The region was linked by highway with the Lake St. John area, and construction of a branch railway line started. In the northern portion of British Columbia, two important copper orebodies were outlined.

In Ontario, the International Nickel Company had nearly completed a \$150,000,000 expansion and development program which is expected to increase the present annual capacity of 250,000,000 lb. of nickel by 25,000,000 lb. The nickel deposits of the Sudbury Basin are now the source of some 70 p.c. of the world output of nickel. A widespread search for uranium deposits in Ontario resulted in a number of stakings in 1954, chiefly in the Lake Huron, North Bay and Haliburton-Bancroft areas. Two properties in the Blind River district were being prepared for production.

Late in 1953, a copper-zinc-silver deposit that is proving to be one of the largest yet located in Canada was discovered in the Manitowadge area, some 40 miles northeast of Heron Bay on Lake Superior. A major staking rush developed, and construction started on two railway branch lines and a highway which will link the area with existing transportation facilities.

During 1954, Saskatchewan and Manitoba, hitherto minor metal producers, came rapidly to the forefront in Canadian mineral production. Nickel and increased amounts of copper were added to Manitoba's metal output by the commencement of production at the Lynn Lake mine following one of the most ingenious feats ever performed in the history of Canadian mining—dismantling a whole town and equipment of a mine and their removal to a new mining site nearly 150 miles away.

Saskatchewan is now a leading producer of uranium ore. In the Beaverlodge area of northern Saskatchewan exploration and development activity in the search for uranium reached new levels in 1954. This field now extends from the Alberta boundary eastward for about 80 miles along the north side of Lake Athabasca.

Industrial Minerals.—In 1954, development, expansion and investment were all active in the field of industrial minerals—still the fastest-growing branch of the mineral industry. The construction industry, with work in progress valued at \$4,750,000,000, is largely responsible for this activity, but the rapidly expanding chemical industry runs a close second. Canada's leading position as a producer of asbestos has been greatly improved by extensive mill construction and by the discovery of new deposits. A new mill at Asbestos, Que., is capable of handling more than 15,000 tons of rock daily and will turn out about one-third of the world output.

Canada possesses no deposits of elemental sulphur, but is nevertheless producing increasingly large tonnages of sulphur from smelter gases, 'sour' natural gas, and the roasting of iron pyrite and nickeliferous pyrrhotite. In 1954, production reached a new high.

Production from Canada's one rock-salt mine near Malagash, N.S., will be joined in 1955 by output from a new mine at Ojibway, Ont. Also a large deposit of very pure material has recently been discovered not far from the Malagash mine. One of the largest potential sources of lithium has been under intensive examination in the Val d'Or-Amos region of Quebec where

IRON-ORE PRODUCTION



▲
The Marmora field in southeastern Ontario will start production early in 1955 with 400,000 tons of concentrate a year.

►
A high degree of mechanization features all Canadian iron mining. At Wabana, Nfld., ore loading and transfer is effected with relatively small use of manpower.



◄
The new open pit known as Hogarth, together with the new Errington underground mine, doubles the iron-ore producing capacity at Sleep Rock, Ont.

Canada's iron ore production has tripled since the end of the War to the 7,000,000-ton level. When extensions and projects at present under construction are completed, production will reach between 20,000,000 and 30,000,000 tons annually.



Weasels pulling trailers loaded with supplies move along a muskeg road, as a seismic party changes camp in the unceasing search for oil in Canada's northwest.

a 1,000-ton mill is in course of construction and rich deposits of potash in Saskatchewan are being examined with a view to production.

Fuels.—Extensive recent discoveries have created a phenomenal expansion in proven and probable oil reserves and output, and a vast potential in reserves of natural gas, with all four western provinces sharing in the advance. Because of present market limitations, the yield of the various producing fields does not wholly reflect oil-well capacities but much progress was made in 1954 toward extending marketing facilities by the planning and construction of new refineries and pipelines. Progress was also made in planning for the transportation of natural gas, particularly from Alberta, and authorization was given for the construction of an all-Canadian pipeline to be built across the prairies to Winnipeg thence eastward north of the Great Lakes to serve Ontario and western Quebec. Building this pipeline will entail an expenditure of hundreds of millions of dollars on development wells to produce the gas, processing plants to purify it, gathering lines to collect it, trunk lines to transport it and distribution lines to market it in prairie and central Canada towns and cities. There is only a local market at present for the known reserve of 3,949,000,000,000 cu. feet of gas in the Peace River area of northern British Columbia and Alberta but a plan to build a pipeline from the area to Vancouver and northwestern United States is under consideration.

Mineral Production in 1954

New records were established by the mineral industry in Canada during 1954. The estimated value of production for the year reached \$1,454,000,000, a figure \$118,000,000 or 8.8 p.c. above the 1953 total, and three times the 1944 total. All provinces contributed to the increase and each classification—metals, non-metallics, fuels and structural materials—reached a new high. The most outstanding gain, which amounted to \$45,000,000, was in the value of crude petroleum production. Copper was up \$23,000,000, nickel \$20,000,000 and asbestos \$7,000,000. On the other hand, coal and zinc each declined by \$7,000,000.

Metals, which make up about half the value of mineral production, increased 7.6 p.c. in 1954 over 1953. Settlement early in the year of strikes in the gold mining areas permitted the mines to resume production and the output therefore increased although the price per ounce was lower than in 1953. Copper production, which amounted to nearly 300,000 tons, was encouraged by the demand which maintained the price at a fairly high level. Iron ore shipped amounted to 7,300,000 tons, a new high in Canadian output. Shipments from the new iron mines in New Quebec and Labrador counter-balanced lessened exports from elsewhere in Canada to United States steel plants in the Great Lakes area.

Mineral fuels increased nearly 13 p.c. in value over 1953 and crude petroleum continued to lead all other minerals in value of production. Alberta increased production by 11,000,000 bbl., but the greatest percentage gain was shown by Manitoba whose output of 2,000,000 bbl. was three times the previous year's production. Natural gas production, at 122,800,000,000 cu. feet, was also up. Conversion to diesel fuel of coal-burning equipment by railroads and industry is adversely affecting the coal-mining industry and 1954 production declined 22.5 p.c. from the 1950 high of 19,100,000 tons.

The greater portion of the value of other non-metallic minerals, amounting to nearly \$137,000,000, was derived from the sale of 966,900 tons of asbestos valued at \$93,000,000, a new high in quantity and value. Salt and sulphur also increased in value and there was a greater tonnage of fluorspar and sodium sulphate shipped. The value of structural materials produced followed its upward trend as a result of continued activity in construction.

New mine and townsite of Lynn Lake, Man. Diesel locomotives are now hauling the mine's nickel concentrate to a new refinery at Fort Saskatchewan, Alta. The copper concentrate goes to Noranda, Que., for processing.



Quantities and Values of Minerals Produced, 1953 and 1954

NOTE.—Excludes data on radioactive minerals.

Mineral		1953		1954	
		Quantity	Value	Quantity	Value
			\$		\$
Antimony	lb.	1,488,105	291,862	1,201,000	321,150
Bismuth	"	117,466	209,557	272,700	583,174
Cadmium	"	1,118,285	2,236,570	1,027,224	1,746,276
Cobalt	"	1,602,545	4,013,077	2,181,900	5,593,200
Copper	"	506,504,074	150,953,742	599,851,280	174,139,274
Gold	oz. t.	4,055,723	139,597,985	4,279,852	145,814,558
Indium	"	6,752	9,588	—	—
Iron ore	ton	6,509,818	44,102,944	7,280,256	46,758,382
Iron ingots	"	107,370	4,064,039	90,885	2,939,114
Lead	lb.	387,411,588	50,076,822	442,542,820	58,990,957
Magnesium and calcium	"	—	5,295,840	—	4,576,024
Molybdenite	lb.	323,907	215,527	875,000	534,000
Nickel	"	287,385,777	160,430,098	319,983,340	180,196,300
Palladium, iridium, etc.	oz. t.	166,018	7,495,409	176,528	7,494,809
Platinum	"	137,545	12,550,981	149,145	12,505,758
Selenium	lb.	262,346	1,101,854	368,800	1,844,000
Silver	oz. t.	28,299,335	23,774,271	31,541,757	26,261,667
Tellurium	lb.	4,694	8,245	7,200	12,000
Tin	"	1,092,228	581,746	390,000	226,200
Titanium ore	ton	9,294	80,085	7,500	47,312
Tungsten	lb.	2,446,028	5,689,160	2,000,732	3,596,387
Zinc	"	803,523,295	96,101,386	747,718,334	89,277,569
TOTALS, METALLICS		—	708,880,758	—	763,428,741
Coal	ton	15,900,673	102,721,875	14,825,000	96,078,000
Natural gas	M cu. ft.	100,985,923	10,877,017	122,854,500	12,683,200
Petroleum, crude	bbl.	80,898,897	200,582,276	95,480,100	245,995,500
TOTALS, FUELS		—	314,181,168	—	354,756,700
Arsenious oxide	lb.	1,403,740	56,150	443,900	18,800
Asbestos	ton	911,226	86,052,805	966,883	93,079,931
Barite	"	247,227	2,220,202	222,519	2,160,469
Diatomite	"	103	12,150	104	12,168
Feldspar	"	21,246	347,164	15,439	307,741
Fluorspar	"	88,569	2,670,585	120,078	3,011,938
Graphite	"	3,466	366,528	1,626	165,000
Grindstones	"	15	900	15	2,100
Gypsum	"	3,841,457	7,399,884	3,957,268	7,054,036
Iron oxides	"	10,308	195,801	5,799	181,073
Magnesian dolomite, brucite	"	—	3,056,392	—	4,008,678
Mica	lb.	2,265,128	161,128	1,503,229	90,479
Mineral waters	gal.	309,585	165,484	310,000	165,150
Nepheline syenite	ton	413,345	1,576,271	120,484	1,740,000
Peat moss	"	81,654	2,643,019	87,257	2,986,961
Perlite	"	1,112	11,120	—	—
Quartz	"	1,785,574	2,070,617	1,742,951	1,589,254
Salt	"	954,928	6,974,501	962,458	8,506,929
Silica brick	M	3,720	712,271	2,143	474,635
Soapstone and talc	ton	27,408	285,755	25,691	301,958
Sodium sulphate	"	115,565	1,681,238	165,521	2,547,586
Sulphur	"	358,850	3,172,698	503,237	4,540,463
Titanium dioxide	"	100,527	4,206,496	82,386	3,680,077
TOTALS, OTHER NON-METALLICS		—	126,039,359	—	136,625,426
Clay products	"	—	29,777,731	—	41,520,243
Cement	bbl.	22,238,335	58,842,022	22,552,788	59,405,097
Lime	ton	1,228,760	14,484,013	1,217,343	14,333,152
Sand and gravel	"	101,033,949	53,485,401	105,430,550	56,884,521
Stone	"	19,849,017	30,613,051	34,212,319	37,242,580
TOTALS, STRUCTURAL MATERIALS		—	187,202,218	—	199,385,593
Grand Totals		—	1,336,303,503	—	1,454,196,460

Provincial Distribution

An analysis of the provincial distribution of mineral production, from east to west, shows that *Newfoundland*, which accounted for 3.1 p.c. of the total estimated value of Canada's mineral output for 1954, was credited with over half the Canadian production of iron ore, output having been increased by about 1,000,000 tons as a result of first shipments from the Labrador orebodies. The Province also produces considerable quantities of zinc, lead and copper and all of Canada's fluor spar, as well as smaller quantities of silver, gold, gypsum, cement and other structural materials. The level of production for these items was about the same in 1954 as in 1953.

Nova Scotia's main contribution to the mineral industry is coal, which accounts for about 70 p.c. of the Province's total value of mineral output and about half of the Canadian value of coal production. The Province is Canada's leading producer of barite and gypsum and operates important salt mines and recovery wells. Its output of base metals increased somewhat in 1954 but most of the advance recorded in the Province's total value over 1953 was accounted for by the output of large quantities of gravel required for the construction of the Canso Causeway.

New Brunswick's small mineral production in 1954 was made up mostly of coal, gas and petroleum, and cement and other structural materials. The discovery of lead-zinc ores in the Bathurst area of the Province has created great activity during the past two years and at the end of 1954 one metal mine was ready to produce.

The estimated value of metals produced in *Quebec* in 1954 was over \$126,000,000. This was the value of twelve metals, ranging from bismuth to zinc. Iron ore was added to the list for the first time, with the 667,000 tons from New Quebec shipped through Sept-Iles. Copper was the most important of the metals, output exceeding 80,000 tons valued at \$48,000,000. Zinc

Mine crew placing
pit props at the
300-ft. level in
the base-metal
development at
Bathurst, N.B.



production was over 105,000 tons, remelt iron over 90,000 tons and lead 8,500 tons. Production of both gold and silver increased to 1,095,000 oz.t. and 5,083,000 oz.t., respectively. The major part of the world's asbestos comes from Quebec and the value of shipments of that mineral in 1954 was \$79,000,000. Other important non-metallics included magnesitic dolomite for basic refractories, titanium dioxide which is used as a pigment in paints, paper, etc., and sulphur in the form of pyrite recovered by the base-metal mines during the milling of sulphide ores. Structural materials were in great demand during the year and a high level of output was maintained.

In 1954, *Ontario* produced 33.4 p.c. of the total value of Canada's mineral output and more than 50 p.c. of the metal output. Metals make up by far the largest part of the mineral output of the Province which in 1954 produced all of Canada's cobalt, magnesium and calcium, platinum metals and tellurium, 98 p.c. of the nickel and approximately half of the copper and gold. Ontario also produced about 40 p.c. of the structural materials, the value of cement and clay products increasing over 1953. The Province's output of natural gas and petroleum also showed some advance.

Manitoba's mineral output was highlighted in 1954 by an advance in crude petroleum production to three times that of 1953, although the aggregate for this Province is still below Saskatchewan and, of course, Alberta. The value of metals produced increased by \$5,000,000 as a result of the commencement of production from the Lynn Lake mine from which nickel concentrates were shipped to the new refinery at Fort Saskatchewan, Alta., and copper concentrates to custom smelters.

Most of *Saskatchewan's* metal production is obtained from the ore deposits that lie astride the Saskatchewan-Manitoba border; production of copper, zinc, gold, silver and selenium all increased in 1954. All natural sodium sulphate produced in Canada comes from this Province. Many new oil wells were brought in during the year, increasing the value of oil production of the Province from \$3,800,000 to \$8,250,000, and exploration and development work on the uranium properties in the north was very active.

The expanding petroleum industry brought *Alberta* to second place among the provinces in mineral production. Of the total output of \$281,000,000, crude petroleum accounted for \$230,000,000, and coal, natural gas and crude petroleum together for \$265,000,000. Structural materials made up most of the balance. Conversion to other types of fuel has had a depressing effect on coal production which dropped 1,000,000 tons from the 5,900,000 tons produced in 1953.

The greater part of *British Columbia's* mineral output is made up of metals, the 1954 value of which declined by \$6,500,000 from the 1953 total. Decreases in zinc, tungsten, iron ore, tin, gold, cadmium and antimony were partially counteracted by increases in copper, lead, bismuth and silver. Total mineral production for the Province increased by nearly \$3,000,000, accounted for mainly by increases in the production of asbestos, barite, peat moss and sulphur. Coal was down slightly and structural material remained about the same as in 1953.

Ore being hauled through the main adit of the new Gaspé Copper mine at Murdochville, Que.



Base metals, gold and coal make up the mineral production of Yukon Territory and most items were up slightly from 1953. In the Northwest Territories, the minerals produced include gold, silver, natural gas and petroleum; increased quantities of gold and oil accounted for a 1954 advance in total production.

Mineral Production, by Province, 1952-54

NOTE.—Excludes radioactive minerals.

Province or Territory	1952		1953		1954 ^a	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
	\$		\$		\$	
Newfoundland.....	32,512,313	2.5	33,780,622	2.5	44,868,679	3.1
Nova Scotia.....	64,552,383	5.0	67,364,408	5.0	75,121,224	5.1
New Brunswick.....	11,298,960	0.9	11,663,618	0.9	12,514,857	0.9
Quebec.....	270,483,962	21.0	251,881,781	18.8	275,140,830	18.9
Ontario.....	444,669,412	34.6	465,877,093	34.9	484,992,796	33.4
Manitoba.....	25,105,045	2.0	25,264,112	1.9	34,952,541	2.4
Saskatchewan.....	49,506,094	3.9	48,081,970	3.6	56,977,794	3.9
Alberta.....	196,811,654	15.3	248,863,295	18.6	281,461,638	19.4
British Columbia....	170,071,244	13.2	158,487,812	11.9	161,309,212	11.1
Northwest Territories	8,944,835	0.7	10,300,230	0.8	10,548,781	0.7
Yukon Territory.....	11,386,451	0.9	14,738,562	1.1	16,308,108	1.1
Totals.....	1,285,342,353	100.0	1,336,303,503	100.0	1,454,196,460	100.0



Pacific Coast catches of salmon and halibut in 1954 showed the results of the long-term international conservation programs of the Canadian and United States Governments. The fishways built in the Fraser River cost \$1,000,000, but paid for themselves in one day's fishing at the peak of the salmon run in 1954. That year, also, Canadian and American fishermen caught 70,000,000 lbs. of halibut, a remarkable achievement when it is considered that halibut stocks in other parts of the world are in the decline.

Fisheries

CANADA is one of the main fish-producing and fish-exporting countries of the world. The yearly catch amounts to some 1,900,000,000 lb. and, as the average consumption of fish products by each Canadian is less than 14 lb. a year, over 90 p.c. of the production is marketed outside the country, most of it in the United States. The marketed value of fish and fishery products in 1954 was estimated at about \$189,000,000.

The best known commercial species are the Pacific Coast salmon, herring and halibut; the Atlantic Coast cod and lobster; and the inland whitefish and lake trout. Also important on the Atlantic Coast are those species, of which cod is one, known as groundfish—haddock, pollock, hake, cusk, rosefish, halibut, plaice, yellowtail, witch, flounders and skate. Shellfish include the clam, oyster and the scallop. "Sardines" (immature herring) are a New Brunswick specialty.

The fishing industry is expending considerable capital for fuller utilization of the resources of coastal and inland waters. The West Coast fisheries have been highly organized for some time and on the Atlantic Coast the conversion to more modern methods of processing and marketing has been very marked in recent years. This continued plant expansion and modernization is expected to have the effect of intensifying the efforts of the fishermen. The clear distinction of past years between offshore and inshore fisheries on the East Coast is gradually disappearing with the use of larger craft by the inshore fishermen who are now ranging farther out to sea.

Much greater attention is being given to fishing-boat design generally. Canada's present fishing fleets, operating from the coastal fishing centres and from the shores of inland lakes, are even now very effective in handling large catches. Most of the larger boats are equipped with radar, echo sounders, ship-to-shore communication and mechanical means of harvesting an assorted catch. Multi-purpose vessels, capable of varying fishing techniques, are now fishing alongside the more conventional types of craft.

*Newfoundland fisherman—
one of the thousands of
Canadians occupied in
gathering a share of the
great wealth of the coastal
and inland waters.*





The Department of Fisheries now uses helicopters in Newfoundland where the exposed coastline, the rugged climate and the lack of other means of transportation make inspection and protection activities very difficult.

The Federal Department of Fisheries, which administers all the tidal fisheries of Canada (except those of Quebec) and certain of the fresh-water fisheries, is responsible for the conservation and development of the country's fishery resources and has, throughout the years, been working to ensure a continued livelihood for those engaged in the industry. The functions of the Department include the inspection of fish products which must meet certain standards of quality, and the education of consumers to create a greater utilization of Canada's fishery products on the home market. Since the summer of 1953, Canada's fishermen have been assisted by the provision of insurance protection for boats and lobster traps, at a reasonable rate, through the fishermen's Indemnity Fund administered by the Department.

The *Fisheries Research Board of Canada*, which operates as a specialized departmental agency under the Minister of Fisheries, has been responsible for much new knowledge over the years in both fish catching and processing. Special studies have been undertaken where intensive fishing and the effects of industrialization have endangered fish stocks. New fishing grounds have been discovered by painstaking search and the fishermen and processors have greatly benefited by the Board's research program.

International co-operation is becoming increasingly important in the over-all picture of conservation. Fish are no respecters of boundary lines and their preservation depends on how they are treated as they pass through the waters of the countries which compete for their catch. In 1954 Canada signed her fourth bilateral treaty with the United States on fisheries conservation matters. This international agreement provides for joint action in Great Lakes fisheries research as well as in the elimination of the predator sea lamprey. The lamprey has been blamed for the decline in fisheries of these inland waters. Other Canada-United States treaties cover the Pribilof seals and the Pacific Coast salmon and halibut stocks.

A three-way treaty has been signed by Canada, the United States and Japan in an endeavour to ensure the success of conservation measures in the North Pacific Ocean. The first major step taken under the treaty was the

Dragger fishermen, operating off the coast of Nova Scotia, stand knee deep in the harvest just released from their nets.



adoption of a joint program of scientific research to learn more about the movements of salmon in the North Pacific and to find out whether they are of Asiatic or North American origin. Canada is also a member of the ten-nation International Commission for the Northwest Atlantic Fisheries which is designed to manage the fisheries of the Northwest Atlantic to avoid over-fishing and obtain maximum long-term yield.

An example of the wisdom of intelligent international management highlighted the 1954 operations of British Columbia's fishing industry which harvested one of the best sockeye runs in the Fraser River since 1913. Forty years ago the salmon runs of the Fraser were seriously affected by rock obstructions at Hell's Gate canyon. Through regulation and fishway construction carried out under international agreement, Canada and the United States have succeeded in reopening the runs. The remarkable 1954 sockeye run to the spawning grounds in the Adams River, a tributary of the Fraser, was the result of this work. Of the 9,000,000 sockeye caught this year, 8,000,000 were from the Adams River run. In September alone the catch was forty times greater than in the same month of 1953.

Restoration of the halibut stocks has also been brought about through co-operative effort by Canada and the United States. The 1954 landings of halibut, a species that faced extinction through over-fishing in the early part of the century, were unequalled since 1915.

Statistics of Fisheries Production

In Canada (exclusive of Newfoundland), 64,000 fishermen landed 1,315,000,000 lb. of fish in 1952, a 10-p.c. decrease from the total landed in 1951. The marketed value of all fish and fish products at \$149,821,000 was 15 p.c. below the figure for 1951. Most of the decrease occurred in British Columbia where the marketed value fell by 32 p.c. to \$58,098,000. Estimates for Newfoundland fisheries indicate that 575,000,000 lb. of fish with a market value of \$27,500,000 were landed in 1952. Total landings for the whole of Canada, therefore, would be approximately 1,890,000,000 lb. and the marketed value \$177,321,000.

Trends in Landings, Values of Production and Equipment, and Numbers Employed in the Fishery Industry, 1899-1952

(Exclusive of Newfoundland)

Year	Quantity Landed	Value of Production	Value of Equipment	Employees in—	
				Fishing	Fish Processing
	'000 lb.	\$'000	\$'000	No.	No.
Average 1899-1908.....	..	24,447	..	77,282	14,070
Average 1909-18.....	..	37,976	..	69,540	24,094
Average 1919-28.....	953,496	47,806	27,813	59,139	16,432
Average 1929-38.....	995,450	37,239	27,672	67,014	14,586
Average 1939-48.....	1,240,570	89,625	38,911	66,130	16,661
1949.....	1,319,958	132,306	69,543	64,613	16,087
1950.....	1,491,225	152,063	80,118	65,037	14,861
1951.....	1,452,945	175,894	92,427	65,188	16,107
1952.....	1,314,592	149,821	102,943	64,260	12,129

Preliminary figures for 1953 show landings of 701,412,000 lb. in the Maritime Provinces and Quebec, and of 500,000,000 lb. in Newfoundland. In British Columbia the catch amounted to 543,675,000 lb., a figure 34 p.c. higher than the 1952 total, but lower than the average for the post-war years.

Quantities Landed and Values of All Products Marketed, of the Chief Commercial Fishes, by Province, 1951 and 1952

(Exclusive of Newfoundland)

Province or Territory	Kind of Fish	1951		1952	
		Quantity Landed	Value of Products	Quantity Landed	Value of Products
		'000 lb.	\$'000	'000 lb.	\$'000
Prince Edward Island.....	Lobsters.....	8,342	2,227	8,375	2,265
	Cod.....	4,395	227	3,452	189
	Smelts.....	849	152	622	163
Nova Scotia.....	Cod.....	147,746	12,420	149,155	12,666
	Lobsters.....	24,278	8,281	23,063	9,063
	Haddock.....	53,355	4,936	51,200	4,932
New Brunswick.....	Lobsters.....	10,565	6,360	10,379	6,538
	Sardines.....	62,503	5,604	52,887	4,466
	Herring.....	62,466	2,720	86,474	2,545
Quebec.....	Cod.....	49,844	2,452	61,156	2,866
	Lobsters.....	2,388	701	2,314	766
	Herring.....	32,739	527	47,112	628
Ontario.....	Whitefish.....	7,180	2,780	9,426	2,956
	Pickeral.....	4,025	1,181	4,670	1,259
	Blue Pickeral.....	4,102	919	7,447	1,181
Manitoba.....	Pickeral.....	11,208	3,227	10,381	2,603
	Whitefish.....	6,125	1,828	5,758	1,582
	Saugers.....	4,319	1,008	4,295	752
Saskatchewan.....	Whitefish.....	5,852	987	5,639	852
	Trout.....	1,587	277	1,234	209
	Pickeral.....	1,334	266	1,175	202
Alberta.....	Whitefish.....	2,703	572	3,159	644
	Tullibee.....	4,618	184	5,428	191
	Pike.....	492	57	471	50
British Columbia.....	Salmon.....	197,594	60,750	146,965	40,495
	Herring.....	365,432	10,640	189,497	4,235
	Halibut.....	20,214	5,762	23,489	5,672
Northwest Territories.....	Whitefish.....	4,580	1,457	3,831	1,247
	Trout.....	2,623	754	2,888	920
Totals.....	Salmon.....	199,396	61,719	148,659	41,568
	Lobsters.....	45,573	17,569	44,131	18,634
	Cod.....	232,439	17,463	243,150	18,111

Landings and Values of All Fishery Products, by Province, 1950-52

Province or Territory	Quantities Landed			Values of Products		
	1950	1951	1952	1950	1951	1952
	'000 lb.	'000 lb.	'000 lb.	\$'000	\$'000	\$'000
Prince Edward Island	29,225	27,224	32,661	3,321	3,213	3,759
Nova Scotia	378,485	381,904	396,623	38,121	40,296	42,435
New Brunswick	239,671	227,038	254,599	18,053	21,155	20,504
Quebec	117,459	102,119	127,564	5,496	5,511	6,113
Ontario	32,755	30,969	38,044	7,034	7,925	8,344
Manitoba	31,468	35,457	31,338	6,791	7,524	5,960
Saskatchewan	8,731	11,512	10,612	1,360	1,749	1,440
Alberta	7,067	8,399	9,657	768	862	943
British Columbia	638,497	620,846	406,452	68,821	85,397	58,098
Northwest Territories	7,867	7,477	7,042	2,298	2,262	2,225
Totals	1,491,225	1,452,945	1,314,592	152,063	175,894	149,821

Principal Statistics of the Fish-Processing Industry, 1948-52

Year	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials Used	Selling Value of Products
	No.	No.	\$'000	\$'000	\$'000	\$'000
1948	600	16,497	17,041	1,782	74,588	115,821
1949	599	16,087	16,970	1,731	69,090	111,919
1950	591	14,861	18,722	1,773	79,959	128,424
1951 ¹	639	18,706	24,744	2,724	101,621	163,010
1952 ¹	635	17,551	24,426	2,533	86,458	134,725

¹ Includes Newfoundland.

Herring from the western end of Lake Superior awaiting the fish merchant.





Smelter at Hamilton, Ont.

Manufactures

CANADA'S growth from Confederation to World War I was characterized by geographic expansion, new settlement, and the discovery and exploitation of natural resources. Since that time, it has been a story of rapid achievement of industrial maturity. In the past generation alone, Canada has changed from a country producing and exporting mainly primary products to a country producing and exporting mainly manufactured products, until to-day, manufactures account for about 30 p.c. of the value of all goods and services produced in this country, and manufacturing is now Canada's leading employer. In 1953, more than 1,325,000 employees, in some 38,000 manufacturing establishments, earned a total of nearly \$4,000,000,000 in salaries and wages, and were responsible for a gross value of factory shipments amounting to nearly \$17,700,000,000. If the cost of materials, fuel and electricity is subtracted from the gross value of factory shipments, a net value added in manufacture is established at \$8,000,000,000.

Canada's manufacturing and industrial emergence has been—and continues to be—based on the immense natural resources and primary products of her fields, forests, fisheries and mines. The Canadian economy, historically, has been built on grain, especially wheat, on animal husbandry, on lumber, pulp and paper and minerals. To develop certain of these resources, fuels and power derived from fuels were available in abundance—and since the discovery and harnessing of electricity, Canada's magnificent sources of hydro-electric power have equipped industry with seven-league boots to take the industrial strides of the past half-century. Moreover, the far-reaching waterways, railroads and highways of Canada have enabled bulk primary and processed goods to be transported on a continental scale.

The discovery and development of new natural resources since the beginning of the century is an epic story—a story of a tremendous upsurge in the physical volume of production, aided by near-tripling of population. Even so, Canada to-day contains a mere two-thirds of one per cent of the world's population, but produces more newsprint, nickel, asbestos and platinum than any other nation; is second in world output of hydro-electric power, pulp, uranium, aluminum, gold and zinc, and third in the production of oats, silver and sawn lumber. Also the "wonder metals"—uranium, germanium, columbium and titanium—of the era of jet flight, non-corrosive alloys, and atomic power are found or produced in Canada. The nation is, however, merely at the beginning of a resource development unparalleled in her earlier history; one whose potential, only now being outlined, will require generations of purposeful effort and skill to realize.

Historical Development.—The first phase of Canada's industrial development began about 1860. Rising prosperity until 1873 resulted in the establishment of factories producing goods for local consumption from the abundance of raw materials at hand—flour and gristmill products from the grain, leather boots and shoes from the live stock, and lumber, lath and shingles from the forests. These industries weathered the depressed economic conditions that prevailed during the latter part of the 1870's and a good part of the 1880's, mainly because Canada's high-quality natural resources could

be developed at low cost, and also because the expanding railway network and cheap water transport made them increasingly accessible.

The period 1900 to 1920 was characterized by rapid population increase and the opening up of the West. The program of railway construction, the growth of cities and towns, the equipping of western farms and the extension of community facilities in both Eastern and Western Canada gave great impetus to the production of capital goods. World War I brought about a notable acceleration of industrial diversification with particularly striking effects on the refining of non-ferrous metals, the expansion of the steel industry and the shipbuilding and aircraft industries. Following the War, international competition became very keen and Canadian industries experienced some adjustment, particularly in the short though severe recession of 1921. This check was temporary and expansion was resumed up to the crest of 1929 with particular emphasis on pulp and paper, transportation equipment, non-metallic mineral products and chemicals. During this period, certain Canadian industries became competitive with those of other countries in both quality and price. One of the earliest examples was the farm implements industry and another was the pulp and paper industry, which was able to compete successfully in important foreign markets in the 1920's and still remains the leading manufacturing industry.

As a result of the depression of the 1930's when economic activity was at a low ebb, Canadian industries were unprepared for the avalanche of military orders following 1939; nevertheless, conversion to war production was accomplished in two years. Expansion of productive capacity in manufacturing during the war years was particularly striking in such fields as tool-making, electrical apparatus, chemicals and aluminum. About two-thirds of the industrial structure created during that period was found to be adaptable to peacetime uses after the War. Although reconversion necessitated large capital outlays and although supply shortages slowed down the implementation of the program, most of the basic work was completed by the end of 1947 and modernization and expansion have continued in succeeding years.

Two developments in the post-war period contributed particularly to manufacturing expansion in Canada. First, the intensive search for new minerals brought about a number of important discoveries and rapid development followed in such fields as crude oil, natural gas, iron ore, non-ferrous metals and other less important metals. This development and the resulting need for equipment for exploration and processing gave great impetus to industries producing capital goods. Further, the availability of a greater quantity and variety of indigenous raw materials led to the creation of more processing capacity and to the establishment of advanced raw-material and power-using industries. Foremost among these was the chemical industry, which became increasingly diversified. In particular, major discoveries of oil and gas made feasible the establishment of such industries in central Alberta notwithstanding the great distances to the principal markets of the North American Continent.

The second development was the commencement of a three-year, \$5,000,000 defence build-up, related to NATO and the outbreak of the war in Korea. Three industries in particular received great stimulus from the rearmament program: the aircraft industry, which for the first time began production of jet aircraft and jet aircraft engines; the electronics



The Consolidated Mining and Smelting Company's four-year expansion program, now nearing completion, is spectacular among many great Western Canada developments. The major part of the company's operations are in the huge metallurgical and chemical fertilizer plants at Trail, B.C. From these plants come 8 p.c. each of the world's lead and zinc and half of Canada's silver.

industry, which produced a great variety of new items, from equipment for Canada's northern radar screen to infantry pack radio sets; and the shipbuilding industry, which not only revived after several years of decline following the end of World War II but which drew increasingly on Canadian equipment-producing industries to fit out, power and arm the newly built naval vessels. A major characteristic of the expansion of Canadian manufacturing industries encouraged by the rearmament program was the adaptability of many of the new developments to civilian use. An outstanding example was the comparative ease with which a television industry was established in Canada.

Industry's Changing Pattern.—The changes in manufacturing during the present century have reflected the changing pattern of Canadian life and Canada's relations with other countries. A largely rural society in 1900, Canada has become a heavily industrial and urban society producing, at competitive world prices, high-quality foodstuffs and other consumer and capital goods for a world-wide market. The increased productivity of the Canadian worker, the development of managerial and scientific skills, and the advance in the mechanization of industry have combined to bring about the mass-production machine age in which we live. The net result of the past half-century of industrial change and the awareness of an enlightened population to the realities of common world problems has been the emergence of Canada as one of the great trading economies of the world. Canadians, as a result, enjoy a living standard, second only to that of the United States—whose earlier population growth, spurred by large-scale

immigration, swift resource development and technological advance, has placed that country's economy in premier world position. These factors are now operative in Canada, though, because of Canada's much smaller population, on a more restricted scale.

The following table shows the steady, long-term growth in Canadian manufacturing. These figures are reasonably comparable but, since they cover such a long period, allowances should be made for certain changes in information collected and in treatment of the data. In particular, in 1952, the policy was changed regarding the collection of statistics on the production of manufactured goods with the result that "gross value of production" was replaced by "value of factory shipments". The former refers to the value at the factory, at average selling value, of all goods produced, whether sold or not sold, whether shipped or not shipped. The latter reports on all sales during the year, regardless of when the products were made. Moreover, the gross figures in each series are higher than the actual contribution of industry to the economy since each firm reporting gives the value of goods leaving the factory, an amount which includes all the work put into them at earlier stages of production. For instance, the value of shipments from a clothing factory covers not only the value of the work done by that factory, but also the work done by the people who produced the raw cotton, the shippers who brought it to Canada, the spinning mills that turned it into yarn and the

Summary Statistics of Manufactures, 1870-1953

Year	Estab- lish- ments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
	No.	No.	\$'000	\$'000	\$'000	\$'000
1870 ¹	41,259	187,942	40,851	124,908	96,710	221,618
1880 ¹	49,722	254,935	59,429	179,919	129,757	309,676
1890 ¹	75,964	369,595	100,415	250,759	219,089	469,848
1900 ²	14,650	339,173	113,249	266,528	214,526	481,053
1910 ²	19,218	515,230	241,008	601,509	564,467	1,165,976
1917 ³	21,845	606,523	497,802	1,539,679	1,281,132	2,820,811
1920.....	22,532	598,893	717,494	2,085,272	1,621,273	3,706,545
1929 ⁴	22,216	666,531	777,291	2,029,671	1,755,387 ⁵	3,883,446
1933.....	23,780	468,658	436,248	967,789	919,671	1,954,076
1939.....	24,805	658,114	737,811	1,836,159	1,531,052	3,474,784
1940.....	25,513	762,244	920,873	2,449,722	1,942,471	4,529,173
1943.....	27,652	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	9,073,693
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	4,358,235	3,467,005	8,035,692
1947.....	32,734	1,131,750	2,085,926	5,534,280	4,292,056	10,081,027
1948.....	33,420	1,155,721	2,409,368	6,632,882	4,938,787	11,875,170
1949 ⁶	35,792	1,171,207	2,591,891	6,843,231	5,330,566	12,479,593
1950.....	35,942	1,183,297	2,771,267	7,538,531	5,942,058	13,817,526
1951.....	37,021	1,258,375	3,276,281	9,074,526	6,940,947	16,392,187
1952.....	37,929	1,288,382	3,637,620	9,146,172	7,443,544 ⁶	16,982,687 ⁷
1953 ⁸	—	1,325,820	3,948,039	9,327,510	8,039,322 ⁸	17,771,758 ⁹

¹ From 1870 to 1890, the figures include all establishments irrespective of the number of employees, including house building and custom and repair work. ² Includes all establishments employing 5 hands or over.

³ From 1917 on, the figures include all establishments irrespective of the number of employees, but exclude construction and custom and repair work.

⁴ From 1929 on, the figures for the net value of production represent the gross value less the cost of materials, fuel and electricity. Before this, only cost of materials is deducted.

⁵ From 1949 on, the figures include Newfoundland. ⁶ Value added in manufacture (see text above). ⁷ Gross value of factory shipments (see text above).

Scrim loom manufactures fibreglass, scrim fabric for reinforcing papers and tapes. Canadian factories turn the oldest material known to man to new and amazing uses. Production has extended to include many types of insulating and textile materials as well as reinforcement for innumerable plastic products.



weaving plants that made the cloth purchased by the clothing factory. Thus, by deducting the cost of materials and the cost of fuel and electricity purchased from the gross value of production or, from 1952, the gross value of factory shipments, a net figure is obtained that gives a truer picture of the contribution to the nation's economy by the factories concerned, but still includes items contributed by such firms as insurance companies, advertising agencies and some transportation expenses.

In the interpretation of manufacturing values over a number of years, as given in the table on p. 172 variations in level of prices must be kept in mind. The record of *volume* of manufacturing production, as distinguished

Packaging aspirin tablets—about 6,000 tins are filled in an hour.



from *value*, is not affected by price changes and is therefore more reliable as an indication of growth of goods and services available to the consumer. In volume terms, the index of manufacturing production (1935-39 = 100) was 246.3 in 1952 as compared with 189.9 in 1946. The durable goods index stood at 294.8 and the non-durable goods at 215.2 in 1952 as against 205.1 and 180.2, respectively, in the first post-war year.

Manufacturing growth may also be measured by the proportion of earned dollars in the national income derived from manufacturing: in 1939 this proportion was 27 p.c. of the net national income at factor cost; in 1946 it was 28 p.c.; in 1950 and in 1952, 30 p.c.

National Income, by Industry, 1939, 1946, 1950 and 1952

(Millions of Dollars)

Industry	1939	1946	1950	1952
Manufacturing	1,164	2,782	4,471	5,421
Agriculture.....	512	1,276	1,709	2,108
Forestry.....	71	220	257	369
Fishing and trapping.....	12	78	78	62
Mining, quarrying and oil wells.....	299	302	570	724
Construction.....	148	430	809	1,002
Transportation, storage and communication, public utilities.....	508	1,105	1,489	1,887
Trade.....	590	1,411	2,163	2,575
Finance, insurance and real estate.....	426	630	1,026	1,312
Service.....	432	772	1,186	1,390
Government.....	460	1,057	1,176	1,639
Net interest and dividends to non-residents..	-249	-242	-384	-268
Net National Income at Factor Cost¹	4,373	9,821	14,550	18,221

¹ Earnings of the factors of production—wages and salaries and supplementary labour income, profits, interest, net rent and net income of agricultural and other unincorporated business.

Another useful indicator is that of investment. Though not as great as at the height of the investment boom of the 1920's, the volume of investment in manufacturing in 1952 was more than two and one-half times the 1939 level. In 1952, nearly \$972,600,000 was invested in durable physical assets in all manufacturing industries and, if repair and maintenance investment is added, the total was nearly \$1,431,300,000.

Factors contributing to the large expansion in investment in the manufacturing industries in the post-war years were the substantial increases in profits and almost continuously rising prices of manufactured goods. This was a result of strong consumer demand—pent-up during the war years—for a variety of consumer and capital goods, and reasonably firm foreign demand for processed goods, and machinery and equipment.

In recent years, Canadian manufacturing has taken on not only new volume but also new variety. Many industries have rounded out their operations and the more fully integrated operation has become common. Firms—in chemicals, for example—which started out merely to sell a particular line of products have added the actual manufacture of the goods to their operations and, often, have proceeded to add related lines of manufacture. Industries—as in the field of electrical appliances—have increased the range of the commodities manufactured so as to take advantage of the market for subsidiary or complementary products and better to meet fluctuating demand

Centrifugally cast stainless steel rings for jet aircraft. Increased production of jet-powered aircraft has created an accelerating demand for heat resisting alloys, a demand being met largely by Canadian suppliers.



for the various products produced. Greater emphasis has been placed on the use of domestic materials, and the better utilization of materials formerly wasted. For instance, in some areas, woods operations have been integrated with sawmilling and pulp- and paper-making, resulting in more efficient use of raw materials. At chemical pulping plants enormous quantities of sulphite liquor containing the lignin portion of pulped wood were turned to waste, but nowadays a limited quantity is being converted for use; in some plants this liquor is dried to render it suitable for burning as a fuel at the plant and in a few others the liquor is converted to industrial alcohol. Inevitably, in the process of paper-making some pulp is discarded as unsuitable; this is now usually converted to cardboards and building boards.

Other Canadian industries—notably in the metallurgical, chemical and electronic fields—have made rapid technological advances in the post-war period and, as a result, many new materials, substances (such as synthetic yarns) and commodities are being marketed. New items added recently to Canada's list of manufactured products include jet aircraft and engines, diesel locomotives, roller bearings, a wide range of automobile parts, and various kinds of heavy machinery and equipment.

Current Trends.—The gross value of production of the manufacturing industries continued its upward trend in 1952, reaching \$16,983,000,000, a 3.6-p.c. increase over 1951. Part of the 1952 advance in value was accounted for by an increase of 2.2 p.c. in the physical volume of production and the balance by price increases. Accompanying the rise in output was an increase of 2.4 p.c. in the number of persons employed and of 11.0 p.c. in the amount of salaries and wages paid. Salary and wage payments at \$3,638,000,000 were the highest on record and exceeded the previous high reported in 1951 by \$361,000,000. In 1952, 2,397 establishments, each with a production of over \$1,000,000, contributed 78 p.c. of the value of the total output of all manufacturing establishments in Canada. Total investment in fixed assets in manufacturing amounted to \$5,253,400,000 or \$4,078 per employee. Seventy-six establishments employed more than 1,500 persons, the two largest employing more than 12,000 each. Out of every 1,000 persons employed in manufacturing, one-fifth were classed as salary-earners and the remainder as wage-earners. Of these groups, the wage-earners had reached an average annual wage corresponding to 75 p.c. of the average annual salary paid;

in money terms, the average wage amounted to \$2,647 and the average salary to \$3,513. Out of a total of approximately 1,288,000 employees in manufacturing, females numbered just over 290,000. The average work week was 42.6 hours for the wage-earner, and 39.4 for the salaried employee.

No definite production trend was established in 1952. Although the durable goods industries as a unit operated at a higher level than the consumer industries, both divisions reported advances and declines. In the durable goods sector the transportation equipment group reported the greatest advance in production followed by non-metallic mineral products and electrical apparatus and supplies. The iron and steel products group was practically unchanged while the wood group and non-ferrous metal products declined. In the non-durable goods sector the greatest increase in production was reported by the tobacco group followed by leather products, petroleum and coal, foods and beverages, clothing and chemicals and allied products. Declines were shown by textiles (except clothing), rubber products, paper products and printing, publishing and allied industries.

Leading Industries.—The extent to which the manufacturing industries of Canada are based on the country's vast natural resources is shown in the table on p. 178 giving principal statistics for the fifteen leading industries in 1952.

The industries whose major raw materials are based on the forests—pulp and paper, sawmilling, other paper products, furniture and other wood products—accounted for about 18 p.c. of the gross value of factory shipments of all manufacturing industries in 1952. The manufacture of pulp and paper has been the leading industry in Canada for many years and the post-war development of the industry has more than kept pace with the industrial growth of the nation. The value of its output rose from \$528,000,000 in 1946 to \$1,158,000,000 in 1952 and the number of employees from 44,967 to 57,803. The industry stands first among all industries in value of production, in exports, in total wages paid and in capital invested. It is the largest consumer of electric energy and the largest industrial buyer of goods and services. In 1952 it alone accounted for nearly 7 p.c. of the total gross value of factory shipments.

Sawmilling, which ranked sixth among the leading industries in 1952 and accounted for 3 p.c. of the total value of factory shipments, has also expanded its activity in the post-war period. Gross value of production, over half of which comes from British Columbia, almost doubled, employment increased by 20 p.c. to 60,931 persons, lumber output increased by 34 p.c. to 6,808,000,000 bd. feet, and exports increased in value from \$126,000,000 to \$297,000,000. In 1952, goods shipped by the furniture industry had a gross value of \$204,000,000; those shipped by the sash, door and planing mills industry, \$191,000,000; the paper boxes and bags industry, \$172,000,000; and the veneers and plywoods industry, \$73,000,000.

Included among the fifteen leading industries in 1952 were five industries whose major raw materials were produced on Canada's farms—the slaughtering and meat-packing industry, which ranked second among all industries, butter and cheese factories, flour mills, the miscellaneous food preparations industry and the bakery industry. These five together accounted for 12 p.c. of the total gross value of shipments, while all the industries using farm-produced raw materials accounted for 29 p.c. of the total.



Canada's largest aviation enterprise, A. V. Roe Canada Limited, on Jan. 2, 1955, became a group operation, incorporating aircraft, engine and component production. The new Company will direct the efforts of 16,000 experienced designers, engineers, technicians and production workers and will continue, as an independent corporation, its responsibility as one of the main industrial arms of the RCAF.



Non-ferrous metal smelting and refining ranked third among the industries in value of factory shipments and this industry is the most important of all those depending on the mines for their major raw materials. Such industries produced 45 p.c. of the total gross value of shipments in 1952 and most of them used ores mined in this country. The most notable exception was the aluminum products industry which uses imported ore but requires large amounts of electricity, an item that Canada is in an excellent position to provide cheaply. Motor-vehicles and petroleum products, also in the mineral origin group, ranked fourth and fifth in 1952, having risen from ninth and eighth places, respectively, in 1946. In both industries, the use of materials and components of Canadian origin has been increasing, particularly the use of domestic crude oil in petroleum refining. Primary iron and

steel, which ranked seventh in 1952, moved up from thirteenth place in 1946. The output of this industry has more than doubled since that year and Canada is now a substantial exporter of pig iron, having sold about 376,000 tons to other countries in 1952. Steel also increased considerably during the period, production rising from 2,327,000 tons to 3,703,000 tons.

The men's factory clothing industry again appeared among the fifteen leading industries in 1952, after having dropped below that level in 1951. It replaced the cotton yarn and cloth industry which was in twelfth place in 1951 but dropped to nineteenth in 1952. Output of the men's factory clothing industry went up 82 p.c. from 1946 to \$277,000,000 in 1952 and the number of persons employed increased by 25 p.c. to 35,583 in the same comparison. Women's factory clothing, although farther down on the list, also considerably increased its value of production from \$174,000,000 in 1946 to \$217,000,000 in 1952.

Mention should be made of the rapid rise of the aircraft and parts industry which appeared in sixteenth place among the industries in 1952 as against fortieth place in 1951. The gross value of products of this industry increased from \$55,000,000 in 1950 to \$117,000,000 in 1951; in 1952 the gross value of factory shipments was \$245,000,000.

Principal Statistics of the Fifteen Leading Industries, 1952

Industry	Estab- lish- ments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Value of Factory Shipments
	No.	No.	\$'000	\$'000	\$'000	\$'000
Pulp and paper.....	128	57,803	225,353	76,740	497,047	1,157,888
Slaughtering and meat- packing.....	154	22,864	71,378	4,645	700,370	863,776
Non-ferrous metal smelt- ing and refining.....	17	24,608	87,964	50,571	519,781	837,074
Motor-vehicles.....	19	31,102	113,607	2,781	497,474	767,355
Petroleum products.....	55	11,661	46,145	27,878	453,955	660,357
Sawmills.....	8,283	60,931	135,541	7,191	299,507	568,023
Primary iron and steel.....	58	35,001	124,387	31,422	239,001	504,000
Butter and cheese.....	1,602	20,435	48,826	7,018	284,367	378,795
Railway rolling-stock.....	36	36,084	108,319	4,784	181,620	332,165
Rubber goods.....	70	21,582	65,478	3,362	120,799	286,655
Clothing, men's factory.....	587	35,583	70,782	785	151,358	277,426
Motor-vehicle parts.....	172	21,791	72,608	3,896	145,667	276,785
Flour mills.....	99	4,961	14,689	1,653	236,194	274,208
Miscellaneous food prep- arations.....	325	9,563	23,203	2,994	190,029	266,030
Bread and other bakery products.....	2,585	33,011	74,245	8,211	122,230	260,181
Totals, Fifteen Leading Indus- tries.....	14,190	426,980	1,282,525	233,931	4,636,399	7,710,718
Grand Totals, All Industries—						
1952.....	37,929	1,288,382	3,637,620	392,981	9,146,172	16,982,687
1951.....	37,021	1,258,375	3,276,281	376,714	9,074,526	16,392,187
Percentages of Fifteen Leading Industries to All Industries, 1952.....	37.4	33.1	35.3	59.5	50.7	45.4

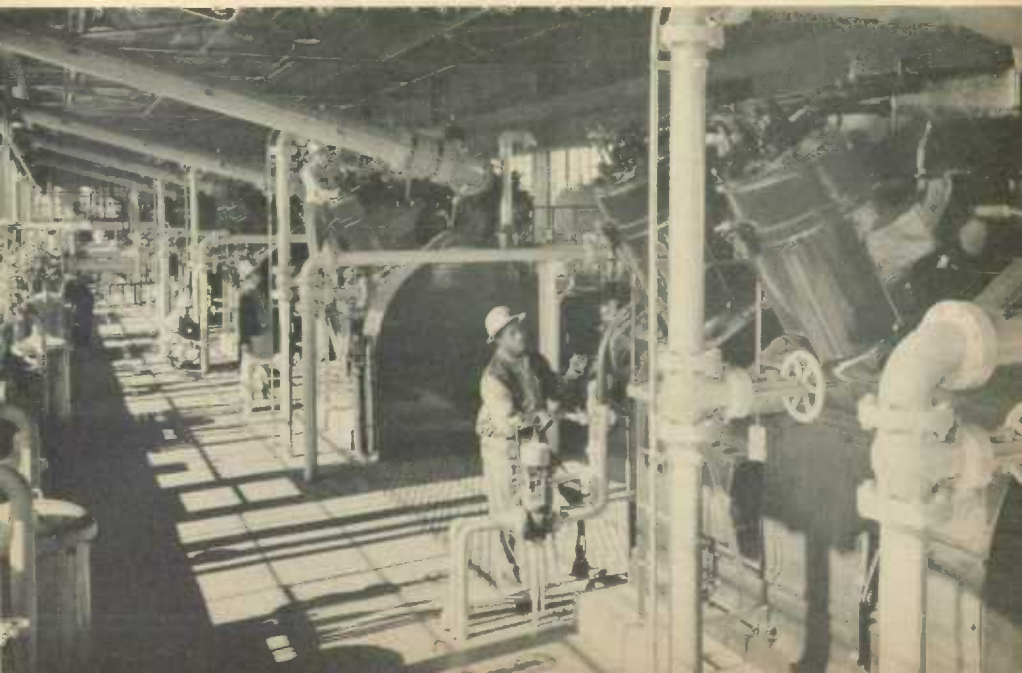
Provincial Distribution—Ontario is Canada's most industrialized province. Since 1946 its manufacturing production has increased by 123 p.c. to \$8,372,000,000 in 1952, and employment has risen by 22 p.c. to 609,696 in

the same comparison. In 1952, Ontario's industries produced over 49 p.c. of the nation's manufactured goods, employed nearly half of the manufacturing working force and paid more than half of the salary and wage bill.

Ontario has the greatest diversification of manufacturing production of any province and certain industries are carried on there almost exclusively. In 1952, the Province turned out 90 p.c. or more, by value, of the Canadian production of motor-vehicles and parts, heavy electrical machinery, agricultural implements, machine tools, starch and glucose, tobacco products and soaps and washing compounds; between 80 p.c. and 90 p.c. of the rubber goods, breakfast foods, wine, carpets, mats and rugs, cordage, rope and twine, tanned leather, electric batteries and artificial abrasives; and between 70 p.c. and 80 p.c. of the primary iron and steel products, iron castings, scientific and professional equipment, wool yarn, white metal alloys, sporting goods, boiler and plate work, refrigerators, vacuum cleaners and appliances, and toys and games. Other industries in which over 50 p.c. of the Canadian value of shipments came from Ontario were: fruit and vegetable preparations, sheet metal products, printing and bookbinding, industrial machinery, aircraft and parts, furniture, radios and parts, flour and feed mills, acids, alkalis and salts, confectionery, and knitted goods. Well over 25 p.c. of the value of shipments of the pulp and paper industry is accounted for by this Province.

Quebec, producing 30 p.c. of Canada's total value of manufactured goods in 1952, is the second largest industrial province. In common with the other provinces, Quebec experienced great industrial expansion following

A row of gas compressors in the multi-million-dollar polythene plant near Edmonton, Alta. In them, natural gas and its derivatives are compressed in the making of ethylene—the first step in the production of polythene, a versatile plastic of world-wide importance as an industrial material. It is used in the manufacture of pipe, wire and cable insulation, containers, transparent film and other materials.



World War II. From 1946, the value of output rose by 107 p.c. to \$5,176,000,000 in 1952 and the number of persons employed in manufacturing increased by 20 p.c. to 429,698 in the same comparison.

Quebec's leading industry is pulp and paper, which had an output of more than \$508,000,000 in 1952—about 44 p.c. of the national total for that industry. Non-ferrous metal smelting and refining is next in importance, reporting value of shipments amounting to \$318,000,000 in 1952. Aluminum production—Canada's total output—reached a record total of 500,000 tons in 1952, making Canada the world's second largest producer of that metal. Quebec also predominates in the production of many commodities. In 1952 the Province produced 94 p.c. of the Canadian value of shipments of tobacco, cigars, and cigarettes, 81 p.c. of the cotton thread, and over 70 p.c. of the oiled and waterproofed clothing, children's clothing, and oilcloth linoleum and coated fabrics; between 60 p.c. and 70 p.c. of the value of production of women's factory clothing, synthetic textiles and silk, cotton yarn and cloth, leather footwear, corsets, narrow fabrics, miscellaneous clothing, and asbestos products; between 50 p.c. and 60 p.c. of the processed cheese, miscellaneous textiles, and fur goods; and between 40 p.c. and 50 p.c. of the miscellaneous electrical apparatus and the railway rolling-stock.

British Columbia, with factory shipments totalling \$1,332,000,000 in 1952, ranked third among the provinces in manufacturing production. Forest resources, fisheries, minerals and electric power have given a broad base and wide diversification to the industrial development of the Province. The post-war expansion is indicated by an increase of 107 p.c. in the value of production from 1946 to 1952 when value of factory shipments amounted to \$645,000,000, and by an increase of 23 p.c. in the number of persons employed in manufacturing—75,484 to 92,667—in the same comparison.

The major industry is sawmilling which reported a gross value of shipments of \$317,000,000 in 1952, followed by pulp and paper with \$125,000,000 and fish-processing with \$58,000,000. The sawmilling industry in British Columbia accounted for 56 p.c. of the Canadian total value of shipments for the industry, and the fish-processing industry for 43 p.c. of the Canadian total for that industry. Non-ferrous metal smelting and refining ranks high among the leading industries of the Province and recent expansion programs together with the new development at Kitimat for the production of aluminum will add to its importance; production figures are confidential and cannot be published. Other industries of importance in the Province are: slaughtering and meat-packing, veneers and plywoods, petroleum products, sash, door and planing mills, food preparations and fertilizers.

Manufacturing activities in the Atlantic Provinces are based mainly on the forests and the sea. Considering the four provinces as a unit, pulp and paper, fish processing, sawmills, and primary iron and steel predominated, accounting for 44 p.c. of the total production of the region in 1952. From 1946, the gross value of production of the three Maritime Provinces—Prince Edward Island, Nova Scotia and New Brunswick—increased by 78 p.c., from \$361,000,000 to \$643,000,000; the individual increases were 97 p.c., 83 p.c., and 72 p.c., respectively. In the same comparison, employment in manufacturing for the three provinces together increased from 54,211 to 59,417, or by 10 p.c.; individually the increases were 2 p.c., 12 p.c., and 7 p.c., respectively.

For Newfoundland, which became part of Canada in 1949, the increase in value of production since that year was about 57 p.c., and in number of employees, about 48 p.c.

In Newfoundland, manufacturing production is dominated by the pulp and paper and fish processing industries which, in 1952, accounted for 70 p.c. of the total production of the Province. In Prince Edward Island, agricultural and fishery resources make butter and cheese, fish processing and prepared stock and poultry feeds the leading industries. In Nova Scotia, primary iron and steel is the leading industry, having reported shipments valued at \$40,000,000 in 1952. This industry benefits from its location close to the coal mines of Cape Breton and its easy access by sea to the iron ore of Newfoundland. Fish processing runs a close second, value of



A new mile-long bridge across Halifax Harbour, completed early in 1955, is carrying traffic between the twin cities of Halifax and Dartmouth.



Most of the superstructure was fabricated at the Lachine shops of the Dominion Bridge Company, Montreal.

shipments being only slightly lower than those of the iron and steel industry in 1952. Railway rolling-stock and shipbuilding, both users of steel, came next in 1952 with shipments of over \$20,000,000 each, and sawmills and pulp and paper together accounted for shipments of about \$40,000,000. The forests of New Brunswick provide the raw materials for the Province's leading industries; pulp and paper reported shipments of \$87,000,000 in 1952 and sawmills reported shipments of \$21,000,000. Fish processing ranked third in value of shipments in 1952 with a total of \$18,000,000.

Developments in the post-war years have resulted in an increase in the gross value of production of the Prairie Provinces of 74 p.c., from \$777,000,000 to \$1,351,000,000. Alberta showed the greatest advance, having an increase of 102 p.c., compared with Manitoba with 63 p.c., and Saskatchewan with 54 p.c. Employment in manufacturing in the three Provinces together increased by 18 p.c. from 1946 to 1952—72,973 to 86,437.

In Manitoba, slaughtering and meat-packing is the leading industry, having shipments valued at \$112,000,000 in 1952. Railway rolling-stock was second with \$39,000,000, followed by flour mills, butter and cheese factories, petroleum products, men's factory clothing and miscellaneous food preparations, each of which shipped goods valued at over \$20,000,000. Manitoba's industries are well diversified, a large number of small and medium-sized firms having located in the Winnipeg area in the post-war period.

In Saskatchewan, manufacturing has continued along more or less traditional lines. Petroleum products led in 1952 with shipments valued at \$50,000,000. Flour mills were second with \$44,000,000 and slaughtering and meat-packing third with \$36,000,000.

Alberta has moved to the manufacturing forefront of the Prairie Provinces, especially since 1950. Slaughtering and meat-packing led the industries in 1952 with shipments of \$110,000,000. Petroleum products came second with \$81,000,000, flour mills third with \$41,000,000, followed by butter and cheese with \$32,000,000. Sawmills and sash, door and planing mills each had shipments of over \$20,000,000. Other industries are advancing rapidly in the Province, particularly the manufacture of such products as drill bits and tanks, heat exchangers and other bulky equipment for the burgeoning oil and gas industries. Chemicals have also made striking gains.

Statistics of Manufactures, by Province, 1952

Province or Territory	Estab- lish- ments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Value of Factory Shipments
	No.	No.	\$'000	\$'000	\$'000	\$'000
Newfoundland.....	948	10,303	25,234	3,873	45,478	105,459
Prince Edward Island...	224	1,795	2,806	326	15,786	22,070
Nova Scotia.....	1,533	33,371	75,245	12,983	183,141	326,840
New Brunswick.....	1,077	24,251	55,978	11,161	164,761	293,760
Quebec.....	12,024	429,698	1,125,945	141,973	2,745,618	5,176,235
Ontario.....	13,172	609,696	1,844,186	173,636	4,387,431	8,372,173
Manitoba.....	1,531	43,365	112,148	9,558	347,665	574,037
Saskatchewan.....	1,022	11,307	29,490	5,610	172,388	258,932
Alberta.....	2,150	31,765	82,527	8,373	331,817	518,411
British Columbia.....	4,225	92,667	283,531	25,298	751,011	1,332,482
Yukon and Northwest Territories.....	23	161	530	190	1,076	2,288
Canada.....	37,929	1,288,382	3,637,620	392,981	9,146,172	16,982,687

The following table gives preliminary figures of manufacturing production in the different provinces for 1953.

Preliminary Statistics of Manufactures, by Province, 1953

Province or Territory	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Value of Factory Shipments
	No.	\$'000	\$'000	\$'000	\$'000
Newfoundland.....	10,198	26,294	3,734	45,316	106,457
Prince Edward Island.....	1,798	3,027	350	16,918	22,954
Nova Scotia.....	31,948	76,917	12,690	182,056	324,839
New Brunswick.....	24,500	60,018	11,382	162,540	294,754
Quebec.....	439,667	1,216,894	144,724	2,774,918	5,370,329
Ontario.....	634,038	2,014,512	189,085	4,546,545	8,868,369
Manitoba.....	43,772	121,819	9,572	344,398	583,268
Saskatchewan.....	11,622	32,357	6,128	181,191	265,478
Alberta.....	33,503	92,506	9,885	349,319	548,340
British Columbia.....	94,617	308,100	27,229	722,938	1,384,477
Yukon and Northwest Territories.....	157	595	147	1,371	2,493
Canada.....	1,325,820	3,948,039	414,926	9,327,510	17,771,758

Manufacturing in Urban Centres.—The prosperity of most of the cities and towns of Canada, especially in the east, is intimately connected with their manufacturing industries, which provide employment for a large proportion of the labour forces. In Western Canada the cities are more largely distributing centres, although manufactures are increasing rapidly there also, particularly in the Vancouver area of British Columbia.

Urban Centres with Value of Factory Shipments of Over \$100,000,000 in 1952

NOTE.—Information for Arvida and Noranda, Que., and Copper Cliff, Oshawa and Port Colborne, Ont., cannot be shown.

Urban Centre	Estab-lish-ments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Value of Factory Shipments
	No.	No.	\$'000	\$'000	\$'000	\$'000
Montreal, Que.....	4,283	187,396	496,270	18,292	1,041,585	1,960,827
Toronto, Ont.....	3,825	149,020	439,286	17,160	943,718	1,787,644
Hamilton, Ont.....	575	59,257	190,168	21,288	385,702	781,597
Windsor, Ont.....	330	36,628	130,027	6,027	377,638	646,949
Vancouver, B.C.....	1,275	33,296	102,164	5,292	248,965	437,663
Montreal East, Que.....	33	5,864	20,205	15,036	284,746	408,257
Winnipeg, Man.....	843	28,162	70,744	3,158	160,845	296,264
Sarnia, Ont.....	49	8,172	29,221	11,564	110,032	198,879
Kitchener, Ont.....	205	14,768	40,621	1,833	95,069	189,466
London, Ont.....	279	15,927	44,302	2,340	81,336	180,716
Calgary, Alta.....	315	9,436	27,229	2,116	107,347	162,524
Quebec, Que.....	431	15,856	36,584	4,586	84,850	161,966
New Toronto, Ont.....	50	7,221	25,216	1,851	88,012	158,289
Welland, Ont.....	61	9,337	32,945	6,395	77,471	157,543
Edmonton, Alta.....	330	10,206	27,671	1,068	99,725	153,099
Brantford, Ont.....	161	13,305	42,285	1,880	77,491	150,351
St. Laurent, Que.....	56	17,110	49,932	1,393	74,935	139,796
Leaside, Ont.....	61	10,572	33,652	1,430	68,325	137,843
Sault Ste. Marie, Ont.....	57	8,196	29,470	7,303	68,686	136,357
St. Catharines, Ont.....	104	11,975	38,327	1,954	62,302	134,364
St. Boniface, Man.....	93	4,269	12,610	1,093	101,397	129,841
Peterborough, Ont.....	101	9,758	30,350	1,254	67,770	122,972
Shawinigan Falls, Que.....	50	6,070	19,393	9,399	49,293	112,759
Three Rivers, Que.....	94	7,434	21,820	7,054	49,296	107,614
New Westminster, B.C.....	118	6,429	19,183	1,208	59,926	106,731
Lachine, Que.....	69	8,869	29,772	1,194	39,699	103,944
Niagara Falls, Ont.....	84	6,950	22,771	6,140	40,593	100,851



Vancouver's new \$16,500,000 eight-lane bridge over False Creek in the centre of the downtown industrial area is nearing completion. A recent nation-wide traffic survey placed Vancouver first among Canadian cities for its clear-cut control policy, its traffic signs, compulsory driving tests, inspections and regular surveys.

Capital Expenditures

CAPITAL expenditures are defined as those outlays made to replace, modernize and expand the nation's stock of physical assets such as factories, theatres, stores, hospitals, mines, railways, telephone lines, power installations and the tools, machinery and equipment used in either producing goods or providing services. Government-owned assets of a physical nature such as roads, canals, office buildings and defence structures, and all housing, whether rented or owner-occupied, are also included. Excluded are outlays made for defence equipment, the accumulation of inventories and the acquisition of land and buildings.

One of the most important determinants of the level of economic activity within a nation is the relative size of its capital expenditures program. Extensive changes take place from year to year in total capital outlays and, because of this variability, capital expenditures form one of the most dynamic factors affecting employment and income levels. The rate of capital spending indicates the extent to which an economy is providing for the future, or is becoming industrialized; it also reflects changes in the opinions of the business community as to future prospects and of governments as to future demands for their services.

Capital expenditures have played a very significant role in Canada's post-war growth. From 1946 to 1953 the combined total of new private and public investment in durable assets amounted to over \$30,000,000,000. In each successive year from the end of the War, except 1950 and 1954, a larger share of the national output was taken up by the investment program. In 1946 the share was 14.2 p.c., in 1953, 23.9 p.c., and for the whole period it was nearly 21 p.c. Since the mid-1920's, only in the period 1926 to 1930 was this high rate of growth paralleled. The preliminary figures for 1954 and the forecast of intentions for 1955 (as of January 1955), given in the following table, indicate that although capital spending declined slightly in 1954, such outlays will continue to provide an important stimulus to further growth.

Private and Public Capital Expenditures, 1946-55

NOTE.—1946-53 figures are actual expenditures, 1954 figures are preliminary and 1955 figures are forecasts as of January 1955.

Year	Construction	Machinery and Equipment	Total	Percentage of Gross National Product
	\$'000,000	\$'000,000	\$'000,000	
1946 ¹	1,074	629	1,703	14.2
1947 ¹	1,424	1,065	2,489	18.1
1948 ¹	1,877	1,298	3,175	20.3
1949	2,124	1,378	3,502	21.3
1950	2,366	1,449	3,815	21.0
1951	2,735	1,842	4,577	21.3
1952	3,263	2,022	5,285	22.7
1953	3,665	2,176	5,841	23.9
1954	3,694	1,804	5,498	22.9
1955	4,064	1,744	5,808	

¹ Excludes Newfoundland.

The capital expenditures of business, institutions and governments for housing for 1954 amounted to \$5,498,000,000, 5.9 p.c. less than the record level of \$5,841,000,000 reached in 1953. Within the total program, expenditures on construction were up slightly and those for machinery and equipment were down by 17.1 p.c.

During the year a number of factors had unfavourable effects on the planned capital expenditure program. Adverse weather conditions and the loss of construction time because of strikes resulted in some projects proceeding more slowly than planned, and in some work being postponed. Greatly reduced crop revenues in Western Canada no doubt affected both the cash and credit position of farmers and, in turn, their equipment purchases. This situation very likely influenced other capital expansion plans associated with agricultural decisions to invest in durable assets.

In 1954, housing, trade, finance and institutions were the main sectors showing increases. The renewed strength in housing, trade and finance was first evident in 1953 following the period of the defence build-up when construction projects of these groups were restrained by government regulations. Primary industries and manufacturing accounted for only 28.1 p.c. of the total in 1954 as compared with 32.5 p.c. in 1953. However, within the primary industries group, the relation of mining to the total remained almost the same. Capital outlays of governments and utilities declined from their respective high levels recorded in 1953.

Private and Public Capital Expenditures, by Sector, 1953-55

NOTE.—1953 figures are actual expenditures, 1954 are preliminary and 1955 are forecasts as of January 1955.

Sector and Year		Construc- tion	Machinery and Equipment	Total
		\$'000,000	\$'000,000	\$'000,000
Agriculture and fishing.....	1953	85	461	546
	1954	78	315	393
	1955	80	315	395
Forestry.....	1953	19	15	34
	1954	20	21	41
	1955	24	17	41
Mining, quarrying and oil wells.....	1953	167	90	257
	1954	169	80	249
	1955	219	90	309
Manufacturing.....	1953	325	644	969
	1954	286	509	795
	1955	298	519	817
Utilities.....	1953	687	522	1,209
	1954	639	475	1,114
	1955	695	415	1,110
Construction.....	1953	10	81	91
	1954	6	60	66
	1955	7	41	48
Housing.....	1953	1,084	—	1,084
	1954	1,169	—	1,169
	1955	1,283	—	1,283
Trade—wholesale and retail.....	1953	191	139	330
	1954	218	139	357
	1955	217	144	361

The St. Lawrence power project begins. This cafferdam, stretching between Sheek and Barnhart Islands, is one of two that will seal off the St. Lawrence River from the power-house site area. Work was begun in mid-summer of 1954 and the first units of the two 16-generator power-houses at this point will be in service by 1958.



Private and Public Capital Expenditures, by Sector, 1953-55 —concluded

Sector and Year	Construc- tion	Machinery and Equipment	Total
	\$'000,000	\$'000,000	\$'000,000
Finance, insurance and real estate..... 1953	63	15	78
..... 1954	95	16	111
..... 1955	105	16	121
Commercial services..... 1953	29	89	118
..... 1954	29	80	109
..... 1955	32	76	108
Institutional services..... 1953	268	33	301
..... 1954	292	37	329
..... 1955	349	44	393
Government departments..... 1953	737	87	824
..... 1954	693	72	765
..... 1955	755	67	822
Totals..... 1953	3,665	2,176	5,841
..... 1954	3,694	1,804	5,498
..... 1955	4,064	1,744	5,808

Construction Activity

The most apparent activity generated by Canada's investment program is construction. In 1953, it is estimated that close to 500,000 of the total civilian labour force of about 5,300,000 were employed in either the erection of new, or the repair of existing, structures.

While the original forecast of the total value of new construction work to be put in place during 1954 was not realized for the reasons mentioned on p. 186, it was nevertheless a noteworthy year for the construction industry.

Two large developments—the Kitimat project in northern British Columbia and the Quebec-Labrador iron-ore project—were completed during the year. Also, Canada's first subway, the construction of which was spread over several years, started operation in April 1954. Initial work on the St. Lawrence power project began in July and toward the end of the year plans were under way for two multi-million-dollar natural-gas pipe lines from Alberta, one stretching eastward and the other southwestward.

The summary statistics in the following tables are based on reports received from organizations paying for the work done by contractors as well as work done by their own labour forces. They include also payments made to material suppliers and such indirect construction costs as legal, architectural and engineering fees. Although derived from the same source as capital expenditure figures, the statistics of construction activity for 1953 and 1954 in this section are based on earlier data.

Forecast estimates for 1954 disclose a continuation of the 1953 shift in emphasis from engineering construction to building construction. All categories of this type except industrial construction contributed to building construction's increased share of the total. The significant increase for engineering construction was that recorded for gas and oil facilities.

Value of New and Repair Construction Work Performed, by Principal Type, 1952-54

NOTE.—1952 figures are actual, 1953 are preliminary and 1954 are forecasts as of January 1954.

Type of Construction	1952		1953		1954	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
	\$'000		\$'000		\$'000	
Building—						
Residential	1,029,000	24.5	1,299,000	28.3	1,347,000	27.9
Industrial	509,000	12.1	497,000	10.8	472,000	9.8
Commercial	454,000	10.8	513,000	11.2	575,000	11.9
Institutional	314,000	7.5	336,000	7.3	422,000	8.7
Other	105,000	2.5	87,000	1.9	98,000	2.0
Totals, Building	2,411,000	57.4	2,732,000	59.5	2,914,000	60.3
Engineering—						
Road, highway and bridge construction	574,000	13.7	572,000	12.4	564,000	11.7
Waterworks and sewage systems	136,000	3.2	119,000	2.6	139,000	2.9
Dams and irrigation	66,000	1.6	61,000	1.3	35,000	0.7
Electric power construction	386,000	9.2	414,000	9.0	415,000	8.6
Railway, telephone and telegraph construction	296,000	7.0	314,000	6.8	308,000	6.4
Gas and oil facilities	215,000	5.1	281,000	6.1	349,000	7.2
Marine construction	70,000	1.7	59,000	1.3	67,000	1.4
Other engineering construction	45,000	1.1	43,000	0.9	39,000	0.8
Totals, Engineering	1,788,000	42.6	1,863,000	40.5	1,916,000	39.7
Totals, Construction	4,199,000	100.0	4,595,000	100.0	4,830,000	100.0

Kitimat—a fabulous dream become reality.



On Aug. 3, 1954, H.R.H. the Duke of Edinburgh "tapped" the first 50-lb. aluminum ingot poured at Kitimat.

This \$550,000,000 project consisted of five separate engineering feats—a dam to impound the water of a chain of lakes, a 10-mile tunnel through a mountain barricade to give passage to falling waters, a powerhouse inside a mountain, a transmission line to carry the power, and a smelter to convert bauxite ore to aluminum ingots.



Summary Statistics of Construction Activity, by Province and Contractor, 1952-54

NOTE.—1952 figures are actual, 1953 are preliminary and 1954 are forecasts as of January 1954.

Province or Contractor and Year		Average Employees	Salaries and Wages Paid	Cost of Materials Used	Value of Work Performed
		No.	\$'000	\$'000	\$'000
Newfoundland	1952	9,771	25,154	37,932	74,370
	1953	8,691	23,036	35,336	68,277
	1954	8,786	23,599	36,503	70,252
Prince Edward Island	1952	1,962	4,272	6,352	12,747
	1953	1,902	4,342	6,496	12,950
	1954	2,079	4,836	7,273	14,528
Nova Scotia	1952	17,870	43,617	64,754	119,696
	1953	19,559	50,328	74,169	137,672
	1954	21,042	55,627	83,744	154,799
New Brunswick	1952	13,872	32,173	48,021	88,582
	1953	14,169	34,901	51,998	95,755
	1954	15,456	38,899	58,591	107,750
Quebec	1952	134,427	388,492	542,192	1,052,287
	1953	129,148	397,680	555,913	1,077,965
	1954	138,330	436,533	612,284	1,185,868
Ontario	1952	157,666	491,324	778,800	1,458,283
	1953	168,894	558,579	872,634	1,640,786
	1954	171,242	579,662	911,405	1,710,601
Manitoba	1952	25,740	71,270	102,194	198,690
	1953	26,641	78,196	112,771	218,307
	1954	25,948	78,410	114,342	220,637
Saskatchewan	1952	22,233	65,259	112,683	200,761
	1953	23,203	72,345	124,082	221,409
	1954	24,379	78,610	137,799	245,767
Alberta	1952	44,660	141,164	283,610	479,232
	1953	50,367	163,734	329,255	558,253
	1954	54,946	180,217	363,982	617,249
British Columbia	1952	49,752	191,169	245,380	513,973
	1953	51,204	210,202	268,631	563,819
	1954	45,970	188,377	239,910	502,629
Totals	1952	477,953	1,453,894	2,221,918	4,198,621
	1953	493,778	1,593,343	2,431,285	4,595,193
	1954	508,178	1,664,770	2,565,833	4,830,080
Contractors	1952	294,908	965,498	1,610,850	3,015,596
	1953	302,200	1,047,922	1,756,864	3,283,376
	1954	317,030	1,110,190	1,875,177	3,489,640
Utilities	1952	77,842	214,597	249,136	499,797
	1953	84,091	248,343	284,133	573,603
	1954	83,805	253,202	290,096	586,330
Governments	1952	55,772	138,172	152,932	305,954
	1953	53,055	139,332	153,619	307,434
	1954	54,907	147,484	164,591	328,055
Others	1952	49,431	135,627	209,000	377,274
	1953	54,432	157,746	236,669	430,780
	1954	52,436	153,894	235,969	426,055

Housing

House-building activity was at a record level in 1954. During the year 113,500 new dwelling units, aside from conversions, were started and 102,000 units were completed. These figures compared with 102,400 units started and 96,800 completed in 1953, the previous record year. All regions except Quebec shared in the increased activity in 1954 but Ontario showed the



The construction of a causeway across the Strait of Canso will provide land passage from Cape Breton Island to the mainland of Nova Scotia. The causeway, a mile long and 80 feet wide at the top will reach shore just left of the lighthouse. In the foreground is the excavation for the ship channel.

largest relative advance. Housing starts in that Province were 19 p.c. higher than in 1953, largely accounted for by the activity in the Greater Toronto area where housing starts were 20,500 in 1954 compared with 11,500 in 1953.

New Dwelling Units Started, Completed and Under Construction, by Province, 1953 and 1954

Province	1953			1954		
	Starts	Com- pletions	Under Construc- tion Dec. 31	Starts	Com- pletions	Under Construc- tion Dec. 31
	No.	No.	No.	No.	No.	No.
Newfoundland.....	1,782	1,480	2,858	1,345	1,160	2,906
Prince Edward Island.....	137	182	77	198	188	87
Nova Scotia.....	2,527	2,160	1,836	2,311	2,496	1,503
New Brunswick.....	1,475	1,402	694	2,228	1,415	1,369
Quebec.....	30,249	29,803	13,418	29,958	26,182	16,629
Ontario.....	38,873	35,173	24,134	46,382	41,085	27,941
Manitoba.....	4,590	4,794	2,641	5,260	5,107	2,796
Saskatchewan.....	4,561	4,047	2,801	4,713	4,889	2,545
Alberta.....	9,625	9,854	5,613	11,529	10,285	6,442
British Columbia.....	8,590	7,944	5,851	9,603	9,158	6,423
Canada¹.....	102,409	96,839	59,923	113,527	101,965	68,641

¹ Exclusive of the Yukon and Northwest Territories.

New Dwelling Units Completed, by Type, 1950-54

Type	1950	1951	1952	1953	1954
	No.	No.	No.	No.	No.
New Construction—					
One-family detached.....	68,685	60,366	55,967	68,916	71,760
Two-family detached.....	7,376	7,568	5,314	7,714	6,098
Row or terrace.....	145	585	99	372	1,065
Apartments.....	12,809	12,791	11,707	19,837	23,042
Totals, New Construction.....	89,015	81,310	73,087	96,839	101,965
Conversions.....	2,739	3,500	3,215	3,824	4,373
Grand Totals¹.....	91,754	84,810	76,302	100,663	106,338

¹ Exclusive of the Yukon and Northwest Territories.

New Dwelling Units Completed, by Metropolitan Area, 1950-54

Metropolitan Area	1950	1951	1952	1953	1954
	No.	No.	No.	No.	No.
St. John's, Nfld.....	299	326	402	585	451
Halifax, N.S.....	708	620	636	1,241	1,360
Saint John, N.B.....	332	98	211	273	273
Quebec, Que.....	1,473	1,045	1,056	1,580	2,380
Montreal, Que.....	15,826	16,316	11,500	17,833	16,191
Ottawa, Ont.....	1,938	2,343	1,752	2,149	2,537
Toronto, Ont.....	9,373	13,026	9,576	9,460	16,252
Hamilton, Ont.....	1,511	1,757	1,877	2,961	2,593
London, Ont.....	1,325	1,261	1,358	1,355	1,297
Windsor, Ont.....	1,196	940	818	940	1,722
Winnipeg, Man.....	3,070	2,127	2,088	3,089	3,602
Vancouver, B.C.....	5,028	4,340	4,249	5,913	6,796
Victoria, B.C.....	1,166	844	715	944	1,065
Totals, Metropolitan Areas	43,245	45,043	36,238	48,323	56,519
Totals, Canada¹.....	89,015	81,310	73,087	96,839	101,965

¹ Exclusive of the Yukon and Northwest Territories.

During 1954 there was a major change in the Federal Government's housing legislation. The National Housing Act, 1954, which came into force on Mar. 22, introduced a system of mortgage loan insurance and provided for the participation of the chartered banks and the Quebec savings banks in mortgage lending under the Act. The Act also provided for higher loan-to-value ratios, higher maximum loan amounts and longer terms for loans.

The new legislation was an important factor in the increase in housing starts in 1954; in 1953 loans for 38,600 dwelling units were approved under the old National Housing Act and in 1954 loans for 50,000 dwelling units were approved under the old and the new Acts together.

Most of the dwellings started in 1954 were privately initiated, only 1,500 units being built directly by the Federal Government. Of the privately initiated dwellings started, 42 p.c. were financed with some form of government assistance such as mortgage loans or insurance of such loans; in 1953 the proportion was 36 p.c.



New housing, Manor Park, Ottawa, Ont.

**Net Loans Approved under the National Housing Acts, by Province,
1953 and 1954**

Province or Territory	1953			1954		
	Loans	Dwellings	Amount	Loans	Dwellings	Amount
	No.	No.	\$'000	No.	No.	\$'000
Newfoundland.....	158	168	1,279	127	166	1,665
Prince Edward Island.....	15	16	124	16	16	154
Nova Scotia.....	410	1,130	7,813	480	746	6,075
New Brunswick.....	308	333	2,629	375	391	3,372
Quebec.....	4,684	7,456	55,459	6,975	9,057	81,128
Ontario.....	13,097	18,839	145,129	20,422	26,074	240,683
Manitoba.....	1,558	2,050	14,969	1,913	2,540	21,813
Saskatchewan.....	633	832	6,231	884	1,040	9,152
Alberta.....	3,738	5,464	39,593	4,500	5,649	49,321
British Columbia.....	1,913	2,360	17,593	3,882	4,344	39,418
Northwest Territories.....	1	1	7	—	—	—
Yukon Territory.....	—1	—1	—3	—	—	—
Canada.....	26,514	38,648	290,823	39,574	50,023	452,781

Commodity Production

THIS section contains a survey of the actual production of commodities in Canada—activities of such industries as transportation, communication, trade, finance and service are not included.

The net value of Canadian commodity production in 1952 rose to \$13,708,000,000, an increase of nearly 5 p.c. over the 1951 total. The developments affecting production included an improved relationship between supply and demand; an abatement of inflationary pressures permitting the lifting of consumer credit regulations and the relaxation of controls over the supply of essential materials; and the outbreak of the foot-and-mouth disease which caused the temporary loss of the United States market and adversely affected the farm sector. Most major price indexes showed declines throughout the year, although the average level of the consumer price index was about 2 p.c. above 1951. Labour income rose steadily throughout the year and on average was 11 p.c. above 1951.

The following analysis covers changes in commodity output, by province, during 1952 and the tables on p. 197 give comparative data for 1950 and 1951.

Newfoundland.—In 1952, the net value of commodity production in Newfoundland accounted for a little more than 1 p.c. of the Canadian total. Over one-third of the Province's production came from the pulp and paper and fish processing industries, and construction accounted for about 24 p.c. The mining industry—the principal products of which are iron ore, lead and zinc—produced 14 p.c. of the total and primary fisheries 8 p.c. Exclusive of agriculture, which plays a minor role in Newfoundland's economy, the total value of commodity output advanced about 10 p.c. during the year, mainly the result of increased construction activity.

Prince Edward Island.—The economy of Prince Edward Island is predominantly agricultural, and potatoes, live stock and dairy products are the principal farm commodities. In 1952 agriculture represented about 60 p.c. of the Island's value of production, and construction and manufactures accounted for most of the remainder.

Nova Scotia.—The value of the commodity output of Nova Scotia rose by more than 6 p.c. during 1952 and in that year represented more than 2 p.c. of total Canadian production. Manufacturing accounted for over 41 p.c. of the provincial total, the leading manufacturing industries being primary iron and steel, fish processing, pulp and paper, sawmilling, railway rolling-stock and shipbuilding. Construction was in second place with 17 p.c. of the total. Mining, agriculture and fisheries, in that order, were the Province's main primary industries. Coal mining has for some years contributed about 80 p.c. of the value of mineral output and live stock, poultry and dairy products are the principal farm commodities.

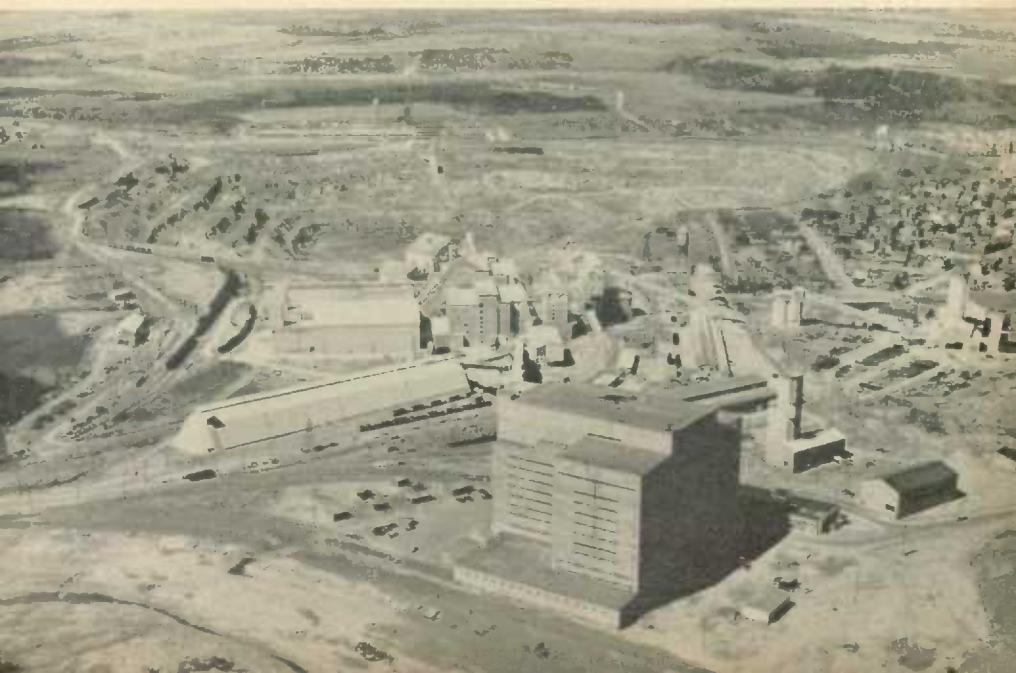
New Brunswick.—The net value of production in New Brunswick was slightly lower in 1952 than in 1951. In the later year the Province's production accounted for about 2 p.c. of the Canadian total. Manufacturing, the principal activity, represented more than 44 p.c. of the provincial total;

the main manufacturing industry is pulp and paper, followed by sawmilling and fish processing. Among the primary industries, agriculture—producing mainly potatoes, live stock, poultry and dairy commodities—was the most important, followed by forestry. Construction in 1952 was very active in New Brunswick, contributing 15 p.c. of the total commodity production.

Quebec.—The Province of Quebec accounted for 26 p.c. of all Canadian commodity output in 1952 and recorded an advance of 8 p.c. over the preceding year. Manufacturing, by far the most important activity, represented over 60 p.c. of the provincial total in 1952; pulp and paper was the leading manufacturing industry, followed by metal smelting and refining, textiles and clothing. The value of construction accounted for more than 14 p.c. of the provincial output and agriculture contributed nearly 9 p.c. Live stock, poultry and dairy products provide the major part of the agricultural income. All industries except agriculture and trapping recorded value gains in 1952 as compared with 1951.

Ontario.—The value of net commodity production in Ontario made up 40 p.c. of the Canadian total in 1952. The Province's total amounted to \$5,500,000,000 and represented an increase of over 3 p.c. as compared with 1951. The economy of Ontario is dominated by manufacturing, which provided 70 p.c. of the provincial output in 1952. The manufacturing industries that contributed more than \$100,000,000 to the net output were, in order of importance: motor-vehicles, primary iron and steel, pulp and paper, metal smelting and refining, heavy electrical machinery, rubber goods and motor parts. Agricultural output represented nearly 10 p.c. of the

One-third of the world's supply of asbestos fibre is produced at the Jeffrey Mine at Asbestos, Que. The new mill completed in the autumn of 1954 replaces obsolete production facilities. In the background may be seen an open mine and part of the townsite of Asbestos.



provincial value composite and consisted mostly of vegetables, live stock, poultry and dairy products. The value of construction work performed accounted for more than 12 p.c., about the same proportion as in 1951. Only agriculture and trapping showed value declines in 1952 as compared with the previous year.

Manitoba.—In 1952, the net value of Manitoba's production contributed about 4 p.c. of the Canadian total. Agriculture and manufacturing provided nearly equal shares (38 p.c. and 37 p.c., respectively) of the provincial value composite. Grain and live stock are the principal agricultural products and in the manufacturing sector, slaughtering and meat-packing and railway rolling-stock are the leading industries. A gain in manufacturing production of about 13 p.c. over 1951 more than counterbalanced a decline of nearly 9 p.c. in the value of agricultural output. The value of construction in Manitoba in 1952 rose appreciably compared with 1951 and accounted for nearly 17 p.c. of the Province's total output. Reduced output of copper and gold resulted in a sharp drop in the value of mineral production to its lowest level in five years.

Saskatchewan.—The economy of Saskatchewan is overwhelmingly dependent on agricultural production which, in 1952, accounted for 77 p.c. of the Province's net value of commodity output. In that year, Saskatchewan accounted for 7 p.c. of the national composite. In contrast to the experience of most other provinces, the value of agricultural output advanced by more than 6 p.c. over 1951, the increased value of grains more than off-setting declines in live stock production. Manufacturing output, consisting mostly of petroleum products and the products of flour mills, meat-packing plants, breweries and butter and cheese-making plants recorded a sharp gain compared with 1951, and a similar increase was shown in the value of construction.

Alberta.—In 1952, commodity output of Alberta was 6 p.c. higher than in 1951; in the later year it represented nearly 8 p.c. of the national total. Because of the rapid advance of mineral production in recent years, agriculture has progressively diminished in relative importance. In 1952 agriculture accounted for about 46 p.c. of provincial output and mining represented 16 p.c., compared with 54 p.c. and 11 p.c., respectively, in 1948. In 1952, the value of construction performed represented over 18 p.c. of the provincial net output, and manufacturing accounted for nearly 17 p.c.—meat-packing, petroleum products, sawmills and breweries are the leading manufacturing industries. Only agriculture and trapping failed to show increases in production value in 1952 as compared with 1951.

British Columbia.—British Columbia in 1952 contributed 9 p.c. of the total value of Canadian commodity production and was thus the third-ranking province in value of output after Ontario and Quebec. In that year the provincial output values of agriculture, fisheries, trapping, mining and manufacturing showed declines from 1951; these were offset by increases in the production value of electric power construction while the forestry industry remained approximately the same. Thus British Columbia's total output for 1952 showed little change compared with 1951. Manufacturing was the leading activity in the Province, representing 45 p.c. of the provincial output.

The principal manufacturing industries, from the point of view of net value, were sawmills, pulp and paper, fish processing, veneers and plywoods, and fertilizers. The construction industry accounted for 22 p.c. and recorded a gain of 27 p.c. over 1951. Forestry represented 13 p.c. and mining more than 9 p.c. of the provincial total.

Net Value of Production, by Industry and Province, 1950-52

Industry and Province	1950	1951	1952
	\$	\$	\$
Industry			
Agriculture.....	1,883,036,000	2,653,678,000	2,467,166,000
Forestry.....	389,500,000	486,293,276	533,937,415
Fisheries.....	82,191,043	102,026,979	92,892,725
Trapping.....	15,204,419	19,791,933	14,137,820
Mining.....	657,328,669	770,143,233	777,443,771
Electric power.....	313,347,197	363,642,975	402,073,511
Manufactures.....	5,942,058,229 ¹	6,940,946,783	7,443,533,199
Construction.....	1,475,000,000	1,738,274,000	1,976,703,000
Totals	10,757,665,557	13,074,797,179	13,707,887,441
Province			
Newfoundland ²	97,238,222	136,110,998	150,017,395
Prince Edward Island.....	30,819,330	36,505,157	41,696,971
Nova Scotia.....	259,731,738	396,791,447	315,598,397
New Brunswick.....	242,111,904	268,285,055	266,208,879
Quebec.....	2,816,309,229	3,337,598,876	3,603,837,567
Ontario.....	4,534,265,812	5,277,350,439	5,462,414,735
Manitoba.....	483,805,980	569,952,272	580,632,738
Saskatchewan.....	546,960,335	891,151,432	967,630,499
Alberta.....	734,148,363	1,002,712,967	1,060,842,944
British Columbia.....	995,233,672	1,240,224,561	1,239,598,201
Yukon and Northwest Territories ³ ...	17,040,972	18,113,875	19,409,115

¹ Exclusive of fish processing in Newfoundland.

² Excludes agriculture, fisheries,

trapping and fish processing in 1950; agriculture and trapping in 1951; and agriculture in 1952.

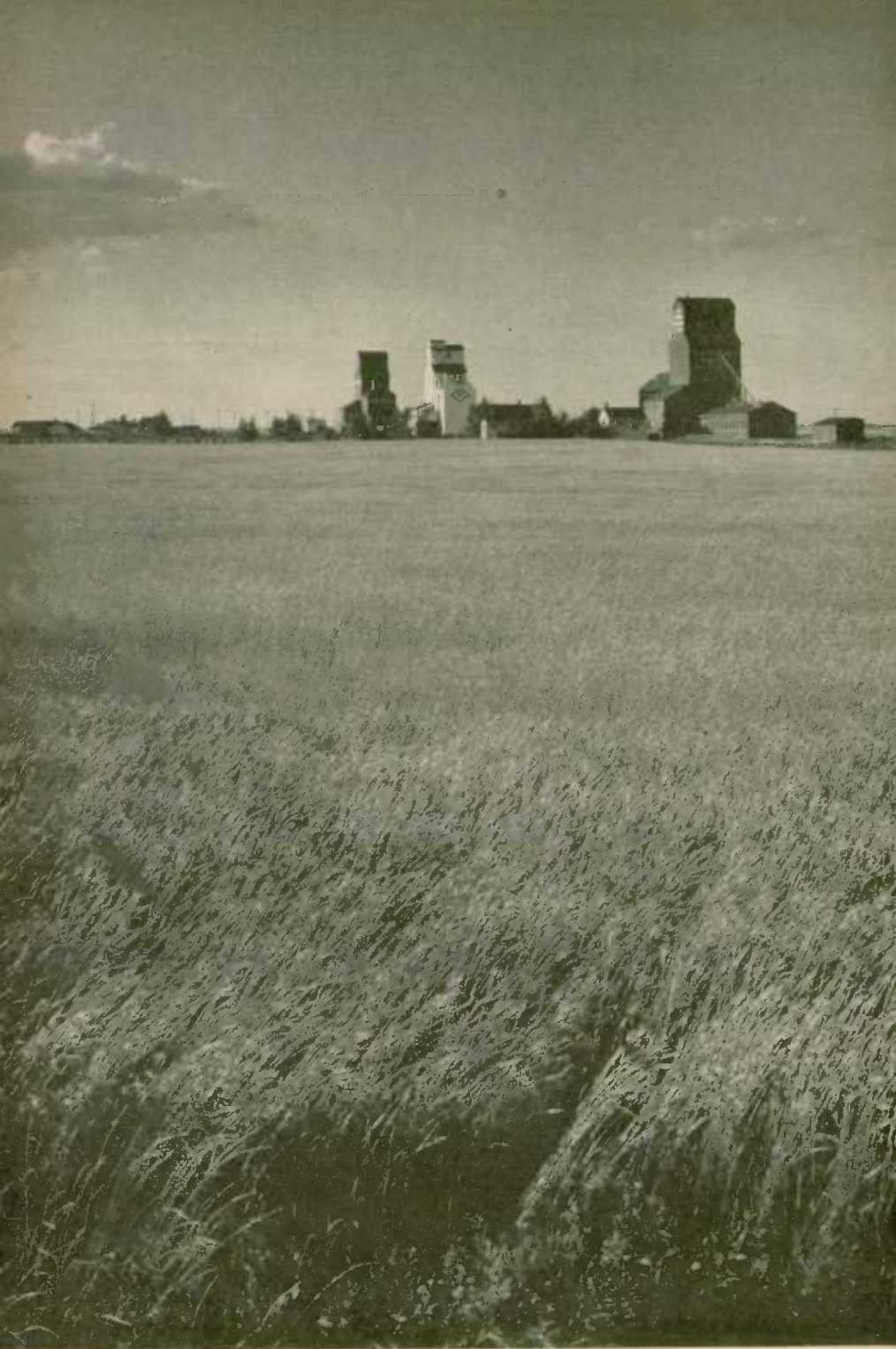
³ Forestry and construction figures for the Yukon and Northwest Territories are included with British Columbia.

The national per capita net value of commodity output rose from \$535 in 1946 to \$965 in 1952 (exclusive of Newfoundland), an increase of 80 p.c. As wholesale prices rose by approximately 63 p.c. in the same period, a considerable "real" advance in per capita output is indicated. Compared with 1951, the value of per capita output in 1952 increased by about 2 p.c.

Per Capita Net Value of Production, by Province, 1950-52

Province	1950	1951	1952	Province	1950	1951	1952
	\$	\$	\$		\$	\$	\$
Newfoundland.....				Manitoba.....	630	734	718
Prince Edward Island...	321	372	405	Saskatchewan.....	657	1,071	1,148
Nova Scotia.....	407	462	483	Alberta.....	804	1,068	1,094
New Brunswick.....	473	520	506	British Columbia ¹ ...	872	1,057	1,029
Quebec.....	710	823	863				
Ontario.....	1,014	1,148	1,146	Canada	798	948	965

¹ Includes Yukon and Northwest Territories.



Saskatchewan

The Economy in 1954

THE year 1954 was essentially one of adjustment for the Canadian economy, though for the first time the value of national output of goods and services declined, the drop being about 2 p.c. from 1953's record \$24,350,000,000. The major factor in the decline was an estimated \$500,000,000 decrease in value of grain production resulting from poor weather and rust, a development sufficient in itself to account for the 2-p.c. decline in total output.

In the non-farm sector of the economy, a network of counterbalancing factors maintained the value of output at approximately the 1953 level of \$22,701,000,000. Though manufacturing activity as a whole declined substantially, reflecting downward pressures in the economy, the decline was generally offset by continued expansion of the services industries and by gains in all of the primary industries except agriculture. Within the manufacturing group, decline in output was concentrated mainly in the durable-goods producing industries, including iron and steel products, transportation equipment and electrical apparatus and supplies. Production of non-durable manufactured goods also fell below the 1953 level but the decline was less marked and reflected mainly a drop in clothing and textiles. Output in most other non-durable goods industries was well above 1953 levels.

Other downward pressures were also operative in 1954 including heavy liquidations of business inventories; a decline in exports; an apparent falling-off in business outlays for plant, machinery and equipment; a levelling-off of the defence build-up; and reduced demand for consumer durable goods. The most significant was the sharp liquidation of business inventories that began in 1954 following the substantial build-up of earlier years to meet defence requirements and growth in economic activity generally. As these forces levelled off and supplies became easier, inventory holdings in certain lines became excessive and substantial liquidations followed. Moreover, production of some types of manufactured goods was cut back in 1954 as current requirements were being met out of inventory stocks.

Export demand in 1954 was lower than in the preceding year, reflecting to a large extent a decline in overseas requirements for Canadian grain. At the same time, the downturn of business activity in the United States was accompanied by lower sales of certain Canadian goods to that country. As industrial capacity in overseas countries continued to expand and as resources were freed from the defence effort in the United States, international trade competition was intensified in 1954, adding to the difficulties of Canadian exporters of manufactured goods.

Although final data are not yet available, business investment in plant, machinery and equipment appears to have declined in 1954. Because of unfavourable weather conditions, non-residential construction fell short of expectations. Also the completion of a number of large resource development and other industrial expansion projects affected the investment picture as did the decline in farm income which was reflected in lower outlays for farm machinery.

Defence outlays were moderately lower in 1954, and this development undoubtedly had some effect on output in certain industries. It may be

noted that Canadian defence outlays reached their peak in 1953 and did not provide an expansionary force in the economy in the following year.

A lower level of consumer durable goods purchases in 1954 was a factor in the decline in business activity. A wave of buying had reflected the pent-up demand of the post-Korean period and the removal of consumer credit restraints in 1952. But by the end of 1953, this demand had been largely satisfied and had diminished to more normal proportions and the cumulative backlog of orders appeared to have been worked off. All types of consumer durable goods were affected by the decline, with the major exception of television sets.

These downward pressures were largely offset by major expansionary influences. Though durable goods purchases were lower than in 1953, consumer outlays for non-durables and services showed considerable increase – sufficient to raise the total of consumer expenditures above the 1953 level by about 3 p.c. and to offset an important part of the decline in other demand categories. This continued expansion of consumer demand, partly attributable to the growth in the population, was directly related to the high and sustained level of personal income throughout 1954. Personal income had risen by 15 p.c. during 1952 and 1953 while retail prices were relatively unchanged; this meant a substantial gain in real wages which, in turn, supported a large volume of increased buying in these years as well as a high level of personal saving. In 1954, despite the relatively poor crop and a slightly lower level of employment, personal income remained stable. This stability was derived from many sources, notably higher average hourly earnings and higher transfer payments from government (unemployment benefits, family allowances, old age pensions and others). In addition, although the level of profits was below the previous year, dividend payments to individuals were maintained. Net rental income also increased as housing stock grew, and interest payments to persons continued to rise. The general level of prices also remained stable during the year.

A further expansionary influence was the continued growth in outlays for new housing which reached an all-time record for Canada in 1954. Changes in the National Housing Act early in the year which reduced down-payment requirements and extended the repayment period, and a change in the Bank Act which permitted the chartered banks to make loans on home mortgages gave impetus to new housing construction. Largely responsive to these housing developments, municipal government expenditures rose further over the preceding year as demands grew for local improvements and services such as roads, streets, sewage and water facilities, schools and hospitals.

The decline in imports of goods and services also had its influence in easing the effect of the fall-off in final expenditures on Canadian production. Since much of the decline in Canadian demand for certain types of goods was met by a cut-back in imports of goods and services from foreign countries, Canadian output fell less sharply than did total outlays by major spending groups.

Thus the over-all effect of these counterbalancing tendencies was to leave the total Canadian output, apart from the farm sector, at approximately the same level as in 1953.

Developments within certain phases of the economy follow.



Refinery nearing completion at Fort Saskatchewan, 15 miles northeast of Edmonton, Alta. It is here that the nickel and copper concentrates from the new mine at Lynn Lake, Man., will be treated.

Employment

Although total non-farm output in 1954 was approximately the same as in 1953, the over-all level of non-agricultural employment was about 1 p.c. lower. In the durable goods industries, employment declined by about 6 p.c. in the first nine months of 1954, and in the non-durable goods industries by about 3 p.c.; these declines were only partly offset by the continued growth of employment in the service industries. With a slightly lower employment level, therefore, and an increase in both the population and the labour force from 1953 to 1954, there was a somewhat larger number of persons without jobs and seeking work in the later year. For the first nine months of 1954, persons without jobs and seeking work constituted 4.3 p.c. of the labour force compared with 2.6 p.c. in the same period of 1953.

Prices

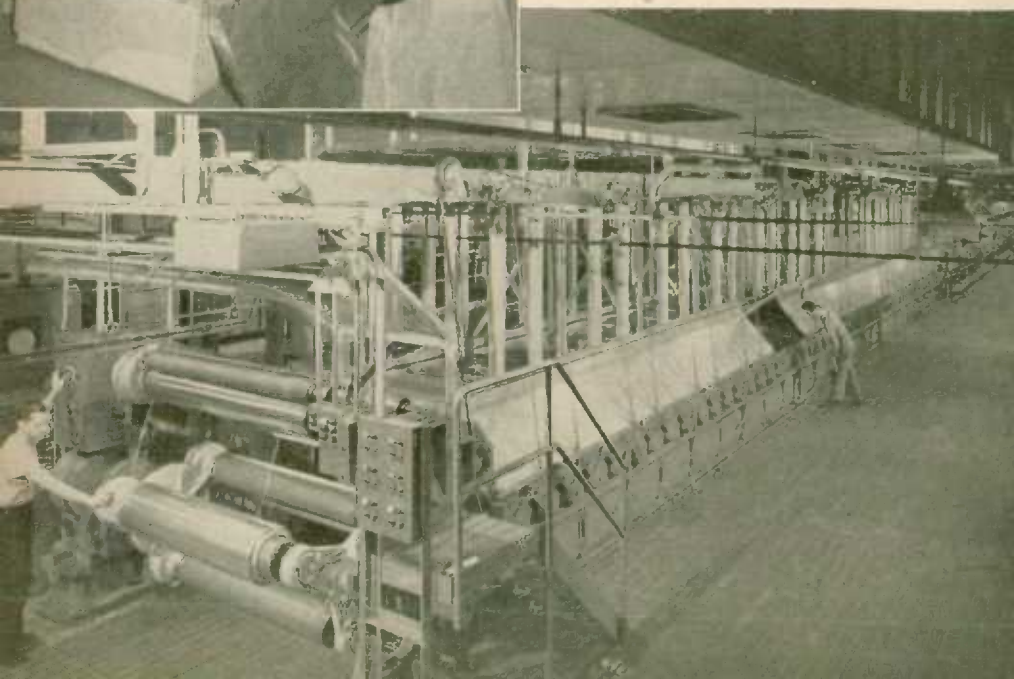
Prices were comparatively stable in 1954, with the exception of those for certain farm products. The sharp rise in world prices in 1950 and 1951 which accompanied the out-break of hostilities in Korea was followed by a decline which levelled off in 1952. Since that time the general level of prices in Canada has shown little change. The consumer price index in 1954 was approximately unchanged from 1953 and 1952, and the index of wholesale prices was 1.5 p.c. below 1953 and 4 p.c. below 1952. Increased world output of both raw materials and manufactured goods was a major factor in the stability of prices, as was the renewed competitive vigour of international trade. Export prices were slightly lower in 1954 than in the preceding year and import prices were slightly higher so that there was a small deterioration in the terms of trade.

Production

An analysis of Canadian production by industry in 1954 indicates that substantial shifts occurred in the composition of output compared with the preceding year. Total manufacturing production was 5 p.c. below 1953 in the first nine months of 1954. Within manufacturing, declines were widespread in the durable goods field, where a drop of 9 p.c. occurred. As stated previously, this development reflected inventory liquidations, reduction in defence spending, falling purchases of consumer durable items, and reduced investment in new machinery and equipment both on and off the farm. Production of primary iron and steel products and motor-vehicles each declined by 23 p.c. Activity in the electrical apparatus and supplies industry



Cellophane cellulose film, which has revolutionized the principles of food packaging, rolls through a casting machine.



A council of twelve business and professional spokesmen from the four Atlantic Provinces held its first meeting in September 1954 at Halifax and laid foundations for the conducting of an exhaustive survey of the economic affairs of the Atlantic Region.



showed a more moderate decline, reduced output in some fields being offset by a sharp increase in the production of television sets. In the non-durable goods sector, a reduction in output of 1 p.c. occurred, associated mainly with a drop in output of clothing and textiles; at the same time, there were substantial liquidations of clothing and textile products. Partly offsetting the decline in this group, higher production occurred in foods and beverages, chemical products, tobacco products, paper products and petroleum products. Most of these gains were mainly associated with higher consumer purchases, while some were related to the growth in resource development.

In the primary industries, as indicated earlier, agricultural output declined substantially because of the large drop in grain output. Production of live stock, poultry and dairy products, however, recorded advances over 1953.

Operations in the woods showed a moderate increase; declines in logging operations occasioned by reduced activity in sawmills and shingle mills were more than offset by an increase of 19 p.c. in pulpwood production. In the second half of 1954, the vigorous housing programs in Canada and United States, together with a rising level of industrial production in the United Kingdom stimulated demand for Canadian wood products. A moderate gain was also recorded in primary fisheries operations, the result largely of increased cod landings off the East Coast and the plentiful run of sockeye salmon off British Columbia.

One of the most significant advances in output in the review year occurred in mineral production which rose by more than 10 p.c. in the first nine months. Metal output increased by 4 p.c., as copper, nickel and lead showed substantial advances. Zinc and gold production, although lower than the year previously, picked up toward mid-year. These increases were related to stronger export demand reflecting, in turn, a high level of economic activity in the United Kingdom, work stoppages of Chilean and United States copper producers, and a resumption of United States government stockpiling of zinc and lead. Output of crude petroleum and natural gas showed marked gains, as resource development in Alberta continued strong. Coal output, on the other hand, continued to decline, reaching its lowest level in seven years, as other sources of energy were substituted for it.

In the public utilities sector, production of electric power continued to advance, gaining about 3 p.c. over 1953. Distribution of natural gas increased sharply, while production and sales of manufactured gas rose very little.

On balance, output of the primary goods industries, other than agriculture, was appreciably higher than in 1953.

The general level of construction activity fell off by nearly 5 p.c. in the first nine months of the year. Housing construction, however, showed an appreciable gain over the preceding year, as previously indicated. Offsetting the gain in housing, there were declines in other sectors of the construction industry. Industrial construction fell off in 1954, reflecting in part unfavourable weather conditions and in part the completion of a number of important resource development projects. Several of these new enterprises are now in production, and their gradually expanding output is showing up in the production of other industries.

All groups of service showed increases with the exception of transportation, communication and storage. The latter group declined as a result of reduced shipments of grain, associated with falling export markets, and lower shipments of automobiles, machinery, and primary iron and steel products. Partly offsetting these declines, activity in air and truck transportation and oil pipelines increased. The communication sub-group also increased as the rise in telephone and telegraph services and the rapid expansion in television transmission continued. Thus, even within transportation, communication and storage, long-run growth factors partially offset substantial declines in a number of component sub-groups.

Retail and wholesale trade activity rose fractionally in 1954—a lower volume of sales by motor-vehicle dealers, clothing and shoe stores and some other trades was more than offset by rising sales by food stores, department and variety stores, garages and filling stations and other businesses. Government, health, educational, recreational and business services also recorded advances from the 1953 level.

National Income

In the first nine months of 1954, national income (the sum of earnings of the factors of production) was 3 p.c. below the 1953 level. Wages and salaries, which declined slightly in the first quarter of 1954, continued their upward trend as the year progressed, averaging about 1.5 p.c. higher than in 1953, as average hourly earnings continued to rise. As production levelled out, corporation profits declined but dividend payments were maintained. Rental incomes and other types of investment income rose in 1954, partly offsetting the decline in profits; for the first nine months of the year, total investment income including corporation profits was only 4 p.c. below 1953. The damage to the western grain crop reduced accrued net income of farm operators from farm production by approximately one-third. As grain deliveries fell less sharply than crop production, cash receipts by farmers were down by only 13 p.c.; the reduction, moreover, in accrued net farm income reflects the smaller accumulation of grain inventories. Net income of non-farm unincorporated businesses declined about 4 p.c. in 1954.

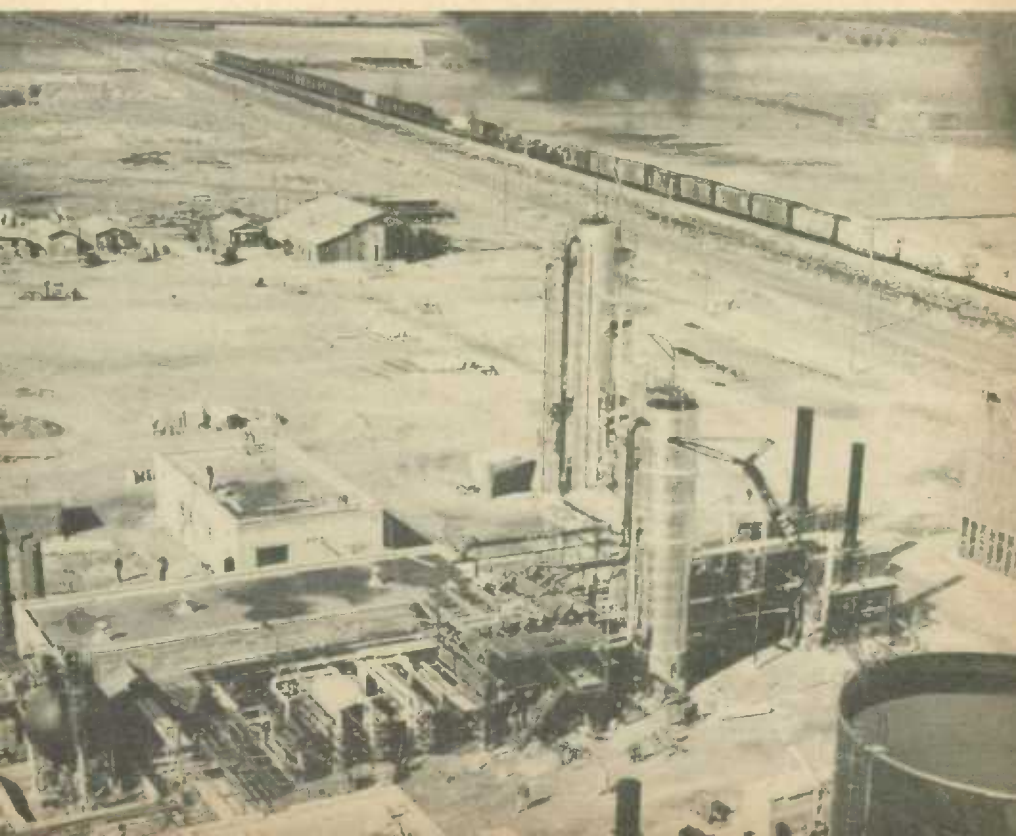
The decline in national income was not matched by a corresponding drop in personal income, because, as noted previously, the flow of interest, dividends, rents and government transfer payments increased. Moreover, people were spending a higher proportion of their incomes in 1954, with the result that the rate of personal saving showed some decline.

Gross National Expenditure

Turning to the disposition of the nation's production in 1954, consumer expenditure and housing were the only two demand categories to show increases over 1953; government expenditures for goods and services, business outlays for new plant, equipment and machinery, and exports were all lower than in the previous year.

For the first nine months of 1954, total personal expenditure on consumer goods and services was 3 p.c. higher than in the preceding year, with a decline of 5 p.c. in durable goods being more than offset by increases of 2 p.c. and 7 p.c., respectively, in non-durable goods purchases and in outlays for services. In the latter two groups, expenditures for such items as food, education, recreation and rents increased steadily throughout the year. In the durable goods group, there was a marked increase in television sales as new transmission stations came into operation, but sales of new automobiles and

A new British Columbia oil refinery under construction. Production of this project will eventually run to about 6,000,000 gals. of refined products each month, ranging from gasoline to tar.



electrical appliances generally were substantially lower. Outlays for new housing were 9 p.c. higher in the first nine months of the year than in 1953.

Government expenditures on goods and services in 1954 were running 2 p.c. below 1953 levels, reflecting the influence of lower outlays for national defence. It may be noted that defence expenditure (on the national accounts basis) in the first nine months of 1954 was more than 10 p.c. below 1953; the cumulative outlays for the year ended Sept. 30, 1954, amounted to \$1,755,000,000 compared with \$1,941,000,000 for the comparable preceding period. An increase in provincial government expenditure on goods and services reflects higher investment outlays, and the increase in municipal government expenditures was associated with the recent high volume of new housing construction.

As previously indicated, business investment in new plant, machinery and equipment appears to have fallen short of the 1953 level. There was a shift in the composition of the investment program in 1954 toward institutional developments such as schools and hospitals, and toward the service industries such as the financial and trade groups; investment in basic manufacturing facilities in the heavy industries and in resource development appear to have taken a smaller share of investment outlays in 1954.

The levelling-off of the defence build-up and a general easing of expansionary forces in 1954, together with the drop in consumer demand for durable goods was accompanied by substantial liquidations of business inventories, especially textiles, clothing and manufactured metal products. The magnitude of the liquidation is indicated by the shift from inventory accumulation in the third quarter of 1953 amounting to \$500,000,000 at annual rates to net liquidation in the third quarter of 1954 of approximately the same amount. This reversal was equivalent to about \$1,000,000,000 of new production, or 4 p.c. of Gross National Product. Thus, a major portion of the falling-off in demand in 1954 can be ascribed to developments in the inventory sector.

In the field of foreign trade, both exports and imports of goods and services showed declines from 1953. A deficit of approximately \$300,000,000 on current account occurred in the first nine months of 1954, but this was more than offset by continued capital inflows from abroad which were related to resource development, purchases of government securities and other forms of investment. The value of the Canadian dollar in 1954 was at an average premium of about 2 p.c. in terms of the United States dollar.

Declines in wheat exports, associated in part with high levels of world grain production, accounted for a major portion of the decline in total exports. Exports of metals strengthened as the year progressed and exports of wood products rose substantially above 1953 levels; these developments were associated with rising levels of European production, the large housing program in the United States, and the recent improvement in the base-metals market. Declines in imports in 1954 were more widespread, with major decreases occurring in raw cotton and wool and their products, farm implements and machinery, and automobiles and parts. These developments were related in part to lower outlays for consumer durable goods, lower investment in machinery and equipment, and the inventory liquidations noted above.

Thus the softening in business activity (apart from the farm sector) in 1954 was associated mainly with a decline in durable goods manufacturing production which, in turn, reflected changes in the demand pattern.

National Income and Gross National Product and Gross National Expenditure, by Quarter, 1953 and 1954

(Millions of dollars)

NOTE.—To facilitate comparisons between quarters and to indicate at what levels the various sectors of the economy are operating, the data have been adjusted for seasonal variation. That is to say, the average amount that activity normally rises or falls as a result of changing seasons (e.g., purchases of coal, summer clothing, Christmas gifts) has been eliminated, so that the underlying movements stand out more prominently.

Item	1953					1954		
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year	First Quarter	Second Quarter	Third Quarter
Income								
Wages, salaries and supplementary labour income.....	11,408	11,672	11,728	11,836	11,661	11,700	11,816	11,960
Military pay and allowances.....	280	308	316	332	309	336	368	380
Investment income.....	3,888	3,856	3,688	3,544	3,744	3,620	3,648	3,636
Accrued net income of farm operators from farm production.....	1,672	1,404	1,668	1,852	1,649	1,256	1,004	1,040
Net income of non-farm unincorporated businesses.....	1,636	1,680	1,668	1,736	1,680	1,572	1,576	1,600
Net National Income at Factor Cost.....	18,884	18,920	19,068	19,300	19,043	18,484	18,412	18,616
Indirect taxes less subsidies.....	2,844	2,940	2,984	2,864	2,908	2,916	2,920	2,884
Depreciation allowances and similar business costs.....	2,236	2,320	2,368	2,420	2,336	2,372	2,488	2,508
Residual error of estimate.....	+204	-84	+196	-61	+63	+100	-120	-256
Gross National Product at Market Prices.....	24,168	24,096	24,616	24,520	24,350	23,872	23,700	23,752
Gross national product at market prices excluding accrued net income of farm operators.....	22,496	22,692	22,948	22,668	22,701	22,616	22,696	22,712
Expenditure								
Personal expenditure on goods and services....	14,996	15,080	15,192	15,392	15,165	15,392	15,560	15,716
Government expenditure on goods and services.....	4,460	4,320	4,568	4,284	4,408	4,356	4,244	4,512
Gross Domestic Investment—								
New residential construction.....	1,020	1,000	1,044	1,180	1,061	1,104	1,000	1,224
New non-residential construction.....	1,588	1,660	1,864	1,792	1,726	1,584	1,552	1,620
New machinery and equipment.....	2,028	1,832	2,044	1,784	1,922	1,820	1,804	1,740
Change in inventories.....	708	612	472	496	572	156	-308	-924
Business inventories only.....	304	676	492	32	376	248	-200	-556
Exports of goods and services.....	5,316	5,564	5,648	5,152	5,420	5,016	5,160	5,208
Less: Imports of goods and services.....	-5,740	-6,056	-6,020	-5,624	-5,860	-5,456	-5,432	-5,604
Residual error of estimate.....	-208	+84	-196	+64	-64	-100	+120	+260
Gross National Expenditure at Market Prices.....	24,168	24,096	24,616	24,520	24,350	23,872	23,700	23,752

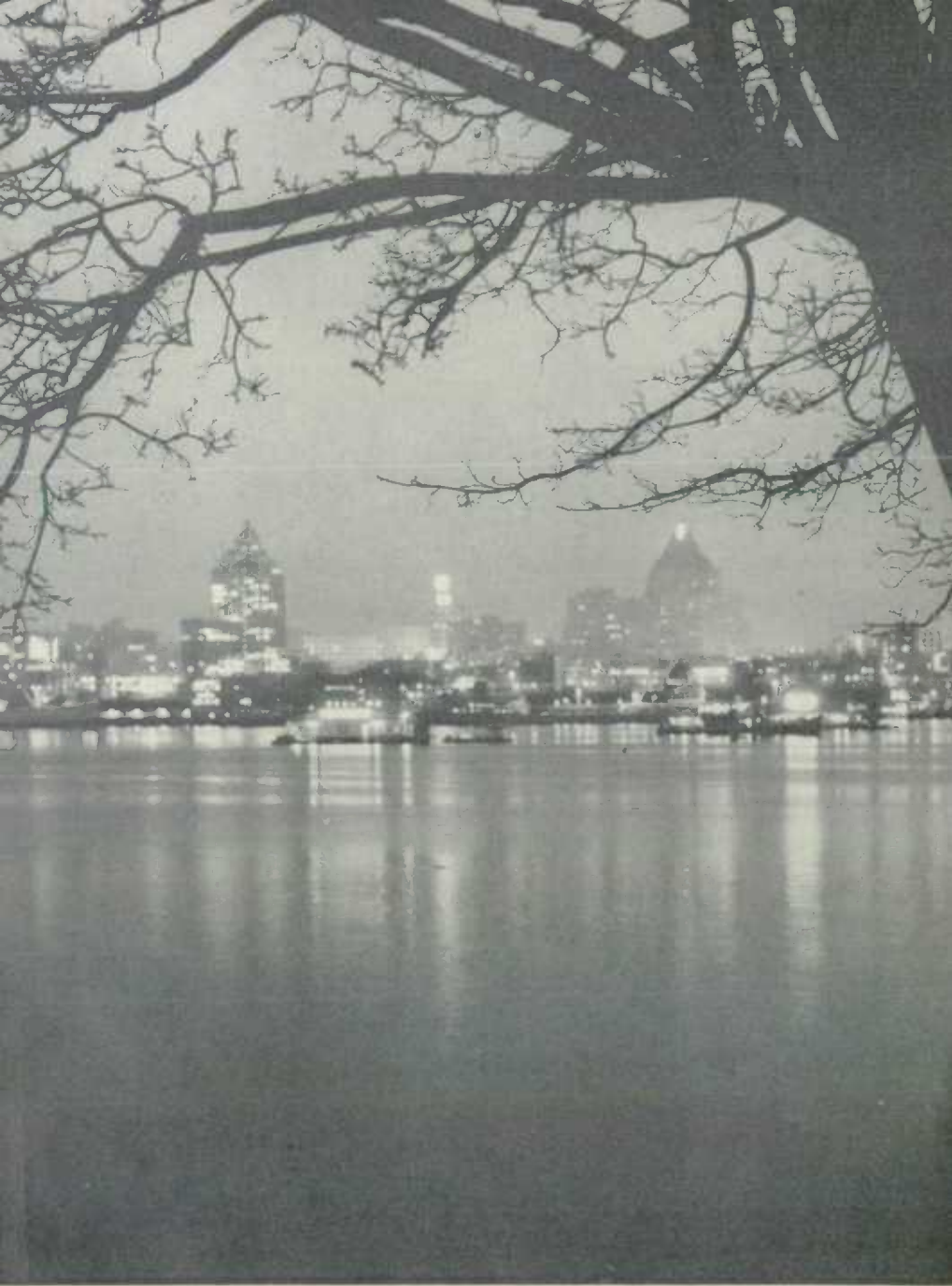
Source and Disposition of Personal Income, by Quarter, 1953 and 1954

(Millions of dollars)

NOTE.—See headnote to table on p. 207.

Source and Disposition	1953					1954		
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year	First Quarter	Second Quarter	Third Quarter
Source								
Wages, salaries and supplementary labour income.....	11,408	11,672	11,728	11,836	11,661	11,700	11,816	11,960
Less: Employer and employee contributions to social insurance and government pension funds.....	-368	-384	-388	-404	-386	-372	-396	-400
Military pay and allowances.....	280	308	316	332	309	336	368	380
Net income received by farm operators from farm production ¹	1,468	1,516	1,528	1,952	1,616	1,204	988	940
Net income of non-farm unincorporated businesses.....	1,636	1,680	1,668	1,736	1,680	1,572	1,576	1,600
Interest, dividends and net rental income of persons.....	1,648	1,668	1,788	1,652	1,689	1,804	1,884	1,960
Transfer Payments to Persons—								
From government (excluding interest).....	1,452	1,452	1,448	1,524	1,469	1,588	1,608	1,564
Charitable contributions by corporations.....	28	32	32	28	30	24	28	28
Net bad-debt losses of corporations.....	24	28	28	32	28	28	28	28
Personal Income.....	17,576	17,972	18,148	18,688	18,096	17,884	17,900	18,060
Disposition								
Personal Direct Taxes—								
Income taxes.....	1,276	1,288	1,292	1,292	1,287	1,252	1,260	1,260
Succession duties.....	76	68	80	68	73	68	68	76
Miscellaneous.....	80	72	68	68	72	72	64	52
Total Personal Direct Taxes.....	1,432	1,428	1,440	1,428	1,432	1,392	1,392	1,388
Personal Expenditure on Consumer Goods and Services—								
Non-durable goods....	8,584	8,744	8,752	8,820	8,725	8,840	8,984	8,980
Durable goods.....	1,872	1,720	1,756	1,764	1,778	1,740	1,620	1,704
Services.....	4,540	4,616	4,684	4,808	4,662	4,812	4,956	5,032
Total Personal Expenditure on Consumer Goods and Services	14,996	15,080	15,192	15,392	15,165	15,392	15,560	15,716
Personal Saving—								
Personal saving excluding farm inventory change.....	1,164	1,572	1,640	1,416	1,448	1,348	1,264	1,056
Farm inventory change.....	-16	-108	-124	+452	+51	-248	-316	-100
Total Personal Saving...	1,148	1,464	1,516	1,868	1,499	1,100	948	956
Personal Income.....	17,576	17,972	18,148	18,688	18,096	17,884	17,900	18,060
Personal disposable income ²	16,144	16,544	16,708	17,260	16,664	16,492	16,508	16,672

¹ This item differs from line 4 in the table on p. 207 in that it excludes undistributed earnings (and the inventory valuation adjustment) of the Canadian Wheat Board. ² Personal income less total personal direct taxes.



Across the shipping lanes of Burrard Inlet, shine the lights of Vancouver, Canada's third largest city.



George Hunter

Toronto's Golden Mile—symbolizing the advance of manufacturing production and its growing diversity in the most highly industrialized area of Canada. Factory after factory, built on modern clean, flat and functional lines, displays in chrome or neon a brand name familiar to consumers from one end of the country to the other.

THE OPERATION OF THE ECONOMY

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The task of operating the Canadian economy—currently valued in terms of gross national product at \$24,000 million—is heroic for a nation of 15,000,000 spread sparse over three and three-quarter million square miles, a truly continental territory to administer and develop.

Canada's geography imposes heavy burdens on the Canadian economy and on the machinery of trade, transport and communication, of labour and finance, which enables the nation's work and business to be carried on. But it is done—and with outstanding success—by the application of twentieth century techniques to the realities of the Canadian environment—an environment whose basic topographic structure, inherited through the long geologic ages, presents formidable barriers to development.

It is done by a far-flung domestic and foreign-linked transport and communications empire, interlaced with a modern financial network, which, combined with the enterprise of Canadian business and the skill and adaptability of Canadian labour, has projected Canada into the third rank among the trading nations of the world and has given the Canadian household a standard of living among the world's highest.

Domestic and Foreign Trade

• Domestic Trade

A REVIEW of all aspects of domestic trade would require the coverage of a great number of activities dealing with the flow of goods in the country through all the channels of distribution. It would also require the inclusion of transportation of various kinds at all levels and the following of the distribution of goods through manufacturers' warehouses, wholesale houses and retail stores with all attendant agencies and services. A still broader concept of domestic trade would include professional care, education and a large assortment of service trades. Such detail is not possible in the limited space available and only certain phases of the merchandising field are therefore covered here. The data include summary results of the 1951 Census of Distribution as well as some current statistics. This information is followed by brief data on prices which are an integral part of wholesale and retail sales.

Merchandising

Wholesale Census.—Details of the 1951 Wholesale Census are available in Census Vol. VIII. The information given here is necessarily very brief but will give some indication of the magnitude of wholesale operations in Canada and of their place in the economy.

Within the scope of wholesale trade are those entrepreneurs who relay goods from the producer direct to the retailer for resale to household consumers and also those whose principal trade is with business and other large establishments purchasing goods for their own use. Complementary to these types of operation are the wholesalers who facilitate this relay of goods, either by bringing buyer and seller together or by buying goods for subsequent trading within the wholesale field. Thus there is a considerable volume of trade between the various types of wholesalers, and it follows that the sum of the sales of all components overstates the actual value of goods moving out of the wholesale field. Wholesale establishments are therefore classified by type of operation, thus separating the segments that tend to duplicate one another.

Wholesale Trade, by Major Type of Operation, 1941 and 1951

Item		1941	1951
Wholesalers Proper—			
Establishments	No.	9,417	10,493
Sales, total	\$'000	2,358,475	5,492,741
Own account	\$'000	2,315,882	5,393,607
Commission	\$'000	42,593	99,134
Petroleum Bulk Tank Stations—			
Establishments	No.	3,973	3,886
Sales, total	\$'000	216,292	1,020,248
Own account	\$'000	156,078	781,694
Commission	\$'000	60,214	238,554
Assemblers of Primary Products—			
Establishments	No.	7,366	7,179
Sales, total	\$'000	453,300	1,517,617
Own account	\$'000	434,059	622,986
Commission	\$'000	19,241	894,631



Grain elevators at the Lakehead between Fort William and Port Arthur, Ont.

Wholesale Trade, by Major Type of Operation, 1941 and 1951—concluded

Item		1941	1951
Manufacturers' Sales Branches and Offices—			
Establishments	No.	1,622	2,703
Sales, total	\$'000	1,206,993	3,794,925
Own account	\$'000	1,189,573	3,689,613
Commission	\$'000	17,420	105,312
Agents and Brokers—			
Establishments	No.	2,106	1,741
Sales, total	\$'000	997,520	2,493,563
Own account	\$'000	38,989	147,819
Commission	\$'000	868,531	2,345,744
Other Types of Operation—			
Establishments	No.	274	165
Sales, total	\$'000	148,168	78,944
Own account	\$'000	143,759	76,934
Commission	\$'000	4,409	2,011
Totals—			
Establishments	No.	24,758	26,167
Sales, total	\$'000	5,290,750	14,401,037
Own account	\$'000	4,278,341	10,714,878
Commission	\$'000	1,012,409	3,686,159

**Summary Statistics of Wholesale Establishments,
by Type of Operation, 1951**

Type of Operation	Estab- lish- ments	Total Sales	Working Propri- etors	Average Em- ployees	Payroll	Total Stocks Dec. 31
	No.	\$'000	No.	No.	\$'000	\$'000
Wholesalers Proper	10,486	5,492,741	6,222	118,164	312,140	674,160
Drop shippers and desk job- bers	126	82,642	77	502	1,657	3
Export merchants	100	175,800	45	1,200	2,451	6,180
Import merchants	1,637	991,044	660	17,896	51,594	157,216
Mail-order wholesalers	98	34,566	51	1,000	2,450	5,097
Voluntary group wholesalers	139	375,047	25	5,284	13,663	28,746
Wagon distributors	106	14,090	92	294	696	557
Wholesale merchants	8,280	3,819,552	5,272	91,988	239,629	476,361
Petroleum Bulk Tank Sta- tions	3,880	1,020,249	2,958	14,594	38,597	78,974
Commission stations	2,583	238,627	2,604	2,634	4,984	18,525
Independent stations	534	60,622	354	1,154	2,847	4,857
Salary stations	763	721,000	—	10,806	30,766	55,592
Assemblers of Primary Prod- ucts	7,177	1,517,617	1,458	20,387	43,483	151,675
Buyers of primary products	1,528	565,853	1,426	8,355	17,113	20,527
Co-operative selling organiza- tions	356	299,484	—	4,118	6,767	12,146
Grain elevators	5,285	650,937	27	7,825	19,481	118,961
Packers and shippers	8	1,343	5	89	122	41
Manufacturers' Sales Branches and Offices	2,702	3,794,925	7	39,409	121,491	250,610
District or general sales of- fices	26	473,800	—	1,412	5,241	16,838
Manufacturers' sales branches (without stocks)	683	1,121,645	1	5,601	19,936	—
Manufacturers' sales branches (with stocks)	1,993	2,199,480	6	32,396	96,314	233,772
Agents and Brokers	1,741	2,493,563	1,259	7,473	23,101	78,220
Auction companies	14	26,887	4	301	498	5,819
Brokers	94	581,373	82	209	614	321
Commission merchants	197	367,566	118	1,816	5,589	26,929
Export agents and brokers	44	559,690	4	460	1,586	24,436
Import agents and brokers	278	156,231	173	1,108	3,834	5,310
Manufacturers' agents	1,051	477,589	856	3,260	9,829	12,908
Purchasing agents and resi- dent buyers	36	145,435	17	136	419	1,452
Selling agents	27	178,792	3	183	732	1,045
Other	165	78,944	69	1,504	4,108	2,708
Totals, All Establish- ments	26,167	14,401,037	11,989	201,592	543,048	1,237,110

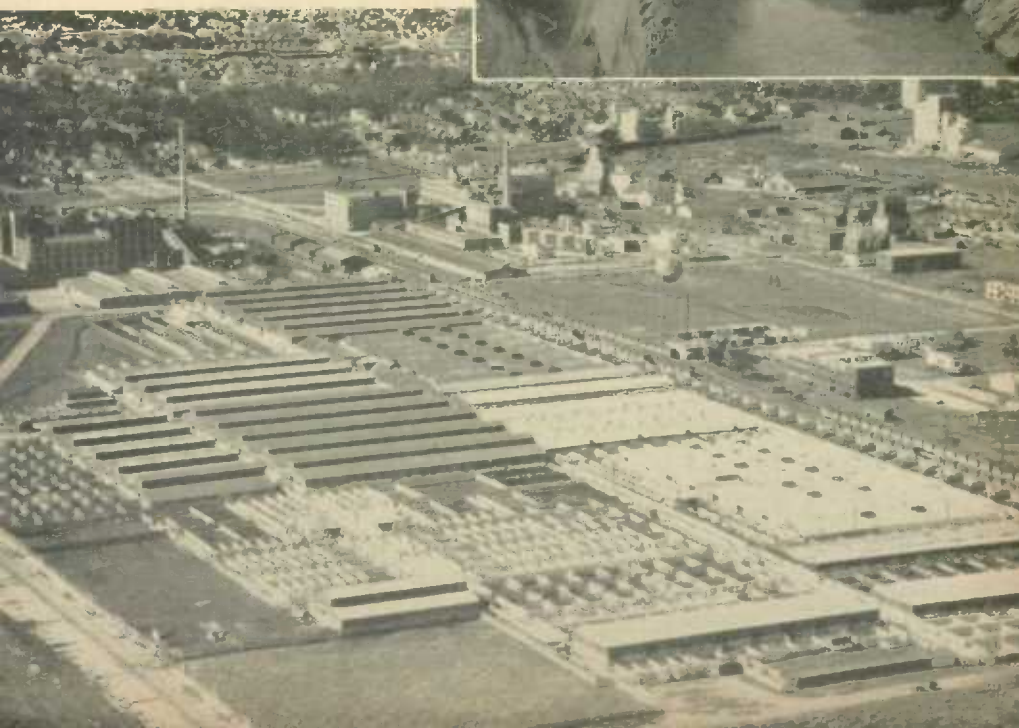
Some of the more important facts brought to light by the 1951 Census are:—

- Sales turnover of all types of wholesalers greatly out-distanced the population growth in Canada between 1941 and 1951. While population increased from 11,500,000 in 1941 to 14,000,000 in 1951, wholesalers' sales volume increased from \$5,300,000,000 to \$14,400,000,000.
- Ontario accounted for 30.4 p.c. of the total wholesale sales in 1951, Quebec for 28.0 p.c., the three Prairie Provinces for 27.3 p.c., British Columbia for 9.3 p.c., and the Atlantic Provinces for 5.0 p.c.
- Wholesalers proper were the most important type of wholesalers in both 1941 and 1951; they accounted for 40 p.c. of the number and 38 p.c. of the sales in 1951.
- Of all types of wholesalers' operations, manufacturers' sales offices and branches showed the greatest increase in number of establishments between 1941 and 1951.
- A maximum of some 225,000 people were employed in wholesaling in 1951 and the payroll amounted to \$543,000,000.

Service Census.—The service segment of the Census of Distribution covers those establishments whose main activity is the rendering of service, including theatres, bowling alleys, dry-cleaning plants, hotels, service garages, taxis operating from stands, and advertising agencies. Excluded are professional services, such as doctors, lawyers and accountants; trade services, such as carpenters, plumbers and electricians; public utilities, such as gas, electricity and water; domestic service; and air, rail and boat transportation.

Canada's weekly meat order amounts to about 36,000,000 lb. and the filling of that order requires the co-ordinated effort of the farmer, the packer and the retail butcher assisted by transportation agencies, cold-storage warehouses, government services and innumerable suppliers of all kinds.

Stockyards at St. Boniface, Man.



Number and Receipts of Selected Types of Service Establishment, 1941 and 1951

Kind of Business	Establishments		Receipts		
	1941	1951	1941	1951	T.C. Change 1941-51
	No.	No.	\$'000	\$'000	
Amusement and Recreation	4,954	5,564	61,344.8	150,973.2	+146.1
Regular theatres.....	1,244	1,799	41,368.8	100,371.1	+142.6
Billiard parlours.....	1,140	1,341	4,006.9	8,094.9	+102.0
Bowling alleys.....	175	428	2,067.6	8,073.4	+290.5
Business Services	1,334	1,788	24,431.8	117,030.8	+379.0
Advertising agencies.....	98	158	4,938.7	18,068.8	+265.9
Outdoor display and billboard advertising.....	45	56	3,266.0	9,198.6	+180.7
Collection and credit agencies.....	130	132	2,038.7	7,779.8	+279.7
Personal Services	24,731	23,489	85,892.6	204,077.1	+137.6
Barber shops.....	8,306	7,285	15,583.4	25,740.3	+ 65.2
Barber shops and beauty parlours combined.....	604	280	2,136.1	1,957.2	- 08.4
Beauty parlours.....	5,619	5,172	12,844.4	22,143.1	+ 72.4
Dry-cleaning and dyeing plants.....	591	1,040	13,925.6	43,426.4	+211.8
Shoe repair shops.....	4,797	4,268	10,039.7	16,124.4	+ 63.6
Repair Services	11,932	12,154	37,512.1	132,987.9	+254.5
Automobile service garages.....	1,509	3,493	8,747.3	56,973.3	+551.3
Body repairs and paint shops.....	422	832	9,140.6	15,786.8	+281.3
Blacksmith and general repair shops.....	4,692	2,818	7,346.9	8,535.6	+ 16.2
Radio and electrical repair and service shops.....	528	1,051	1,521.7	9,386.9	+516.9
Undertaking and Funeral Serv- ices	1,225	1,091	13,131.9	30,686.2	+133.7
Photography	1,078	1,289	6,901.3	17,189.3	+149.1
Commercial photographers.....	83	106	703.9	3,417.3	+385.5
Portrait photographers.....	834	1,057	4,770.6	10,425.8	+118.5
Hotels and Tourist Camps.....	.....	8,741	.....	370,911.2	.....
Full year hotels, licensed.....	.....	3,292	.....	311,321.3	.....
Full year hotels, non-licensed.....	.....	1,036	.....	25,441.8	.....
Miscellaneous Services	4,017	4,632	25,463.4	61,902.2	+143.1
Taxis.....	2,570	3,064	14,923.3	47,315.3	+217.1
Cold storage locker plants.....	1	164	1	3,326.8	.....
Totals, All Establishments	49,271	58,748	254,677.9	1,085,757.9	+326.3

¹ Not comparable.

Summary Statistics of Service Establishments, by Province, 1951

Province or Territory	Establish- ments	Receipts	Working Proprietors	Paid Employees		Payroll
				Min.	Max.	
	No.	\$'000	No.	No.	No.	\$'000
Newfoundland.....	650	7,221	643	1,099	1,287	1,589
Prince Edward Island.....	367	2,793	389	559	707	620
Nova Scotia.....	2,050	22,553	1,993	4,151	5,571	5,540
New Brunswick.....	1,600	18,719	1,545	2,896	3,768	3,869
Quebec.....	16,501	280,146	16,929	37,369	47,550	63,331
Ontario.....	20,540	415,313	20,433	56,782	75,914	106,858
Manitoba.....	3,117	66,656	3,189	8,669	11,096	15,197
Saskatchewan.....	3,771	57,105	3,758	6,432	8,032	10,042
Alberta.....	4,227	94,337	4,091	10,586	15,214	20,825
British Columbia.....	5,848	118,452	5,662	15,065	20,634	31,302
Yukon and N.W.T.....	77	2,463	72	198	275	536
Canada	58,748	1,085,758	58,704	143,800	190,048	259,709

Some of the more noteworthy results of the Service Census are:—

- Canadians spent more than \$1,000,000,000 in service establishments in 1951 compared with \$10,700,000,000 in retail stores.
- The 200,000 people employed in these establishments in 1951 received about \$260,000,000 in salaries and wages.
- Between 1941 and 1951, several kinds of business in the personal service group declined in number of establishments, particularly barber shops, beauty parlours and shoe repair shops.
- The business group of establishments showed the greatest increase in dollar volume of business in the ten-year period.
- The hotel and tourist group accounted for receipts of \$370,000,000 in 1951, more than one-third of the receipts of all service establishments.

Intercensal Surveys.—Though the decennial Census of Distribution produces complete coverage of statistics on retail and wholesale trade, certain surveys are continued between the census years. Some of these surveys are conducted on a sample basis and use the census results as a base from which to project trends and obtain reliable estimates. Other continuing surveys are made on a complete coverage basis once a year.

Retail Trade.—The retail store is the main channel for the distribution of goods to the consumer and during 1954 such stores sold merchandise to the extent of \$11,928,800,000, an estimate lower by 1 p.c. than that for 1953. The decrease was attributed to lower dollar volume of business in motor-vehicles, hardware, lumber, restaurants and general stores, furniture and appliances as well as in most clothing trades. In 1953, Saskatchewan showed the greatest increase over the previous year among the provinces, but in 1954 recorded the greatest loss.

Retailing is the core of business activity. With the exception of certain government purchases, every product produced enters into the retail picture at one time or another and every employee in industry works ultimately for the consumer.



**Retail Store Sales, by Selected Types of Business and by
Province, 1952-54**

Type of Business and Province	Sales			Percentage Change 1953-54
	1952	1953	1954	
Type of Business	\$'000,000	\$'000,000	\$'000,000	
Grocery and combination stores.....	2,039.5	2,095.0	2,245.0	+ 6.7
Meat stores.....	164.4	167.7	173.9	+ 3.7
General stores.....	546.3	536.7	527.5	- 1.7
Department stores.....	996.0	1,024.7	1,059.2	+ 3.4
Variety stores.....	213.7	222.2	240.3	+ 3.6
Motor-vehicle dealers.....	2,119.2	2,286.0	2,091.8	- 8.5
Garages and filling stations.....	503.7	534.5	545.7	+ 2.1
Men's clothing stores.....	209.4	206.4	189.7	- 8.1
Family clothing stores.....	203.2	205.9	197.7	- 4.0
Women's clothing stores.....	203.8	209.3	203.7	- 2.7
Shoe stores.....	116.4	118.6	113.1	- 4.6
Hardware stores.....	235.0	246.6	237.8	- 3.6
Lumber and building-material dealers.....	380.1	414.0	398.6	- 3.7
Furniture stores.....	177.7	184.2	178.0	- 3.4
Appliances and radio stores.....	254.2	274.3	263.9	- 3.8
Restaurants.....	457.1	449.6	433.0	- 3.7
Fuel dealers.....	234.5	222.6	231.6	+ 4.0
Drug stores.....	267.1	273.1	274.7	+ 0.6
All other stores.....	2,254.3	2,356.2	2,343.6	- 0.5
Totals	11,575.5	12,027.6	11,928.8	- 0.8
Province				
Atlantic Provinces.....	978.0	1,005.8	1,005.1	- 0.1
Quebec.....	2,662.9	2,763.5	2,793.0	+ 1.1
Ontario.....	4,387.9	4,569.4	4,624.4	+ 1.2
Manitoba.....	645.2	671.8	655.0	- 2.5
Saskatchewan.....	762.4	815.4	718.9	- 11.8
Alberta.....	944.1	978.4	907.7	- 7.2
British Columbia (incl. Yukon and N.W.T.).....	1,194.9	1,223.4	1,224.7	+ 0.1

Retail chain store sales increased from \$1,929,750,000 in 1952 to a total of \$2,048,228,000 in 1953. Salaries amounting to \$171,167,000 were paid to the store employees of the 7,835 stores. Firms considered as retail chains are those operating four or more retail outlets under the same ownership and carrying on the same or related kinds of business.

Chain Store Statistics, 1941 and 1946-53

NOTE.—Includes Newfoundland from 1951.

Year	Stores	Retail Sales	Salaries to Store Employees	Stocks on Hand, End of Year		Accounts Outstand- ing, End of Year
				Store	Warehouse	
	Av. No.	\$'000	\$'000	\$'000	\$'000	\$'000
1941.....	7,622	639,210	57,777	68,619	20,976	38,376
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
1949.....	6,839	1,420,084	115,903	123,696	46,755	50,001
1950.....	7,155	1,559,693	129,334	159,083	60,501	65,001
1951.....	7,585	1,726,354	144,792	178,799	59,504	53,169
1952.....	7,660	1,929,750	154,980	176,699	56,821	79,517
1953.....	7,835	2,048,228	171,167	179,704	52,096	91,538

It is estimated that 309,138 new motor-vehicles were sold in 1954, considerably fewer than in 1953. The percentage of these cars financed was about the same in the two years.



Streamlined methods expedite express service and provide smooth flow even at peak periods of traffic. Way bills are transcribed rapidly through the use of tape recorders—the callers' instructions are recorded and transmitted through playback machines on the billers' desks.



New Passenger-Car Sales and Financing, 1952-54

Province	1952			1953			1954		
	Sold		p.c.	Sold		p.c.	Sold		p.c.
	No.	No.		No.	No.		No.	No.	
Atlantic Provinces.	21,529	9,737	45.2	26,595	12,000	45.1	24,134	10,845	44.9
Quebec.	58,756	27,507	46.8	70,889	32,615	46.0	64,922	30,067	46.3
Ontario.	124,624	48,874	39.2	157,058	58,029	36.9	141,330	56,202	39.8
Manitoba.	16,351	6,570	40.2	19,278	7,419	38.5	15,191	5,343	35.2
Saskatchewan.	19,488	7,952	40.8	23,909	8,616	36.0	16,489	6,192	37.6
Alberta.	25,174	13,251	52.6	29,463	15,855	53.8	21,742	10,819	49.8
British Columbia.	26,132	10,885	41.7	32,829	12,918	39.3	25,330	9,018	35.6
Totals	292,054	124,776	42.7	360,021	147,452	41.0	309,138	128,486	41.6

Services.—The 1953 receipts of Canadian hotels exceeded \$410,000,000, a 5-p.c. increase over the previous year. Sixty-seven per cent of the 5,209 hotels were licensed to sell alcoholic beverages and, in those, 57 p.c. of the revenue was derived from the sale of alcoholic beverages. Room occupancy (that is, the number of rooms times the number of days they were occupied) in hotels with more than 500 rooms was reported as 77 p.c. of potential (that is, the number of rooms times the number of days the rooms were available for occupancy). The smallest hotels had a room occupancy of only 27 p.c. of potential. During 1953, salaries of \$96,249,000 were paid to an average of 59,376 persons employed in hotels.

Hotels, Rooms and Receipts, by Province, 1953, with Totals for 1951 and 1952

Province and Year	Hotels	Rooms	Receipts			
			Rooms	Meals	Beer, Wine and Liquor	Total
	No.	No.	\$'000	\$'000	\$'000	\$'000
Newfoundland.	27	815	677	899	687	2,553
Prince Edward Island.	26	710	328	254	—	633
Nova Scotia.	149	3,940	2,778	2,535	279	6,199
New Brunswick.	103	3,262	2,155	1,423	—	4,003
Quebec.	1,555	40,325	23,661	19,026	48,154	98,979
Ontario.	1,536	46,740	30,288	26,994	62,674	132,143
Manitoba.	287	8,078	4,460	2,687	19,128	28,285
Saskatchewan.	529	11,904	5,947	3,363	26,251	38,298
Alberta.	452	14,746	10,850	6,780	30,545	52,900
British Columbia.	545	19,133	12,770	7,013	22,266	46,722
Totals, 1953	5,209	149,653	93,914	70,974	209,984	410,715
Totals, 1952	5,157	149,615	89,879	67,269	201,759	391,936
Totals, 1951	5,092	146,441	83,322	63,440	180,642	357,282

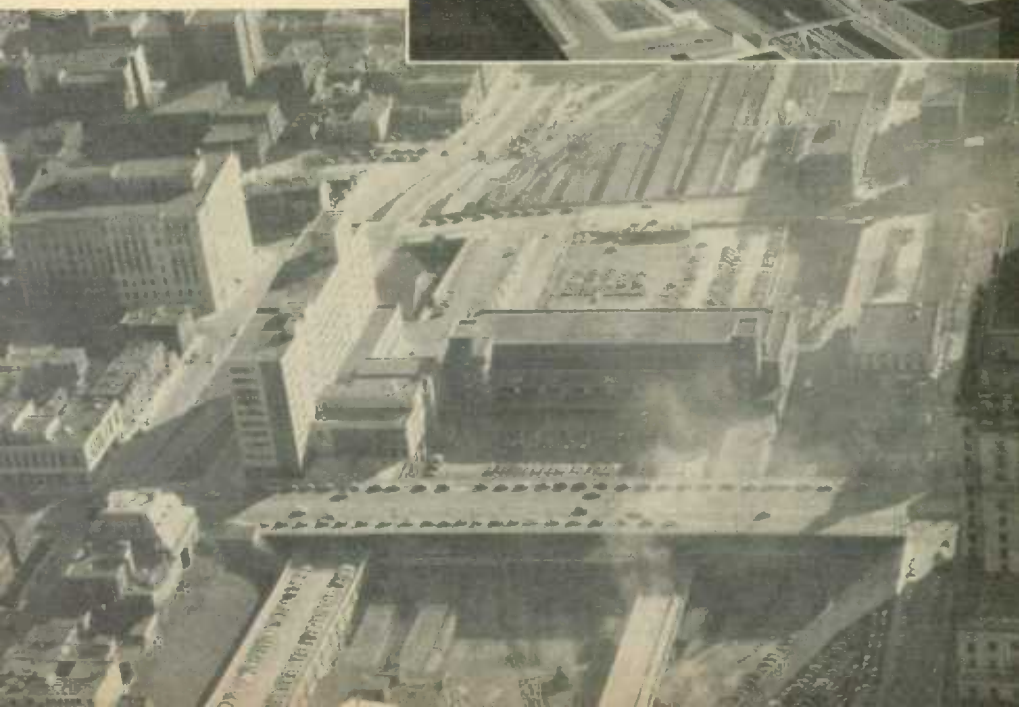
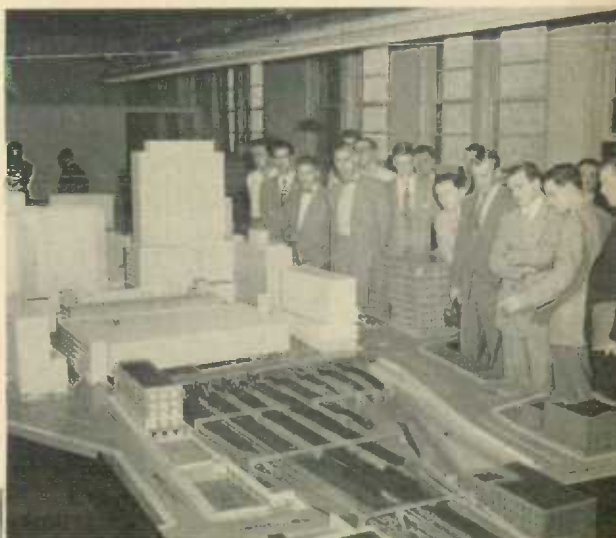
While the total receipts, excluding taxes, of motion-picture exhibitors increased by 3 p.c. from \$105,459,183 in 1952 to \$109,072,528 in 1953, there was a decrease of 1 p.c. in attendance as the number of paid admissions fell from 262,963,287 to 259,346,837 in the same period. In 1953 the per capita expenditure on motion-picture entertainment was \$8.30 compared with \$8.21 in 1952. Per capita expenditure in 1953 ranged from \$10.56 in British Columbia (including the Yukon and Northwest Territories) to \$4.03 in Newfoundland.

Motion-Picture Theatre Statistics, 1953

Item		Regular Theatres	Drive-in Theatres	Com- munity Enter- prises	Halls Served by Itinerant Operators	Total
Theatres and halls	No.	1,906	174	669	805	3,554
Receipts (excluding taxes)	\$	100,889,361	5,862,920	1,851,685	468,562	109,072,528
Amusement taxes	\$	12,760,235	685,389	105,057	31,859	13,582,540
Paid admissions	No.	241,182,736	11,134,788	5,647,668	1,381,655	259,346,847

The CNR Central Station at Montreal, one of the most modern railway terminals on the Continent, is the core of a potential civic centre which will include hotel accommodation, office buildings, stores and theatres. The immediate objective is the construction of a 20-storey 1,000-room hotel.

Below is a view of the present structures and the inset shows a model of the proposed additions being scrutinized by CNR trustees.



All-Canadian
fashion show
before an audi-
ence of tex-
tile producers
and retailers.



Canadian couturiers
show imagination,
beauty of design and
practicability in their
creations.

Co-operative Associations

During the crop year ended July 31, 1953, co-operative associations in Canada reported a total volume of business amounting to \$1,202,325,902. This volume was reported by 2,773 marketing, purchasing and service co-operatives, serving 1,500,000 members.

Co-operative Marketing.—The value of farm products marketed during 1952-53 was \$876,300,000, greater by \$36,000,000 than the value reported for 1951-52. The proportion of all farm products marketed by co-operatives was estimated to be 32.4 p.c.

Co-operative Purchasing.—Sales of merchandise and farm supplies amounted to \$256,700,000 in 1953, an increase of \$22,000,000 over the 1952 total.

Co-operative Wholesaling.—The 11 co-operative wholesales operating in Canada reported a total business of \$127,400,000 in 1952-53. Of this,

\$83,300,000 consisted of merchandise and farm supplies and \$43,900,000 represented the value of farm products marketed by the wholesales. The remaining \$200,000 represented revenue from services rendered.

Co-operative Services.—In 1953 there were 475 co-operatives rendering services to 218,000 members in medical care, housing, electrification, transportation, and other fields. Revenue of these service-type co-operatives was reported to be \$20,000,000.

Fishermen's Co-operatives.—Every province except Alberta reported co-operatives engaged in the marketing of fish. In 1952-53, there were 77 such organizations with a membership of 15,000 doing a total business of \$21,400,000.

Credit Unions.—There were 3,607 credit unions in Canada in 1953, with a membership of 1,393,585 and assets of \$492,400,000. Loans made during the year amounted to \$204,800,000.

• Prices

Wholesale Prices.—The collection of wholesale prices by the Dominion Bureau of Statistics has extended over many years, some records going

Co-op warehouse at Moncton, N.B., showing part of a \$100,000 stock of feed and flour. Farmers in the three Maritime Provinces have found it advantageous to develop a single Maritime co-operative, servicing more than 200 local and regional co-ops. Commercial services include the marketing of live stock, poultry, wool, feed and flour, fertilizers, insecticides, seeds, machinery and groceries.



back to 1867. Prices have been collected for many purposes but used mainly in the calculation of price index numbers under various classifications. The table below contains indexes of some of the more important series.

A post-war inflationary movement caused the general wholesale price index to rise approximately 73 p.c. in six years to reach a peak of 240.2 in 1951. Prices declined slowly over the following three years to reach a level of 215.3 by December 1954. Though relative stability was experienced in 1953 and 1954, individual commodity changes were substantial during the later year. Sharp declines occurred in some agricultural items, in particular hogs, eggs, fowl, raw wool, hides and skins, raw furs and sugar. In addition, fibres, textiles and textile products were generally lower as were wire, scrap iron, crushed stone and a few organic chemicals. On the higher side were potatoes, onions, tea, coffee, imported fresh fruits, canned vegetables, steers, lead, zinc, solder, plate glass, lime, dyeing materials and soap.

Building material prices registered minor weakness in 1954. The residential building materials index changed from a 1953 average of 282.6 to 278.7 in December 1954 and in the same period the index for non-residential building materials moved down from 124.4 to 120.4 (1949=100). Among the index's more important component groups, roofing material advanced in the residential series owing to increases in cedar shingles but plumbing and heating equipment moved down owing to lower quotations for certain items of bathroom equipment. In non-residential groups the tile group advanced as did paint and glass while plumbing and heating equipment and electrical equipment and materials, among others, declined.

Annual and Monthly General Wholesale and Special-Purpose Price Indexes, 1949-54

(1935-39 = 100)

NOTE.—All 1954 indexes and Canadian farm products indexes subsequent to July 1953 are subject to revision.

Period	General Wholesale Prices	Raw and Partly Manufactured	Fully and Chiefly Manufactured	Canadian Farm Products	Residential Building Materials	Non-residential Building Materials (1949 = 100)
1949.....	198.3	197.1	199.2	228.7	228.0	100.0
1950.....	211.2	212.8	211.0	236.7	242.7	105.0
1951.....	240.2	237.9	242.4	268.6	286.2	118.6
1952.....	226.0	218.7	230.7	250.2	284.8	123.2
1953.....	220.7	207.0	228.8	220.9	282.6	124.4
1954—January.....	219.8	206.5	227.8	212.9	277.3	123.2
February.....	219.0	205.1	227.3	212.3	276.7	123.1
March.....	218.6	204.3	226.9	210.2	275.9	122.9
April.....	217.9	205.7	225.1	209.0	276.1	122.6
May.....	218.2	207.5	224.5	213.4	275.9	121.1
June.....	217.8	206.7	224.5	213.1	277.4	121.2
July.....	217.4	207.4	223.6	217.8	278.2	121.2
August.....	215.8	204.9	222.3	207.9	278.0	120.2
September.....	215.3	202.9	222.6	204.1	278.6	120.4
October.....	214.3	201.4	221.8	201.1	278.6	120.5
November.....	214.8	202.1	222.2	203.8	278.4	120.5
December.....	215.3	203.4	222.3	204.7	278.7	120.4

Consumer Prices.—In October 1952, the Dominion Bureau of Statistics issued a new series of Canadian index numbers of retail prices. This consumer price index* (on the base 1949=100) replaced the cost-of-living index as the official measurement of retail prices of goods and services. It is constructed from post-war expenditure patterns and is designed to measure the average percentage change in retail prices of goods and services bought by a large and representative group of Canadian urban families. The index is not affected by changes in standards of living.

The new index is based on goods and services purchased during the year ended Aug. 31, 1948, by 1,517 families, representing all Canadian urban families with the following characteristics: (1) living in 27 Canadian cities with over 30,000 population (1951 Census); (2) ranging in size from two adults to two adults with four children; (3) with annual incomes during the survey year ranging from \$1,650 to \$4,050.

To measure the influence of price change on the cost of goods and services purchased by such families, the consumer price index contains 224 items. The criteria as to whether or not an item was included was whether or not families bought it, and no attempt was made to differentiate between luxuries and necessities.

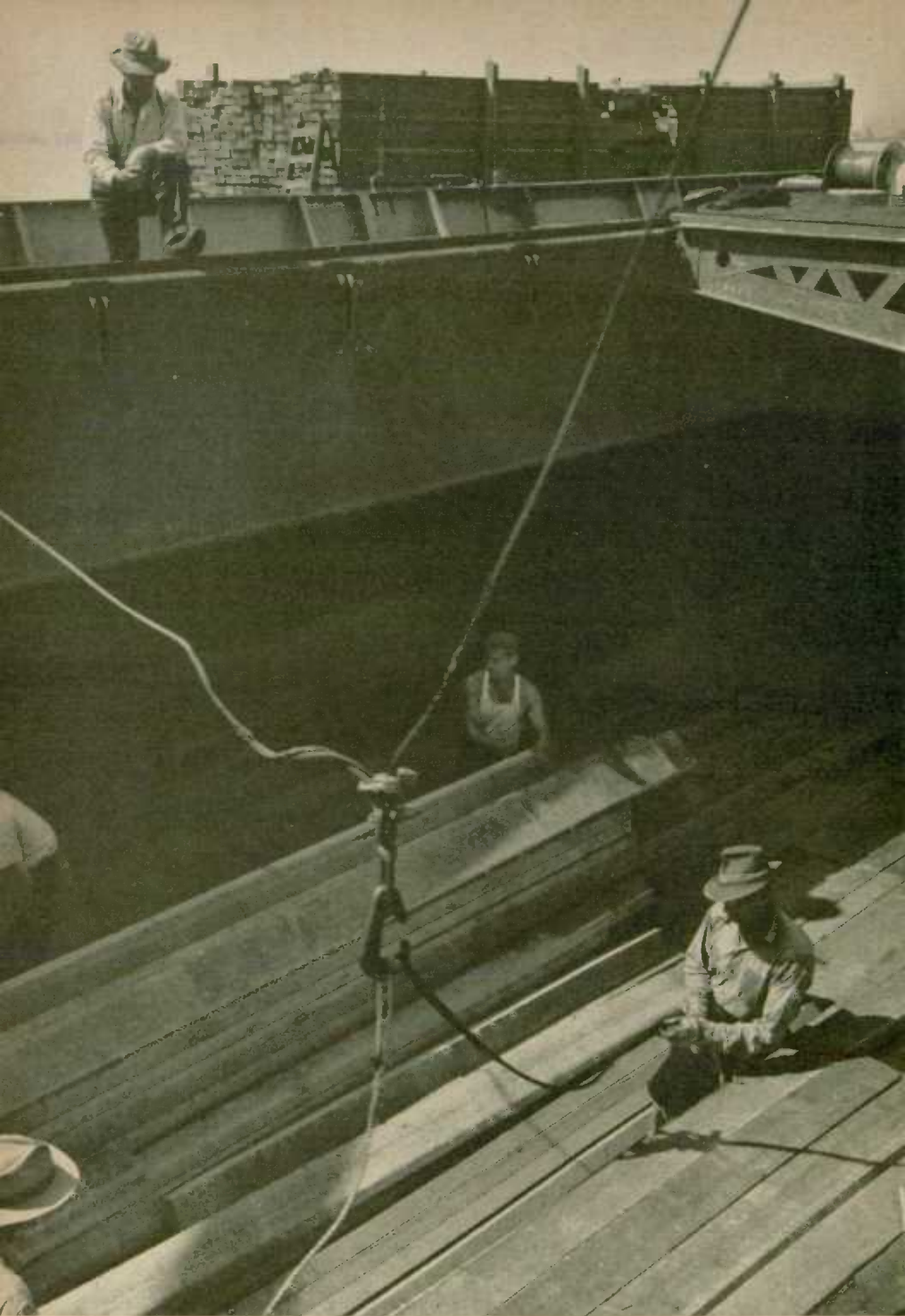
From the table below it is possible to compare prices for the past six years. It can be seen that prices rose rapidly reaching an annual peak in 1952, and have since fluctuated within rather narrow limits reflecting a period of relative price stability. The various components of the index have not shown the same tendency. As compared with 1952, the Food and Clothing index has been moving at somewhat lower levels, while the Other Commodities and Services index and the Household Operation and Shelter index have been advancing.

* Detailed information concerning the construction of the index is given in DBS special report, *The Consumer Price Index, January 1949-August 1952*.

Consumer Price Index Numbers, 1949-54

(Av. 1949 = 100)

Year and Month	Food	Shelter	Clothing	Household Operation	Other Commodities and Services	Total
1949.....	100.0	100.0	100.0	100.0	100.0	100.0
1950.....	102.6	106.2	99.7	102.4	103.1	102.9
1951.....	117.0	114.4	109.8	113.1	111.5	113.7
1952.....	116.8	120.2	111.8	116.2	116.0	116.5
1953.....	112.6	123.6	110.1	117.0	115.8	115.5
1954.....	112.2	126.5	109.4	117.4	117.4	116.2
1954—January.....	111.6	125.4	110.1	117.5	116.4	115.7
February.....	111.7	125.4	110.0	117.5	116.5	115.7
March.....	110.7	125.6	109.8	117.6	116.6	115.5
April.....	110.4	125.6	109.9	118.1	117.2	116.6
May.....	110.2	125.8	109.9	117.3	117.5	115.5
June.....	112.0	126.4	109.7	117.1	117.5	116.1
July.....	112.1	126.6	109.6	117.2	117.6	116.2
August.....	114.4	127.0	109.6	117.2	117.7	117.0
September.....	113.8	127.2	109.5	117.2	117.6	116.8
October.....	113.8	127.4	108.4	117.3	117.9	116.8
November.....	113.4	127.9	108.2	117.2	118.2	116.8
December.....	112.6	128.2	108.1	117.1	118.2	116.6



Canadian planks and boards, mainly from the West Coast, find their way all over the world, but the United States takes the bulk of these exports. Newsprint, planks and boards, wood pulp and pulpwood together make up over one-third of all Canada's exports.

• Foreign Trade

Canada's foreign trade was moderately greater in 1953 than in any other peacetime year. However this increase resulted entirely from a further substantial advance in imports which was concentrated especially in the first half of the year. The value of exports was somewhat below the record 1952 level throughout most of 1953, and the drop was especially sharp in the latter months of the year. Imports also fell off at this time. The level of trade showed some recovery during 1954, but for the year as a whole was about 6 p.c. lower than in 1953.

Exports, Imports and Total Trade of Canada, 1950-54

(Millions of Dollars)

Year	Exports			Imports	Total Trade	Balance of Trade
	Domestic Produce	Foreign Produce	Total			
1950.....	3,118.4	38.7	3,157.1	3,174.3	6,331.3	- 17.2
1951.....	3,914.5	48.9	3,963.4	4,084.9	8,048.2	-121.5
1952.....	4,301.1	54.9	4,356.0	4,030.5	8,386.4	+325.5
1953.....	4,117.4	55.2	4,172.6	4,382.8	8,555.4	-210.2
1954.....	3,881.3	65.6	3,946.9	4,093.2	8,040.1	-146.3

The value of world trade (excluding the trade of the communist countries) reached a post-war peak in 1951, when prices of many commodities were at record levels. In both 1952 and 1953 world trade declined, although the decline in 1953 (in Canadian dollar terms) was much less than that which occurred in 1952. Canadian exports did not begin to decline until late in 1952, and imports not until late in 1953, after the declines in world trade were far advanced. World exports in 1953 were some 9 p.c. below their peak level, imports were down about 12 p.c., but Canadian exports had fallen only 4 p.c. below their peak and Canadian imports were still at record levels.

A trade agreement for the exchange of most-favoured-nation treatment between Canada and Japan was signed in 1954, by His Excellency Koto Matsu-daira, Japanese Ambassador to Canada, the Hon. L. B. Pearson, Secretary of State for External Affairs, and the Rt. Hon. C. D. Howe, Minister of Trade and Commerce.



A lower level of Canadian trade in 1954 together with a higher level of world trade reduced the discrepancy between Canadian experience and that of other countries.

Canada accounted for about 6 p.c. of world trade in 1952 and 1953, and ranked third among the leading world exporters and importers in both years. Only the United States and the United Kingdom have consistently conducted a greater foreign trade than Canada in the post-war period, although France's imports exceeded those of Canada in the first half of this period, and its exports and imports were both greater than those of Canada in 1951. Germany's trade grew rapidly after 1951 and that country ranked fifth in world trade in 1952 and fourth in 1953.

Leading Countries in World Trade, 1952 and 1953

NOTE.—Countries ranked by total trade and total trade per capita in 1953. Sources of data: Trade—International Monetary Fund; Population—United Nations Statistical Office.

Country	Exports, f.o.b.		Imports, c.i.f.		Total Trade	
	1952	1953	1952	1953	1952	1953
VALUE OF TRADE (Millions of United States Dollars)						
United States.....	15,196 ¹	15,775 ¹	11,637	11,836	26,833 ¹	27,611 ¹
United Kingdom.....	7,638	7,524	9,736	9,366	17,374	16,890
Canada.....	4,761	4,609	4,479	4,842	9,240	9,451
Germany, Federal Republic.....	4,002	4,389	3,814	3,771	7,816	8,160
France.....	3,891	3,788	4,435	4,007	8,326	7,795
Belgium and Luxembourg.....	2,445	2,251	2,444	2,405	4,889	4,656
Netherlands.....	2,130	2,152	2,251	2,382	4,381	4,534
Italy.....	1,386	1,488	2,331	2,395	3,717	3,883
Japan.....	1,273	1,275	2,028	2,410	3,301	3,685
Australia.....	1,690	1,979	1,979	1,487	3,669	3,466
World Trade:	74,179	74,883	80,107	76,280	154,286	151,163
TRADE PER CAPITA (United States Dollars)						
Canada.....	330	307	310	323	640	630
New Zealand.....	337	316	370	258	707	573
Hong Kong.....	227	213	295	301	521	515
Belgium and Luxembourg.....	271	248	271	265	543	513
Switzerland.....	228	245	250	240	478	484
Sarawak.....	246	235	215	218	461	453
Denmark.....	196	202	222	228	418	430
Netherlands.....	205	204	217	225	422	429
Sweden.....	220	206	243	220	463	425
Trinidad and Tobago.....	202	221	214	204	416	425

¹ Includes military aid extended to other countries, and eastern European countries not reporting trade currently.

* Exclusive of China, USSR.

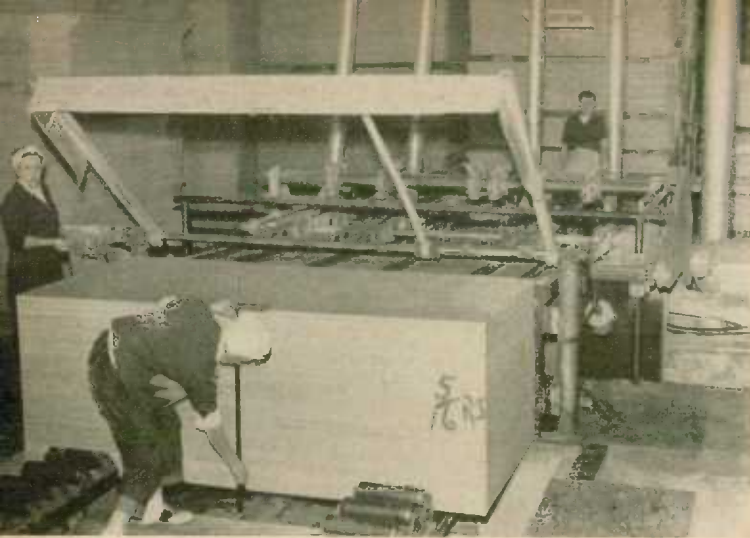
Importance of Foreign Trade to Canada.—Foreign trade is of much greater importance to the Canadian economy than to the economy of the United States or, indeed, to the economies of many other leading world traders. In 1953 the total value of the movable commodities produced in Canada was some \$12,000,000,000; of this, goods to the value of about \$4,000,000,000 were exported. A similar high ratio of commodity exports to commodity production has prevailed in other recent years, and is reflected in the value of Canada's trade per capita. In 1953 that value was greater than the per capita trade of any other leading trading country, and in no recent year has Canada's rank in trade per capita been lower than third.



Freighter bound for Southampton, England, takes on a cargo of flour at Montreal.

The importance of foreign trade to the Canadian economy is based on such diverse factors as natural resources, climate, the size of the population, the stock of capital available to assist in production, and the course of the country's economic development. Canada's natural resources are both large and varied relative to the size of the country's population, and much of Canada's economic history is a story of the exploitation of these resources in relation to existing demands in older countries—usually with capital originally supplied by older countries. On the other hand, the relatively severe Canadian climate has limited the frontiers of settlement in the country and has also limited the range of agricultural and forest products that can be domestically produced.

The industries most important in Canadian export trade are based on the resources of fisheries, forests, farmlands and minerals. Fish caught in Canadian waters and preserved were finding markets in Europe long before any permanent settlement of Europeans developed on the mainland, and the annual value of exports of fishery products has exceeded \$100,000,000 in recent years. The forests were first exploited through the fur trade, later through lumbering as well, and more recently through the growth of the pulp and paper industry. Agriculture became a major export industry during the 19th century, but assumed its present importance only in the early 20th



Exports of Canadian manufactured veneer and plywood increased from \$12,025,836 in 1946 to \$21,555,108 in 1954. Although production is mainly from native woods, a number of imported woods of special decorative value give a wide choice of finishes.

century after the opening of the Canadian West. In recent years the forest and agricultural industries have each provided about one-third of Canada's exports and the mining and metallurgical industry, which has developed chiefly during the present century, for almost one-fifth of the total.

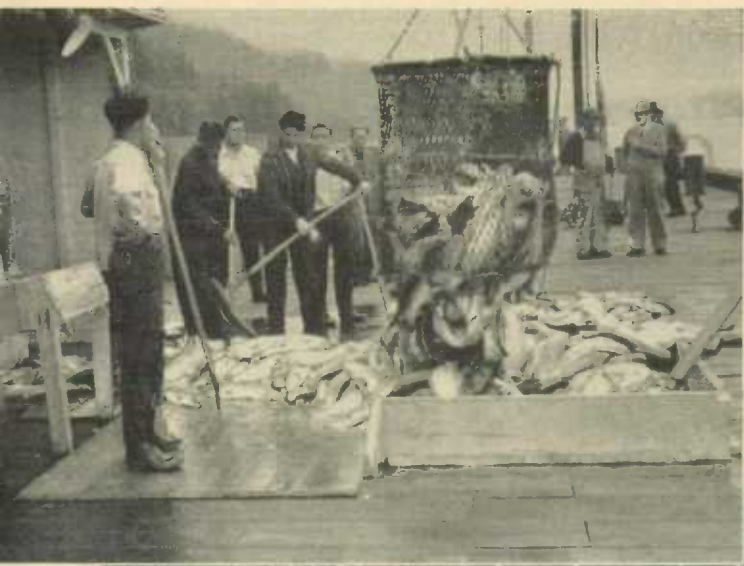
The extent of manufacturing in Canada has been limited by the smallness of the country's population relative to available resources. It has usually been more profitable to use relatively scarce Canadian labour in industries exploiting natural resources extensively, rather than in labour-intensive complex manufacturing processes. Much of present-day manufacturing in Canada involves either the processing of natural products to facilitate their transportation, as in the flour-milling industry or the metal smelting and refining industry, or the use of non-exportable resources to produce exportable products, as in the primary aluminum industry or (in part) the pulp and paper industry, both of which depend on the availability of cheap hydro-electric power. Such manufacturing is best regarded as a facet of primary production in analysing the nature of Canada's trade.

The concentration in Canada on the efficient exploitation of natural resources has brought to Canadians one of the world's highest standards of living. It has also necessitated the import of a wide variety of goods. In part these are goods needed to supplement those which can be produced by Canadian resources, such as coffee, oranges or tin. But many products which could be produced in Canada as efficiently as elsewhere are not produced at all or are produced in insufficient volume to meet demand because Canadian labour and capital employed in such industries would be less productive than when employed in an extractive industry.

Leading Exports and Imports.—The following tables of leading exports and imports illustrate the results of Canada's concentration on primary industries. Of the twenty leading export commodities in 1954, four forest products accounted for 45 p.c. of the value, seven minerals for 25 p.c., and three agricultural products for 19 p.c. Of the remaining six commodities, fish are also a primary product and fertilizers are to an important degree a by-product of the extractive industries. Only farm implements, whisky,

machinery and guns are highly manufactured goods, and exports of the latter were extraordinarily high in 1954 as a result of defence requirements.

Among the twenty leading imports, manufactured goods play a much more important part. No less than eight, accounting for 56 p.c. of the value of the twenty, are fully fabricated manufactures, and five others, accounting for 16 p.c., are industrial materials at a relatively advanced state of fabrication. Five others, petroleum, coal, coffee, cotton and sugar, were required to supplement Canadian resources either because Canadian supplies could not be economically utilized to meet total Canadian demand or because Canada could not produce these goods. The other two imports are of a rather special character, one—tourist purchases—being related to the affinity of Canadians for travel and the other—non-commercial items—chiefly to the high level of immigration in the post-war years.



Fish, either fresh or frozen, is one of Canada's important export commodities, over 90 p.c. of the production being marketed outside of the country.



Principal Domestic Exports, 1950-54

NOTE.—Commodities ranked by value of exports in 1954.

Commodity	1950	1951	1952	1953	1954
	\$'000	\$'000	\$'000	\$'000	\$'000
Newsprint paper.....	485,746	536,372	591,790	619,033	635,670
Wheat.....	325,614	441,043	621,292	567,907	375,339
Planks and boards.....	290,847	312,198	295,949	282,736	324,724
Wood pulp.....	208,556	365,133	291,863	248,675	271,418
Aluminum, primary and semi-fabricated.....	103,206	120,853	155,106	173,378	182,392
Nickel, primary and semi-fabricated.....	105,300	136,689	150,982	162,542	182,154
Copper, primary and semi-fabricated.....	82,990	81,691	100,806	117,351	127,334
Barley.....	23,442	58,822	145,684	136,729	89,363
Wheat flour.....	93,839	113,854	116,055	102,160	88,029
Asbestos, unmanufactured.....	62,752	80,333	86,510	83,973	82,566
Farm implements and machinery (except tractors) and parts.....	78,512	96,873	95,692	67,821	70,819
Whisky.....	41,682	54,039	54,254	63,086	59,156
Zinc, primary and semi-fabricated.....	58,710	83,669	96,283	57,572	58,392
Fish, fresh and frozen.....	49,711	53,363	52,852	51,219	56,650
Pulpwood.....	34,768	68,103	64,820	45,859	45,766
Fertilizers, chemical.....	38,874	35,734	42,293	42,633	42,342
Lead, primary and semi-fabricated.....	38,105	45,290	49,676	37,835	40,530
Iron ore.....	13,310	18,576	22,333	30,843	39,719
Guns, rifles and other firearms.....	230	15	5,627	24,110	39,549
Machinery (non-farm) and parts.....	25,644	40,271	47,378	37,282	36,676

Principal Imports, 1950-54

NOTE.—Commodities ranked by value of imports in 1954.

Commodity	1950	1951	1952	1953	1954
	\$'000	\$'000	\$'000	\$'000	\$'000
Machinery (non-farm) and parts.....	226,249	328,741	360,969	401,856	380,219
Petroleum, crude and partly refined.....	203,996	233,148	210,036	213,094	212,767
Electrical apparatus, n.o.p.....	82,585	120,101	139,567	198,275	207,539
Automobile parts.....	158,405	195,177	190,337	222,284	180,433
Aircraft and parts (except engines).....	10,942	41,438	95,212	111,803	100,397
Rolling-mill products (steel).....	93,649	173,127	143,133	124,813	97,563
Engines, internal combustion, and parts.....	47,068	80,314	126,332	107,736	84,914
Tractors and parts.....	108,320	125,562	119,253	126,351	82,814
Fuel oils.....	45,909	58,389	64,908	65,151	70,921
Coal, bituminous.....	118,788	115,275	99,571	94,680	70,445
Tourist purchases.....	33,090	47,071	66,682	73,840	68,767
Coffee, green.....	41,664	48,438	50,775	57,595	64,214
Automobiles, passenger.....	75,329	56,632	49,484	79,454	60,846
Farm implements and machinery (except tractors) and parts.....	53,322	69,529	78,044	82,795	60,351
Pipes, tubes and fittings (iron and steel).....	35,394	43,183	57,261	58,327	59,680
Non-commercial items.....	15,575	32,544	47,095	60,923	56,763
Cotton, raw.....	88,461	94,315	65,956	55,494	52,441
Sugar, unrefined.....	77,208	77,100	59,546	47,491	51,519
Principal chemicals (except acids), n.o.p.....	37,161	43,940	49,824	54,505	46,193
Cotton fabrics.....	45,901	54,984	53,248	55,906	46,012



Where trade statistics are born. The International Trade Division of the Dominion Bureau of Statistics collects and analyses statistical information in the fields of international trade and international finance. To a country like Canada where external transactions are so important in the economic structure, such information is indispensable in the conducting of government and commercial business.

Leading Trading Partners.—Canada's trade with other countries—the United States and the United Kingdom particularly—is based on an exchange of Canada's natural resources, unworked or partially processed, for the labour and capital tied up in the highly finished manufactured goods which make up the bulk of imports.

The United States is by a wide margin the chief export market for Canadian goods and the chief source of imports for Canada. Exports to the United States consist chiefly of industrial materials in inadequate supply in that country, especially forest products and minerals, although fish and farm implements are also of great importance. The farm implements industry, which developed in relation to Canada's own requirements in the past century, proved able not only to hold a major part of the Canadian market but also to win a significant share of the United States market aided by the absence of tariffs on farm implements on both sides of the border. Imports from the United States consist chiefly of manufactured products such as industrial machinery and automobile parts, and natural products not available in Canada, such as cotton, citrus fruits and fresh vegetables out-of-season.

The United Kingdom ranks second both as an export market and as a source of imports. Principal exports to the United Kingdom include grains, metals and forest products, while imports are primarily manufactured goods such as machinery, electrical apparatus and textiles. Trade with most European countries and with Japan is similar in character. Manufactured goods are of greater importance in sales to Latin American countries and to many Commonwealth countries, and imports from these countries are.

generally speaking, largely natural products which cannot be efficiently produced under Canadian climatic and physiographic conditions. But the volume of trade with these areas is not sufficiently great to change appreciably the tone set by trade with the United States and the United Kingdom.

Domestic Exports to Leading Countries, 1950-54

NOTE.—Countries ranked by value of exports in 1954.

Country	1950	1951	1952	1953	1954
	\$'000	\$'000	\$'000	\$'000	\$'000
United States.....	2,020,988	2,297,675	2,306,955	2,418,915	2,317,153
United Kingdom.....	469,910	631,461	735,845	665,232	653,408
Japan.....	20,533	72,976	102,603	118,568	96,474
Germany, Federal Republic.....	8,873 ¹	37,028 ¹	94,863	83,858	86,899
Belgium and Luxembourg.....	66,351	94,457	104,376	69,510	54,987
Australia.....	35,446	49,079	49,697	39,629	45,768
Brazil.....	15,806	53,684	81,367	37,561	45,096
Norway.....	18,924	32,198	39,002	37,278	43,813
Union of South Africa.....	42,561	52,736	47,852	50,763	39,883
Netherlands.....	8,617	26,191	41,508	42,382	39,777
France.....	18,403	46,538	48,264	32,281	33,799
Venezuela.....	25,457	26,982	35,683	36,485	30,973
Mexico.....	17,624	29,880	39,641	28,986	27,359
Switzerland.....	26,435	25,345	26,918	29,833	26,826
Italy.....	15,476	48,763	52,645	33,170	23,844
Colombia.....	14,806	12,311	13,756	20,146	21,000
India.....	31,520	35,737	55,423	37,187	17,689
Cuba.....	18,005	20,424	24,181	16,124	17,455
Philippines.....	10,829	15,598	16,045	13,872	15,863
New Zealand.....	10,983	21,757	18,844	7,475	14,807

¹ Includes Eastern Germany in 1950 and 1951.

Imports from Leading Countries, 1950-54

NOTE.—Countries ranked by value of imports in 1954.

Country	1950	1951	1952	1953	1954
	\$'000	\$'000	\$'000	\$'000	\$'000
United States.....	2,130,476	2,812,927	2,976,962	3,221,214	2,961,380
United Kingdom.....	404,213	420,985	359,757	453,391	392,472
Venezuela.....	87,264	136,718	135,758	155,147	167,594
Germany.....	11,026 ¹	30,936 ¹	22,629	35,507	44,485
Brazil.....	28,178	40,627	35,103	35,047	31,623
India.....	37,262	40,217	26,822	26,627	28,054
Belgium and Luxembourg.....	22,795	39,095	33,216	29,082	25,077
Colombia.....	13,342	13,063	18,004	23,215	24,820
Australia.....	32,803	46,228	18,712	23,464	24,657
Netherlands.....	8,896	14,010	16,495	22,298	22,562
France.....	14,669	23,974	19,117	22,267	22,046
Netherlands Antilles.....	17,336	10,809	11,747	8,154	20,582
British Guiana.....	21,735	25,025	23,660	17,800	20,482
Malaya and Singapore.....	28,852	57,980	25,473	21,896	19,586
Japan.....	12,087	12,577	13,162	13,629	19,197
Switzerland.....	14,464	16,398	16,396	20,437	19,151
Lebanon.....	62 ²	16,381 ²	15,171	19,584	17,413
British East Africa.....	15,067	10,864	9,593	9,393	15,852
Jamaica.....	19,080	18,041	9,204	11,761	15,309
Italy.....	9,373	14,217	11,735	14,271	15,006

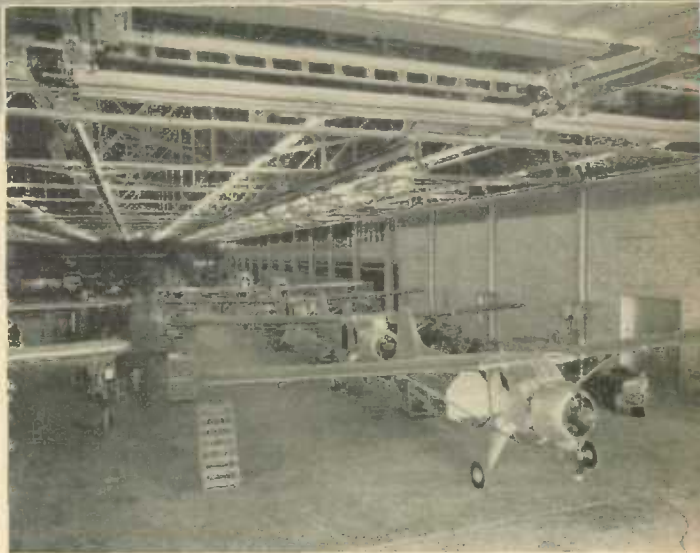
¹ Includes Eastern Germany in 1950 and 1951.

² Includes Syria in 1950 and 1951.



The Netherlands Government is buying these Beaver aircraft for use in New Guinea, bringing to 32 the number of countries in which the famous Canadian bush-plane is in operation.

Beaver final assembly in De Havilland's new Toronto plant.



Recent Trade Trends.—During 1953 and 1954 the value of Canadian exports was reduced below its previous record peak, and imports also fell off after the middle of 1953. The decline in export values resulted in part from a slow but steady decline in export prices over this period, in part from a decline in the quantity of Canadian goods shipped abroad. Import prices were quite stable in both years, and the drop in imports in 1954 resulted entirely from a decline in the quantity of foreign goods purchased by Canadians.

The greater part of the decline in export volume in 1953 and 1954 resulted from a lower level of world trade in grains after the 1953 harvest. Crops in most important producing and consuming countries were considerably better in 1952 and 1953 than in 1951, and during the first nine months of 1953

stocks of grains in many consuming countries rose to very high levels. The smaller total trade in grains after the harvest was also divided among a greater number of exporters—a poor harvest in 1951 and the need to rebuild stocks after the 1952 harvest had limited the participation of Argentina, Australia, France and Turkey in world grain exports before 1953.

Summary Trade Statistics, by Quarters, 1952-54

Period	Value of Trade (\$'000,000)			Price Indexes (1948 = 100)		Volume Indexes (1948 = 100)	
	Total Exports	Im- ports	Trade Balance	Domestic Exports	Im- ports	Domestic Exports	Im- ports
1952							
Jan.-Mar.	1,001.8	916.1	+85.7	124.8	117.3	103.0	118.1
Apr.-June	1,119.9	1,034.2	+85.7	122.0	110.9	118.1	140.9
July-Sept.	1,069.2	995.2	+74.0	120.6	107.1	113.7	140.6
Oct.-Dec.	1,165.0	1,084.9	+80.1	119.9	107.9	124.8	151.7
1953							
Jan.-Mar.	913.9	998.0	-84.1	119.2	108.5	98.2	138.7
Apr.-June	1,105.8	1,218.6	-112.8	119.0	109.4	119.5	168.4
July-Sept.	1,089.0	1,118.2	-29.2	118.5	110.3	117.9	152.5
Oct.-Dec.	1,063.9	1,048.1	+15.8	116.9	110.2	116.9	143.4
1954							
Jan.-Mar.	866.3	925.9	-59.6	115.2	109.2	95.5	128.3
Apr.-June	1,005.0	1,124.2	-119.2	116.3	110.2	110.6	154.3
July-Sept.	993.1	1,001.2	-8.1	115.0	...	110.4	...
Oct.-Dec.	1,082.5	1,041.9	+40.6	114.4	...	121.1	...

Other influences contributing to the lower level of exports in 1953 and in 1954 included the business readjustments in the United States, and special factors influencing exports of automotive products. The decline in economic activity in the United States affected especially farm implements, some base metals and minerals, and primary iron and steel. Exports of lumber, shingles and iron ore were also depressed in the early months of 1954 but increased sharply in the second half. Lower sales of many of these products to the United States were partly offset by greater sales in overseas markets which generally showed no economic declines in this period, although exports of automotive products to Europe and Latin America in particular fell off sharply.

The weak state of the market for textiles in Canada in the latter part of 1953 and in 1954 played an important part in the reduction of imports in this period. Canadian imports of fibres and textiles had expanded sharply in the last quarter of 1952 and were very heavy in the first half of 1953. But during this period inventories of these goods increased and demand weakened. In the latter part of 1953 textile imports fell off and remained at a low level in 1954.

Other declines in import volume appear to have been related to a reduction in requirements for some capital goods by agriculture and industry, to weakness in the demand for some consumer durables, and to attempts to reduce inventories of some types of goods. Farm cash income in Canada declined in 1953 and, as farmers were already well equipped with new machinery, their demand for machinery fell off in late 1953 and 1954. A lower rate of new automobile production in Canada caused some decline

in imports of automobile parts and engines, and falling sales of automobiles also caused a cut in imports of completed vehicles. Requirements for imported iron ore and for primary iron and steel decreased with the lower rate of steel production in Canada and a general easing in steel demand. Imports of refrigerators and freezers showed a sharp drop from their high 1953 level. A marked decrease in imports of coal appeared to reflect some reduction in inventories in dealers' hands in Canada, as well as the long-run trend towards the displacement of coal by oil.

Although import and export prices were, on the whole, relatively stable in 1953 and 1954, a few commodities were especially influenced by price change. The reduction in the volume of grain exports was accentuated by lower prices than prevailed during 1951 and 1952, and the increase in the value of exports of lumber to all countries was limited by lower prices. Average export prices of zinc and lead were also appreciably lower than those

Rubber or sugar, scrap iron or feathers — every commodity entering Canadian ports from the four corners of the earth is sampled for quality and weighed, a task made mandatory by customs regulations for the benefit of importers.



recorded during the Korean war boom. A few imports were subject to important price increases, especially the beverage commodities (coffee, cocoa and tea) and some other agricultural products.

The Canadian Balance of International Payments

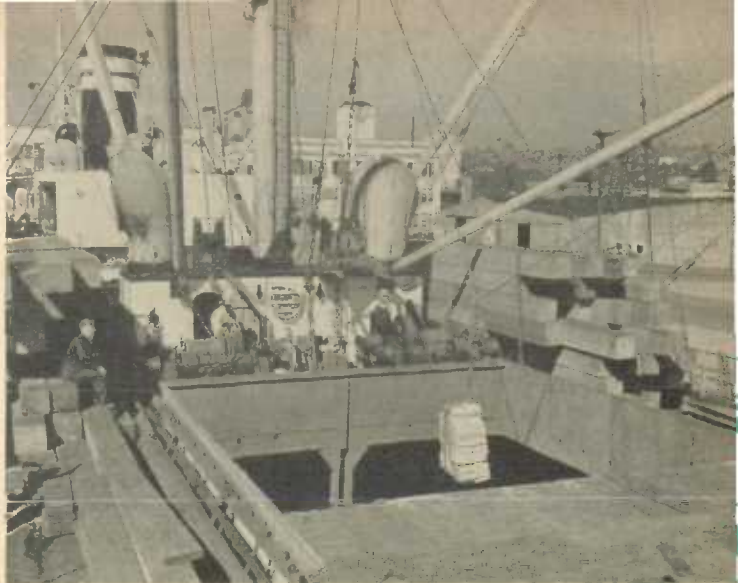
Canada is in the forefront of countries attracting foreign investment capital and is also, in relative terms, a major investor abroad. The importance of foreign trade in the Canadian economy and of foreign capital in financing some parts of recent Canadian development are among the factors that give the balance of international payments particular significance for the Canadian nation.

After a series of surpluses extending from the early 1930's on account of transactions in goods and services with other countries, Canada in recent years has tended to incur substantial deficits. These deficits have been influenced by the growth in the volume of goods and services imported in response to high levels of investment and other economic activity in Canada, and by the economic condition of Canada's trading partners. Despite wide fluctuations in the balance of Canada's current account in the post-war period, the balances have been small in relation to the gross international exchanges of goods and services by Canada, which in the past few years have been at an annual rate in excess of \$11,000,000,000. In 1954, the aggregate value of these transactions showed a decrease for the first time since the end of World War II.

Most of Canada's international transactions take the form of commodity trade. But the trade balances, when adjusted for balance of payments purposes, have been relatively small in recent years although they have fluctuated widely. The deficits on current account have been mainly the result of transactions termed "invisibles". The income account is consistently the largest contributor to this deficit and, although net payments of interest and dividends have fallen from the high levels of a few years ago, they continue to amount to about \$250,000,000 a year, representing the net exchange cost of Canada's net debtor position of more than \$6,000,000,000. In recent years, Canada has experienced deficits on account of international travel (*see p. 242*) and on account of freight and shipping services; these together have recently amounted to about \$100,000,000. "All other" current transactions also lead to a considerable deficit: this account reflects mainly the myriad business services provided to and by non-residents, as well as government transactions in which defence expenditures have at times loomed large. Against these substantial net debits on account of invisibles, there has been net gold production available for export amounting to about \$150,000,000.

Canada's current account deficits have been the real counterpart of very substantial inflows of foreign capital for direct investment in Canadian enterprises and for additions to foreign holdings of Canadian securities. These inflows, together with repayments on loans extended to other governments in the early post-war years, have been more than sufficient to finance the current account deficits. Despite a considerable increase in Canada's official holdings of gold and foreign exchange, and other outflows of capital, the Canadian dollar has remained at unprecedented levels on the world's exchange markets.

Loading zinc for export. Primary and semi-fabricated aluminum, nickel, copper, zinc and lead all rank within the twenty top exports of Canada.



Though on balance only a relatively small part of Canada's great post-war economic development has been financed from abroad, foreign capital has played a most important role in some of the more dramatic developments, and there has been a considerable growth in the nation's net balance of international indebtedness. This is now well over \$6,000,000,000 and is approaching the levels of 1930, although, of course, the change in price levels and the great increase in the productive capacity of the country make it relatively much less important than at that time. Gross liabilities to non-residents now amount to nearly \$13,000,000,000 but external assets are equal to somewhat more than half of this amount. The largest and most rapidly growing element in Canada's liabilities is the foreign direct investment in industrial enterprises, mainly from the United States, but non-resident holdings of the bonds of Canadian governments and municipalities, and of securities of Canadian-controlled companies, are also of great importance.

Foreign investors now own about one-tenth of the funded debt of Canadian governments and municipalities and about one-third of the broad field of Canadian industry and commerce. Their investment represents only a negligible part of other forms of Canadian wealth such as farm, residential and personal property. The proportions have been declining. Before World War II about one-quarter of government debt was in foreign hands; so was the ownership of about 38 p.c. of Canadian industry. Because of the concentration of post-war investment by foreigners in manufacturing and mining enterprises, their share of these particular fields has increased. Nearly 60 p.c. of the capital of mining, smelting, and petroleum exploration and development companies was owned by non-residents at the end of 1951, compared with 40 p.c. in 1939. The share of foreign capital varies widely in different fields of manufacturing. The percentage is comparatively large in some branches such as non-ferrous metals, the automobile industry, and petroleum refining; it is comparatively low in other fields such as textiles and primary iron and steel. In some industries such as newsprint and wood products, non-resident capital plays a very important part but the major share of ownership is Canadian.

Although external assets are sufficiently large to cover more than half Canada's international liabilities, they are in some respects different in character. More than half are assets of the Canadian Government in the form of war and post-war loans to overseas countries and of official gold and foreign exchange holdings. Private assets abroad include long-term direct and portfolio investments of more than \$2,000,000,000; since the War these holdings have shown a rate of growth somewhat higher than that of foreign private long-term investment in Canada.

Travel between Canada and Other Countries

Travel between Canada and the United States is probably much greater than between any other two countries. High standards of living and complementary attractions on both sides of the border have stimulated the movement of people from one country to the other and have given rise to large travel expenditures in both countries. In 1953 more than 51,300,000 persons crossed the International Boundary from the United States to Canada, 28,000,000 of them being United States travellers entering Canada and 23,300,000 of them Canadian residents returning from visits to the United States. This record represents an all-time high in both directions. Travellers arriving in Canada from overseas (both direct and through the United States) numbered 38,200 and Canadians returning from overseas countries numbered 77,700.

In analysing travel from the United States to Canada, most important in both numbers and expenditures is the group of persons travelling by automobile. The total number of non-resident automobiles entering Canada in 1953 was 8,235,000, carrying 19,494,000 people who spent the sum of \$156,900,000 during their stay. Persons entering by other means of transportation numbered 8,632,000 and their expenditures were \$125,300,000. The difference in the average expenditures of these two groups is largely



The name "Calgary" is almost synonymous with "Stampede". Every year during Stampede Week, Calgary becomes a colourful "cowtown" and visitors about 400,000 flock to the foothills city to see a great show.

The famous Spanish aero car has taken thousands of Canadians and visitors on breath-taking rides above the great Whirlpool on the Niagara River.



accounted for by the fact that those entering by automobile have a tendency to remain a shorter length of time and thus spend less money. This trend has been particularly noticeable in recent years.

Of the 23,311,842 Canadians visiting the United States in 1953, 13,584,352 travelled by automobile and 20,551,757 were short-term visitors staying only two days or under. Total expenditures of all Canadian travellers in the United States in 1953 amounted to \$307,290,955. Following the trend of recent years, this expenditure exceeded the expenditure of United States travellers in Canada. In 1953, the average expenditure per person for visits lasting longer than 48 hours was \$86 for Canadians visiting the United States and \$52 for Americans visiting Canada. For visits of 48 hours or under, the average expenditure was \$3.42 and \$2.52, respectively. Merchandise bought in the United States by Canadian travellers represents almost a quarter of the total expenditure on travel account in that country.

The "Lake of Shining Waters", known as a place of enchantment to many little girls through the stories of "Anne of Green Gables", is a reality at Cavendish, P.E.I., and remains today as the author knew and loved it.





Whether on a weekend jaunt to a nearby lake or stream or a leisurely holiday in the wilderness, countless numbers of enthusiasts enjoy Canada's excellent fishing waters.

Travel between Canada and overseas countries normally produces a debit balance because Canadians travel overseas in greater numbers and spend more money than overseas travellers in Canada. The difference in expenditure in 1953 was \$38,000,000.

The numbers of travellers moving between Canada and other countries in the years 1950-53 were, in millions of dollars:—

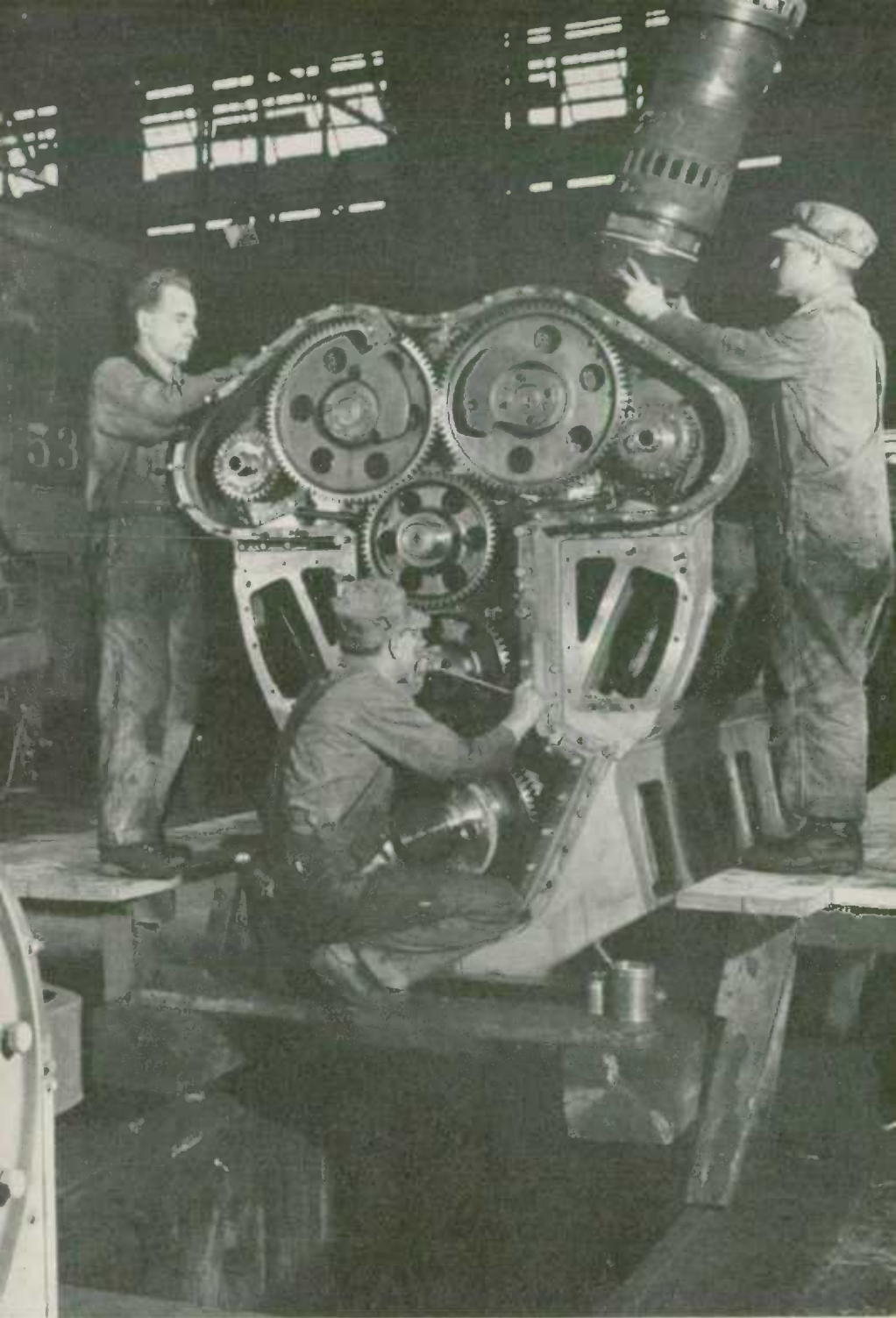
<u>Item</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>
Canadians visiting the United States...	16,000,801	18,586,927	21,512,024	23,311,842
Americans visiting Canada.....	23,516,711	24,879,527	26,276,834	28,024,746
Canadians visiting overseas countries (direct).....	43,801	44,165	54,812	61,482
Overseas visitors to Canada (direct)....	16,147	18,160	22,078	21,575
TOTALS.....	39,577,460	43,528,779	47,865,748	51,419,645

The balance of payments on travel account between Canada and other countries for 1950-53 were, in millions of dollars:—

<u>Item</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>
Account with United States—				
Credits.....	260	258	257	282
Debits.....	193	246	294	307
Net.....	+ 67	+ 12	- 37	- 25
Account with Overseas Countries—				
Credits.....	15	16	18	20
Debits.....	33	34	47	58
Net.....	- 18	- 18	- 29	- 38
Account with All Countries—				
Credits.....	275	274	275	302
Debits.....	226	280	341	365
Net.....	+ 49	- 6	- 66	- 63



Blessed are we
who may stand in the bright glow
of sunlight through Autumn's leaves
and behold her wearing her crown of glory.



A work force of nearly 1,100 at the CPR maintenance shops at Calgary, Alta., keeps diesel locomotives rolling over the mountain railroads of Western Canada. This is one of three large CPR repair shops—its average monthly payroll amounts to about \$291,000.

Labour

CANADA'S industries today employ about five and one-half million persons. Ranging from unskilled labourers to highly trained technicians and executives and from labour on the farm to workers in large manufacturing plants, these men and women daily play their role in providing the nation's goods and services. Over the post-war years, wages and working conditions have steadily improved and have helped the rise in the standard of living which stems from improvements in productive capacity and the general concern that its benefits shall be spread as widely as possible over the entire community.

Labour legislation at both federal and provincial levels is designed to set minimum standards for hours, wages and many other conditions of employment. Most workers, however, enjoy higher than minimum standards. About 1,250,000 belong to labour unions, their right to do so being protected by law. Through their unions, these workers have negotiated over 6,100 collective bargaining agreements which, in general, cover joint labour-management decisions on conditions of employment. These agreements are usually renegotiated each year, sometimes with the assistance of government conciliation services, and mostly without work stoppages. Only about one-seventh of one per cent of the estimated total working time in all Canadian industry was lost by strike action in 1953.

The Labour Force

The labour force of Canada, as measured by sample surveys conducted by the Dominion Bureau of Statistics, includes those people who have jobs plus those who do not have jobs and who are looking for work. "Job" in this sense means work for pay or profit, or unpaid work which contributed to the running of a farm or business operated by a relative. Thus a coal-miner or a shopkeeper is considered to be in the labour force but a housewife or a student is not. The labour force is not a fixed group of people. It is constantly changing, as new workers enter and old ones leave.

Industrial Distribution of Persons with Jobs, by Sex, Week ended Dec. 11, 1954

(Thousands of persons 14 years of age or over)

Industry	All Persons with Jobs			Paid Workers		
	Male	Female	Both Sexes	Male	Female	Both Sexes
Agriculture.....	770	33	803	97	1	105
Forestry.....	145	1	146	114	1	115
Fishing and trapping.....	18	1	18	1	1	1
Mining and quarrying ²	94	1	95	91	1	92
Manufacturing.....	1,019	264	1,283	953	257	1,210
Construction.....	328	1	335	271	1	277
Transportation ³	338	52	390	306	52	358
Public utilities.....	59	1	63	59	1	63
Trade.....	569	257	826	430	218	648
Finance, insurance ⁴	89	75	164	78	73	151
Service.....	548	516	1,064	464	481	945
Totals.....	3,977	1,210	5,187	2,868	1,101	3,969

¹ Less than 10,000.

² Includes oil wells.

Includes storage.

⁴ Includes real estate.

About three out of four people in the labour force are male and almost one-half of those in the labour force are from 25 to 44 years of age; the average female worker is considerably younger than the average male worker. Occupationally, one worker out of six is in agriculture; geographically, almost two out of three live in Ontario or Quebec. The percentage of the labour force to the total population 14 years of age or over is lower in Newfoundland, the Maritime Provinces and British Columbia than in the rest of the country. In non-agricultural industries, which employ 4,384,000 people of whom one-quarter are women, about 86 p.c. of the men and 93 p.c. of the women are paid employees. In agriculture, on the other hand, paid employees form a relatively small element—hardly more than one worker in seven, even during harvest season.

Occupational Distribution of Persons with Jobs, by Sex, Week ended Dec. 11, 1954

(Thousands of persons 14 years of age or over)

Occupation	All Persons with Jobs			Paid Workers		
	Male	Female	Both Sexes	Male	Female	Both Sexes
Managerial.....	388	40	428	168	15	183
Professional.....	244	171	415	209	167	376
Clerical.....	230	355	594	239	350	589
Transportation.....	343	1	347	315	1	319
Communication.....	45	33	78	45	33	78
Commercial.....	217	156	373	213	135	348
Financial.....	43	1	45	32	1	33
Service.....	210	243	453	192	220	412
Agricultural.....	775	33	808	103	1	111
Fishing, logging and trapping.....	139	1	149	100	1	106
Mining.....	64	1	64	62	1	62
Manufacturing and mechanical ¹	733	157	890	697	153	850
Construction.....	276	1	278	235	1	237
Labourers.....	261	14	275	258	13	271
Totals.....	3,977	1,210	5,187	2,868	1,101	3,969

¹ Less than 10,000.

² Includes stationary engine-men and occupations associated with electric power production.

Women in Industry. Employment opportunities for women have expanded with the growth of the Canadian economy. Notable developments during the past 10 or 12 years include: the increase in the employment of married women; the concentration of the growth in those occupations in which women have been traditionally employed; the reduction in the proportion of teen-age girls in the labour force; and the greater expansion proportionately of women's employment in Ontario, British Columbia and Alberta.

Employment of married women has increased in almost all areas, occupations and industries; proportionately, the greatest rise in the major occupational groups occurred in agriculture, proprietary and managerial, commercial and manufacturing. Of all women with jobs in Canada at Dec. 11, 1954, 639,000 were single, 447,000 married, and 124,000 were widowed, divorced or legally separated.

In recent years there have been large increases, proportionally, in the older age groups of working women in Canada. The largest growth proportionately has taken place in the age group 45 to 64 although the greatest



"Want ad" Service in a large newspaper office. Equipment is designed to provide comfort and reduce fatigue, an important requirement for employees dealing directly with the public.

number are still to be found in the age group 25 to 44. The age distribution of women with jobs in Canada at Dec. 11, 1954, was: 14-19 years, 203,000; 20-24 years, 242,000; 25-44 years, 509,000; 45-64 years, 233,000; 65 years or over, 23,000.

Women in the Canadian Labour Force, Dec. 11, 1954

Region	Women in Population 14 Years or Over ¹	Women in Labour Force	P.C. of Women in Labour Force	P.C. of Women to Total Labour Force in Region
	No.	No.		
Atlantic.....	558,000	109,000	19.5	21.4
Quebec.....	1,489,000	360,000	24.2	23.0
Ontario.....	1,818,000	493,000	27.1	24.9
Prairie.....	909,000	174,000	19.1	18.6
British Columbia.....	449,000	104,000	23.2	23.5
Totals	5,223,000	1,240,000	23.7	22.8

¹ Excludes women inmates in institutions, women in remote areas or Indian women on reserves.

Employment in 1954

Employment in the nine major non-agricultural industries covered by monthly surveys reached an all-time high in October 1953. Since then the volume has been at a slightly lower level. The index for the first nine months

of 1954 was 3.2 p.c. below that for the same months of 1953 and also somewhat below the index for 1952 but, aside from these two years, it was the highest on record.

Lower levels of employment were reported in the 1954 period for all provinces except Saskatchewan, where construction activity was largely responsible for a small increase over 1953 and the attainment of an all-time maximum in that Province. In the other provinces, slackness in manufacturing and the completion of large defence and industrial projects were important factors in the moderately lower level of employment. On the whole, declines were not so great in Western Canada as in the central and eastern provinces.

Forestry (chiefly logging) showed a further falling-off in employment in the 1954 period, the greatest declines occurring in Newfoundland, Quebec and Ontario. The losses, however, took place in the earlier months of the year and by autumn the indexes in most provinces were higher than in the same period of 1953. Continued curtailment of operations in the coal fields and lessened activity in the Quebec and Ontario gold-mining areas, partly caused by industrial disputes which began in the late summer of 1953 and remained unsettled until early 1954, brought the index for the mining group to slightly below the 1951 level.

As already mentioned, completion of certain large projects affected the general index for the construction group during 1954 in most provinces. Expansion in the communications sector of the transportation, storage and communication group was offset by lower employment in steam-railway operations and the group index was 1.8 p.c. below its 1953 position. In the non-durable sector of manufacturing, employment was higher in paper products and food and beverages but serious losses were experienced in clothing and textiles. Declines were relatively greater in durable manufactured goods—unfavourable market conditions and industrial disputes adversely affected employment in the primary iron and steel, transportation equipment and some other industries.

Other major industrial groups—public utility operation, trade, finance, insurance and real estate and services—reported increased employment, continuing the post-war upward trend. Relatively large numbers and proportions of women are employed in most of these groups and in the light manufacturing industries which suffered on the whole a relatively smaller loss than durable goods manufacturers; the number of women employed showed a decrease of 1.5 p.c. compared with 3.7 p.c. for men.

The fractional reduction in weekly payrolls during the nine-month period of 1954 from those for the same period in 1953 was the first reversal of the continuously upward trend experienced since the War. The major declines occurred in forestry and construction, and increases were reported for the other non-manufacturing groups with the exception of mining. Geographically, considerable improvement took place in Saskatchewan, with lesser increases in Ontario, Manitoba and Alberta. While decreases occurred in the other provinces, the level of their industrial payrolls in the first nine months of 1954 was above that of 1952 except in New Brunswick. Average weekly wages and salaries generally in Canada advanced by 2.9 p.c. to a new high of \$58.66 in the nine-month period of 1954, a smaller gain than was indicated in 1953 over 1952. Fairly widely scattered wage-rate increases were offset by reductions in overtime and more extensive short-time work in some industries.



Welding crew working on a natural-gas pipeline running from the International Border at Queenston, Ont., to Toronto. The line, built during the summer of 1954, will carry United States gas to Toronto.

Average hours worked per week in manufacturing in 1954 were 40.6, slightly shorter than in the same period of 1953. The steady post-war climb in average hourly earnings generally continued at a more moderate pace than in earlier years. The annual figure for manufacturing was 140.8 cents, a rise of 4.2 p.c. over 1953.

Index Numbers of Employment and Payrolls, and Average Weekly Wages and Salaries, by Province, 1953 and 1954

(1949=100)

NOTE.—Figures are for the first nine months of 1953 and 1954.

Province	Index Numbers of—						Average Weekly Wages and Salaries		
	Employment			Payrolls					
	1953	1954	P.C. Change	1953	1954	P.C. Change	1953	1954	P.C. Change
							\$	\$	
Newfoundland.....	138.1	124.2	-10.1	203.9	180.1	-11.7	55.13	54.45	- 1.2
Prince Edward Island.....	114.6	106.9	- 6.7	151.9	141.0	- 7.2	44.74	44.49	- 0.6
Nova Scotia.....	100.5	96.7	- 3.8	130.8	128.2	- 2.0	48.42	49.61	+ 2.5
New Brunswick.....	101.1	96.7	- 4.4	130.6	128.3	- 1.8	49.00	50.19	+ 2.4
Quebec.....	111.8	107.7	- 3.7	148.0	147.3	- 0.5	54.30	56.18	+ 3.5
Ontario.....	114.2	110.8	- 3.0	152.1	152.4	+ 0.2	59.07	60.90	+ 3.1
Manitoba.....	106.5	103.6	- 2.7	136.4	136.8	+ 0.3	54.70	56.16	+ 2.7
Saskatchewan.....	113.5	116.2	+ 2.3	148.3	156.4	+ 5.5	54.23	55.74	+ 2.8
Alberta.....	127.2	125.4	- 1.4	166.0	168.4	+ 1.4	58.38	59.61	+ 2.1
British Columbia.....	107.7	105.0	- 2.5	148.1	147.7	- 0.3	62.89	64.18	+ 2.1
Composite.....	112.6	109.0	- 3.2	149.7	149.5	- 0.1	57.2	58.66	+ 2.9

Index Numbers of Employment and Payrolls, and Average Weekly Wages and Salaries, by Industrial Groups, 1953 and 1954

(1949 = 100)

NOTE.—Figures are for the first nine months of 1953 and 1954.

Industrial Group	Index Numbers of—						Average Weekly Wages and Salaries		
	Employment			Payrolls					
	1953	1954	P.C. Change	1953	1954	P.C. Change	1953	1954	P.C. Change
							\$	\$	
Forestry (chiefly logging).....	93.2	85.1	- 8.7	136.8	127.5	- 6.8	58.91	59.84	+ 1.6
Mining.....	113.3	108.8	- 4.0	150.0	148.1	- 1.3	68.00	69.91	+ 2.8
Manufacturing.....	113.3	108.1	- 4.6	151.6	149.8	- 1.2	58.70	60.66	+ 3.3
Durable goods.....	124.2	116.6	- 6.1	167.3	161.2	- 3.6	63.26	64.92	+ 2.6
Non-durable goods.....	103.7	100.7	- 2.9	136.6	138.6	+ 1.5	53.95	56.40	+ 4.5
Construction.....	114.7	106.3	- 7.3	166.1	156.2	- 6.0	59.62	60.91	+ 2.2
Transportation, storage and communication.....	110.3	108.3	- 1.8	139.9	140.6	+ 0.5	61.05	62.29	+ 2.0
Public utility operation.....	111.4	114.6	+ 2.9	151.0	162.6	+ 7.7	65.05	67.70	+ 4.1
Trade.....	112.0	113.4	+ 1.3	145.5	155.0	+ 6.5	48.30	50.59	+ 4.7
Finance, insurance and real estate.....	121.7	126.3	+ 3.8	147.5	160.6	+ 8.9	51.44	53.67	+ 4.3
Service.....	108.3	110.9	+ 2.4	136.6	147.3	+ 7.8	36.61	38.49	+ 5.1
Composite.....	112.6	109.6	- 3.2	149.7	149.5	- 0.1	57.20	58.66	+ 2.9

Average Hours and Earnings in Manufacturing, by Month, 1953 and 1954

Month	Average Hours Worked		Average Hourly Earnings		Average Weekly Wages	
	1953	1954	1953	1954	1953	1954
	No.	No.	cts.	cts.	\$	\$
January 1.....	38.3	38.5	134.0	140.4	51.32	54.05
February 1.....	41.9	40.7	134.2	140.4	56.23	57.14
March 1.....	42.1	41.1	134.4	140.6	56.58	57.79
April 1.....	42.1	40.9	134.9	141.0	56.79	57.67
May 1.....	41.8	40.6	135.5	141.8	56.64	57.57
June 1.....	41.7	39.8	135.9	142.2	56.67	56.60
July 1.....	41.3	40.5	136.2	141.6	56.25	57.35
August 1.....	41.0	40.7	136.0	140.9	55.76	57.35
September 1.....	41.0	40.9	135.7	139.5	55.64	57.06
October 1.....	41.5	41.3	136.6	139.7	56.69	57.70
November 1.....	41.4	41.3	137.4	140.5	56.88	58.03
December 1.....	41.2	41.2	138.4	141.2	57.02	58.17
Annual Average.....	41.3	40.6	135.8	140.8	56.09	57.16

Monthly Indexes of Employment in Manufacturing, 1949-54

(1949 = 100)

Month	1949	1950	1951	1952	1953	1954
January 1.....	98.0	97.2	103.7	104.4	111.4	108.0
February 1.....	98.8	96.0	104.9	105.3	111.9	108.3
March 1.....	99.0	97.5	105.9	106.5	112.7	108.3
April 1.....	99.0	97.8	107.3	107.0	112.9	107.9
May 1.....	99.1	98.1	108.0	107.3	113.1	107.3
June 1.....	99.9	99.7	109.2	108.5	113.4	107.7
July 1.....	101.0	101.5	110.2	108.8	114.7	108.8
August 1.....	100.5	102.1	110.3	110.3	114.4	108.0
September 1.....	101.8	103.8	110.3	112.8	115.6	108.3
October 1.....	101.6	105.5	110.4	114.2	115.2	108.1
November 1.....	100.6	105.4	108.5	113.6	113.1	106.3
December 1.....	99.6	105.3	107.5	113.5	110.9	105.4
Annual Average.....	100.0	100.9	108.0	109.3	113.3	107.7

Steelmen riveting girders on a seven-span 1018-foot bridge over the Skeena River, B.C.



Wage Rates, Hours of Labour and Working Conditions

Index numbers of wage rates by industry are compiled by the Department of Labour but these indexes measure the trend in rates of wages only and cannot be used to compare wage levels in one industry with those in another. The basic statistics are average straight-time wage rates or average straight-time piece-work earnings and do not, therefore, include overtime or other premium payments. The information is collected by means of a survey of employers conducted as at October 1 each year, with a sample survey in April and October to determine the intervening trend.

The index numbers reveal a general increase in wage rates from 1949 to 1953 of 33.6 p.c.; from October 1952 to October 1953 the increase was 4.6 p.c. with an estimated additional rise of 1.2 p.c. between October 1953 and April 1954. Based on a selected sample of collective agreements, negotiated wage rates continued to advance during 1954 though not to the same extent as in 1953.

The trend toward the 40-hour week, usually a five-day schedule, continued in increased degree between April 1953 and April 1954. In the latter month more than half the 800,000 plant employees in the manufacturing establishments surveyed were on a 40-hour week and 80 p.c. of them were on a five-day week. Of the 196,000 office employees covered in manufacturing, 56 p.c. were on a week of 37½ hours or less in April 1954 and about 90 p.c. were in establishments operating on a five-day basis.

In regard to vacations, two notable features were revealed in the 1954 survey of working conditions. One was a tendency toward shorter service requirements for one-week and two-week vacations. Another was an increase in the practice of granting vacations of three weeks or longer. In six of the ten provinces, a one-week annual vacation with pay is mandatory but the vacation policies of most employers were more liberal than required

under provincial legislation. More than nine-tenths of the plant employees and almost all office employees were in plants where they could become eligible for a two-week paid vacation. More than half the plant workers were in employment where a three-week vacation was provided if service requirements were met, and almost two-thirds of the office workers were employed in establishments granting three weeks. A two-week vacation for plant employees is earned, as a rule, within the first five years of employment, and over half the employees were in plants where the service requirement ranged between one and three years; another 35 p.c. could become eligible for a two-week vacation after five years of service. Fifteen years was the most common service requirement for a three-week vacation among plant workers. Office employees of most manufacturing establishments employing 87 p.c. of the total, earned a two-week vacation after one year or less. For a three-week vacation, their stipulated service was, as with plant employees, predominantly 15 years. About 5 p.c. of the plant workers and a slightly higher proportion of the office workers were in establishments reporting four-week vacations, usually after 25 years of service.

For both plant and office employees eight paid statutory holidays a year was predominant. This number of paid holidays was reported in establishments employing 43 p.c. of the plant workers and for those employing 61 p.c. of the office workers. More than two-thirds of the plant workers and over 80 p.c. of the office employees were paid for six, seven or eight statutory holidays.

Establishments employing about 60 p.c. of the workers reported pension plans for non-office employees. The proportion of office employees was 72 p.c. For group life-insurance plans the proportions of plant and office workers were 83 and 87 p.c., respectively. Some type of sickness and accident benefit plan or a plan providing cash compensation for wage loss because of illness was reported in effect for plant employees in establishments covering 94 p.c. of the total of plant employees; for office employees the proportion was 96 p.c.

Index Numbers of Wage Rates for Certain Main Groups of Industries, 1901-53

(Rates in 1949 = 100)

Year	Logging	Coal Mining	Metal Mining	Manu- facturing	Con- struction	Steam Rail- ways	Tele- phones	Per- sonal Service	General Average ¹
1901.....	23.8	24.2	33.8	..	19.2	19.8	..	..	18.6
1905.....	26.4	25.2	32.5	..	23.2	21.4	..	..	21.1
1910.....	29.6	27.5	34.6	..	27.6	25.9	..	..	24.4
1915.....	28.3	29.9	36.6	23.0	32.2	29.3	..	24.4	26.0
1920.....	65.9	57.8	56.9	47.0	57.5	63.6	60.9	45.2	52.3
1925.....	44.0	49.0	51.6	42.4	54.2	53.6	58.8	50.8	45.8
1930.....	45.1	49.5	51.9	43.8	64.7	58.8	62.5	52.3	48.8
1935.....	33.8	48.4	51.2	39.9	50.8	52.9	61.4	49.5	43.2
1940.....	48.5	52.1	56.9	47.9	56.7	58.8	66.9	54.1	50.8
1945.....	70.9	74.6	70.9	67.2	71.2	73.7	82.9	69.4	69.3
1950.....	97.0	102.8	106.8	106.1	104.8	105.1	104.8	102.9	105.5
1951.....	109.6	111.1	121.6	120.3	118.6	121.9	115.7	110.6	119.1
1952.....	133.3	124.0	130.1	128.4	128.6	136.8	128.4	117.6	127.7
1953.....	135.5	124.0	132.3	134.6	136.2	137.2	136.6	123.3	133.6

¹ Includes other main industries not shown in this table.

Labour Legislation

Provincial Legislation.—Provincial labour laws may be grouped under the following headings: safety laws; laws providing compensation for employment injury; laws regulating hours, providing for paid vacations and establishing a minimum wage; laws governing collective bargaining and industrial disputes; laws providing for apprenticeship training; laws requiring examination and certification of certain tradesmen; and laws forbidding discrimination in employment.

In all provinces in which mining is carried on, laws designed to create the safest possible working conditions in mines are in effect. Factories Acts seek to provide control over the working environment in a large part of industry. The construction, installation and operation of boilers and pressure vessels and of freight and passenger elevators, and electrical wiring and installation are regulated by special statutes. The safety standards established by all these laws are enforced by government inspectors.

Under a workmen's compensation law in each province a worker who is disabled by an industrial accident or a disease caused by the nature of his employment is entitled to compensation. This is based on the extent of his disability and the amount of his earnings, subject, in respect of earnings, to a specified percentage rate (which may be 66⅔, 70 or 75, depending on the province) on an annual ceiling of \$4,000 or less. In fatal cases, widows, children or other dependants are awarded fixed monthly sums. Compensation and medical aid are payable from an accident fund to which employers are required to contribute and which provides a system of mutual insurance.

Five provinces have general hours-of-work laws. These either limit daily and weekly hours to eight and 48 or fewer, as in Alberta, British

There is growing recognition in Canada that the attainment of such goals as high employment and better standards of living entails responsibilities for management, labour and government—sound policy and imaginative and creative activity on the part of each group.



Columbia and Ontario, or require the payment of overtime rates after specified limits, as in Manitoba and Saskatchewan. In seven provinces working hours in some industries are regulated through industrial standards or similar laws under which the wages and hours reached by agreement in a representative section of the industry may be made law by Order in Council establishing minimum standards to which all employers and workers in the industry and area must conform.

Annual vacations with pay of one or two weeks are provided by law in six provinces. A Board with minimum-wage-fixing powers has been set up in every province but Prince Edward Island and most industrial workers are protected by a minimum wage set by law, of particular importance where prevailing rates are low and where workers are unorganized. In Nova Scotia and Ontario, however, these provisions affect women only; in New Brunswick, only one industry in which men are employed is covered; and in Newfoundland, a minimum wage has so far been applied to men only.

To promote collective bargaining and the settlement of disputes in undertakings within provincial jurisdiction, all provinces have labour relations Acts. Under these Acts an employer is required to bargain with a trade union which has been certified as bargaining agent for his employees for the conclusion of a collective agreement to establish conditions of employment binding on both parties for the duration of the agreement. Every agreement must contain a grievance procedure which may be invoked if any disagreement arises out of the terms of the agreement. A strike or lockout is forbidden while an agreement is in effect. If efforts to obtain an agreement are unsuccessful, government conciliation services are available and a strike or lockout is prohibited until the procedure for settlement set out in the Act has been carried out.

Apprenticeship laws in all provinces provide for the training of young people in designated skilled trades through a combination of on-the-job training and class instruction. This is usually for a period of four years, during which time an apprentice receives a percentage of the journeyman's prevailing rate of pay, with progressive increases for each stage of training. Most provinces have agreements with the Federal Government for financial assistance in promoting apprenticeship.

In a few provinces legislation is in effect requiring tradesmen in certain designated trades to hold certificates of competency, without which they may not engage in the trade. Standards of proficiency are laid down to be attained upon examination by a person seeking a certificate.

Equal-pay laws in British Columbia, Ontario and Saskatchewan require women to be paid at the same rate as men when they do the same or comparable work in the same establishment, and fair employment practices laws in Manitoba and Ontario prohibit discrimination in hiring and employment on grounds of race, creed, colour or national origin.

Federal Legislation.—Under a federal law, a system of unemployment insurance covers most workers in Canada and a nation-wide free employment service is available to all workers and employers (*see* p. 257). The Vocational Training Co-ordination Act authorizes the Minister of Labour to co-operate with the provinces in carrying out various types of vocational training (*see* p. 258). The Canada Shipping Act sets standards for the welfare and

Electronic calculators take care of the accounting and recording requirements of large industrial establishments—man hours are saved and efficiency improved in all phases of industry by the introduction of specially designed equipment and the use of the latest developments in applied science.



safety of seamen. Two federal laws provide compensation for workers injured in their employment—the Merchant Seamen Compensation Act applying to seamen not covered by a provincial workmen's compensation law and the Government Employees Compensation Act applying to Federal Government employees.

Fair wages legislation requires contractors for federal public works and government equipment and supplies to pay wages generally accepted as current in the district. Hours must be limited to eight a day and 44 a week or, on supplies contracts, to those fixed by the custom of the trade in the district. All contracts must contain a clause prohibiting discrimination by the contractor in hiring and employment on grounds of race, national origin, colour or religion.

A Fair Employment Practices Act, applicable to industries under federal jurisdiction, forbids an employer to discriminate against any person seeking employment or already in his employment because of his race, national origin, colour or religion and also forbids a trade union to discriminate on any of these grounds against any person with regard to membership.

The Industrial Relations and Disputes Investigation Act applies to industries within federal jurisdiction, i.e., navigation and shipping; inter-provincial railways, canals, telegraphs, steamship lines and ferries; inter-provincial and international aerodromes and air transport; radio broadcasting stations; and works declared to be for the general advantage of Canada.

The legislation provides for the right of free association of employees and employers, for the safeguarding of that right by prohibiting unfair labour practices, for the certification by the Canada Labour Relations Board of a trade union as bargaining agent for a group of employees, and for compulsory collective bargaining. A collective agreement must contain provision for the settlement, without recourse to strike action, of disputes arising out of its terms. If the parties are unable to negotiate an agreement, they may ask for the appointment of a Government conciliation officer and if, with

his assistance, agreement cannot be reached on all points at issue, the Minister of Labour may appoint a three-member conciliation board. A strike or lockout may not legally take place until seven days have elapsed after the report of a board has been received by the Minister.

Labour Organization

A third of the wage and salary workers in Canada's non-agricultural industries belong to unions. They are distributed across the country in approximately the same proportions as the population generally. The heaviest proportion of the members—63 p.c.—are in Ontario and Quebec, and 13 p.c. are in British Columbia.

Most of the unions to which the Canadian workers belong are affiliated to one of the three large central labour congresses—the Trades and Labour Congress of Canada (596,000 members), the Canadian Congress of Labour (361,000 members) and the Canadian and Catholic Confederation of Labour (100,000 members). In the first two, most of the unions are international in their scope, having headquarters in the United States. There remains, however, one large group of workers belonging to unaffiliated unions which comprise the International Railway Brotherhoods, numbering approximately 41,000 members.

Collective bargaining is a basic function of all the unions. To-day, more than 6,100 agreements are in effect throughout the country. In total, they affect the working conditions of almost 40 p.c. of the non-agricultural wage and salary workers, although the percentage of the workers covered varies by industrial groups. For example, in transportation and communications 78 p.c. of the workers are covered by agreement and in mining 69 p.c. are covered; other industries have lesser proportions of their working force covered. In manufacturing, 55 p.c. of the workers carry on many of their activities under the terms of a collective agreement, in public utilities 50 p.c., service 12 p.c. and trade 8 p.c.

Unemployment Insurance

The Unemployment Insurance Act, 1940, which came into operation in July 1941, provides for a contributory scheme of unemployment insurance and a nation-wide free employment service. The Act is administered by an Unemployment Insurance Commission, consisting of a Chief Commissioner and two Commissioners—one appointed after consultation with organized labour and one after consultation with employers. Regional and local officers strategically located across the country handle applications for employment and claims for unemployment insurance benefit.

All persons employed under a contract of service 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 \$4,800. Persons employed on an hourly, daily, piece or mileage basis are insured regardless of earning level. Employers and their insured workers contribute equally, the contributions being based on the wages or salaries earned. The Federal Government adds one-fifth of the total employer-employee contributions and pays administration costs.

Rates of Contribution and Benefit under the Unemployment Insurance Act

Range of Earnings	Weekly Contributions		Rates of Benefit			
	Em- ployer	Em- ployed Person	Person Without a Dependant		Person with a Dependant	
			Daily	Weekly	Daily	Weekly
While Earning in a Week—	cts.	cts.	\$	\$	\$	\$
Less than \$ 9.00.....	18	18	0.70	4.20	0.80	4.80
\$ 9.00 to \$14.99.....	24	24	1.00	6.00	1.25	7.50
\$15.00 to \$20.99.....	30	30	1.45	8.70	2.00	12.00
\$21.00 to \$26.99.....	36	36	1.80	10.80	2.50	15.00
\$27.00 to \$33.99.....	42	42	2.15	12.90	3.00	18.00
\$34.00 to \$47.99.....	48	48	2.50	15.00	3.50	21.00
\$48.00 or more.....	54	54	2.85	17.10	4.00	24.00

Persons Insured under the Unemployment Insurance Act, by Industrial Group, Sex and Province, as at Apr. 1, 1953

Industrial Group	Males	Females	Province	Males	Females
	No.	No.		No.	No.
Agriculture.....	1,590	610	Newfoundland.....	46,650	6,750
Forestry and logging..	71,470	1,700	P. E. Island.....	7,160	2,320
Fishing, hunting and trapping.....	320	—	Nova Scotia.....	78,210	20,260
Mining, quarrying and oil wells.....	88,340	2,570	New Brunswick.....	79,770	17,370
Manufacturing.....	896,490	284,170	Quebec.....	670,710	239,160
Construction.....	193,070	6,800	Ontario.....	936,960	350,470
Transportation, storage and communication..	295,570	48,290	Manitoba.....	131,050	46,290
Public utility operation	30,180	4,130	Saskatchewan.....	53,730	20,810
Trade.....	303,280	191,360	Alberta.....	122,520	37,180
Finance, insurance and real estate.....	43,670	67,360	British Columbia...	215,850	67,460
Service.....	196,560	151,680			
Unspecified.....	6,840	2,050			
Claimants.....	215,230	47,350			
Totals.....	2,342,610	808,070	Totals.....	2,342,610	808,070

During the calendar year 1953 there were 1,675,864 initial and renewal claims filed, 1,189,566 claimants were considered entitled to benefit on initial and on renewal claims, and benefit payments totalled \$148,751,425. Comparable figures for 1952 were 1,388,884 claims, 1,014,257 entitlements to benefit, and payments of \$114,200,316. During the first six months of 1954, 1,142,611 claims were filed, claimants considered entitled to benefit numbered 860,539 and benefit payments amounted to \$144,576,833.

In addition, supplementary benefits are paid during the period Jan. 1 to Apr. 15 each year to certain classes of claimants unable to qualify for the regular benefit. In the 1954 period such benefits amounted to \$14,132,015 paid to an estimated 193,000 persons. This compares with \$9,222,346 paid to 135,837 beneficiaries in the 1953 period.

The National Employment Service.—The Unemployment Insurance Commission operates the National Employment Service rendering service to all workers and employers of Canada through a national chain of 200 offices.

In 1953, a total of 993,406 vacancies were filled by the Service for Canadian employers. Of these 736,188 were jobs for regular employees and 218,013 were casual placements: the number of persons transferred to jobs in other areas was 39,205.

Vocational Training

The Training Branch of the Department of Labour is responsible for the administration of the Vocational Training Co-ordination Act which was introduced in 1942 to provide, in co-operation with the provincial governments, various types of training considered in the public interest. Projects under the Vocational Training Agreement include training for unemployed persons who require such assistance to fit them for suitable employment, special programs for handicapped persons, training of supervisors and foremen in industry, training for members of the Armed Forces, rehabilitation training for veterans and for disabled civilians, special training projects for defence industry, and short intensive courses for young people in rural communities, and for persons engaged in fishing, forestry, mining and other primary industries. The Federal Government pays the full costs for the training of veterans and service men and pays 75 p.c. of the costs of special training projects for defence industry. All other training costs are shared equally with the provinces concerned.

Under an Agreement covering the ten years ending Apr. 1, 1955, financial assistance is being provided to the extent of \$20,000,000, to be shared equally by the Federal Government and the provincial government concerned, for the establishment and operation of vocational and technical schools and classes of lower than university grade. An additional \$10,000,000 has been allotted for capital expenditures on the construction, equipment and extension of vocational schools, trade schools and technical institutes.

The total budget of the Training Branch for the year ended Mar. 31, 1955, was \$4,797,795.

Civilian Rehabilitation

A Civilian Rehabilitation Branch was established within the Department of Labour in February 1951 for the purpose of co-ordinating all activities, both public and private, directed towards the rehabilitation of so-called disabled persons. Working co-operatively with the Department of Labour in this matter are the Departments of National Health and Welfare and Veterans Affairs. Eight provinces have signed Co-ordination of Rehabilitation Agreements with the Federal Government and have appointed provincial co-ordinators, whose salaries and expenses are shared equally by the two levels of government. The provincial staffs are working to co-ordinate on a regional and local basis the efforts of all agencies working with the disabled and to stimulate the interest of the medical profession, management, labour, and vocational and placement services in the potential value of such persons. Training of any type required may be obtained for a disabled person through the Vocational Training Co-ordination Act, provided such training would result in his rehabilitation. Health grants have been supplemented to fill gaps in existing services.

Oil refinery workers are familiarized with the details of a new plant before it comes into operation.



The Older Worker

During the post-war years, the Department of Labour, in co-operation with the National Employment Service and the Department of Veterans Affairs, has carried on an educational campaign designed to bring the facts and effects of the problem of the older worker before the greatest number of responsible citizens.

Canada's steadily aging population, coupled with trends that result in rejection or withdrawal from employment of an important segment of older workers, presents a national problem demanding close scrutiny. In 1881, the number of Canadians over 40 years of age constituted 20 p.c. of the population; by 1951 this had increased to approximately 32 p.c. This trend should be considered in relation to the fact that one of the chief difficulties facing the National Employment Service in matching unplaced applicants with unfilled jobs is a tendency on the part of employers to reject applicants over 40 (over 35 for women). The wide circulation among business executives and personnel men of a film entitled *Date of Birth*, produced for the Labour Department by the National Film Board, resulted in many direct changes in hiring policies of benefit to middle-aged and older workers. Extensive distribution of a memorandum outlining the problem has also proved beneficial.

An Interdepartmental Committee, set up as a sub-committee of the National Advisory Council on Manpower, is at present engaged in a broad program of education and is conducting surveys to fill gaps in Canadian knowledge of many aspects of the full utilization of the abilities and experience of the older worker.



The spreading out of Canadian industry has necessitated continuous extension and modernization of land transportation facilities. In most cases the isolated industrial plant and its satellite community must have immediate road and rail contact with sources of supply and with markets.

Transportation and Communications

EXTENSIVE and efficient transportation and communication facilities are vitally necessary to Canada, perhaps more so than to most other countries. Canada extends more than 4,000 miles from east to west and its main topographic barriers run north and south, tending to separate one section of the country from another. The relatively small population of 15,195,000 is mainly concentrated in a narrow uneven strip along the southern border but, as Canada's great natural resources come under development, the movement is gradually northward. Distance to markets is always great, whether goods are destined for domestic consumption or for export. The task of keeping this vast area—3,845,774 sq. miles—with its scattered population, closely integrated by rail, road, water and air and by radio, telegraph, telephone and post office is fundamentally important to Canada's economic development and to the maintenance of national unity and identity.

• Transportation

The range of requirements for transportation services is so wide that no single medium can meet the demands of industry and the travelling public. The railways have served and will continue to serve as the principal facility of movement because only they have the capacity to supply cheap all-weather transportation in large volume over continental distances. But they are being faced to an increasing extent with specialized competition from air, water, and other land transport enterprises.

The air lines are specialized in speed of movement which gives them a definite advantage in the transport of passenger and mail traffic. The air lines, too, are taking over the opening up of new areas for development, a job formerly carried on, where this was economically and physically feasible, by railway and waterway facilities. Moreover, speed, lower capital outlays in instituting service and ability to reach otherwise inaccessible areas have been instrumental in establishing the air lines in this field. To-day there are many isolated mining properties that have been prospected, proven, developed and maintained by air transport.

Water carriers are specialized in low-cost bulk movement of goods in which speed of service is not a critical factor. Most of the movement in this field is over the Great Lakes-St. Lawrence waterways. About 50 p.c. of the lake tonnage is engaged in carrying grain and the balance carries ore, coal, pulpwood, crude petroleum, limestone and general cargo. The oil pipeline, a relatively new development in Canada is a means of transportation that has a definite advantage over other methods for the movement of petroleum and petroleum products.

Road transport has, of course, since the earliest days, played an unparalleled part in local passenger and freight movement. This service has gradually extended until now it provides great arteries for both short- and long-distance commercial and passenger traffic. The relatively low cost of operation of commercial road vehicles makes them particularly suitable for short-haul traffic moving in comparatively small volume.

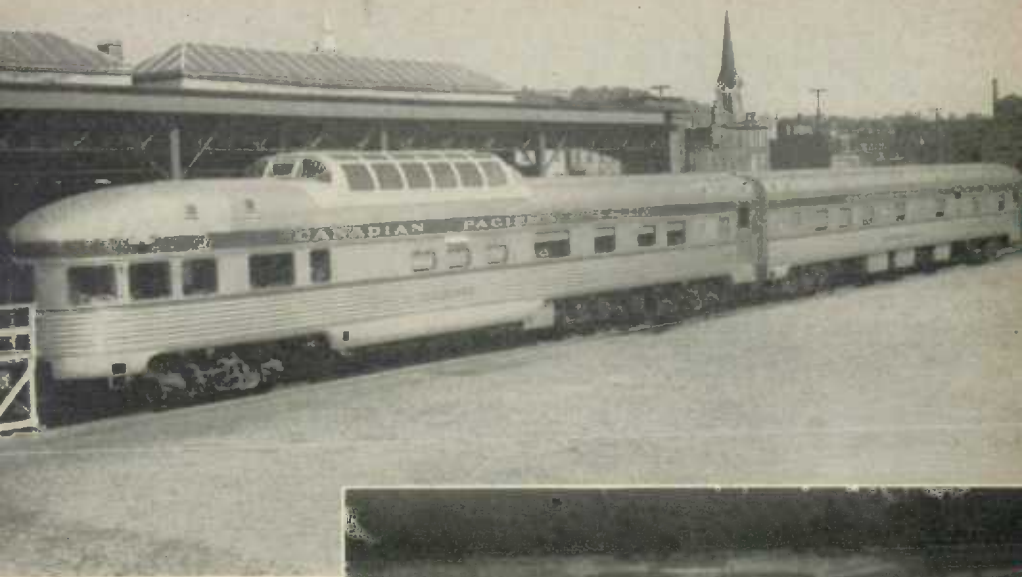
Railways

There are two great railway systems in Canada, the Canadian National Railways, a government-owned system formed from the consolidation of several private and government lines in 1923, and the Canadian Pacific, a joint-stock corporation which began transcontinental operations in 1885. Each has a transcontinental line and a network of branch lines connecting the principal urban and rural centres of Canada. Each company constitutes an immense organization, serving the public in many fields of transportation and communication. The CNR is Canada's largest public utility operating, in addition to its rail network and the multifarious associated facilities, a fleet of coastal and ocean-going steamships, a nation-wide telegraph service providing efficient communication between all principal points of Canada with connections to all parts of the world, express facilities in Canada and abroad, a chain of hotels, a scheduled trans-Canada and North America air service and a trans-Atlantic air service. The CPR, in addition to its far-flung railway operations, also has a fleet of inland, coastal and ocean-going vessels, a north-south air-line system which is one of the world's greatest air freight carriers, a trans-Pacific air-line service to the Orient and the Antipodes, an air service to Mexico and Peru, a chain of year-round and resort hotels, a cross-Canada telegraph network, a world-wide express service, and a truck and bus transport service.

These two transportation systems co-operate, under government supervision, in avoiding unnecessary duplication of railway service. The Board of Transport Commissioners controls freight and passenger rates as well as other matters relating to construction, operation and safety.

The combined length of line operated by these two companies, together with that owned by a number of smaller companies, was 58,695 miles in 1953. Gross operating revenues of all railways amounted to \$1,205,935,414 and operating expenses were \$1,100,393,836, compared with \$1,172,158,665 and \$1,057,186,304 in 1952. The 65,267,015,500 ton-miles of freight carried in 1953 was a decrease of 3,163,401,537 ton-miles as compared with 1952. Passengers carried numbered 28,736,159 compared with 30,167,145 in 1952 and employees averaged 211,951 as compared with 214,143.

There has been little change in the mileage of single-track line since the 1920's but recently the construction of several large industrial projects in outlying districts has sparked a new phase of railway building. Although aircraft are playing an important role in the discovery of new resources and in their early development, the provision of railway services is absolutely essential to the continuing life of nearly all such projects. Only the railway can provide a permanent, dependable and adequate link with the markets of "civilization". Three new lines, opening up entirely new districts, have been completed—the 43-mile Terrace-Kitimat line in British Columbia, the 144-mile Sherridon-Lynn Lake line in Manitoba, and the 360-mile Quebec, North Shore and Labrador Railway. A 17-mile branch line was built during 1954 between Havelock and Nephton in Ontario, providing a rail outlet for a new mine at the latter point. Two others, one into the Chibougamau area of northern Quebec and the other into the Manitouwadge area of north-western Ontario—both new mining districts—are under initial development.



Scenic dome lounge cars are part of the ultra modern stainless steel passenger equipment recently placed in transcontinental service by the Canadian Pacific Railway. The cars have been designed to provide the ultimate in comfort and enjoyment for the rail passenger.



A self-propelled diesel-powered day-liner carries passengers, express and mail from Mattawa, Ont., 100 miles north to Angliers, Que. Passenger day-liners are in service between other centres.





Most cities in Canada have experienced a decline in the passenger load of mass transportation systems. Ottawa's municipal system, which operates street cars and motor-and trolley-buses, is no exception, passenger traffic in 1954 having declined by one-third from the peak in 1946.

Urban Transport Services

Widespread changes in urban transport systems have been taking place in recent years. Electric street railways have been replaced or supplemented in many Canadian cities by motor-buses and trolley-buses and a large number of inter-urban electric lines have been abandoned. Most urban transportation systems are owned and operated by the municipalities.

In 1953, urban transit systems carried 1,310,156,000 passengers compared with 1,353,213,000 in 1952. Inter-urban services carried 93,089,159 passengers, 4,416,710 fewer than in the previous year. There has been a definite downward trend in traffic on transit facilities since 1949. A large proportion of the 2,554,000 private passenger vehicles in use, including automobiles and motor-cycles, is competitive with the transit systems. The recent rapid development of suburban areas has had the effect of encouraging the purchase of private cars as well as increasing the operating costs of transit-company service. At the same time, the advance in fares made necessary mainly because of this suburban expansion has discouraged to some extent the previously profitable short-haul city traffic.

*Highway from
Montreal to the
heart of the Laur-
entian resort area,
at a point near
Ste. Adele, Que.*



Roads and Highways

Canada, at the end of 1952, had 181,306 miles of surfaced road and 331,489 miles of non-surfaced road. Of the surfaced road, 152,657 miles were gravel, 26,770 miles were bituminous-surfaced and 1,879 miles were concrete.

All roads, except those in the Territories, the National Parks and Indian reserves, which are the responsibility of the Federal Government, are under the jurisdiction of provincial and municipal authorities. Of the almost \$404,300,000 spent in 1952 on new construction and maintenance of roads, bridges, ferries, and other works, \$350,000,000 was supplied by the provincial governments and the remainder by the federal and municipal governments. To appreciate fully the use made of public roads and the high cost of maintenance, it must be realized that motor-vehicle registrations have more than doubled in the past eight years, rising from 1,622,463 in 1946 to 3,430,672

*Highway near the
Skagit River be-
tween Hope and
Princeton, B.C.*



in 1953. In addition to domestic traffic, Canadian highways carry millions of foreign tourist cars annually, more than 8,235,000 entries having been recorded in 1953. Again, apart from wear and tear by vehicles, the natural climatic conditions such as snow, frost and floods, play havoc with the roads.

The construction of a national coast-to-coast highway was sanctioned in December 1949. Every province, except Quebec, is participating in the plan and is undertaking to construct and maintain that portion of the highway, other than on federal lands, within its borders. The general administration and co-ordination of the program is the responsibility of the Federal Government, which also shares equally with each province the cost of new construction and the cost of construction of existing highways taken into the system.

The route, selected by the provinces, covers a distance of 4,993 miles, including the mileage across Quebec. By the end of March 1954, 4,723 miles were considered passable for vehicular traffic but only 2,094 miles were paved. The 270 miles not yet constructed included 80 miles between Clarenville and Gander, and 60 miles between Flat Bay and Tompkins in Newfoundland, together with 130 miles in northern Ontario between Chapleau and Schreiber.

Motor-Vehicles

There were more motor-vehicles registered in Canada in 1953 than ever before. Of the 3,430,672 registrations—compared with 3,155,997 in 1952—2,513,754 were for passenger cars and 916,918 for commercial vehicles and motorcycles, including 820,110 trucks, 8,968 buses, 40,177 motorcycles and 47,663 other vehicles. Registrations in the different provinces were as follows: Newfoundland, 29,576; Prince Edward Island, 20,286; Nova Scotia, 129,564; New Brunswick, 93,914; Quebec, 617,855; Ontario, 1,406,119; Manitoba, 203,652; Saskatchewan, 257,504; Alberta, 318,812; British Columbia, 348,830; and the Yukon and Northwest Territories, 4,560.

Provincial revenues from motor-vehicle registrations and licences reached a high of \$87,788,069 in 1953, and provincial gasoline tax revenues amounted to \$219,876,095. Taxable gasoline sold, most of which was consumed by motor-vehicles, amounted to 1,902,514,817 gal. in 1953.

The apparent supply of new passenger vehicles in 1953 amounted to 373,072 cars, 92,963 more than in 1952. The 1953 figure includes 319,937 cars made for sale in Canada plus 53,179 imports, less 44 re-exports of imported cars. In that year, 359,172 passenger cars valued at \$899,726,000 were sold, as well as 103,354 trucks and buses valued at \$262,745,000. Only 40.9 p.c. of the number and 29.4 p.c. of the value of these vehicles were financed by finance companies. The average financed value was \$1,810.

Motor-Carriers.—The movement of freight and passengers by motor-vehicle has assumed great importance in the national transportation picture during the past quarter-century. Since the end of World War II, particularly, motor-vehicle traffic has advanced considerably with the improvement of equipment and the extension of hard-surfaced highways.

Motor-carrier statistics do not represent a complete coverage of the industry, which is largely made up of small businesses with hundreds of licensees, each operating one or two trucks. Their bookkeeping is often sketchy and, at the same time, amalgamations and retirements are numerous, making a census difficult. In 1951, 4,275 carriers reported and, of these, 2,276

were small operators with revenues under \$8,000 for the year, most of them driver-owner operated. Seven hundred and sixty-eight freight carriers had revenues of between \$8,000 and \$19,999; 810 had revenues of \$20,000 or over. There were 421 passenger carriers including urban and inter-urban systems other than those operating streetcars or trolley-buses.

Statistics of Motor-Carriers, 1948-51

Item		1948	1949	1950	1951
Investment in land, buildings, and equipment.....	\$	105,126,021	124,984,523	141,213,577	160,225,318
Revenue.....	\$	138,468,317	159,631,109	179,301,971	200,616,604
Equipment—					
Trucks.....	No.	9,769	10,937	11,126	11,368
Tractors, semi-trailer.....	"	2,920	3,197	3,640	4,081
Trailers.....	"	1,755	1,825	2,496	3,281
Buses.....	"	4,097	4,623	4,710	4,874
Passengers carried.....		295,672,437	376,187,446 ¹	363,341,945	365,946,738
Freight, inter-city and rural ²	ton	13,889,337	15,087,704	19,009,488	18,248,756

¹ Increase accounted for largely by the inclusion of two companies formerly reported as electric railways.

² This item is not reported by all carriers.

Shipping

The importance of shipping in the economy of the country may be realized when consideration is given to the fact that Canada is one of the world's major trading nations and that a large portion of the goods coming into and leaving the country does so by way of the sea. Also, Canada possesses large navigable waterways extending inland which not only lead to the seaports but provide, as well, cheap service from one point to another along the way. The inland lakes and rivers are almost innumerable and there are vast outlying areas where water is still the only available means of transportation. Many settlements along both the east and west coasts depend entirely upon shipping for the transport of goods and passengers.

Largest ship on the Great Lakes, the 751-ft. Canada Steamship Lines carrier "T. R. McLagan" unloading her first shipment of iron ore at Hamilton on May 1, 1954.



There is no record of all the freight carried by water in Canada, but there is a record of the number and tonnage of ships calling at all ports at which there are customs collectors and of cargoes of vessels trading between these ports. All waterways including canals and inland lakes and rivers are open on equal terms, except for the coastal trade, to the shipping of all countries of the world so that the commerce of Canada is not dependent entirely upon Canadian shipping. However, a large part of the inland and coastal traffic is carried in ships of Canadian registry.

During 1953, customs officials reported 123,075 vessel arrivals in foreign and coasting service as compared with 113,505 and 118,875 in 1952 and 1951, respectively. The total tonnage of all cargoes loaded and unloaded in foreign trade at all Canadian ports amounted to 70,894,082 tons, of which 28,485,923 tons or 40.2 p.c. was carried by vessels of Canadian registry.

As in former years, the bulk of foreign trade was with the United States which accounted for 42,993,787 tons, or 60.6 p.c. of the total. Canadian vessels carried 62.3 p.c. of this water-borne commerce. In trade with other countries, however, Canadian shipping fared less well, carrying only 1,680,709 tons of a total of 27,900,295 tons. Most of this freight was carried by vessels of the United Kingdom, United States, Panama, Norway and Sweden.

In 1953, commodities exported amounted to 32,202,205 short tons, slightly lower than the 1952 total. Loadings at Great Lakes and Pacific ports were higher than in the previous year but at Atlantic and lower St. Lawrence River ports tonnages declined 5.1 p.c. Major Canadian exports, with the 1952 totals in parentheses, include: wheat 7,588,616 tons (9,077,612); iron ore 4,907,331 tons (3,946,098); lumber 2,110,304 tons (1,886,989); newsprint 1,997,009 tons (1,810,461); and pulpwood 1,553,414 tons (1,871,668).

Imports also declined slightly to 38,691,877 tons from 38,756,206 tons in 1952. Lighter shipments were reported for petroleum oils, which decreased to 3,613,160 tons from 3,929,039; cement which dropped to 109,293 tons from 215,718; limestone, iron, crude oil and other mine products. Increases were reported for bauxite, fertilizers, corn, sand, chemicals and general freight.

The gross investment in vessels, docks, wharves, warehouses, land and buildings, and equipment reported by the water transportation industry in 1952 amounted to \$283,291,000. Gross income received from this investment was \$288,198,000. The industry employed 20,192 workers and paid out \$47,567,000 in salaries and wages, an average of \$2,356 which did not include the value of meals and lodging estimated at \$5,876,000.

Lighthouses and other marine danger signals, a pilotage service and radio signal and direction-finding stations, as well as federal legislation and regulations, maintain a high standard of safety for navigation in and around Canada.

Harbours

Overseas exports and imports comprise a large proportion of Canada's international trade and the long routes over which these commodities travel—the overland routes and the sea lanes—are linked together by a number of deepsea harbours. Having in mind the importance of deepsea ports as inherent and vital units in the national system of transportation, and for purposes of ensuring greater efficiency and economy in operation, improvement



Ships are the life-line for many isolated communities along Canada's extensive sea coasts, on the long reaches of her northern rivers and on the shores of her Great Lakes.

▲
CNR's "William Carson", new ferry in service between Nova Scotia and Newfoundland.



▲
Loading material and equipment at Montreal to supply outposts along Quebec and Labrador coasts.



◀
Last of the sternwheelers, the "Whitehorse" still plies the Yukon River between Dawson and Whitehorse.

A number of passenger and freight vessels operate out of Vancouver serving communities along the Strait of Georgia.



and strengthening of engineering services as well as uniformity in regulations and tariffs, eight of these harbours have been placed under a permanent central board for administration as national ports in accordance with national policy and with the assistance of national credit. The National Harbours Board is an agency of the Crown, responsible to Parliament through the Minister of Transport. Seven other harbours are administered by commissions that include municipal as well as federal appointees and, in addition, there are about 300 public harbours, all of which come under the supervision of the Department of Transport.

The harbours administered by the National Harbours Board are Halifax and Saint John on the Atlantic seaboard; Chicoutimi on the Saguenay River and Quebec, Three Rivers and Montreal on the St. Lawrence River in Quebec; Churchill on Hudson Bay and Vancouver on the Pacific Coast. Assets administered by the Board represent, at cost, an outlay of \$236,000,000, and facilities include wharves, vessel berths, transit sheds, grain elevators, cold-storage warehouses, terminal railways, shore and floating equipment, workshops, electric-power and water-supply systems and industrial sites. The extent and variety of facilities at each port are, of course, influenced by the nature and volume of the traffic passing through that port. In general, the objective is to make the national harbours as self-sustaining as possible, first, by business-like management and, second, by charges for the use of facilities and services that are fair by accepted standards. It is the policy of the Board to provide the necessary major facilities for public use but to refrain from performing certain services that can be provided adequately by private interests.

The freight loaded and unloaded at the larger ports from sea-going vessels frequently constitutes a surprisingly small part of the total freight handled. Usually, the volume coming in or going out by coasting vessels is larger. It is not possible to obtain statistics of freight handled in all ports and harbours, but the water-borne cargo handled at the eight principal ports in 1953 was as follows:—

	<i>Tons</i>		<i>Tons</i>
Halifax.....	4,402,716	Montreal.....	16,899,341
Saint John.....	2,474,858	Churchill.....	330,024
Chicoutimi.....	281,161	Vancouver.....	11,836,533
Quebec.....	3,256,548		
Three Rivers.....	3,044,056	TOTAL.....	42,525,237

Canals

The canals of Canada may be divided into two classes: the main route canals on the St. Lawrence River and the Great Lakes, including the Lachine, Soulanges, Cornwall, Farrans Point, Rapide Plat and Galop Canals on the St. Lawrence River, the Welland Ship Canal between Lakes Ontario and Erie, the Sault Ste. Marie Canal between Lake Huron and Superior; and subsidiary canals or branches including the St. Peters Canal between Bras d'Or Lakes and the Atlantic Ocean, Nova Scotia; the St. Ours and Chambly Canals on the Richelieu River, Quebec; the Ste. Anne, Carillon and Grenville Canals on the Ottawa River; the Rideau Canal between the Ottawa River and Lake Ontario; and the Trent and Murray Canals between Lake Ontario and Georgian Bay in Ontario.



Welland Canal at Thorold, Ont.

Evidence of the importance of this transportation system as a highway of commerce is the fact that, during 1953, 33,373,064 tons of freight passed through the canals in 27,563 vessels. In addition, thousands of pleasure craft locked through; one point, Sault Ste. Marie, was passed by 105,366 passengers.

The St. Lawrence waterway with its ship channel and series of canals is the world's greatest inland navigation system, providing as it does a great navigable artery from the Atlantic Ocean to the western end of Lake Superior, a distance of more than 2,200 miles. The development of this waterway as a highway of international trade has involved a series of engineering projects in keeping with the increasing demands of traffic and the safety of larger and faster ships. Throughout its course, 31 locks overcome a rise in level of 600 feet. At present the canals on the St. Lawrence River have a navigable depth of up to 14 feet but between the lakes the navigable depth is 25 feet, permitting the passage of large lake freighters from the Upper Lakes to Prescott on the St. Lawrence. Plans are under way for deepening the St. Lawrence channel to permit these freighters passage to the Atlantic and to allow large sea-going vessels to ply the Great Lakes.

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



The air strip about eight miles from Uranium City is the terminal of its only means of transportation to and from the outside world. A Saskatchewan Government aircraft is being loaded before flight to Prince Albert.

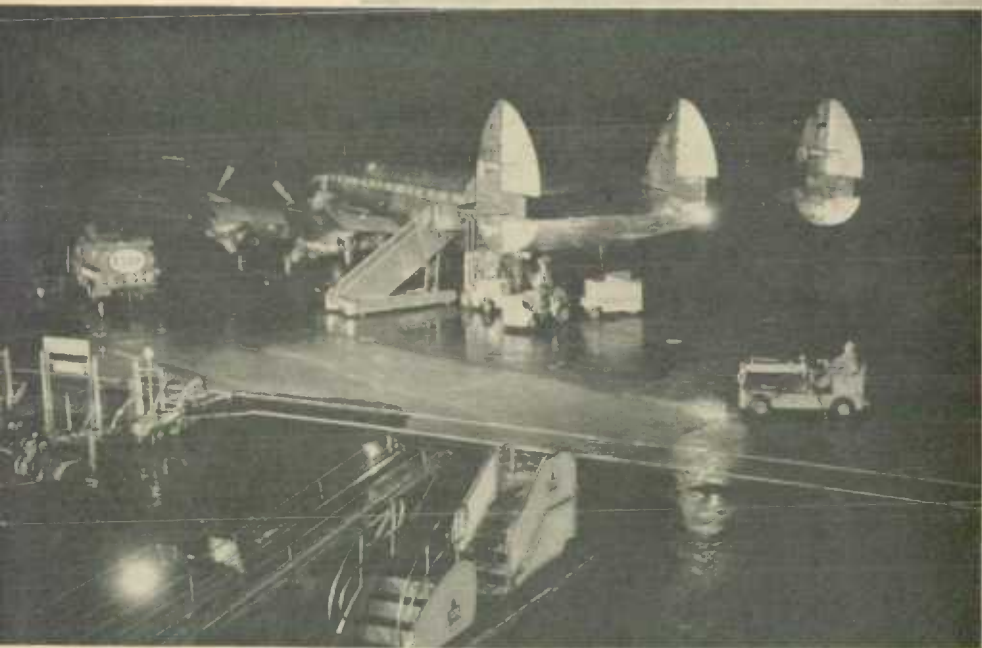
side, which includes matters of registration of aircraft, licensing of airmen, establishment and maintenance of airports and facilities for air navigation, air traffic control, accident investigation and the safe operation of aircraft. Certain statutory functions with respect to the issue of licences 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—non-scheduled services and scheduled services.

Non-scheduled Services.—Non-scheduled services include specific point-to-point services not on regular time schedules; charter and contract services; and specialty services. Such services provide access to sections of Canada that are inaccessible by other means of transportation and also act as feeders to the scheduled airlines. The use of aircraft has become vital to the exploration and development of the remote parts of Canada and has made many projects in otherwise inaccessible areas economically sound and physically possible. The helicopter, for example, played an essential role in the transport of equipment and supplies, as well as engineering and other working parties during development of the Kitimat project in British Columbia. In the year ended Mar. 31, 1954, non-scheduled operators flew 17,003,386 revenue miles, carried 343,973 passengers, 115,893,061 lb. of goods and 802,260 lb. of mail.

Besides transportation, the non-scheduled operations provide a variety of services, thus making important contributions to the discovery, conservation and development of the natural resources and to the expansion of the Canadian economy. Aerial photography, which has been highly developed, is applied to geological surveys, mapping, timber-estimating and operation-planning, as well as to the planning of oil pipelines, roads and many large construction projects. An outstanding contribution by aircraft has been made in the field of exploration and prospecting for minerals. Aircraft have long been employed for the protection of forests by the use of fire-spotting aerial patrols, by aiding in fire-fighting operations and by the dusting of forest areas

A Vickers Viscount, first propeller-turbine airliner in the world, started carrying passengers in Canada in February 1955. Twenty-two Viscounts will be in service for TCA by 1957.



▲
TCA Super Constellation at Vancouver Airport.

►
Bristol freighters, with five-ton capacity, are now supplementing TCA's regular freight service.



against destructive insects. In the agricultural sphere, aircraft are used for crop-dusting and spraying to control insect pests, and for seeding and frost control. In connection with the protection of wildlife resources, aircraft are used to patrol wide areas for the detection of poachers and violators of fish and game regulations, and for the stocking of lakes and streams with fingerlings. Among the many other services performed by means of aircraft are: patrolling power lines and pipelines, police activities, missionary work, aerial ambulances and advertising.

At Mar. 31, 1954, there were 173 commercial operators licensed to conduct scheduled, non-scheduled and specialty services, and there were 96 flying schools and flying clubs licensed for training activities.

Scheduled Services.—*Trans-Canada Air Lines.*—TCA lines provided air transportation during 1953 for 1,307,810 passengers and carried 14,000,000 lb. of freight over its North American and international routes. This was an increase of 16 p.c. in passenger traffic and 18.4 p.c. in commodity business over 1952. In performing these services TCA flew 11 p.c. more scheduled miles on all services; *North Star* seating capacity was increased and three *Bristol* freighters were added to the fleet to facilitate commodity transport. The Company staff numbered 7,072.

During the year, service was extended to Sudbury and, on a summer schedule, to Muskoka, providing air transport to the industrial and resort areas of northern Ontario. In January 1954, Canada and Mexico were linked by air with an initial schedule of one flight weekly. TCA provides service for passengers, mail and commodity traffic over North American routes totalling 9,916 miles; international routes total 9,415 miles and serve the United States, England, Scotland, Ireland, France, Germany, Mexico, Bermuda, the Bahamas, Jamaica, Barbados and Trinidad.

Statistics of TCA operations for 1953 are as follows:—

	No.
Revenue miles flown.....	30,171,902
Revenue passengers carried.....	1,307,810
Revenue passenger miles flown.....	759,319,800
Revenue goods ton miles flown.....	8,402,761
Mail ton miles flown.....	5,373,841

At the end of 1953, the TCA fleet consisted of 23 *North Stars*, 26 DC-3's, three *Bristol* freighters and one DC-3 cargo liner. In 1954 a new *Super Constellation* fleet was put into service on both the transcontinental and trans-Atlantic routes, reducing considerably long-distance flight time. Also a number of *Vickers Viscounts* were added to the inter-city service.

Canadian Pacific Air Lines, Limited.—CPA operates scheduled domestic services over routes covering 10,723 miles and overseas services from Vancouver to the Orient, the Antipodes, and South America via Mexico covering 20,676 miles. Domestic services, which are flown with DC-3, DC-4 and Convair 240 equipment, are centred largely in western and northern Canada with two daily services flown in the Montreal-Quebec-Toronto area. Overseas routes are flown exclusively by DC-6B aircraft with configurations designed to accommodate both tourist and first-class passengers.

Tourist fares were introduced on the Vancouver-Honolulu and the Vancouver-Mexico routes, as a result of which traffic increases of up to 400 p.c. were experienced.

Summary statistics of CPA operations for 1953 are as follows:—

	No.
Revenue miles flown	9,209,089
Revenue passengers carried	231,131
Revenue passenger miles flown	166,323,904
Revenue goods ton miles flown	1,862,732
Mail ton miles flown	722,450

Maritime Central Airways, Limited.—Scheduled flights serve Charlottetown and Summerside in Prince Edward Island; Moncton, Fredericton and Saint John in New Brunswick; New Glasgow and Halifax in Nova Scotia; and the Magdalen Islands. In addition to these daily flights, service is provided to Goose Bay in Labrador, Gander and St. John's in Newfoundland, and to the French Islands of St. Pierre and Miquelon. Air freight charter work in the north accounted for a large share of the Company's revenue.

During 1953 the Company increased its service to 2,911,256 revenue miles; 64,906 passengers and 4,607 tons of goods were carried, and 2,462,969 tons of revenue goods and 69,814 tons of mail were flown. The Company has at present a fleet of heavy aircraft, including nine DC-3's, three Lockheed 10A's, three De Havilland *Beavers*, three PBV-5A *Cansos*, one Mk V *Anson* and one Bristol 170 freighter.

Queen Charlotte Airlines Limited.—This Company operates scheduled services in British Columbia between Vancouver, Tofino, Comox Airport, Westview Airport, Alert Bay, Minstrel Island and Sullivan Bay, B.C. Non-scheduled services are operated from Vancouver, B.C., serving Tofino,

"Beaver" aircraft, commercially operated, follows the twisting Liard River on its course from northwestern British Columbia to the Northwest Territories where it joins the Mackenzie River system. These aircraft keep geological parties, operating along the Liard, supplied with food and mail.



them calls to other countries. Long-distance connections to 113 other countries and territories are available, making accessible to Canadians over 96 p.c. of the world's telephones.

Although 2,793 separate telephone systems operated in Canada in 1953, there was a high degree of co-operation among them. Long-distance service on a national scale was provided by the Trans-Canada Telephone System comprising the seven major units operating in the more heavily populated areas from the Maritime Provinces on the east to British Columbia on the west. Of the total number of systems, 2,205 were small co-operatives serving rural districts. The largest of the 419 shareholder-owned companies were the Bell Telephone Company of Canada and the British Columbia Telephone Company. The Bell Telephone and its subsidiaries operate in Ontario and Quebec and serve almost 60 p.c. of all telephones in Canada. The systems of the three Prairie Provinces, owned by the respective provincial governments, reported 11 p.c. of the total. Service in some remote areas was provided by provincial or federal lines.

Large amounts of new capital have been applied in recent years to the evolution of Canadian telephone services. At the end of 1953, total investment in telephone systems amounted to \$1,152,309,749. Employees in telephone service numbered 50,540 and in 1953 they received a total of \$145,109,934 in salaries and wages.

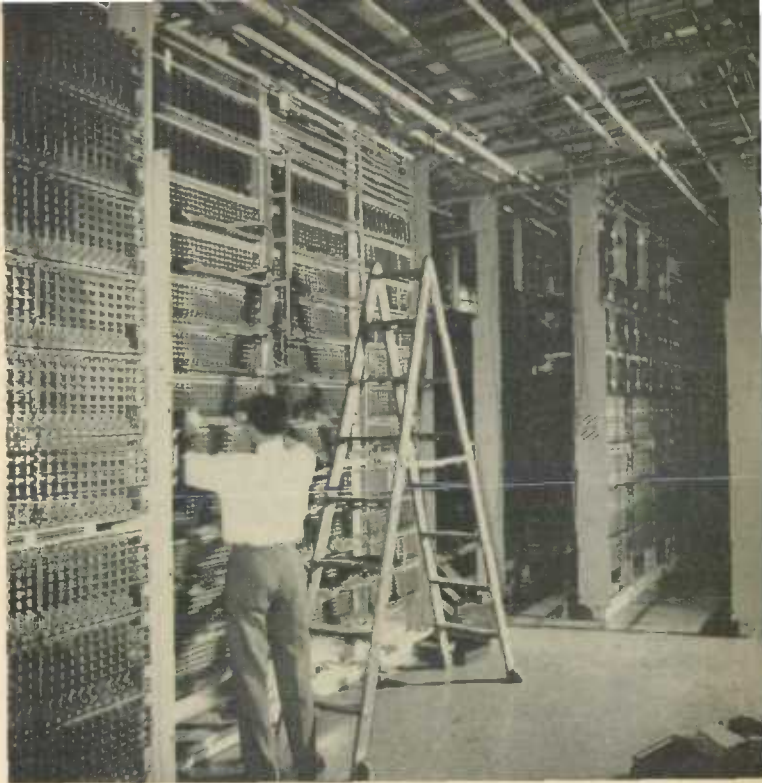
Technologically, the recent development of the Canadian telephone industry has kept pace with its rapid growth. The constant process of refinement of equipment and methods for local service maintains high standards of service. It is in the long-distance field, however, that the more spectacular recent advances have been made, in both the switching and the transmission of calls.

In Canada, a continent-wide long-distance dialing network is now rapidly evolving. Operating independently on all-Canadian calls, it will connect with a similar network being developed in the United States to form an integrated North American direct distance dialing system. Complex electronic equipment in regional centres will accept calls dialed into it by operators in tributary centres and, without intervention by other operators, will select



Locomotive operators in the Cape Breton coal mines keep in constant communication with dispatchers on the surface by radio telephone.

Sensitive complex telephone equipment will some day make telephones in all sections of Canada and the United States part of one giant continent-wide exchange. Through this machine, which will be in operation in 1955, Toronto telephone operators will be able to dial directly to telephones as far away as San Francisco.

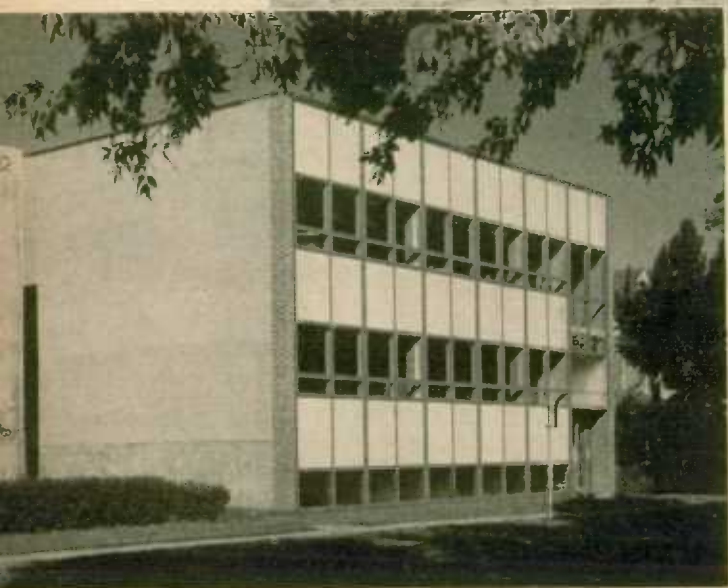


the most direct available route to a destination and ring the called telephone. Montreal and Regina are to be regional centres for Canada. Beyond the automatic switching centres, calls will travel as they now do over physical circuits or on carrier channels, superimposed on either wire circuits or microwave radio beams.

The microwave radio relay system opened in 1953 by the Bell Telephone Company of Canada to carry network television programs as well as long-distance telephone calls between Toronto, Ottawa and Montreal has been extended eastward to Quebec city. A westward extension from Toronto to the Manitoba boundary is under construction; it will be continued to Winnipeg by the Manitoba Telephone System.

Additional channels for telephone communication between North America and Europe, now carried by short-wave radio systems, will soon be provided by the first trans-Atlantic telephone cable. The new system, planned to go into operation by the end of 1956, will provide 36 two-way telephone channels. It will be installed, owned and operated jointly by the Canadian Overseas Telecommunication Corporation—a Canadian Government corporation—the British Post Office, and the American Telephone and Telegraph Company. Submarine cable will span the 2,000 miles between Newfoundland and Scotland and the 300 miles from Newfoundland to Cape Breton. From Cape Breton the intercontinental circuits will be extended by a microwave radio relay system to Canadian and United States terminal points.

CHED, third commercial radio station to operate in Edmonton, Alta., opened early in 1954.



Letters of congratulation pour in during first week of broadcasting.

Radio

There were 171 standard broadcast band stations operating in Canada on Nov. 1, 1954, of which 21 were Canadian Broadcasting Corporation stations and 150 were privately owned stations. In addition there were 37 shortwave stations, of which 29 were CBC and eight were privately owned, together with five CBC and 26 non-CBC frequency-modulation stations.

Canadian Broadcasting Corporation.—The publicly owned Canadian Broadcasting Corporation is operated as a national public service; privately owned stations provide local community service, and many are affiliated with the CBC networks. As constituted under the Canadian Broadcasting Act, the CBC is responsible to Parliament through a Minister of the Crown. From time to time, the work of the CBC is reviewed by a special Committee

of the House of Commons. The last such committee, reporting in May 1953, noted the expansion and improvement of sound broadcasting and endorsed the development of the national television service in which both the CBC and privately owned stations would play their part.

CBC policy is determined by a Board of 11 Governors who act as trustees of the national interest in broadcasting. The Governors, representing the main geographic divisions of Canada and various facets of Canadian life, are appointed by the Governor General in Council for three-year terms. The Chairman is appointed for a ten-year term on a full-time basis. All operations and activities of the Corporation are carried out under the direction of the General Manager, who is the Chief Executive, and the Assistant General Manager. The CBC's income in sound broadcasting is derived from a current annual grant of \$6,250,000 together with revenue from a 15-p.c. excise tax on radio, television and phonograph sets and tubes, and revenue from some commercial programs. Present television operations are financed through the same excise tax and commercial programs.

Radio Broadcasting Facilities and Program Service.—The CBC operates 80 transmitters for its National Service and two for its International Service. Twenty-one are standard band AM stations, eight of which are of 50,000 watts to give good service to rural areas; five are frequency-modulation transmitters; four are shortwave transmitters (used on 11 frequencies) to reach remote areas; and 50 are low-power "repeater" transmitters operating automatically with the network lines and serving sparsely settled areas. CBC network services reach more than 98 p.c. of the radio homes in Canada. Program service extends from St. John's, Nfld., in the east to Vancouver Island in the west. The Trans-Canada and Dominion networks serve English-speaking listeners from coast to coast, and the French network serves French-speaking listeners from Moncton, N.B., to Edmonton, Alta. Ninety-five of the privately owned stations in Canada function as network outlets.

Canada's system of broadcasting is designed to overcome the problems posed by great distances, a scattered population, two official languages, and seven of the world's 24 time zones. Programs are planned regionally as well as nationally on CBC networks not only to provide as complete a service as possible during the broadcasting hours of each region but also to fulfil the regional needs and tastes of the listening public in various parts of the country. National programs are planned with a view to uniting the cultural tastes and interests of Canadians and providing good entertainment from each of the main program production centres.

Through CBC facilities, schools across Canada are provided with at least 30 minutes daily of broadcast programs specifically planned by departments of education to meet classroom requirements. In addition, national school broadcasts, prepared with the advice of the departments of education and teachers and financed by the CBC, are heard on Fridays. More than a million children in 15,000 schools across Canada hear these school broadcasts regularly. Canada's agricultural population is served by the most complete service of farm broadcasts in the world, including the weekly *National Farm Radio Forum*, which has about 12,000 members across Canada. A comparable program, *Citizens' Forum*, provides a national platform for discussion of topics of current interest. Programs of interest to women are

scheduled for afternoon listening; there are special children's programs for out-of-school listening; and time is allotted regularly for religious programs. Free-time political broadcasts arranged with the parties concerned are heard both nationally and regionally. The special *CBC Wednesday Night* program offers a full evening of the finest in drama, music, talks, poetry, recitals, and performances by such groups as the CBC Symphony and the CBC Opera Company.

Television.—Canadian television came to Canada officially in September 1952, when the CBC's first television stations, CBFT and CBLT, were opened at Montreal and Toronto, respectively. Both stations began programming about three hours each evening. By January 1953, the program



Final lighting adjustments are made as guests and panelists arrive for "Press Conference", a weekly CBC-TV presentation on which personages in the current news are interviewed by press correspondents.

schedule at both centres had grown to 30 hours a week, and live programs from United States networks joined the Canadian schedule when the microwave link between Buffalo and Toronto was completed. By the end of May 1953, the microwave link between Toronto, Ottawa and Montreal was ready for service. In June the first Canadian TV network became a reality when the new CBOT at Ottawa swelled CBC-TV coverage to include one-third of Canada's population.

By the end of 1954, CBC stations were on the air in Vancouver (CBUT), Winnipeg (CBWT), Toronto (CBLT), Ottawa (CBOT, with French language outlet CBOFT under construction), Montreal (CBFT for French-language programs and CBMT the English language outlet), and Halifax (CBHT). Private television stations were on the air at Sydney, N.S., Saint John and Moncton, N.B., Rimouski and Quebec city, Que., Kingston, Hamilton,

London, Kitchener, Windsor, Sudbury, Sault Ste. Marie and Port Arthur, Ont., Regina and Saskatoon, Sask., Calgary and Edmonton, Alta. Three other private television stations are authorized for Sherbrooke, Que., Peterborough, Ont., and Brandon, Man. Ten stations between Windsor, Ont., and Quebec city were joined by direct microwave relay connection by the end of 1954, and plans were under way for the extension of the relay from coast to coast—expected to be in operation within the next three years.

All Canadian television stations serve as outlets for the national TV system in addition to producing their own programs. They are required to carry 10½ hours a week of national network programs. Stations beyond the microwave network receive CBC programs on television recordings. At the

One of the best known farm families in Ontario and Quebec is the Craig family, which broadcasts in the CBC's noon-hour farm program Monday to Friday every week.



end of 1954 this CBC recording service was providing television stations with up to 50 hours programming a week.

Since Canadian television first went on the air it has become available to almost 75 p.c. of the Canadian population. To-day Canada is second in the world in terms of "live" television production and in terms of number of television transmitters in use.

CBC television has developed a program schedule covering the wide range of entertainment achieved in its sound broadcasting. These programs have included weekly drama series and leading sports events such as NHL hockey, and the Grey Cup football final (fed in 1954 by CBC to NBC in the United States and seen by one of the largest audiences ever to witness a Canadian sports event in North America). Children's series, news, variety, discussions, and many other types of programs have also been featured.

Two separate experiments in television for school children have been undertaken by the CBC School Broadcasts Department in collaboration with departments of education. The first, in March 1954, presented a series of out-of-school telecasts and the second, in November of the same year, represented the most extensive experiment ever undertaken by any television system in in-school television. The pattern for future efforts in this field will be based largely on the results of these experiments.

Most Canadian television productions are "live" from studios at Toronto and Montreal, although studios are in operation at Vancouver and are under construction at Winnipeg, Ottawa and Halifax. Some programs shown on the CBC network are fed directly from United States networks via the microwave relay and some film features are also offered from other countries.

The development of Canadian television is being accompanied by a great expansion in the electronics industry. In 1950 there were 30,000 television sets in use in the country; by 1951 the figure had climbed to 70,000 and by 1952 to 200,000. At the close of 1953 this number had doubled and by the end of 1954 there were well over 1,000,000 in use.

CBC International Service.—The International Service is financed wholly by funds voted by Parliament. The main program and production headquarters are in the Radio Canada building at Montreal and two powerful 50,000-watt transmitters at Sackville, N.B., are linked with the studios at Montreal by a landline 600 miles long. Altogether the shortwave broadcasts of the International Service are listened to in some 30 countries. The programs are broadcast in 15 languages: English, French, German, Dutch, Danish, Swedish, Norwegian, Italian, Spanish, Portuguese, Czech, Slovak, Polish, Russian and Ukrainian. Countries that have poor reception because of geographical reasons, such as Austria and Greece, receive transcribed programs. The International Service endeavors to give listeners in other



School broadcasts are planned on the theory that radio's emotional appeal is its strongest point. Programs are intended to stimulate the student's imagination and increase his desire for study. An extensive experiment in classroom television programs is now under way.

lands Canadian views on international affairs and a picture of Canadian life, with special reference to cultural, social and economic development. The Service has also developed a transcription service, which prepares special programs of Canadian music and the spoken word on disks. These programs are made available to Canadian missions abroad and are sent to radio stations and networks around the world.

Postal Service

Postal service in Canada is provided from Newfoundland to the west coast of Vancouver Island, and from Pelee Island, Ont., the southernmost inhabited point of Canada, to settlements and missions far within the Arctic Circle.

Various facilities are used in the transporting of mails—railways, aircraft, motor-vehicles and inland and coastal steamers—but the principal means is the railway mail service which operates on about 40,000 miles of track and covers more than 47,000,000 miles yearly. There are about 1,310 railway mail clerks employed in sorting and exchanging mails while *en route* in postal railway cars and in steamers serving the coastal settlements of Newfoundland. The far northerly points receive mail by steamer, air-stage service and aircraft courtesy flights.

Canada's air-mail system provides several flights daily and constitutes a great air artery from St. John's, Nfld., to Victoria, B.C., intersected with branch and connecting lines radiating to every section of the country and linking up with the United States air-mail system. All first-class domestic mail up to and including eight ounces in weight is carried by air between one Canadian point and another, whenever delivery is thus facilitated. There are, altogether, approximately 30,000 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, and letter-carrier delivery is given in 130 cities and towns. An extensive organization distributes mail to rural districts: 5,280 rural mail routes are in operation covering 125,000 miles of road and serving 424,000 rural mail boxes, and the majority of these receive daily service. Rural mail routes are generally circular in pattern and average 24 miles in length. Some 4,300 side services are in operation to transport mail between post offices, railway stations, steamer wharves and airports, while 2,993 stage services operate to service post offices not situated on railway lines. In cities and larger towns there are approximately 750 services conveying mails to and from sub post offices, postal stations, and railway stations, collecting mails from street letter boxes and delivering parcel post. In all, approximately 13,282 land mail service couriers travel in the neighbourhood of 50,000,000 miles annually. Land mail services are performed under a contract system, the contracts being awarded to the lowest tenderer who must provide all the requisite equipment.

An estimated 3,000,000,000 items of mail are delivered annually, a job requiring the use of the most modern mechanical handling devices. There were 12,202 post offices and 11,264 money-order offices in operation across the country on Mar. 31, 1954. For the year ended on that date, postage paid by means of postage stamps amounted to \$64,546,068 and the gross postal revenue was \$129,889,326. Post Office Savings Banks in operation in all parts of the country had combined deposits of \$37,792,914.



Finance—private, corporation and government—keeps the wheels turning and governs the pattern of life for the individual and the nation.

Municipal Finance

In Canada, local government is administered by the municipalities, which numbered 4,196 at Dec. 31, 1953. These vary greatly in size and also in the services they provide.

Areas governed municipally may be either urban or rural. Urban municipalities are usually distinguished by the official names of city, town and village, though in Quebec villages are officially regarded as rural. Sometimes the official designation is misleading—municipalities may be incorporated in the rural classification though they have become urbanized extensions of the greater metropolitan cities. A very few others have rural designations but are partly urbanized, as where a mining centre has sprung up within the boundary of a municipality.

Incorporated municipalities include within their boundaries only a small portion of the area of Canada, but they serve most of the population. Outside lie a few school districts, and in parts of municipally unincorporated territory some local services are provided by the provincial government concerned. A great part of the area of Canada has not sufficient density of population to warrant even these limited activities. In most provinces the municipalities levy the local taxation for school authorities but exercise little or no control over school administration or finance. In much of Quebec and Prince Edward Island and in limited areas of some other provinces, school authorities levy and collect local taxes.

Municipal Assessed Valuations, Tax Levies, Collections and Receivables, 1941-52, and by Province, 1952

Year and Province	Valuations on which Taxes were Levied	Tax Levies	Tax Collections (Current and Arrears)	Percentage of Levies to Collections	Total Taxes Receivable and Property Acquired for Taxes
	\$'000	\$'000	\$'000		\$'000
1941.....	7,859,415	272,458	237,680 ¹	104.6 ¹	237,133
1943.....	7,906,826	278,697	298,196	107.0	192,777
1945.....	8,155,068	291,693	..	..	134,021
1947 ²	6,237,747	259,941	255,748	98.4	79,482
1949 ²	7,232,125 ³	334,138	325,109	97.3	87,423
1950 ⁴	10,251,875	367,554	356,838	97.1	97,072
1951 ⁴	11,849,707	569,512	410,798 ²	96.5 ²	128,832
1952					
Newfoundland.....		1,768	1,631	92.2	515
Prince Edward Island.....	35,581	1,349	1,238	91.8	352
Nova Scotia.....	314,804	19,250	18,838	97.9	5,087
New Brunswick.....	397,054	15,181	14,143	93.2	4,491
Quebec.....	3,868,454	159,005	..	..	23,783
Ontario.....	4,773,779	263,197	259,439	98.6	29,224
Manitoba.....	650,022	39,280	37,399	95.2	12,156
Saskatchewan ⁴	941,281	43,067	43,218	100.3	18,935
Alberta ⁴	987,492	53,079	52,560	99.0	22,951
British Columbia.....	712,928	48,577	48,397	99.6	9,199
Totals, 1952.....	12,681,395	643,753	476,863	98.4	126,693

¹ Excludes Quebec cities and towns.

² Quebec not included as information not available.

³ Includes cities and towns only for Quebec.

⁴ Includes information for Local Improvement Districts for Saskatchewan and Alberta.

Net Direct and Net Indirect Debt of Provincial Governments (less Sinking Funds), by Province, 1951 and 1952

NOTE.—Figures are as at fiscal year ends nearest Dec. 31.

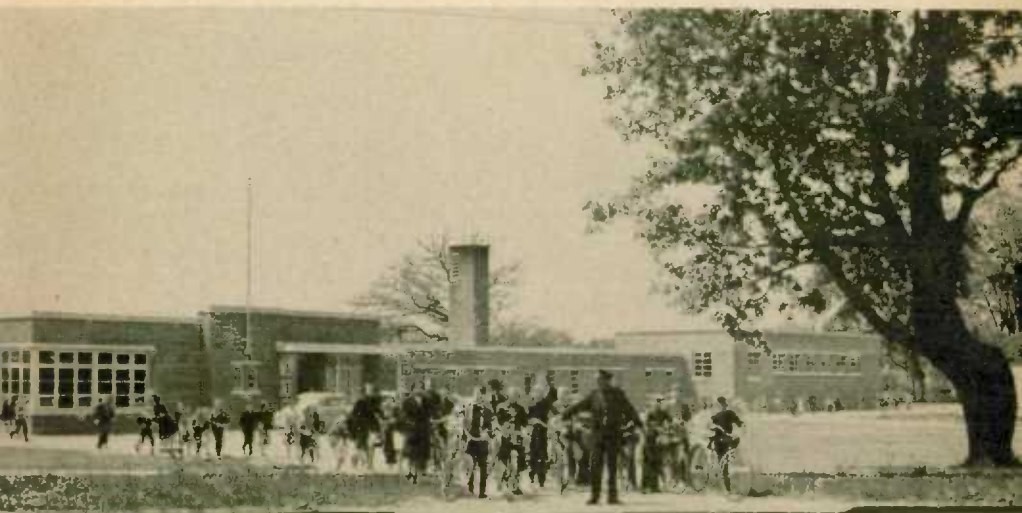
Province or Territory	Direct Debt		Indirect Debt	
	1951	1952	1951	1952
	\$'000	\$'000	\$'000	\$'000
Newfoundland.....	5,352	14,706	31,392	33,552
Prince Edward Island.....	17,562	17,574	297	391
Nova Scotia.....	175,502	181,117	4,914	3,918
New Brunswick.....	166,240	170,681	10,029	10,509
Quebec.....	361,638	385,819	299,014	289,828
Ontario.....	805,316	847,984	571,295	717,134
Manitoba.....	140,165	154,862	440	393
Saskatchewan.....	163,984	173,832	800	705
Alberta.....	104,924	101,115	5,905	5,016
British Columbia.....	256,752	232,952	23,523	30,678
Yukon Territory.....	108	—	—	—
Totals	2,197,543	2,280,642	947,609	1,092,124

Gross Provincial Bonded Debt, by Currency of Payment, 1951 and 1952

NOTE.—Figures are as at fiscal year ends nearest Dec. 31. Bonded debt of other authorities assumed by provincial governments is excluded.

Payable in—	1951	1952
	\$'000	\$'000
Canada, only.....	1,450,160	1,522,623
London (England) only.....	16,643	16,643
London (England) and Canada.....	3,499	3,499
New York only.....	265,025	358,255
New York and Canada.....	296,047	297,243
London (England), New York and Canada.....	177,945	172,770
Totals	2,209,319	2,371,033

Education services in Canada required an outlay of about \$484,000,000 in 1951 by federal, provincial and local governments—the provinces allocated about 17 p.c. of their total expenditures to this purpose and the municipal governments over 31 p.c.



Analysis of Net General Expenditure of Provincial Governments, 1950 and 1951

NOTE.—Figures are for fiscal years ended nearest Dec. 31.

Function	1950	1951	Function	1950	1951
	\$'000	\$'000		\$'000	\$'000
General government.....	37,042	45,481	Contributions to municipal governments.....	16,595	22,626
Protection of persons and property.....	50,783	60,537	Contributions to government enterprises.....	11,754	14,592
Transportation and communications.....	349,958	299,474	Other expenditures.....	8,110	8,960
Health.....	158,142	173,983	Sub-Totals.....	1,006,739	1,158,184
Social welfare.....	86,869	92,274	Non expense and surplus payments.....	2,502	2,189
Recreation and cultural services.....	5,768	6,890	Totals.....	1,009,241	1,160,373
Education.....	183,115	196,481			
Natural resources and primary industries.....	71,934	85,110	Less Debt Retirement (included above).....	66,937	86,530
Trade and industrial development.....	5,667	6,660	Totals, exclusive of Debt Retirement.....	942,304	1,073,843
Local government planning and development.....	1,500	1,973			
Debt charges.....	119,502	143,243			

Both the net direct and the net indirect debt of the combined provinces in 1952 again showed increases over the previous year. The increase in direct debt was general to all provinces except Alberta and British Columbia. The indirect debt of Nova Scotia, Quebec, Manitoba, Saskatchewan and Alberta was reduced, but that of the other five provinces increased.

Details of Net Direct and Net Indirect Debt of Provincial Governments (less Sinking Funds), 1951 and 1952

NOTE.—Figures are as at fiscal year ended nearest Dec. 31.

Detail	1951	1952	Detail	1951	1952
	\$'000	\$'000		\$'000	\$'000
Direct Debt—			Indirect Debt—		
Bonded Debt.....	2,211,084	2,372,798	Guaranteed Bonds.....	900,558	1,049,107
Less sinking funds.....	364,929	423,254	Less sinking funds.....	4,885	5,301
Net Bonded Debt.....	1,846,155	1,949,544	Net Guaranteed Bonds.....	895,673	1,043,806
Treasury bills.....	153,122	121,466	Guaranteed bank loans.....	23,073	18,558
Savings certificates and deposits.....	1,548	1,474	Municipal Improvement Assistance Act loans.....	3,945	3,682
Temporary loans and overdrafts.....	996	9,311	Other guarantees.....	24,918	26,078
Bonds due.....	377	172,830	Totals, Net Indirect Debt.....	947,609	1,092,124
Bond interest due.....	1,057				
Accounts and other payables.....	169,517	26,017			
Accrued expenditures.....	24,771		Grand Totals.....	3,145,152	3,372,766
Totals, Net Direct Debt.....	2,197,543	2,280,642			

provinces where general sales taxes were levied these provided a large share of the revenue. The next largest category of provincial government income consisted of privileges, licences and permits, pertaining mainly to the exploitation of natural resources and to the operation of motor-vehicles. The profits of government monopoly liquor sales and the federal tax-rental agreements were the other major sources of provincial revenue.

Transportation and communications, education, health, and social welfare continue to constitute the bulk of net general expenditure of provincial governments.

Net General Revenue and Expenditure of Provincial Governments, by Province, 1950 and 1951

NOTE.—Figures are for fiscal year ended nearest Dec. 31.

Province or Territory	Net General Revenue		Net General Expenditure	
	1950	1951	1950	1951
	\$'000	\$'000	\$'000	\$'000
Newfoundland.....	21,028	25,183	27,536	29,995
Prince Edward Island.....	5,590	6,048	7,537	8,368
Nova Scotia.....	35,685	38,794	53,988	51,855
New Brunswick.....	32,271	40,697	43,463	44,624
Quebec.....	238,883	277,406	233,986	275,500
Ontario.....	265,705	303,842	298,779	367,726
Manitoba.....	41,643	46,073	40,912	48,717
Saskatchewan.....	66,668	74,777	68,168	77,449
Alberta.....	105,276	105,751	73,702	84,840
British Columbia.....	138,681	157,102	160,169	170,136
Yukon Territory.....	1,023	1,187	1,001	1,163
Totals	952,453	1,076,860	1,009,241	1,160,373

Analysis of Net General Revenue of Provincial Governments, 1950 and 1951

NOTE.—Figures are for fiscal years ended nearest Dec. 31.

Source	1950	1951	Source	1950	1951
	\$'000	\$'000		\$'000	\$'000
Taxes.....	478,508	566,380	Non-revenue and surplus receipts.....	1,893	2,394
Federal tax rental agreements.....	92,782	95,887	Totals	952,453	1,076,860
Privileges, Licences and Permits—					
Motor-vehicles.....	67,060	72,645			
Natural resources.....	99,325	113,307			
Other.....	40,325	42,323			
Sales and services.....	23,387	29,925	SUMMARY OF LIQUOR CONTROL REVENUE		
Fines and penalties.....	2,439	2,916	(Included above)—		
Other Governments—			Sales tax.....	1,608	1,615
Government of Canada			Permits.....	25,031	28,370
Share of income tax on			Fines and penalties.....	663	1,062
power utilities.....	4,458	3,714	Profits.....	114,505	115,640
Subsidies.....	25,300	26,615	Confiscations.....	27	64
Municipalities.....	851	879	TOTALS	141,834	146,751
Government enterprises.....	115,425	119,099			
Other revenue.....	700	776			

Number of Taxpayers, Total Income Declared and Taxable, and Tax Collected Thereon, by Province and Occupational Class, 1952

Province or Class	Taxpayers	Total Income Declared	Net Taxable Income	Total Tax
	No.	\$'000	\$'000	\$'000
Province				
Newfoundland.....	34,710	110,453	45,220	9,775
Prince Edward Island.....	6,540	21,305	9,568	2,512
Nova Scotia.....	93,890	275,496	102,627	21,333
New Brunswick.....	65,320	193,616	72,865	15,447
Quebec.....	706,420	2,317,967	984,415	236,187
Ontario.....	1,364,260	4,556,453	2,178,915	497,773
Manitoba.....	157,790	493,677	214,019	48,187
Saskatchewan.....	131,050	435,693	199,628	43,580
Alberta.....	209,350	692,637	329,723	73,113
British Columbia.....	339,280	1,130,680	537,274	117,667
Yukon Territory.....	2,970	10,135	5,716	1,205
Non-residents.....	13,520	35,921	21,368	5,004
Totals	3,125,100	10,274,033	4,701,338	1,071,783
Class				
Primary producers.....	72,100	286,076	137,148	29,476
Professionals.....	31,700	247,155	176,366	54,041
Employees.....	2,753,590	8,361,048	3,564,710	753,393
Salesmen.....	33,230	152,826	80,422	19,341
Business proprietors.....	158,320	811,081	470,060	132,519
Financial.....	64,240	359,026	244,825	76,299
Estates.....	5,550	28,973	12,613	2,879
Deceased.....	5,620	25,572	14,007	3,593
Unclassified.....	750	2,276	1,097	242

Collection statistics are gathered at the time the payments are made and are thus quite up to date. However, because collections are made before the filing of income tax returns, these figures cannot be directly related to those for individual taxpayers given above.

Collections under the Income Tax Act, Years Ended Mar. 31, 1945-54

Fiscal Year	General Income Tax		Tax on Undistributed Income	Non-resident Tax	Total Income Tax
	Individuals	Corporations			
	\$	\$	\$	\$	\$
1945.....	767,755,082	276,403,849	—	28,599,137	1,072,758,068
1946.....	691,586,114	217,833,540	—	28,309,619	937,729,273
1947.....	694,530,146	196,819,253	41,972,700	30,136,146	963,458,245
1948.....	659,828,215	351,535,006	12,596,108	35,889,028	1,059,848,357
1949.....	762,563,516	488,549,610	3,440,514	43,445,764	1,297,999,404
1950.....	621,982,213	602,072,622	1,120,510	47,474,846	1,272,650,191
1951.....	652,328,680	711,576,735	87,619,776	61,610,319	1,513,135,510
1952.....	975,776,320	1,118,067,202	14,612,872	55,017,014	2,163,473,408
1953.....	1,238,275,562	1,766,556,194	10,383,356	53,674,377	2,555,890,089
1954.....	1,278,355,616	1,238,015,309	8,771,289	53,761,291	2,578,903,505

Provincial Finance

In 1951 over half of the net general revenue of provincial governments consisted of taxes. The most remunerative of these taxes, on the whole, were the corporation taxes and the taxes on gasoline sales, although in a few



The Instrument and Radar Division of the Crown-owned corporation, Canadian Arsenal Limited. This company, in its nine plants, manufactures a wide range of explosives, small arms, radars and ammunition.

Members of the 42nd Infantry Workshop, RCME, awaiting embarkation orders at Pusan, Korea. Their departure in January 1955 completed the policy of reducing by two-thirds the Canadian Forces serving in the Far East.



increase in defence expenditure. The combined disbursements of the Departments of National Defence and Defence Production increased nearly seven-fold between 1949 and 1954. In the latter year defence spending was down slightly to 43 p.c. of the total expenditure.

The 1954-55 Budget.—The Budget Speech concerning the fiscal year ending Mar. 31, 1955, was delivered in the House of Commons by the Minister of Finance on Apr. 6, 1954. A slightly increased expenditure for the year was forecast and the Government's policy of maintaining a balanced budget was confirmed. No income tax changes were proposed but a few minor tax concessions, estimated to cost the Government about \$36,000,000, were introduced. Although no revisions were proposed in the general sales tax rate, some changes were recommended with regard to the 15 p.c. special excise tax. The tax was reduced from 15 p.c. to 10 p.c. on such items as soft drinks, candy, cosmetics, tires and tubes, motorcycles, clocks, watches and jewellery. The 15-p.c. special excise tax was removed completely from furs, electrical household appliances, some sporting goods, cameras and luggage. The customs tariff was removed or lowered on certain items.

Funded Debt.—The outstanding unmatured funded debt (including treasury bills) of the Government of Canada at Mar. 31, 1954, amounted to \$14,576,168,250, a decrease of \$234,359,339 from the previous year. The portion of the unmatured funded debt payable in Canada was 97.3 p.c., the portion payable in London amounted to 0.4 p.c. and in New York to 2.3 p.c. at Mar. 31, 1954.

Income Tax.—Considerable change has taken place since 1941 in the number of persons paying income tax. In that year there were 871,484 taxpayers, a figure which, with the increasing employment of the war and post-war years, increased to 2,689,930 in 1948. In 1949, exemption allowances were raised and the number of taxpayers decreased to approximately the level of the war years. Since then, however, the number has again shown marked growth, attributable to the favourable economic conditions prevailing and to the substantial post-war immigration; in 1952 the number of taxpayers reached a new high of 3,125,100.

Distribution by income groups also changed during the same period. In 1941, 61 p.c. of all taxpayers had incomes of under \$2,000 but in 1952 only 23 p.c. of the taxpayers were in that category and 67 p.c. had incomes of between \$2,000 and \$5,000.

Taxpayers classified by Income Group, Alternate Years, 1941-52

Year	Taxpayers by Income Group					Total Taxpayers	Total Tax
	Under \$2,000	\$2,000-\$2,999	\$3,000-\$4,999	\$5,000-\$9,999	\$10,000 or Over		
	No.	No.	No.	No.	No.	No.	\$'000,000
1941.....	534,337	198,252	92,047	34,325	12,523	871,484	223
1943.....	1,434,243	513,875	153,936	45,954	15,346	2,163,354	801
1945.....	1,487,984	529,202	167,269	53,242	16,549	2,254,246	642
1947.....	1,238,560	773,780	249,800	76,190	28,126	2,366,456	622
1949.....	745,520	848,960	485,130	113,570	38,790	2,231,970	501
1951.....	732,910	961,670	855,100	176,800	51,130	2,777,950	812
1952.....	736,680	986,520	1,111,960	230,300	59,640	3,125,100	1,072

Summary of Revenue and Expenditure, Years Ended Mar. 31, 1952-54

Item	1952	1953	1954
	\$	\$	\$
Revenue			
Customs import duties.....	346,364,563	389,442,109	407,312,241
Excise duties.....	217,939,983	241,360,370	226,732,460
Income tax.....	2,161,373,408	2,473,790,089 ¹	2,432,603,505 ¹
Excess profits tax.....	2,364,909	—	—
Sales tax (net).....	573,470,562	566,233,167 ¹	587,331,544 ¹
Succession duties.....	38,207,985	38,070,530	39,137,594
Other taxes.....	318,053,672	288,696,672	310,467,109
Totals, Revenue from Taxation.....	3,657,775,082	3,997,592,937	4,003,584,453
Non-tax revenue.....	281,971,660	280,134,664	318,186,825
Totals, Ordinary Revenue.....	3,939,746,742	4,277,727,601	4,321,771,278
Special receipts and other credits.....	41,161,910	83,095,188	74,548,305
Totals, Revenue.....	3,980,908,652	4,360,822,789	4,396,319,583
Expenditure			
Agriculture.....	67,134,389	106,710,890	108,361,384
Auditor General's Office.....	601,128	576,211	614,880
Canadian Broadcasting Corporation.....	8,300,972	8,235,311	24,996,275
Chief Electoral Officer.....	367,736	464,487	5,527,130
Citizenship and Immigration.....	23,240,788	23,646,348	28,478,651
Civil Service Commission.....	1,691,663	1,909,508	2,051,348
Defence Production.....	30,978,479	88,817,141	47,898,563
External Affairs.....	37,582,459	39,251,463	45,718,964
Finance.....	873,613,548	946,967,875	971,375,876
Fisheries.....	8,733,025	10,776,926	9,254,771
Governor General and Lieutenant Governors.....	275,114	396,924	399,086
Insurance.....	403,336	448,619	492,239
Justice, including Penitentiaries.....	14,038,715	14,908,495	15,017,396
Labour.....	64,302,099	67,021,861	67,561,441
Legislation.....	5,945,263	6,157,261	5,600,210
Mines and Technical Surveys.....	27,751,836	29,658,169	38,536,620
National Defence.....	1,415,473,862	1,882,418,468	1,805,914,922
National Health and Welfare.....	498,752,415	406,564,698	430,533,808
National Revenue.....	45,762,585	47,313,178	49,937,839
Northern Affairs and National Resources.....	—	—	19,118,141
Post Office.....	97,973,263	105,553,191	113,581,752
Prime Minister's Office.....	4,057,687	3,720,571	3,732,910
Privy Council Office.....	—	—	—
Public Archives.....	251,018	306,714	346,910
Public Printing and Stationery.....	1,103,156	1,607,237	2,036,771
Public Works.....	77,544,088	81,847,470	114,956,865
Resources and Development.....	34,432,805	38,477,423	—
Royal Canadian Mounted Police.....	27,440,713	31,141,324	33,845,572
Secretary of State.....	2,399,468	2,201,462	3,278,154
Trade and Commerce.....	46,896,842	44,846,035	44,626,253
Transport.....	99,900,569	103,905,716	118,012,795
Veterans Affairs.....	216,026,529	241,424,539	238,714,852
Totals, Expenditure.....	3,732,875,250	4,337,275,512	4,350,522,378
Surplus.....	248,033,402	23,547,277	45,797,205

¹ Excludes tax credited to Old Age Security Fund. ² The expenditures of this Department have been transferred to the Departments of Northern Affairs and National Resources, Public Works, and Citizenship and Immigration.

While the volume of revenue has increased greatly, the pattern of collections has changed very little during the past few years. Taxes accounted for the major portion of revenue, varying between 88 p.c. in 1949 and 92 p.c. in 1952. Well over half the taxation revenue has been contributed by income tax. Next in importance are sales tax, customs import duties and excise duties. The striking change in departmental spending has been the vast

peak of \$13,421,000,000 in 1946, amounting to \$1,091.88 per capita. For eight consecutive years the *Public Accounts of Canada* have shown a surplus of revenue over expenditure, reducing net indebtedness by corresponding amounts. A record surplus of \$676,119,657 was obtained in 1948 and in the fiscal year ended Mar. 31, 1954, the surplus was \$45,797,205.

Inflation of the general price level through the years reduces the significance of the magnitude of the Government debt, and the great expansion of the Canadian economy, both in absolute terms and in relation to population, allows the country to support the present debt on a sound financial basis. In terms of the gross national product, the trend in Canada's debt is, indeed, quite favourable. On Mar. 31, 1939, the net debt of Canada amounted to 60.2 p.c. of the gross national product, in 1946 this had risen to 113.3 p.c. but by 1953 the net debt was only 48.3 p.c. of Canada's gross national product.

Finances of the Federal Government, Years Ended Mar. 31, 1868-54

NOTE.—These figures are derived from the *Public Accounts of Canada* and differ from those in the preceding Combined Statistics section. Revenue and expenditure in this table are on a gross basis and net debt here represents the excess of gross debt over net active assets.

Year	Total Revenue	Per Capita Revenue ¹	Total Expenditure	Per Capita Expenditure ¹	Net Debt at End of Year	Net Debt Per Capita ²
	\$	\$	\$	\$	\$	\$
1868	13,687,928	3.95	13,716,422	3.96	75,757,135	21.58
1871	19,375,037	5.34	18,871,812	5.21	77,706,518	21.06
1881	29,635,298	6.96	32,579,489	7.66	155,395,780	35.93
1891	38,579,311	8.07	38,855,130	8.13	237,809,031	49.21
1901	52,516,333	9.91	55,502,530	10.47	268,480,004	49.99
1911	117,884,328	16.87	121,657,834	17.40	340,042,052	47.18
1921	436,888,930	51.06	528,899,290	61.82	2,340,878,984	266.37
1931	357,720,435	35.04	441,568,413	43.26	2,261,611,937	217.97
1941	872,169,645	76.63	1,249,601,446	109.80	3,648,691,449	317.08
1942	1,488,536,343	129.36	1,885,066,055	163.82	4,045,221,161	347.11
1943	2,249,496,177	193.02	4,387,124,118	376.45	6,182,849,101	524.19
1944	2,765,017,713	234.42	5,322,253,505	451.23	8,740,084,893	731.63
1945	2,687,334,799	224.96	5,245,611,924	439.11	11,298,362,018	935.91
1946	3,013,185,074	249.60	5,136,228,505	425.47	13,421,405,449	1,091.88
1947	3,007,876,313	244.70	2,634,227,412	214.30	13,047,756,548	1,039.58
1948	2,871,746,110	228.81	2,195,626,453	174.94	12,371,636,893	964.80
1949	2,771,395,075	216.13	2,175,892,332	169.69	11,776,134,152	875.74
1950	2,580,140,615	191.87	2,448,615,662	182.09	11,644,609,199	849.23
1951	3,112,535,948	226.99	2,901,241,698	211.58	11,433,314,948	816.14
1952	3,980,908,652	284.17	3,732,875,250	266.46	11,185,281,546	775.14
1953	4,360,822,789	302.21	4,337,275,512	300.57	11,161,734,269	755.14
1954	4,396,319,583	297.43	4,350,522,378	294.33	11,115,937,064	731.55

¹ Based on estimated population as at June 1 of the immediately preceding year.

² Based on estimated population as at June 1 of same year.

After the end of the War, reduced taxation rates resulted in lower revenue, but since 1950 revenue has risen annually through moderately increased taxes and a widening base of economic activity. An all-time record revenue of \$4,396,319,583 was collected in the year ended Mar. 31, 1954. Annual expenditure, which was halved between 1944 and 1949, has also increased rapidly since 1950.

A steel and concrete lighthouse pier ready for transporting to its final location in the St. Lawrence River. The provision of navigation aids for Canada's extensive inland and coastal waters is the responsibility of the Federal Department of Transport.



Combined Government of Canada, Provincial and Municipal Direct and Indirect Debt, 1947-51

NOTE.—Figures as at fiscal years ended nearest Dec. 31.

Item	1947	1948	1949 ¹	1950	1951
	\$'000	\$'000	\$'000	\$'000	\$'000
Direct Debt—					
Government of Canada.....	17,631,616	17,460,635	17,299,664	17,554,469	17,994,712
Provincial.....	1,746,824	1,820,191	1,941,941	2,005,051	2,197,435
Municipal.....	980,550 ²	1,009,193 ²	1,128,926 ²	1,277,841 ²	1,583,471 ^{2,3}
Totals.....	20,358,990	20,290,019	20,370,531	20,837,361	21,775,618
Less Inter-governmental Debt.....	150,047	166,348	190,066	214,391	225,068
Combined Direct Debt.....	20,208,943	20,123,681	20,171,465	20,622,970	21,550,550
Indirect Debt—					
Government of Canada.....	603,468	654,803	729,756	701,181	728,002
Provincial.....	471,599	564,509	737,870	860,371	947,609
Municipal.....	45,574 ²	47,006 ²	46,249 ²	45,542 ²	23,138 ²
Totals.....	1,120,641	1,266,318	1,513,875	1,607,094	1,698,749
Less Inter-governmental Debt.....	21,094	22,382	21,900	20,711	25,100
Combined Indirect Debt.....	1,099,547	1,243,936	1,491,975	1,586,383	1,673,648
Grand Totals, Direct and Indirect Debt.....	21,308,490	21,367,617	21,663,440	22,209,353	23,224,198

¹ Provincial and municipal debt of Newfoundland included in 1949 and thereafter.

² The debt of municipalities in the Province of Quebec is estimated.

³ Includes debt of certain boards previously shown as indirect debt.

Finances of the Federal Government

The following table records the trend of Canada's federal net debt from Confederation to 1954. In 1868 this net debt amounted to less than \$76,000,000, and in 1913 to \$314,000,000. Two world wars brought staggering increases and the net indebtedness of the Canadian Government reached a

Comparative Government of Canada, Provincial and Municipal Expenditure (Capital and Current), 1937-51

NOTE.—Figures are for fiscal years ended nearest to Dec. 31. Inter-governmental transfers such as subsidies paid by the Government of Canada to the provinces are excluded.

Year	Government of Canada	Provincial and Municipal			Grand Total
		Provincial	Municipal	Total	
EXPENDITURE					
	\$'000	\$'000	\$'000	\$'000	\$'000
1937.....	444,599	359,689	296,288	655,977	1,100,576
1939.....	571,198	354,883	304,580	659,463	1,230,661
1941.....	1,718,787	311,260	292,517	603,777	2,322,564
1943.....	4,907,475	300,997	300,579	601,576	5,509,051
1945.....	4,652,841	370,875	334,261 ¹	705,136	5,357,977
1947.....	1,762,472	625,539	454,473 ¹	1,080,016	2,842,488
1949.....	2,010,587	873,929	619,106 ¹	1,493,035	3,503,622
1950.....	2,494,731	923,740	682,146 ¹	1,605,886	4,100,617
1951.....	3,283,926	1,039,370	772,817 ¹	1,812,187	5,096,113
PERCENTAGE DISTRIBUTION					
1937.....	40.4	32.7	26.9	59.6	100.0
1939.....	46.4	28.8	24.8	53.6	100.0
1941.....	74.0	13.4	12.6	26.0	100.0
1943.....	89.1	5.5	5.4	10.9	100.0
1945.....	86.8	6.9	6.3	13.2	100.0
1947.....	62.0	22.0	16.0	38.0	100.0
1949.....	57.4	24.9	17.7	42.6	100.0
1950.....	60.9	22.5	16.6	39.1	100.0
1951.....	64.4	20.4	15.2 ¹	35.6	100.0

¹ Expenditure of municipalities in the Province of Quebec is estimated. Newfoundland included from 1949.

² New-

In the above tables, revenue and expenditure are shown on a net basis. Offset against expenditure are such revenue items as grants-in-aid and shared-cost contributions from other governments, interest revenue, institutional revenue, and certain sales of commodities and services. It should be noted that expenditure excludes debt retirement but includes expenditure financed from capital borrowings.

Combined Debt.—The figures in the following table represent total liabilities less sinking funds. New borrowings of provincial and municipal governments have shown a tendency to exceed debt retirement in the post-war years, as might be expected with the capital expansion programs undertaken by these governments. The net direct debt of the Federal Government was reduced in the years 1947 to 1949 but increased in the next two years.

Indirect debt, resulting from governmental guarantees of the debts of other corporate entities, has shown a distinctly different pattern of change at the various levels of government during the 1947-51 period. Provincial governments have demonstrated a considerable propensity to increase by financial guarantees their indirect support of various activities: between 1947 and 1951 the net indirect debt of the provinces increased annually. In 1951 the debt of certain boards which had previously been included in municipal indirect debt was included in direct debt; figures for that year are therefore not comparable with those of previous years. The total effect of fluctuations in the net indirect debt of the Federal Government over the years 1947-51 has been a moderate increase.

Finance

• Public Finance

A SUMMARY of the combined finance statistics of all levels of government in Canada is given in this section, together with a more detailed presentation of separate federal, provincial and municipal statistics.

Combined Statistics of All Governments

Combined Revenue and Expenditure.—In 1951, all three levels of government recorded increased net revenue and net expenditure as compared with the previous year. For the provinces and municipalities this represented a continuation of the rapid expansion of government financial activity subsequent to the War. The increased dollar expenditure may be partly accounted for by the general rise in price levels, but much of the increase may be attributed to the execution of capital expenditure programs curtailed or deferred during the War, to the rapid growth in population requiring government services and to the extension of government services in keeping with the considerable post-war expansion of the Canadian economy. On the other hand, the Federal Government, which was responsible for financing the war effort, decreased expenditure sharply after the cessation of hostilities in 1945 but, since 1948, increased social welfare payments and, lately, the defence preparedness program have caused another upward trend in federal spending.

Comparative Government of Canada, Provincial and Municipal Revenue, 1937-51

NOTE.—Figures are for fiscal years ended nearest to Dec. 31. Inter-governmental transfers such as subsidies paid by the Government of Canada to the provinces are excluded.

Year	Government of Canada	Provincial and Municipal			Grand Total
		Provincial	Municipal	Total	
REVENUE					
	\$'000	\$'000	\$'000	\$'000	\$'000
1937.....	460,544	221,397	304,161	525,558	986,102
1939.....	480,027	236,223	316,964	553,187	1,033,214
1941.....	1,389,433	301,842	331,206	633,048	2,022,481
1943.....	2,522,414	250,646	340,600	591,336	3,113,750
1945.....	2,694,116	316,724	356,280 ¹	673,013	3,367,129
1947.....	2,663,310	533,857	413,351 ¹	947,208	3,610,518
1949 ²	2,411,218	730,842	511,835 ¹	1,242,677	3,653,895
1950.....	2,905,578	827,286	560,437 ¹	1,387,723	4,293,301
1951.....	3,739,353	945,408	650,806 ¹	1,596,214	5,335,567
PERCENTAGE DISTRIBUTION					
1937.....	46.7	22.5	30.8	53.3	100.0
1939.....	46.5	22.8	30.7	53.5	100.0
1941.....	68.7	14.9	16.4	31.3	100.0
1943.....	81.0	8.1	10.9	19.0	100.0
1945.....	80.0	9.4	10.6 ¹	20.0	100.0
1947.....	73.8	14.8	11.4 ¹	26.2	100.0
1949 ²	66.0	20.0	14.0 ¹	34.0	100.0
1950.....	67.7	19.3	13.0 ¹	23.3	100.0
1951.....	70.1	17.7	12.2 ¹	29.9	100.0

¹ Revenue of municipalities in the Province of Quebec is estimated, and included from 1949.

² Newfoundland.

Each spring, street repair and construction sets a familiar pattern. Maintenance in most Canadian cities is a costly business because part of the work done in summer is undone by winter weather.



Estimated municipal revenue for 1952 was \$756,900,000; 70 p.c. was derived from taxes on real property, 13.5 p.c. from other taxes, and the remaining 16.5 p.c. from licences and permits, public utility contributions, provincial subsidies and other sources.

Support of local schools currently requires the largest expenditure by municipal governments. In 1952 estimated total expenditures were \$745,700,000 and the proportion of that total spent on education services was 31.5 p.c. Public welfare took 13.4 p.c., transportation 13.3 p.c. and debt charges, together with provisions for debt repayment, 14.4 p.c.

Direct and Indirect Liabilities of Municipal Governments (less Sinking Funds), by Province, 1950-52

Province	1950		1951		1952	
	Direct	Indirect	Direct ¹	Indirect	Direct ¹	Indirect
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Newfoundland.....	3,589	..	4,002	..	4,508	..
Prince Edward Island.....	3,031 ²	..	3,461 ²	..	3,971 ²	..
Nova Scotia.....	37,494 ²	1,129	46,437	756	52,432	726
New Brunswick.....	37,402	652	44,917	2,278	50,527	3,623
Quebec.....	..	..	549,262	7,312	606,107	22,400
Ontario.....	421,843	13,196	538,118	11,919	616,134	11,096
Manitoba.....	52,896	7,569	77,588	868	76,951	1,348
Saskatchewan.....	41,038	..	47,081	..	50,328	..
Alberta.....	103,317	..	119,464	..	144,569	500
British Columbia.....	116,299	17,001	153,141	5	186,666	13
Totals.....	816,909	39,547	1,583,471	23,138	1,792,193	39,706
Grand Totals.....	856,456	..	1,606,609	..	1,831,899	..

¹ Includes some debt previously shown as Indirect Debt.

² Exclusive of rural schools.

**Municipal Bonded Debt and Sinking Funds, Certain Years 1919-50, and
by Province, 1950-52**

Year	Gross Bonded In- debtedness	Total Sinking Funds	Province	Gross Bonded Indebtedness		
				1950 ¹	1951 ²	1952 ²
	\$'000	\$'000		\$'000	\$'000	\$'000
1919.....	729,715	³	Newfoundland.....	3,001	3,646	4,136
1925.....	1,015,950	³	Prince Edward Island.....	3,302	3,740 ⁴	4,250 ⁴
1930.....	1,271,390	³	Nova Scotia.....	42,797	49,191	51,974
1935.....	1,372,026	267,709	New Brunswick.....	41,402	47,354	52,397
1940.....	1,244,001	259,343	Quebec.....	452,413	444,256	502,944
1945.....	965,450	168,365	Ontario.....	363,578	458,506	521,992
1946.....	503,426 ⁵	118,964 ³	Manitoba.....	55,038	72,450	71,995
1947.....	515,066 ⁵	119,063 ³	Saskatchewan.....	32,035	35,639	39,629
1948.....	..	..	Alberta.....	80,428	102,916	119,751
1949.....	..	..	British Columbia.....	146,351	174,567	198,786
			Totals.....	1,220,345	1,392,265	1,567,854

¹ Excludes rural schools in Prince Edward Island and Nova Scotia. ² Includes some debt previously shown as Indirect Debt. ³ Sinking fund totals not available before 1934; Alberta showed net debt to 1928. ⁴ Excludes rural schools. ⁵ Excludes Quebec.

• Banking

The Canadian banking system is a strong and stable structure with many outstanding features that have grown up since its foundations were laid more than a century ago. It consists of the Bank of Canada, which is a government-owned central bank, and ten privately owned commercial banks competing among themselves for the domestic and foreign banking business of the Canadian people. These institutions operate under the provisions of the Bank of Canada Act and the Bank Act both of which were amended during 1954.

The Bank of Canada is the keystone of the structure. Its chief function is to regulate the total volume of money and credit through changes in the cash reserves of the chartered banks. Each chartered bank is required to maintain, on the average during each calendar month, an amount of cash reserves, in the form of Bank of Canada notes and deposits with the Bank of Canada, equal to not less than 8 p.c. of its Canadian dollar deposit liabilities. (Before the Revision of the Bank Act, effective July 1, 1954, each chartered bank was required to maintain at all times cash reserves equal to not less than 5 p.c. of its Canadian dollar deposit liabilities; in practice, the chartered banks normally attempted to maintain a ratio of about 10 p.c.)

An increase in cash reserves encourages banks to expand their assets (mainly by purchasing securities and making loans) with a resultant similar increase in their deposit liabilities; a decrease in cash reserves tends to discourage expansion and may result in some contraction. Therefore, by taking steps to alter the volume of cash reserves available to the chartered banks, chiefly through open market purchases and sales of Government of Canada securities, the Bank of Canada is able to influence the total of chartered bank assets and the total of their Canadian dollar deposit liabilities. The deposit liabilities of the banks, except for those payable to the Government, are of course assets of the general public and together with currency comprise its most liquid assets.

Trading desk of the Royal Bank's Foreign Exchange Department, whose services are available to any customer through his local branch. It is linked up directly with branches, other financial institutions and cable companies.



The Bank acts as the fiscal agent of the Government of Canada, manages the public debt and has the sole right to issue notes for circulation in Canada. It 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, a Deputy Governor and twelve Directors; the Deputy Minister of Finance is also a member of the Board.

The Industrial Development Bank, established in 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. Current authorizations of loans, investments and guarantees of the Industrial Development Bank at Sept. 30, 1954, amounted to \$60,089,177 and amounts outstanding totalled \$42,373,730.

Commercial Banking.—There are ten commercial banks in Canada whose main function is to provide a safe repository for savings and surplus funds and to furnish credit for carrying on the business of the country.

Commercial banks in Canada are called "chartered" because they receive a charter or licence to do business from the Parliament of Canada. Canada has developed the branch bank system to a greater extent than any other nation and each bank has a head office and numerous branches. They operate in all parts of the country under the provisions of the Bank Act, control of banks and banking being a federal matter under the Canadian constitution.

One feature of the Bank Act is that it extends bank charters for only ten years at a time. Thus every ten years the Bank Act is revised and brought into line with changing economic conditions and the banks, in effect, are made to justify their existence. This is done in public hearings before the

Banking and Commerce Committee of the House of Commons. The result is that banking in Canada is never static but is progressive and flexible and adaptable to new needs.

The eighth decennial revision of the Bank Act was completed in 1954. Perhaps the most important of the broad basic changes was to empower the banks to lend on mortgage on new housing projects, a departure from a long-standing prohibition under Canadian banking law. The principle of variable cash reserves was introduced, the Bank of Canada having the power to vary gradually, after due notice, the cash reserves of the chartered banks between a minimum of 8 p.c. and a maximum of 12 p.c. of Canadian deposit liabilities. The banks were given the power to lend against the security of oil in the ground and, in loans to individuals, to take a chattel mortgage on household goods including motor-cars.



Payroll days are busy days in a branch bank. To speed up service, the teller uses a coin-counting machine and the bills are pre-wrapped.

There were many changes of a technical nature made in the Bank Act. The note-issuing privileges of the banks, in process of progressive reduction since the Bank of Canada was set up in 1934, were wiped out. The minimum subscribed capital for a new bank was increased from \$500,000 to \$1,000,000 and the minimum paid-up capital from \$250,000 to \$500,000. Changes were made in the method of offering new stock in established banks.

As at Sept. 30, 1954, there were 4,154 bank branches in Canada and 119 in foreign countries, mostly in the United States, Great Britain, the West Indies and South America. In addition to foreign branches, Canadian banks maintain banking correspondents throughout the world, facilitating Canada's world-wide trade.

The "after-hour" depository provides a safeguard for customers operating late-hour businesses. This banking service is available in the larger centres across Canada.



Although Canadian banks are subject to close regulation by federal authorities, they are uncontrolled in their day-to-day affairs. They are subject to the authority of the Minister of Finance whose link with them is an official of the Department of Finance, the Inspector-General of Banks. He has the responsibility of inspecting the books of each bank at least once a year and he may do so oftener. This inspection is in addition to that carried out by auditors appointed by the shareholders of each bank and reporting to them and the continuous audit by the inspection staff of the bank, which includes every branch.

There is extremely keen competition among the chartered banks, extending even to branches of the same bank in one community. There is competition for deposits, loan business and general banking services. There is also competition in opening new branches, not only in cities and towns but in frontier areas. During the past ten years, 900 new branches were opened in various parts of Canada to keep pace with population increases and new

The Farm Improvement Loans Act, administered by the Department of Finance, offers dependable credit to farmers through the co-operation of the chartered banks. Here a bank manager discusses a loan with one of his clients.



development areas. In relation to total population, Canada has a branch bank for each 3,735 persons, a higher ratio than the United States or the United Kingdom.

The branch bank is a self-contained unit. It operates under the general supervision of its head office but has a full range of banking services, whether in a big city or small hamlet. The strength of the whole institution stands behind each branch, fully responsible for its commitments and undertakings. Excess funds from branches where deposits exceed loan potentials are credited to head office which, in turn, makes them available to branches where lending funds are needed. In this way, there can be no dearth of credit through lack of local funds.

The chartered banks are owned by 68,000 shareholders, 72.8 p.c. of whom are Canadian. In 1953 the shareholders' equity in the banks totalled \$414,300,000 and dividends averaged 4.9 p.c. There has been no bank failure since 1923 and note holders have had no losses since 1881.

Statistics of Individual Chartered Banks, Sept. 30, 1954

Bank	Branches in Canada and Abroad ¹	Total Assets	Liabilities to Shareholders	Liabilities to the Public	Loans and Discounts	Total Deposit Liabilities ²
	No.	\$'000	\$'000	\$'000	\$'000	\$'000
Bank of Montreal...	620	2,522,971	2,522,971	2,407,750	888,046	2,369,233
Bank of Nova Scotia	433	990,210	990,210	942,210	525,359	922,629
Bank of Toronto ³ ...	256	582,129	582,129	560,129	241,579	556,963
Provincial Bank of Canada	348	216,934	216,934	208,934	95,037	208,211
Canadian Bank of Commerce	682	1,960,380	1,960,380	1,887,380	864,697	1,852,544
Royal Bank	808	2,893,308	2,893,308	2,774,280	1,112,216	2,709,911
Dominion Bank ⁴ ...	192	522,461	522,461	501,461	268,794	494,493
Banque Canadienne Nationale	567	540,364	540,364	525,364	247,363	523,797
Imperial Bank of Canada ⁵ ...	242	649,845	649,845	640,845	302,077	623,182
Barclay's Bank (Canada)	4	36,892	36,892	30,892	10,200	28,792
Mercantile Bank of Canada	2	5,850	5,850	3,950	1,747	3,623
Totals ...	4,154	10,921,344	10,921,344	10,473,195	4,557,115	10,293,378

¹ Includes sub-agencies which numbered 703, including 7 outside of Canada.

² Excludes inter-bank deposits.

³ The Bank of Toronto and the Dominion Bank amalgamated to become the Toronto-Dominion Bank on Feb. 1, 1955.

⁴ Commenced business Dec. 7, 1953.

• Insurance

Life Insurance.—Life insurance business in Canada in 1953 continued the increasing rate of expansion in evidence particularly since the end of World War II. During 1953, new insurance business written, including industrial, group and fraternal insurance, amounted to \$2,827,000,000, which brought the total life insurance in force in Canada at the end of the year to \$22,648,000,000. This represents an average of \$1,532 of insurance protection for every man, woman and child in the country. The amount of premiums paid to carry this insurance was \$485,000,000. Total benefits paid during

the year to policyholders, including death claims, matured endowments, disability claims, dividends, surrender values and annuity payments were over \$288,000,000. Life insurance in Canada is actively transacted by 62 companies and 39 societies registered by the Federal Government, of which 31 companies and 15 societies are Canadian, 6 companies are British, and 25 companies and 24 societies are foreign. There are also 12 companies and about 45 societies operating under provincial licence only.

Fire Insurance.—The growth of the fire insurance business has also been substantial and, though a good part of this growth may be attributed to the increase in the practice of insurance, it is also indicative of the advance in the amount and value of insurable property throughout the country. Fire insurance in force at the end of 1953 amounted to approximately \$46,000,000,000, premiums written amounted to \$167,000,000, and claims paid to \$78,000,000. These figures include the business of 290 companies registered by the Federal Government to transact fire insurance business in Canada (73 Canadian companies, 86 British and 131 foreign) as well as a number of provincially incorporated companies and Lloyds of London.

Casualty Insurance.—Casualty insurance includes: accident (personal accident, employers' liability and public liability); sickness; aircraft; automobile; boiler; credit; earthquake; explosion; falling aircraft; forgery; guarantee; hail; impact by vehicles; inland transportation; live stock; personal property; plate glass; real property; sprinkler leakage; theft; water damage; weather; and windstorm. Premiums written for all classes of casualty amounted to \$348,000,000 in 1953. In that year there were 308 companies registered by the Federal Government to transact casualty business in Canada, of which 76 were Canadian, 82 British and 150 foreign. The majority of these companies also reported fire business. The figures for 50 provincially incorporated companies and Lloyds are also included.

Accident and Sickness Insurance.—Great strides have been made in recent years in making voluntary accident and sickness insurance available to Canadians through more than 60 insurance companies, Blue Cross Hospital plans operating in eight provinces, eight medical-care plans sponsored by the medical profession, and numerous co-operative organizations. At the end of 1953, 5,900,000 Canadians had hospital expense insurance, 4,600,000 had surgical expense insurance and 3,500,000 had medical expense insurance. Most of these people have acquired this protection during the past ten years through the medium either of group insurance or of individually purchased policies. During the three years 1951 to 1953 alone, nearly 1,500,000 Canadians became insured against hospital expenses and almost 2,000,000 against surgical and medical expenses. Estimated duplication of coverage has been deducted from these figures.

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