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# CANADA 1944

The Official Handbook  
of Present Conditions and  
Recent Progress



THE SIXTH ANGLO-AMERICAN WAR CONFERENCE,  
QUEBEC CITY, AUG. 10 - 24, 1943

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**I**N a new setting for the discussion of new problems of the War, Prime Minister Winston S. Churchill and President Franklin D. Roosevelt met at the invitation of the Canadian Government in the old historic city of Quebec on Aug. 17, 1943.

High above the broad St. Lawrence River, on the brow of Cape Diamond—at the Chateau Frontenac—was the meeting place of the naval, military, and air force experts and other officials connected with the discussions concerning the prosecution of the United Nations' war effort.

Quebec City thus again takes its position in the ranks of places where weighty decisions settling the world's destiny have been made—this time by the word and the pen rather than by the sword.

Since the Quebec Conference, Mr. Churchill and Mr. Roosevelt have conferred at Cairo (Nov. 22 - 26) and later (Nov. 28 - Dec. 1) they continued their journey to Teheran, Iran, where Marshal Stalin joined them and took part in the important decisions there reached.

Previous conferences held between the two great English-speaking leaders are:

- |                          |                    |
|--------------------------|--------------------|
| 1. Atlantic Conference   | Aug. 14, 1941      |
| 2. Washington Conference | Dec. 22 - 28, 1941 |
| 3. Washington Conference | June 18, 1942      |
| 4. Casablanca Conference | Jan. 14 - 24, 1943 |
| 5. Washington Conference | May 11, 1943       |



## The Quebec Conference

The Leaders of the United Kingdom, the United States and Canada confer at Quebec's Citadel.—Prime Minister Churchill, President Roosevelt and Prime Minister King talk informally, while behind are staff officers of the United Kingdom and the United States.



Prime Minister Churchill, accompanied by Prime Minister Mackenzie King, rides through cheering crowds in the streets of Old Quebec.



President Roosevelt, with his Naval Aide, being officially welcomed to Ottawa by Prime Minister Mackenzie King. The Governor General, the Earl of Athlone, is on the President's right.



# CANADA 1944

The Official Handbook  
of Present Conditions  
and Recent Progress



Published by Authority of  
THE HON. JAMES A. MacKINNON, M.P.  
Minister of Trade and Commerce

DOMINION BUREAU OF STATISTICS  
DEPARTMENT OF TRADE AND COMMERCE  
OTTAWA, CANADA

Price 25 cents



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OTTAWA, CANADA

## foreword

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THE growth in popularity of this Handbook since the series was placed on an annual basis in 1930; its extensive use by official and semi-official bodies in regular and special editions; its distribution in large numbers at international exhibitions; its translation into various languages for use in different parts of the world where Canada is officially represented; and its use, by special permission, in financial and commercial houses for distribution to their clients; all attest to the need that exists for a brief and attractive economic handbook of the Dominion.

The current reports of the Dominion Bureau of Statistics deal in great detail with the subjects of population, production, external and internal trade, transportation, education, etc., but they are intended mainly for those who are specially interested in particular phases of our national life. The *Canada Year Book*, which summarizes these and other official publications, is essentially a book of reference, and is of too detailed a character for wide distribution. The present publication is the result of an effort to survey the current Canadian situation and especially the effect the War has had on Canadian economy—comprehensively but at the same time succinctly—in a popular and attractive form, and at a cost that makes possible its use on a general scale.

*Jas. A. Mac Kinnon*

*Minister of Trade and Commerce.*

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OTTAWA, JANUARY 1, 1944

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## PREFATORY NOTE

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

*The Handbook is planned to cover the general economic situation in Canada, the weight of emphasis being placed from year to year on those aspects that are currently of most importance, since there is not space to deal adequately with all. A review of Canada's War Effort and Economic Conditions at the Close of 1943 precedes the chapter material. The special article following this review deals with The Effects of the War on Canadian Forestry. It has been specially prepared for the Handbook in the Dominion Forest Service, Department of Mines and Resources.*

S. A. CUDMORE,  
*Dominion Statistician.*

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# Canada's War Effort and Economic Conditions at the Close of 1943



The Rt. Hon. W. L. Mackenzie King,  
P.C., M.P., Prime Minister  
of Canada.

*Copyright, Karsh, Ottawa*

## The War Effort

The steps taken by Canada immediately on the outbreak of War in September, 1939, to stand alongside the United Kingdom and to organize the Canadian economy to meet the stresses and strains that would result from the demands made upon her by 'all-out' warfare are covered in the earlier editions of this Handbook that have been published over the years 1940 to 1943.

The year 1943 has seen the participation of Canadian troops in widely separated military operations that have included the conquest of Sicily, the invasion of Italy and the occupation of the Aleutian island of Kiska. This followed three years of intensive training in the United Kingdom where the Canadian troops were a bulwark against threatened invasion.

Since the winter of 1942-43, the entire war situation has changed for the better. The submarine threat to the Atlantic life-line of the United Nations has now been

met and definitely parried and the glorious, though silent, part played by the Canadian Navy in bringing this about is a legitimate source of pride to all.

By blows that have weakened the structure of the entire Eastern Front the enemy has been obliged to give way, and to fall back from one strongly fortified position to another over a wide area by the unrelenting pressure of the gallant Russians, and thereby to relinquish vast stretches of rich lands previously overrun in Eastern Europe. In Italy the advance of the British (including Canadian) and the American Forces toward Rome is making steady progress. The enemy, however, still offers a stubborn resistance in the Mediterranean theatre where, late in the summer, the Nazis succeeded in regaining an element of temporary control in the Aegean Sea. In the Pacific theatre, the war with Japan is, at present, confined to a phase of slow attrition.

Canada has made an outstanding contribution to the success of Allied arms through the R.C.A.F. The bomber and fighter squadrons stationed overseas have, alongside the R.A.F., taken a prominent part in the succession of heavy bombing raids that are disorganizing the internal economy of Germany and bringing ultimate victory nearer. The British Commonwealth Air Training Plan, which is administered by the R.C.A.F., has now reached full production and the first slow trickle

of aircrew graduates overseas that began in November, 1940, has swelled to a mighty stream. The new agreement of July 1, 1942, operates until Mar. 31, 1945, and one-half of the cost (\$1,500,000,000) will be borne by Canada.

Far-reaching understanding and definite agreement between the three major powers, Russia, the United States and Great Britain, in regard to a co-ordinated policy of waging war on the common enemy has become more tangible and real as a result of the conferences held during the year. In August, 1943, Prime Minister W. L. Mackenzie King was host at the sixth Anglo-American War Conference held at Quebec City (see frontispiece). Here British, United States and Canadian experts conferred *in camera* and important decisions were reached. For the first time the United Kingdom War Cabinet and the War Committee of the Canadian Cabinet met in joint session. Mr. Roosevelt later visited Ottawa—the first President of the United States to visit the Canadian Capital. The second great conference of Allied leaders was held at Cairo in November, 1943. Generalissimo Chiang Kai-Shek conferred with Prime Minister Churchill and President Roosevelt. The Prime Minister and President then travelled to Teheran where, in December, they met Marshal Stalin in the first personal meeting of the three Allied leaders. General agreement on a concerted policy and a careful dovetailing and timing of operations were reached.

In the international economic field, Canada was elected to the chairmanship of the Committee on Supplies and to membership on the Committee on Europe of the United Nations' Relief and Rehabilitation Administration in November, 1943. Canada's widely recognized contributions to the relief of the countries freed from the Nazi strangle-hold will take, in large part, the form of foodstuffs, principally wheat, and it is quite logical that she should have a responsible place on those committees. This is in line, too, with the earlier published statement of the Prime Minister that "authority in international affairs must not be concentrated exclusively in the largest powers". In several other directions, Canada's importance as a supplying nation, not only of food but of munitions and war materials, became more fully recognized during 1943. Her stand on various questions of international relations commanded wider attention. The Dominion's increased international stature is reflected in the announcements of November and December, 1943, that the Canadian Legations at Washington, Moscow, Chungking and Rio de Janeiro would be raised to the rank of embassies. The Canadian Embassy at Washington is the first to be established by any British Dominion. The legations of each of the named countries at Ottawa have assumed the same status. Among British countries, Canada has now, next to the United Kingdom herself, the largest diplomatic corps.

In the economic field at home, the Government is paying close attention to the complex problems of post-war rehabilitation and reconstruction. Steps have already been taken to provide for the gradual and economic disposal of surplus materials or those that are obsolete. A Committee known as the Crown Assets Allocation Committee upon which agriculture, labour, householders and the Government departments concerned are represented is to be set up. The actual disposition of the assets is to be effected through a Crown Company known as War Assets Corporation Limited, which will be authorized to hold, manage, operate or sell property entrusted to it; to convert surplus materials to basic products; to hold stocks pending their ultimate disposal; and generally to handle assets assigned to it in the public interest.

## THE WAR EFFORT

The disposal of surplus assets is being effected in a manner that will, as far as possible, contribute to the continued prosecution of the War and meet essential civilian needs with as little dislocation as possible to the Canadian economy.

Canada has planned and put into operation what is considered to be perhaps the most advanced and comprehensive rehabilitation programs for men and women in the Armed Forces among the other countries of the United Nations. Every man and woman before demobilization from the Forces will know, through the organization that is now operating, what the Government has agreed to do for his or her rehabilitation into civil life.

As a definite curb to the inflation threat that has increased in severity throughout the year, the Prime Minister announced in December a policy of revised wage control and a new labour code by which the cost of living is to be absorbed into basic pay rates and no further increases of cost-of-living bonus are to be made and, in the event of an appreciable change in living costs, there will be a general review of the Government's stabilization policy. The program also establishes a floor under farm prices and certain sections of wage and salary earners, such as farmers and government employees—provincial and Dominion—are excluded from the wages policy.

Details of the various developments of Canada's truly remarkable war effort are given in the following sections of this Introduction.

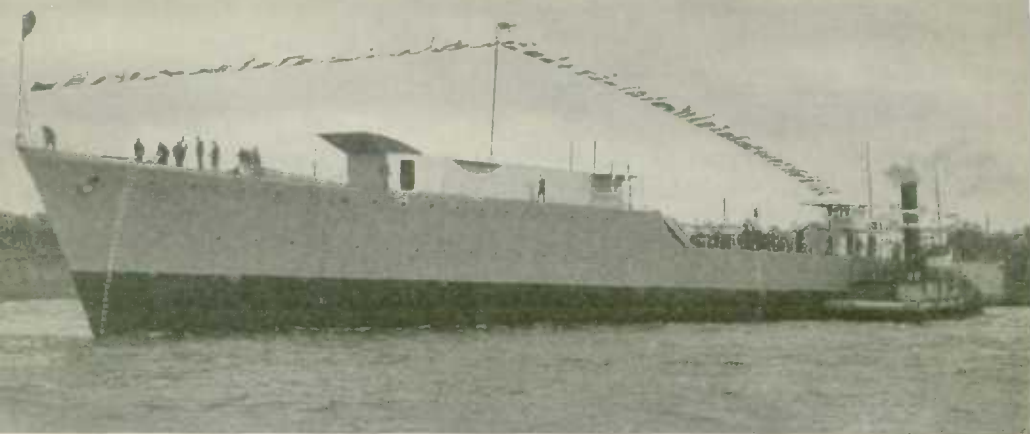
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The First Lancaster Bomber produced in Canada just prior to taking off for her first official flight in midsummer 1943. The Lancaster and Mosquito types of combat plane, which present very special and difficult problems of production, were added to the Canadian-built types in 1942.

*Courtesy, National Film Board*







H.M.C.S. *Micmac*, Tribal Destroyer, after she was launched at Halifax on Sept. 18, 1943.  
This is the largest warship ever built in Canada.

Royal Canadian Navy Photo

**The Navy.**—Vastly increased responsibilities have been undertaken during 1943 by the Royal Canadian Navy and to meet them there has been a corresponding expansion of strength both in ships and men.

Canada continues to play an impressive role in the task of providing escorts for convoys in the North Atlantic, which has been the Dominion's most important theatre of operations since the beginning of the War. In addition, the Canadian Navy has carried the war to the enemy in the Mediterranean, in the Aleutian Islands and in other theatres. In the Mediterranean, Canadian corvettes guarded convoys during the critical stages of the North African campaign and in doing so sank, with certainty, three enemy submarines. Canadian-manned landing flotillas also played an important role in the troop landings in Africa and in Sicily. In the Pacific, Canadian warships worked with the United States fleet in clearing the Japanese from their footholds in the Aleutians. An enemy attempt to disrupt shipping by mining Canadian coasts was met and countered by prompt action of Canadian minesweeping craft.

To perform all these duties, the Canadian Navy now musters a strength of more than 600 ships and more than 70,000 men. Corresponding figures for 1942 were 400 ships and 48,000 men; at the beginning of the War there were 15 ships and 1,774 men. The Women's Royal Canadian Naval Service, less than two years old, has passed the 4,000 mark in numbers and some of the personnel is serving overseas.

In ships the growth has not been in numbers only but also in size. It has been announced that two cruisers will shortly be taken over by Canada and there is a possibility that aircraft carriers will follow. Three of the new Tribal Class destroyers built in England (*Iroquois*, *Athabaskan* and *Huron*) are already in commission and the first Canadian-built destroyer (*Micmac*) was launched in September, 1943. Two others were, at the close of the year, in course of construction in Canada.

The destroyer fleet has also been increased by the acquisition of four ships from Britain (*Kootenay*, *Ottawa*, *Gatineau* and *Saskatchewan*). Smaller than the Tribals, they are, nonetheless, powerful and useful escort vessels.

## THE WAR EFFORT

New types of ships built by Canadian yards are now coming into service: frigates, which rank about half way between destroyers and corvettes in strength; Algerine minesweepers, equally useful as sweepers or escort ships; and improved types of corvettes. Fairmiles, patrol and auxiliary craft continue to leave the ways for commissioning in increasing numbers.

Losses during 1943 included the destroyer *St. Croix*, in terms of lives the greatest single naval loss yet suffered by Canada. Sunk while on Atlantic convoy duty, only one man of her complement of 147 was saved. Two corvettes were lost in the Mediterranean (*Weyburn* and *Louisburg*) with 9 and 38 casualties, respectively.

Canadian losses to date in the War include four destroyers (*Fraser*, *Margaree*, *Ottawa* and *St. Croix*); six corvettes (*Levis*, *Windflower*, *Spikenard*, *Charlottetown*, *Weyburn* and *Louisburg*); and three patrol ships (*Bras d'Or*, *Otter* and *Raccoon*).

Casualties reported up to Oct. 11 are 954 killed on active service, 132 other deaths, 177 wounded or injured and eight prisoners of war.

**The Army.**—The War began in earnest for the Canadian Army in the summer of 1943. Battle ended more than three frustrating years of watchful waiting in Britain and long preparation for the attack.

The Canadian First Division, commanded by Major-General Guy Simonds, took part in some of the heaviest fighting of the Allied 39-day conquest of Sicily.

---

Combined Operations between the Royal Canadian Navy and the Royal Canadian Air Force.—The personnel is engaged in plotting Atlantic convoy routes on the wall chart.

Royal Canadian Navy Photo



Its task was to drive through the centre of the Island, between the British and United States troops. In the closing stages of the battle the Canadians, with the British 78th Division of the Eighth Army, broke through the Mount Etna line and started the enemy retreat to the evacuation port of Messina.

General Sir Bernard Montgomery visited the Canadian troops on Aug. 20, three days after the last Axis defenders had been killed or captured or fled from the Island, and told them: "You handled yourselves according to the best and highest standards of any army in this very short, model little 39-day campaign. It has been said that it was a great honor for the Canadians to be in the Eighth Army, but I say that it was a great honor for the Eighth Army to have the Canadians."

Fighting men of the First Division were again side-by-side with the famous Eighth when the direct assault on Italy began and in the bitterly fought advance up "the boot". It was in Italy that the extensive development of new equipment and new battle technique, much of it on the "secret" list, proved the worth of long-range planning. New wireless equipment of Canadian design and manufacture and similar developments played as important a part as the foot and mounted battle drill that equipped the Canadians for their part in the invasion.

Canadians were shoulder-to-shoulder, too, with United States forces when a combined Allied force occupied the key Aleutian island of Kiska, meeting no resistance. Troops from all across the Dominion, a large proportion of them soldiers called for service under the National Resources Mobilization Act, were represented in this operation.

The Canadian Army Overseas is made up of two corps, one of three infantry divisions, the other of two armoured divisions. Besides these there are large numbers of ancillary or corps troops. Corps troops are concerned with communications, repairs to equipment, transport of supplies, medical and hospital services and many other functions. The Canadian Army has more than 170 such units.

During the year, corps and divisions overseas were re-organized to make possible any combination of brigades and divisions and to make the Canadian divisional establishment similar to the British.

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Members of the Canadian Women's Army Corps on Parade on Parliament Hill, Ottawa.

*Canadian Army Photo*



## Canadians in Sicily

Canadian Gunners, covering  
advancing infantry, pound  
German positions.



A Canadian Armoured Regiment  
advancing along a  
dry dusty mountain road.  
Note the Sicilian mountain  
donkey cart in the fore-  
ground.



General Sir Bernard Mont-  
gomery, Commander of the  
British Eighth Army, talk-  
ing to a group of officers  
and men of a Canadian  
armoured regiment under  
his command in Sicily.





## CANADA 1944

The year 1943 also marked an advance in the training of Canadian air-borne troops, now trained at Camp Shilo, Manitoba. Units are on active service overseas.

That the Army has now passed its expansion stage was emphasized in changes of policy. These entailed a reduction of the number of officers trained in Canada, the closing of two officers' training centres, the training of some officers in England and the re-organization of centres training reinforcement personnel. In future a greater proportion of officers will come from candidates with overseas service, some of whom will be trained in England and some in Canada.

Canadian defence requirements have decreased substantially and officer requirements now are principally to replace casualties and wastage, with consequent curtailment in officer-training facilities.

Under the plan to re-organize centres for the training of reinforcement personnel, certain basic training centres have been designated for the reception of recruits for armoured, infantry and medical corps. Such centres are specifically associated with, or linked to, the advanced or corps training centre of the arm of the service

Ski Troops in Training for Winter Offensives. Inset: A ski-trooper completely equipped for battle.

*Courtesy, National Film Board*



concerned. In the case of the artillery, engineers, signals, ordnance, army service and provost corps, it has been found possible to link both basic and advanced training at the same corps training centre.

Figures at October, 1943, showed the strength of the Army to be in excess of 460,000 men. There are record figures, too, for the Canadian Women's Army Corps which celebrated its second anniversary on Aug. 29, 1943. At that time nearly 14,000 women were wearing the khaki uniform.

The Reserve Army of Canada continued its role at home and added armoured, tank, reconnaissance and anti-aircraft training to its program of training.

**The Air Force.**—The British Commonwealth Air Training Plan was born on Dec. 16, 1939. Under its terms Canada became Administrator of the B.C.A.T.P. and the training ground for United Nations aircrews. The Plan is administered by Canada's Department of National Defence for Air, assisted by a Supervisory Board at Ottawa comprising three Canadian Cabinet Ministers, representatives of the participating governments, the Deputy Minister of National Defence for Air, and the Chief of the Air Staff.

Since the first agreement was signed more than 50,000 aircrew—enough to man 15,000 combat craft—have been trained in Canada. They include pilots, navigators, observers, bomb aimers, wireless operators, air gunners and flight engineers.

In 1941 the partners to the B.C.A.T.P.—the United Kingdom, Australia, New Zealand and Canada—met and renewed the original agreement on terms providing for greatly increased production of trained aircrew, and for more emphasis to be placed on preserving the identity of the R.C.A.F. fighting forces overseas. The new agreement, effective July, 1942, is operative until Mar. 31, 1945, during which time the estimated cost will be \$1,500,000,000. Canada will pay 50 p.c. of this, and will continue as Administrator. At the last session, Parliament was asked for \$1,129,000,000 to carry on operations and training during 1943-44—nearly double the cost for the previous year. The appropriation for overseas war establishment increased from \$20,000,000 to \$383,000,000.

The number of training units has risen to 154, with twice the capacity originally intended; the small peace-time force of 4,500 officers and men has grown to over 200,000. There are now 32 R.C.A.F. squadrons in operation. By the end of 1943 there will be 38. The strength of the Women's Division was over 15,000 in October, 1943.

In August, 1942, R.C.A.F. fighter and army co-operation squadrons gave air cover for the Dieppe raid by Canadian troops. Canadian airmen in R.C.A.F. and R.A.F. squadrons comprise more than one-third of the personnel participating in the heavy raids on industrial Germany, Italy and occupied countries. In the rout of Rommel's Afrika Corps, 2,000 members of the R.C.A.F. stationed in the Middle East flew and maintained many of the aircraft taking part. R.C.A.F. Wellington squadrons moved into North Africa as Allied invasion forces swept across the Mediterranean into Sicily, and helped pave the way for the invasion of Italy.

Far out on the Aleutian chain, R.C.A.F. squadrons co-operated with American air forces to drive the Japanese out of Attu and Kiska, their last footholds on this Continent. On the other side of the globe, R.C.A.F. squadrons form part of the air force guarding Ceylon.



Top: Airwomen meteorologists sending off a pilot balloon, used to determine the velocity of winds at different levels, and recording meteorological data in the observatory hall.  
Bottom: Potential observers charting the flight of a pilot balloon on a plotting table.



*Courtesy, Toronto Star Newspaper Service*

At the same time Canada's Home War Establishment was augmented, an expansion that is reflected in the increase of expenditure from \$172,000,000 in 1942-43 to \$300,000,000 in 1943-44. The personnel has doubled on Home War Establishments since Canada started operations out of her own coast lines—operations which have netted highly successful results. Liberator bombers from R.C.A.F. East Coast stations made possible the "aerial umbrella" over Allied convoys and were a decisive factor in reducing shipping losses, as well as an effective offensive weapon against enemy U-boats.

In the autumn of 1943 the Nazis turned to a new tactic. Instead of submerging to evade attacking patrol aircraft they stayed on the surface while their crews manned heavy anti-aircraft guns in an attempt to fight off their attackers. It turned out to be a costly move. In one outstanding two-day running battle, 'planes from an R.C.A.F. East Coast base carried out six attacks on U-boats with highly successful results.

As aerial activity over Europe has increased, more and more Canadian airmen have earned recognition for their part in battle. Awards for gallantry won by members of the R.C.A.F. are given at p. 33.

### The Economic Effort and Its Organization

Modern war requires the full and effective mobilization of the nation's economic resources to equip and supply the fighting forces and to maintain the civil population while as much as possible of the national effort is devoted to the prosecution of the War. For Canada this implies not only the provision of men and materials for the fighting forces but the furnishing of food, materials, munitions and equipment to Britain and other Allies. The demands for man-power are therefore urgent for the making of munitions and war supplies as well as for the Services—the Navy, the Army and the Air Force.

Fortunately, so far as financial organization is concerned, the Canadian financial structure was already well developed before the War to a point where it had proved its adaptability and suitability to the country's needs. The strain of war and Canada's accomplishment in meeting such a high proportion of the direct cost of the War, while at the same time providing Britain and other Allied Nations with very extensive assistance in obtaining war supplies in Canada, has been further evidence of this.

In the War of 1914-18, Canada's munitions output was limited to shells and rifles. Ships and aeroplanes, Bren guns, heavy machine guns, Browning guns, sub-machine guns, AA guns, anti-tank guns, trench mortars, 25-pounders, naval guns, tanks, universal carriers, etc., are but a few of the munitions now being supplied in quantity for use in almost every theatre of war. In 1942, Canada made an outright contribution of munitions and supplies to the value of \$1,000,000,000 to the United Kingdom. In 1943, the Mutual Aid Act enabled Canada to provide various types of war supplies up to a total value of \$1,000,000,000 directed to the United Nations who need them in the effective prosecution of the War but who do not have Canadian dollars of their own to pay for all the war supplies they require from Canada.

During the course of the War a serious exchange problem has developed in the form of a shortage of U.S. dollars resulting from the growing need of obtaining essential materials of war from that country. As indicated later, this has been met effectively by the measures carried out by the Foreign Exchange Control Board (see p. 20), and by the arrangements made under the Hyde Park Agreement.

**The Financing of Canada's War Effort in 1943.**—Canada's total expenditures, including those made to provide war supplies to other United Nations, are expected to reach a total of \$5,500,000,000 in the fiscal year 1943-44. In the Budget for that year, brought down Mar. 2, 1943, tax changes were introduced increasing revenues for the fiscal year 1943-44 by an estimated \$151,200,000, bringing anticipated revenues to a total of \$2,752,200,000. In the same Budget there was also introduced the "pay-as-we-go" system of income tax collection (see p. 179). During the year two great Victory Loans were issued. The Fourth Victory Loan campaign took place between Apr. 26 and May 15, and a total of \$1,308,716,650 in cash subscriptions was obtained, made up of 2,669,111 subscriptions. The Fifth Victory Loan campaign took place between Oct. 18 and Nov. 6, and 3,008,336 cash subscriptions were received, amounting to a total of \$1,383,275,250. In addition there were conversion subscriptions to this loan amounting to a total of \$188,036,300.

An important financial development during the year was the enactment by Parliament of the War Appropriation (United Nations Mutual Aid) Act, 1943, establishing the Canadian Mutual Aid Board (consisting of five Cabinet Ministers), and providing \$1,000,000,000 to purchase war supplies in Canada to be transferred by the Board in accordance with strategic needs to other United Nations for use by them



in the effective prosecution of the War. Under this Act, supplies were furnished during the year to many countries, including, for example, Russia, China, Britain, Australia, and the French Committee of National Liberation.

One of the principal war-time financial control measures is the Foreign Exchange Control Order, which went into force Sept. 16, 1939. Under it the Foreign Exchange Control Board authorizes and controls transactions between residents of Canada and persons outside Canada. Subject to the direction of the Minister of Finance, the Board manages Canada's foreign exchange rates and operations. Normal transactions are handled through authorized dealers, made up largely of the branches of the chartered banks. The Board has exercised particularly close control over exports of capital from Canada, and under Government direction has restricted the use of foreign exchange for pleasure travel purposes. The work of the Board in conserving foreign exchange has been supplemented by the various measures passed by Parliament, to discourage or to restrict non-essential imports, notably the War Exchange Conservation Act.

Shortage of foreign exchange for Canada has also been relieved in part by the agreements announced by the President of the United States and the Prime Minister of Canada at Hyde Park on Apr. 20, 1941. In accordance therewith the United States has provided to the United Kingdom, under the Lend-Lease Act, American components of war supplies to be manufactured in Canada for Britain. Even more significantly, under the agreements, the United States buys from Canada certain essential materials and other war supplies that Canada has been in a position to produce quickly and efficiently.

**Department of Munitions and Supply.**—In the fifth year of war, Canada ranks fourth among the United Nations as a producer of munitions. Major production objectives have been achieved, and the Dominion's role in the co-ordinated Anglo-Canadian-American production picture has become clarified. With a weekly output of more than \$55,000,000 worth of munitions, the nation's war program has reached and passed goals once considered impossible.

The Department was organized in September, 1939, to fulfil two main functions—the making of all defence purchases, and the mobilization of industrial and other resources to meet war needs. When the Department was launched, its work comprised chiefly the purchasing for the Armed Forces. It was not until June, 1940, that it was called upon to initiate an over-all war-time production program.

The vast increase in the volume of purchases which followed the Fall of France, and the increased utilization of the industrial and other resources of the country called for increased mobilization and regulation of Canadian industry. Regulation in particular became increasingly necessary as factories came into production and the demand for raw material mounted.

To meet this need, Controllers were appointed to administer various industries and the supplies of various commodities. By the authority of the Munitions and Supply Act, Controllers can purchase, expropriate, manufacture and take virtually any steps required to further the war effort in the fields in which they operate. Each Controller on his appointment automatically becomes a member of the Wartime Industries Control Board, which was set up to integrate the efforts of the individual Controllers.

Since the Department of Munitions and Supply was created by Act of Parliament in September, 1939, a total of more than \$6,500,000,000 has been spent on war pro-



Prime Minister Churchill taking part in a meeting of the War Committee of the Canadian Cabinet, during his visit to Quebec for a war conference with President Roosevelt.

*Courtesy, Canadian Pacific Railway*

duction and construction. By the end of 1943, Canada had achieved an output of more than 10,000 'planes; 600,000 motor vehicles; 750 escort, cargo and patrol ships; 60,000,000 rounds of heavy ammunition and 3,000,000,000 rounds of small arms ammunition; vast quantities of chemicals and explosives; and millions of dollars worth of signals equipment and instruments.

So far the Dominion's industrial war effort has been divided into four periods: 1940—planning and organization; 1941—further construction and expansion of industrial facilities; 1942—large-scale production; 1943—peak production.

In the latter half of 1943, with major objectives achieved, the industrial war program of Canada underwent a change of emphasis. Some programs were reduced and others expanded to meet the changing war needs. Few items of Canadian-made war supplies correspond to-day to the original specifications. Designs of weapons and equipment have been subject to continual change, sometimes because of scarcities of materials and tools, sometimes by the urgency that demanded simpler production techniques, and sometimes by lessons of war. This flexibility now enables Canada to shift emphasis from one phase of production to another by gradual stages and with a minimum of disruption.

Some of the accomplishments to date and an indication of the changes made are given in the following paragraphs.

More than one-fifth of the total Government investment in war plants has been allocated to the production of guns and small arms. To date more than 100,000 guns, barrels or mountings have been produced, as well as 1,000,000 small arms. In line with the changing picture of the over-all production program, adjustments are being made in gun and small-arms schedules. Having met the requirements for certain types of guns, their production will be replaced by others or by other products more urgently required.

The number of men and women producing aircraft and components now exceeds 100,000. More than 10,000 'planes have been delivered at an average rate of 80

per week. During the year, changes in aircraft production have resulted in the building of new types of combat 'planes, notable examples of which are the Lancaster and Mosquito.

Canada has about 50 plants making shells, as well as scores of others producing components. All these plants, which are turning out 525,000 rounds a week, have produced more than 60,000,000 rounds of heavy ammunition. Of a total of 28 types of shells being made in 1942, three have gone out of production, two are being increased in output, and others will be reduced.

Over-all commitments for shipbuilding in the Dominion total \$1,000,000,000. About half this amount has been earmarked for cargo vessels and overhaul.

Within two years, Canada has built a fleet of freighters equal to 10 p.c. of the total merchant tonnage of Great Britain at the beginning of the War. Besides merchant vessels, there have been built frigates, corvettes, minesweepers and patrol vessels, and in September the hull of the first Canadian-built destroyer was launched.

Only 30 p.c. of all Canadian war production is delivered to Canadian forces at home and abroad. The remainder goes to Britain, the United States, India, Africa, China, Russia, Australia, New Zealand and the South Pacific. More equipment is being allocated to other United Nations, much of it under the Mutual Aid Act.

**Department of National War Services.**—The Department of National War Services was established by Act of Parliament in July, 1940, to assist in carrying out the provisions of the National Resources Mobilization Act, 1940, concerned with the mobilization of all the effective resources—both human and material—of the nation. The Department was also empowered to promote, organize and co-ordinate voluntary war services and material contributions made for the prosecution of the War. At present, it comprises the following Divisions: The Canadian Travel Bureau; Directorate of Censorship; Committee on Co-operation in Canadian Citizenship; The Corps of (Civilian) Canadian Fire Fighters for Service in the

*Photo copyright, Karsh, Ottawa*



The Dominion Government has taken steps to ensure that the home nursing and the first-aid training facilities of the Canadian Red Cross and the Venerable Order of St. John in Canada should be utilized to the fullest extent. On Sept. 7, 1943, a Joint Board known as the St. John-Red Cross Board was organized under the Minister of National War Services to co-ordinate the above-mentioned activities of these bodies. The illustration to the left and on p. 23 symbolize the spirit of these two great voluntary organizations.

*Courtesy, St. John Ambulance  
Association and the  
Canadian Red Cross  
Society*

United Kingdom; Government Office Economies Control; National Salvage Division; Prisoners of War Next of Kin Division; Voluntary and Auxiliary Services; and the Women's Voluntary Services.

The Canadian Broadcasting Corporation and the National Film Board, while not component parts of the Department proper, are two very important bodies responsible to Parliament through the Minister of National War Services.

*Canadian Government Travel Bureau.*—As a result of strict tire and gasoline rationing and the banning of pleasure driving for the summer months in a large portion of the United States, a decrease in tourist traffic to Canada was inevitable.

Although all advertising and direct tourist promotional work has been discontinued, the Bureau still receives and answers hundreds of inquiries relating to travel in Canada. Revision of maps and publications has been continued for use in the post-war period.

*Directorate of Censorship.*—The Directorate of Censorship is responsible for the censorship of publications of all kinds, including radio broadcasting and films, and also for the censorship of postal and telegraphic communications.

*Committee on Co-operation in Canadian Citizenship.*—The objective of the Committee is to promote mutual understanding between Canadian citizens of French and British extraction and those of other European origins and, through contact with the latter, to interpret their points of view to the Government and to the Canadian public.

*Corps of (Civilian) Canadian Fire Fighters for Service in the United Kingdom.*—At the request of the British Government, a Corps of (Civilian) Canadian Fire Fighters was recruited early in 1942 to assist the National Fire Service in the extinction of fires and protection of life and property in the United Kingdom.

*Government Office Economies Control.*—Created in 1942, this Division is charged with the duty of effecting throughout all Government Departments the greatest possible economy and saving in the use of printing, stationery, office appliance machines and furniture.

*National Salvage Division.*—The National Salvage Division co-operates with approximately 1,700 Voluntary Salvage Committees now in operation throughout Canada. The net proceeds from the sale of salvage material are contributed by Committees to recognized War Charity Funds for the benefit of Canada's Armed Forces.





*Prisoners of War Next of Kin Division.*—The Prisoners of War Next of Kin Division furnishes information concerning prisoners of war and is responsible for the issue of labels every three months to the next of kin, without which personal parcels may not be despatched. This service is also extended to the Prisoners of War of Allied Nations and Civilian Internees whose next of kin reside in Canada.

*Voluntary and Auxiliary Services.*—The Voluntary and Auxiliary Services Division exercises budgetary and financial supervision in respect to the six national organizations which receive funds from public treasury for war auxiliary services, viz: Canadian Legion; Knights of Columbus; Salvation Army; Y.M.C.A.; Y.W.C.A.; Navy League of Canada for Hostels and Merchant Seamen Clubs; and also supervision of appeals to the public of Canada for voluntary contributions for war services objectives. It is responsible for development of voluntary war services generally and of Citizens' Committees which act as co-ordinating agencies in approximately 70 urban centres, where off-duty and auxiliary services for Armed Forces personnel are necessary.

This Division administers the War Charities Act, through which some 6,081 funds have been registered. Immediately war was declared, the War Charities Act and Regulations were promulgated to ensure proper directions and controls over war charity appeals to the public.

*Women's Voluntary Services.*—The Women's Voluntary Services Division, in an advisory capacity, seeks to prevent overlapping and duplication and promotes voluntary civilian war- and peace-time services on a community basis. Voluntary Service Centres are organized with the primary purpose of acting as a central registry or a manning pool to recruit volunteers for war- and peace-time services community work.

A Block Plan, patterned on the existing Air Raid Precaution set-up, has been organized on a neighbourhood basis with the purpose of bringing factual information on national and community projects into every home. These projects concern peace- or war-service activities.

*Wartime Information Board.*—The Wartime Information Board was created by Order in Council on Sept. 9, 1942, with the object of "ensuring an informed and intelligent understanding of the purposes and progress of the Canadian war effort".

The functions of the Board are carried out under the direction of the General Manager. They consist of co-ordinating existing Government information services and providing means and facilities for the distribution both within and without Canada of Canadian war news and information. The Board, consisting of a chairman, a vice-chairman and eight members, is related to the War Committee of the Cabinet, and is responsible to the Prime Minister as President of the Privy Council. In Canada, the Board operates from Ottawa. Abroad, offices are maintained at New York and Washington, in the United States; London, England; and Canberra, Australia.

*National Film Board.*—Established by Act of Parliament, 1939, the National Film Board is composed of two cabinet ministers, three civil servants and three representative citizens. Its functions are directed by the Government Film Commissioner who is responsible for co-ordinating and advising upon all film activities of the Canadian Government.



It produces or arranges for the production of films on behalf of all Government Departments and divisions. Since 1940, the National Film Board has produced 193 documentary films, 110 newsclips and trailers and a large number of newsreel stories. Also, through its Graphics Division, it supplies regular photo service to newspapers, magazines, rotogravures, organizations, house organs, etc.; plans posters, booklets, cartoons, decorative illustrations for Government Departments; and maintains an active information section.

**Wartime Prices and Trade Board.**—The Wartime Prices and Trade Board was established at the beginning of the War "to provide safeguards under war conditions against any undue enhancement in the prices of foods, fuel and other necessities of life, and to ensure an adequate supply and equitable distribution of such commodities". Underlying the work of the Board during the first two years of the War was the belief that if ample supplies were kept available, monopolistic tendencies controlled and sporadic instances of local profiteering dealt with, fair and reasonable prices would be maintained.

To assist in the organization of supply, the Board selected administrators in October, 1939, for the major commodity fields of wool, sugar, hides and leather, and coal. In 1940, an administrator was appointed for animal, fish and vegetable oils, and one for housing rentals.

The most important direct control exercised by the Board was that over rents. Industrial and military activities had led to sharp increases in the population of certain cities, with a consequent shortage of housing facilities. Starting in September, 1940, local Rental Committees were appointed for designated areas and maximum rents were fixed.

Direct price control which, except in the case of rents, was considered a temporary expedient, was imposed only on wool (Nov. 24, 1939, to Jan. 27, 1940), bread and flour (Aug. 6 to Sept. 6, 1940), butter (Dec. 27, 1940, to May 1, 1941), hides and leather, and rents. Apart from direct control, the Board undoubtedly exercised a strong general influence against price increases, through its power to investigate and prosecute in cases of alleged profiteering, and the known fact that it stood prepared to follow up all complaints regarding unreasonable enhancement. The formal and informal activities of the Board to prevent price increases were supplemented by programs to ensure supplies (wool and sugar), by anti-waste campaigns (butter), by compulsory simplification and reduction of unnecessary services (bread) and by steps to detect and prevent hoarding.

The cost-of-living index, which advanced 2.7 points (August 1939=100) during the first month of the War, increased only 5 points more in the following year and a half. However, starting in April, 1941, the index rose sharply, largely as a result of rapidly increasing food prices, and by Oct. 1, 1941, 6.9 points had been added to the previous increase, making the index 114.6. Against the background of this accelerating rise in the cost of living, combined with substantial increases in wholesale prices and wages, the Government decided upon a policy of over-all price and wage ceilings.

The powers of the Board were extended to cover prices of all goods and certain designated services. Under the ceiling plan adopted in October, 1941, and effective Dec. 1, 1941, the prices of most goods and the more important services and rents were frozen at the levels prevailing in the "basic period", Sept. 15 to Oct. 11, 1941. The Board was vested with authority to use a number of related controls; payment

of subsidies\*; prescribing terms and conditions of sale and consumer credit controls; control over distribution, rationing and requisitioning; and control over quantity and type of goods produced.

The Board was re-organized on a basis of the various industries and commodities, and a large number of new Administrators were appointed. These Administrators supervise all controls over their respective products until they reach the wholesaler. From this stage, control is generally exercised through a Wholesale Trade Administrator and a Retail Trade Administrator. Related industries are grouped under six Co-ordinators as follows: distributive trades (including retail trade, wholesale trade and services); foods; textiles and clothing; metal and wood products; pulp and paper; and real property. Proposed orders concerning prices are reviewed by a Prices Division and those concerning supplies by a Supply Division and, finally, must be approved by the Chairman of the Board. To facilitate administration, 13 regional offices of the Board were established under which approximately 100 local offices have been set up. A Consumer Branch acts as a clearing house for problems arising out of price-control measures and affords consumers throughout Canada direct representation in Board operations. In the autumn of 1943 the Board set up more than 500 local ration boards to deal with local details of rationing.

All the members of the Board are senior officers in the Government service. They bring to the Board wide and varied administrative experience, and represent, in addition, the points of view of the principal Departments of Government closely related to or affected by problems of price control and civilian supply. Co-ordination between the Board and the Wartime Industries Control Board is effected by having the Chairman of each Board sit as a permanent member of the other. Also, several Administrators under the Agricultural Supplies Board are also Administrators under the Wartime Prices Board. The Board is recognized as the equivalent of a Government department and holds membership on a number of inter-departmental committees, e.g., the National Textile and Leather Requirements Committee; the Food Requirements Committee; the National Selective Service Advisory Board; the Canadian Shipping Board; the Export Control Committee; and the Economic Advisory Committee.

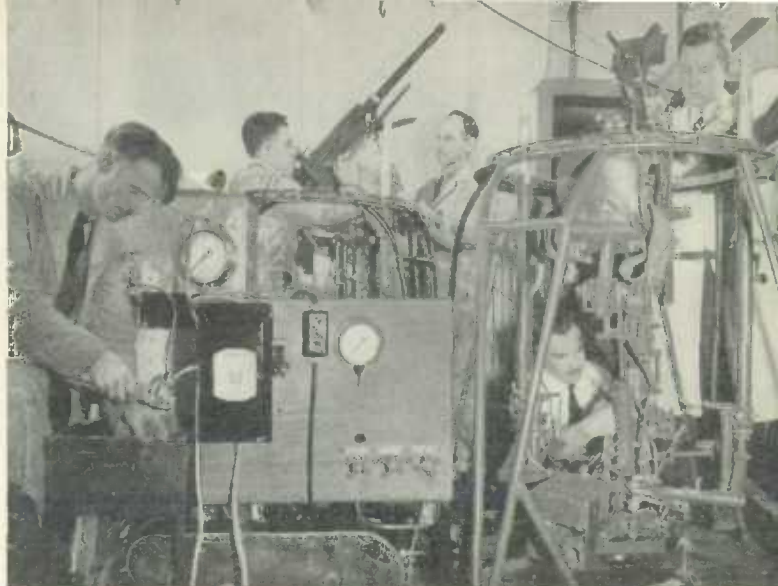
**Department of Labour.**—The development of war-time labour policy up until the latter part of 1942 is outlined in *Canada 1942*, pp. xxiii-xxiv, and in *Canada 1943*, p. 25. During 1943 the National War Labour Board was reconstituted and there were further important developments in man-power policy.

The National War Labour Board, with the assistance of nine Regional War Labour Boards, administers the wages control and fair-wages policies of the Dominion Government. Originally, it consisted of the Minister of Labour as chairman and five representatives each of employers and workers. In February, 1943, the Board was reconstituted and it now consists of three members of whom the chairman is a Judge of the Supreme Court of Ontario. The employers' and workers' representatives of the old Board were formed into an advisory committee to the new Board. The composition of the regional boards is unaltered, except for a few changes of individual members.

The new National Board, when it was set up, was authorized to make any investigations it considered necessary into wage conditions and labour relations in

\* The subsidy program is handled by the Commodity Prices Stabilization Corporation and three subsidiary corporations: Wartime Food Corporation; Canadian Wool Board; and Wartime Salvage Corporation.

Turret Assembly in a  
Canadian Aeroplane  
Plant.



*Courtesy, National  
Film Board*

Canada, and from April to June, 1943, it conducted an extensive inquiry into these matters. Its report has been prepared and is being considered by the Minister of Labour, but at present (October, 1943) it has not been released for publication.

In December, 1942, and January, 1943, the measures relating to man-power were, with a few insignificant exceptions, consolidated in two sets of regulations, the National Selective Service Mobilization Regulations under which men are called up for the military service and the National Selective Service Civilian Regulations which deal with the allocation of civilian labour. These two sets of regulations, which are administered under the Minister of Labour by the Director of National Selective Service, together embody almost the entire man-power policy. During 1943 several amendments were made in the Civilian Regulations and two of these are especially significant. One of them permitted the Director to remove from less essential civilian industry men between the ages of 16 and 40 who could be more usefully employed in other industries. The other prevented any male worker from leaving an essential industry without permission. A more complete summary of the Selective Service policy appears at p. 146.

**Agricultural Supplies Board.**—The Agricultural Supplies Board is a war-time control body operating under the Department of Agriculture. It is the responsibility of the Board, in consultation with the Provincial Departments of Agriculture, to ensure that Canadian agriculture is carried on during war-time in a manner best suited to meet, so far as possible, the needs of Canada and the United Kingdom for food and fibres. The organization of the Board includes four Administrators who, under the direction of the Board, are responsible for ensuring supplies of live-stock feeds, fertilizers and pesticides, seeds and flax fibre.

During 1943 the need for increased production in a wide range of commodities continued. British bacon requirements remained large; greater domestic demand and British requirements involved an increase in egg production, and the requirements of dairy products in all forms called for an increase in the production of fluid milk. These increased requirements not only involved arranging production programs with Provincial Departments of Agriculture to assure, so far as possible, that the requirements should be met, but called for most active steps to arrange that supplies of all kinds—feed, seed, fertilizers—were made available throughout the Dominion.

One of the major problems confronting the Board throughout 1943 was to assure adequate supplies of western feeding grains to live-stock farmers in Eastern Canada and British Columbia. This presented a transportation problem of considerable difficulty and, in addition to freight assistance and subsidies to encourage the early purchase of western grain, steps were taken to prevent the congestion at lakehead elevators, where western grain is normally cleaned on its way to the east. Direct control over the export of millfeeds was continued, and practically all of the 8 p.c. of Canadian production exported went to Newfoundland and other British possessions dependent upon Canada for supplies.

An important phase of the Board's activities is to ensure that sufficient seed of all kinds is available. An annual program designed to keep the production of essential field, root and vegetable seeds at a sufficiently high level to meet anticipated requirements is, therefore, undertaken annually in co-operation with Provincial Departments of Agriculture. To meet a shortage in Eastern Canada, western alfalfa seed was moved east and red clover and alsike clover seed was purchased in the United States. Rape seed and sunflower seed were also purchased. Large quantities of certain seeds were shipped to Great Britain during 1943 and contracts were arranged for certain vegetable seeds from the 1943 crop and also for seed of biennial crops in 1944.

**Agricultural Food Board.**—In March, 1943, the Agricultural Food Board was established. The duties of the Board are: in co-operation with the Agricultural Supplies Board, to develop and direct the policies of the Department of Agriculture for the war-time production of food; to co-ordinate the activities of all commodity boards established under the Department of Agriculture; to direct the diversion of food products produced in Canada; to fill export contracts; to meet the requirements of the Armed Forces in Canada, and to supply deficiency areas in Canada; and to provide a medium for co-operation between the Department of Agriculture and the Wartime Prices and Trade Board in all matters pertaining to agricultural production, price adjustments and subsidies.

**Commodity Boards.**—Working in close collaboration with the Agricultural Supplies Board and the Agricultural Food Board are three commodity boards, which procure and forward Canadian farm products contracted for under agreements with other Governments. The Meat Board (previously the Bacon Board) acts as the agency which implements the agreements with the British Ministry of Food for bacon and other meat products. The Dairy Products Board acts in a similar capacity with respect to Canadian cheddar cheese needed by the United Kingdom and takes such measures as will ensure needed supplies of other dairy products for Britain or for Canadian markets. The Special Products Board is responsible for supplying certain Canadian farm products such as eggs, fruit and vegetable products and flax fibre.

**Dominion Bureau of Statistics.**—The great and many-sided expansion of Canadian statistics in numerous fields during the past twenty years, and the work that the Dominion Bureau of Statistics has done to provide a statistical background for economic study, have greatly facilitated the conversion from a peace economy to a war economy. Far more is known about production, internal trade, prices, the balance of international payments, etc., than during 1914-18, and this knowledge has been extensively used by the Government.



*Co-operation with the Wartime Prices and Trade Board.*—After the creation of the Wartime Prices and Trade Board, close liaison was established between the Board and the Bureau, the statistical staff being supplied by the Board but organized by the Bureau. Statistics on coal were collected and compiled for the Coal Administrator. At the request of the Hides and Leather Administrator, a monthly series of statistics on stocks of hides, skins and leather was instituted. Later on, another monthly series of reports on retailers' inventories was introduced. The work on prices has been expanded considerably, particularly as regards cost-of-living statistics, and extensive price records are furnished regularly to the Board at frequent intervals.

Under the Wartime Prices and Trade Board's order to license persons and firms selling or buying for resale, commodities and specified services, the Merchandising and Services Branch of the Bureau became the Records Division for this work. Over 330,000 businesses were licensed and have been coded. Results from this work have provided record lists of firms for use in the various administrations.

*Co-operation with the Foreign Exchange Control Board.*—The International Payments Branch of the Bureau co-ordinates its work with that of the Foreign Exchange Control Board. Four officers of its staff are working on the premises of the Foreign Exchange Control Board and the Branch has co-operated in drawing up the forms and schedules used by the Board in its statistical work. As a result of the requirements of the Foreign Exchange Control Board, the work on tourist statistics has been reorganized.

*National Research Council.*—The National Research Council is serving as a central co-ordinating body directing scientific research in Canada. This work is being carried on not only within its own laboratories but in the universities and in industry; the combined effort is at present being directed to the solution of new and urgent problems arising out of the War. The Council has been appointed the official research station of the Navy, Army and Air Force in Canada. Close co-operation between Service personnel and research staff has been a large factor in the successful application of science to the solution of military problems. Continued co-operation of all research workers in Canada on the firm basis established during the War will likewise be a powerful factor in the solution of the many and varied problems that will confront the Dominion in the post-war era.

The Council's work is planned along two main lines: the conduct of fundamental and applied research, including essential test work in the National Research Laboratories at Ottawa, and the promotion, co-ordination and support of research in other centres throughout the Dominion by grants in aid, award of scholarships, and the direction of research investigations under the guidance of committees of specialists appointed by the Council.

Effective liaison has been maintained in scientific work going on in the United Kingdom, Canada, and other Dominions, and the United States. The National Research Council has a Chief Scientific Liaison Officer at London; the British Government has a liaison office in Canada. Intimate connections are also maintained with government officials and laboratories in the United States in the joint planning and conduct of war research.

Scientific problems referred to the Council in connection with the activities of the Armed Forces are studied jointly by officers from Defence Headquarters and civilian personnel on the Council's staff. Many of the problems are highly technical.



Satisfactory tests made on a cracked type of gasoline have shown that it can be used in training aircraft. This investigation should materially assist in increasing the aviation gasoline supply.

The structures laboratory is the only building in Canada equipped with facilities for testing aircraft structures, such as wings and tail surfaces.

Development for the Air Service of a suitable man-carrying parachute from 'nylon' has been successful. Viscose rayon as a substitute for silk in the manufacture of reconnaissance flare parachutes is being used with success. Boot soles of cotton fabric and suitable plastics have been made up and after successful laboratory tests are now being given field trials.

Gas-detector paints, luminous paints, heat-reflecting paints for armoured vehicles, finishes for rifle barrels, camouflage paints, fluorescent paints, and fire-retardant paints have been developed. Indicators for war gases and chemicals for other war services have been synthesized and studied.

The National Research Council has undertaken the manufacture of high-grade lenses for precision instruments for the Department of National Defence. Such lenses were imported from abroad in pre-war days. The picture shows raw glass shapes and finished lenses mounted on the blocks ready for grinding. The curvature of the concave or convex blocks governs the curvature of the surfaces to which the lenses are finally ground. *Inset:* The operator is applying emery to the iron grinding plate upon which the blocks carrying the lenses are rotated.

*Courtesy, National Research Council*



In the field of food and shipping, useful aid has been given in the fitting of temporary refrigerators on merchant vessels; investigations on modified curing practices for bacon resulted in the adoption of a standard cure by Canadian packers; research on the drying of pork has been successful; specifications have been prepared for the processing and storage of dried eggs; and much research work has been done on food containers.

**Department of Pensions and National Health.**—The ordinary peace-time duties of this Department have been turned into war channels to an increasing degree since the outbreak of hostilities. The Pensions Branch of the Department has been largely occupied with the treatment of members and discharged members of the Armed Forces, and with pensions. It has been necessary to construct additional accommodation in all the Departmental pensions hospitals; those Departmental hospitals previously utilized for immigration and quarantine purposes have been adapted to provide active treatment for members of the Armed Forces or for civilian accommodation in the event of any emergency, and the total bed accommodation has been increased from less than 3,000 to over 8,000. The case of every member of the Forces discharged by reason of medical unfitness is reviewed by the Canadian Pension Commission. Rehabilitation plans for members of the Forces engaged in the present conflict are now in process of organization, under the direction of an Associate Deputy Minister of the Department especially appointed for the purpose. The rehabilitation program already enacted is much more comprehensive than that following the First World War. Because of conditions that were attached to the training program after that War, only 8 p.c. of the Forces benefited by vocational training and assistance in interrupted education. A further 4 p.c. were assisted in settlement upon the land. Thus, only 12 p.c. of the Forces then demobilized benefited by rehabilitation projects and the remaining 88 p.c. were given a war service gratuity. The newly enacted Post-Discharge Re-establishment Order enables the Department to furnish vocational training to all members, male and female, of the Forces, who need a skill or a brush-up course. Likewise, anyone who possesses the basic education can be assisted in university training. Social security and free medical treatment are also available for all for twelve months after discharge.

Most of the divisions of the Health Branch of the Department have also taken an active part in the war effort. The Division of Industrial Hygiene is specifically authorized to examine and recommend improvement in the working conditions and medical care of personnel in war industries. The work of the Nutrition Services is important in raising the standard of nutrition not only among the Armed Forces but among the general public of Canada, with a view to greater achievement in the war effort. Both of these services have proved most acceptable to industry. The Public Health Engineering Division has found its important peace-time duties of supervision of drinking- and culinary-water supplies and sanitation greatly increased in relation to the movement of troops and the establishment of new training grounds. The Laboratory of Hygiene undertakes, standardizes and controls the manufacture of biological products for use by the Armed Forces; under the supervision of the Kamloops, B.C., Division watch is kept on the rat population on the seaboards as well as the invasion of disease-carrying rodents in various parts of the western provinces. The vigilance of the Food and Drugs Division is directed towards the maintenance or adjustment of the standards of foodstuffs to meet war-time requirements, particularly with regard to those constituents that

came from countries where trade relations are difficult if not impossible. The Quarantine and Sick Mariners' Division now treats members of the Merchant Marine who are taken ill while awaiting convoy, and provides for the institutional retention of those in Canada who are too sick to continue service and who are citizens of countries occupied by the enemy.

**Other Agencies and Activities.**—There are various other special agencies performing important economic functions, either of control or investigation. The Canadian Shipping Board controls the use of both lake and ocean ships of Canadian registry. In allocating ships to particular routes and in seeing that essential cargoes are carried, it co-operates with the United Kingdom Ministry of War Transport and the United States Maritime Commission. The Shipping Priorities Committee determines the degree of urgency or priority of the various shipping requirements, gives direction to the Shipping Board, and forwards necessary requests for the use of United Kingdom and United States ships.

Since the Hyde Park Declaration, joint committees have been set up to co-ordinate the war programs of the United States and Canada on the economic side. The Joint Materials Co-ordinating Committee, linking the War Production Board and the Department of Munitions and Supply, is concerned with joint plans for the production, acquisition and use of scarce basic materials. The Joint Committee on Defence Production surveys the plant capacities in each country for the production of complete war equipment and supplies and recommends such modifications in allotment and specifications as will increase the total effectiveness of the program. The Joint Agricultural Committee reviews the war-time agricultural problems of both Canada and the United States for the purpose of promoting the co-ordination of agricultural production and marketing policies of the two countries.

Joint Economic Committees, with which the other joint committees maintain liaison, have an over-riding responsibility to investigate and report on joint war-time economic problems not being currently studied by other agencies. They are further charged with the duty of studying joint economic problems of post-war adjustment.

More recently, the problems of co-ordination, both internal and international, in the field of export policy have become more important because of the growing scarcity of essential materials. A Food Requirements Committee was established late in 1942 for the purpose of studying both domestic and external demands on Canada's food production and recommending appropriate policies in connection therewith.

In order to keep essential supplies from reaching enemy hands, control is exercised over exports from Canada through a special branch of the Department of Trade and Commerce. The Trading with the Enemy Regulations, administered by the Custodian of Enemy Property, prevent the enemy from deriving any benefit whatsoever from trade.

In September, 1939, an Advisory Committee on Economic Policy, consisting of senior officials of various departments and agencies of Government, was established to investigate, report and advise upon questions of economic and financial policy and organization arising out of Canadian participation in the War. Early in 1943 the responsibility of this Committee was widened to include the planning and organization of the investigation and study of post-war problems by departments and agencies of Government.

The Canada Medal.—This is the first distinctly Canadian decoration, the institution of which has been approved by His Majesty the King on the recommendation of the Canadian Government. It is to be awarded in recognition of "meritorious service above and beyond the faithful performance of duties".

*Courtesy, National Film Board*



### Honours and Decorations

The tabulation below shows the awards to Naval, Army and Air Force personnel and to civilians for the period from the outbreak of war to Oct. 31, 1943. The Naval awards include those to Royal Canadian Navy personnel on loan to the Royal Navy. Of the Army awards, the Dieppe expedition accounted for one V.C., 13 D.S.O.'s, 19 M.C.'s, 13 D.C.M.'s and 49 M.M.'s. The operations in Sicily were recognized by the granting of 13 D.S.O.'s, 20 M.C.'s, 5 D.C.M.'s and 29 M.M.'s, and Canadians attached to the British forces in North Africa received one M.C. and one M.M.

#### HONOURS AND DECORATIONS AWARDED TO CANADIANS FROM THE OUTBREAK OF WAR TO OCT. 31, 1943

Honour or Decoration	Navy	Army	Air Force		Civil	Total
			R.C.A.F.	Canadians with R.A.F.		
V.C.	—	1	—	—	—	1
G.C.	—	2	1	1	—	4
C.B.	2	10	3	4	—	19
C.M.G.	—	1	—	—	15	16
C.B.E.	4	12	5	2	21	44
D.S.O.	6	26	13	7	—	52
O.B.E.	22	43	15	3	65	148
I.S.O.	—	—	—	—	10	10
M.B.E.	21	99	25	1	151	297
R.R.C.	—	8	—	—	—	8
D.S.C.	46	—	—	1	—	47
M.C.	—	40	1	—	—	41
D.F.C.	—	—	609	168	—	777
A.F.C.	—	—	75	11	—	86
A.R.R.C.	2	15	3	—	—	20
<b>MEDALS—</b>						
Albert	1	—	—	—	—	1
Distinguished Conduct	—	18	—	—	—	18
Conspicuous Gallantry	1	—	5	—	—	6
King's Police and Fire Services	—	—	—	—	18	18
George	5	4	10	1	2	22
Distinguished Service	28	—	—	—	—	28
Military	—	80	—	—	—	80
Distinguished Flying	—	—	278	21	—	299
Air Force	—	—	30	1	—	31
British Empire	35	71	58	—	27	192
Polar (silver)	—	—	—	—	8	8



## Economic Developments in Canada, 1943



Hon. James A. MacKinnon, M.P.,  
Minister of Trade and Commerce.

The accomplishments of the Canadian people in waging war have, over the short period of the past few years, virtually transformed the Dominion's internal economy. The total value of war contracts awarded and commitments made by the Munitions and Supply Department had exceeded \$10,000,000,000 at the end of September, 1943, the Canadian account alone totalling \$4,572,000,000. An additional amount of \$48,400,000 was placed for construction in connection with the British Commonwealth Air Training Plan. Canada's balance sheet, the four-year credits and debits of war, makes it clear that the economic situation is one of great strength.

### National Income

The unprecedented rise in the national income is a measure of the economic contribution of Canadians to the War. The official estimate of such income for the first nine months of 1943 was \$6,579,000,000, a gain of 96 p.c. over the same period of 1939. Owing to the increasing concentration upon war production, the advance in the national income has continued sharply since the outbreak of hostilities. The large amount contributed to the war effort in the form of taxation and in lending to the Dominion Government reduced the disposable income in the hands of individuals and, to that extent, prevented competition with war-time industries through the purchase of consumers' goods and services. The remainder of the national income, more evenly distributed over the entire population, nevertheless represented a marked gain in the purchasing power of Canadians.

### External Trade

The expansion in external trade reflects the acceleration in productive operations. The export trade in the first nine months of 1943 was over 230 p.c. greater than in the same period of 1939. Of the grand total of \$2,137,000,000 (excluding gold) in the nine months ended September domestic exports to the United Kingdom, consisting mainly of munitions and food, were \$764,000,000. Exports to the United States, contrary to normal tendencies, were somewhat greater than the outward flow to Britain, the gains over the same period of 1939 having been 242 p.c. and 213 p.c., respectively. The War has not changed the main channels of Canada's trade which have always been predominantly with Britain and the United States. In the earlier years of the War a marked increase was shown in imports from the United States and a steady rise in exports to Britain—both features reflecting Canada's part in the war effort. The War has tended to change Canada not only from an agricultural to an industrial country but also from a debtor to a creditor nation.

Based on the experience of the first eight months of 1943, it was evident that the net capital import into Canada from the United States was of the order of \$200,000,000, or about double that for 1942 when net capital imports on Canada's security trading with that country were \$109,000,000. Security trading with the United States in 1939 resulted in a capital influx into this country of some \$57,400,000, showing how marked has been the increase since the outbreak of hostilities.

The active balance of the trade in goods rose from \$452,000,000 in the first nine months of 1942 to \$860,000,000 in the same period of 1943, or no less than 90 p.c. Including the invisible trade as well as the visible, total credits on current account with all countries, of \$3,384,000,000 in 1942 exceeded total debits of \$2,275,000,000 by \$1,109,000,000. The extraordinary change in our international trading is shown by comparison with the relatively small credit balance of \$126,000,000 recorded in 1939. Preliminary information indicates the existence of an even greater international credit in the year just ended.

### **Internal Trade**

A tapering off in retail and wholesale trade, due to the shortage of consumer goods rather than to any retardation in demand, is in evidence. Retail merchandise sales, which in 1941 amounted to \$3,311,000,000, are, according to the trend of monthly indexes, running about 20 p.c. above that figure. As the production of household utilities has been largely discontinued for the duration of the War and the output of many other lines drastically curtailed, retail trade, especially in non-essential commodities, is feeling the effects of the limitation.

Dollar sales of wholesale merchants rose 63.4 p.c. in the first eight months of 1943 over the same period of 1939. As the gain in wholesale prices was 35 p.c. in the same comparison, it is evident that the volume of goods distributed through wholesale outlets was at a much higher level.

Transportation being the life-line of a country at war, the smooth functioning of the different interlocking transportation services has been a factor in the development of war industries. The revenue freight loaded from January to September, 1943, was about 73,000,000 tons compared with 41,000,000 for the corresponding period in 1939. The net earnings of the two main railways during the first nine months surpassed comparable figures for any previous year in Canadian railway history. The combined amount for railway operations was \$104,900,000 compared with \$19,400,000 in 1939.

### **Manufacturing and Employment**

Since the outbreak of war, the industrial activity of the Dominion has been increasing at a steadily rising pace. The index of manufacturing production advanced more than 190 p.c. in the first nine months of 1943 over the same period of 1939 and progressive increases have been recorded from month to month as the War has progressed. Changes in the type of production during last year were mainly concerned with the transition from defensive to offensive weapons, and the change in the fortunes of the Allied Nations has provided an opportunity to appraise critically production in certain lines to determine whether greater opportunity could not be found for the manufacture of necessary civilian supplies.

The average number employed in manufacturing industries as indicated by the index of employment in the first nine months of 1943 was more than double the

## **CANADA 1944**

corresponding figure in 1939. The number of persons employed directly or indirectly in war work was estimated at 1,100,000 on Sept. 1, compared with 300,000 on the same date in 1940. Concentration of war workers was heaviest in the iron and steel, non-ferrous metal, electrical apparatus and chemical industries, although the acceleration also extended to most other lines of manufacturing.

Estimates of expenditure on additions and extensions to war industry plants for the fiscal year 1943-44 are \$195,000,000, a considerable drop from the \$361,000,000 of the preceding fiscal year. Up to the end of 1942, capital commitments made on behalf of the Dominion and British Governments for plant expansion were \$900,000,000. Construction contracts were awarded to the amount of \$160,000,000 in the first nine months of 1943, a decline of about \$70,000,000 from the same period of the preceding year: the contraction further increases the sizable backlog of this type of construction—an important factor in post-war employment.

### **Finance**

There exists no simple measure of monetary expansion. The medium of payment in Canada consists predominantly of bank deposits, but the use of circulating media has also been greatly expanded since the War commenced. The notes and subsidiary coin in the hands of the public were estimated at \$783,000,000 in September, 1943, compared with \$251,000,000, the average for 1939. The four main classes of bank deposits had advanced to \$3,978,000,000 in September, 1943, from \$2,524,000,000 in the first month of war, a gain of more than 57 p.c.

The moderate expansion in current loans placed by the chartered banks in the past four years has been due, in part, to the construction and financing of many war plants by the Government. The security holdings of the banks have risen markedly from \$1,502,000,000 in September, 1939, to \$2,881,000,000 in September, 1943: they represent the part the banks have taken in helping to finance the War.

As a result of war demands the Government's cash requirements for the fiscal year 1943-44 are nearly eleven times as great as in the pre-war period, amounting to about \$5,500,000,000.

### **Primary Production**

Greatly hampered by the lack of adequate manpower, the primary industries made a notable contribution to the war effort in 1943.

Agriculture continued to play an increasingly important part in providing food supplies urgently needed by the United Nations. Despite the remarkable wheat crop of 1942 amounting to nearly 600,000,000 bu., the stocks presently on hand are not regarded as excessive.

The 1943 wheat harvest was only about half that of 1942, but was larger than the output in any of the five years from 1933 to 1937 and was produced on the smallest acreage seeded to wheat since annual records were first kept in 1918. The trend toward wheat acreage production, in evidence since 1938, has now been checked because of the increasing consumption for feed and the expectation that large quantities will be required to supply liberated European countries. The amount of wheat used for animal feed and alcohol during the past season was almost double that used for domestic human consumption. Arrangements were made in September to supply Britain with 1,000,000 tons of wheat flour, representing from 40,000,000 to 60,000,000 bu. of wheat; milling capacity was fully employed to hasten delivery.

Owing to the unsatisfactory crop of coarse grains in Eastern Canada, live-stock producers are relying on feed grains from the western provinces to a greater extent than ever before. Heavy demand for oats and barley for milling and feeding as well as the smaller crop will greatly reduce the combined stocks of the two grains. The eastward movement of feed grains from the Prairie Provinces is forecast at 100,000,000 bu., which, however, is being supplied from stock without endangering the abundance that has existed since the harvest of 1942. At time of delivery the farmers receive 10 cents per bu. on oats and 15 cents on barley in addition to market prices. The compensation is for the purpose of equalizing export and domestic prices.

Many farmers specializing in wheat production during the pre-war period have in recent years turned their attention to live-stock and animal products. Canada is undertaking to supply Britain with not less than 900,000,000 lb. of bacon during the two years 1944 and 1945. Actual shipments may be substantially greater, if feed conditions and the supply of labour permit production on a scale comparable to that of 1943. The agreement for 1943 called for 150,000,000 lb. of cheese and 63,000,000 doz. eggs and major quantities of both foods will be needed. The requirements of butter may exceed the 7,000,000 lb. shipped in 1943.

The fisheries industry also is performing an important function by adding to the war-time food supply. Deliveries of canned salmon to Britain amounted to about 150,000,000 lb. during 1941 and 1942, while canned herring production reached 79,000,000 lb. in the latter year. The landed value of sea fish in the first nine months of 1943 was placed at \$37,000,000, a gain of 35 p.c. over the corresponding figure of 1942. The gain, however, was almost entirely due to increased prices, the volume remaining practically unchanged.

Confronted with a heavy demand, forestry production in Canada at present is limited only by the scarcity of efficient labour and the restriction of transportation facilities. Records of timber scaled in British Columbia indicate that operations were on a lower level than in 1942. While the output of newsprint was nearly 8 p.c. greater in the first nine months than in the same period of 1939, the supply was inadequate for present markets.

The mining industry made a notable contribution to the war effort in 1943. Immense quantities of base metals produced in Canada were supplied to the munitions factories of the United Nations, this country becoming the greatest exporter in these lines. The output of aluminum, derived from imported ores, is sufficient to supply 40 p.c. of the war requirements of the Allies. Canada is producing about 95 p.c. of the total nickel output of the United Nations, 20 p.c. each of the zinc and the mercury, 15 p.c. of the lead and 12 p.c. of the copper. War-time restrictions have reduced the civilian use of four of the most important non-ferrous metals to well below 10 p.c. of the total consumption.

The response to the challenge of war-time demand for power is indicated by the rapid advance in the output of primary electric energy. The total for the first nine months of 1943 was 26,300,000,000 kwh. against 14,100,000,000 kwh. in the same period of 1939. The expansion in turbine installation since the end of 1939 has been 1,750,000 h.p. and further installations are planned for the immediate future. The rapid construction of the Shipshaw plant with a designed capacity of 1,020,000 h.p. contributed greatly to power expansion in the past two years.





## THE EFFECTS OF THE WAR ON CANADIAN FORESTRY



Canada's great forest resources and forest industries have been able to play a significant part in the war effort of the Empire and of the United Nations.

Canada's forests cover an area of 1,220,400 square miles, or more than one-third of the total land area of the country, but a considerable part of this vast forest is not suitable for commercial operations, either because it is too difficult and expensive to reach, or because the trees are not of satisfactory size and quality. The accessible productive portion of the forest covers 430,000 square miles, or 275 million acres, and it is from this area that the whole output of sawlogs, pulpwood, fuelwood, and other primary products is obtained. About 340,000 square miles of forests, classed as productive but not at present accessible, form a reserve for the future when transportation systems may be more highly developed.

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

The total stand of timber of merchantable size is estimated to be approximately 313,000 million cubic feet, of which 212,000 million cubic feet are accessible. In terms of ordinary commercial units of measurement, the accessible portion of the stand consists of 252,000 million feet board measure of sawlogs and 1,500 million cords of smaller material. Nearly 70 p.c. of the accessible stand is of softwood species.

### The Forest Industries

The three major forest industries are: operations in the woods (or logging), the lumber industry, and the manufacture of pulp and paper. There are also large and important groups of secondary industries which use partially manufactured wood or paper as their raw materials.

Some of the most important facts respecting the major industries in the latest pre-war year are given in the following statement.

FOREST INDUSTRIES, 1939

Industry	Estab- lishments No.	Capital Invested \$	Em- ployees No.	Value of Products \$
Woods operations.....	-	198,000,000	98,000 <sup>1</sup>	157,747,398
Lumber industry.....	3,941	85,628,394	32,399	100,132,597
Pulp and paper.....	100	597,908,918	31,016	208,152,295

<sup>1</sup> Man-year basis.

## FORESTRY IN WAR-TIME

In Eastern Canada, where climatic conditions favour seasonal operations, most of the sawlogs are cut during the winter months by the same companies that operate sawmills. Much of the pulpwood is produced by manufacturers of pulp and paper, but an additional volume is taken out by independent operators. The latter group may be considered to constitute a separate, though small, logging industry. On the west coast of British Columbia, however, there is a highly developed industry engaged solely in the production and sale of logs, although many sawmill companies also do their own logging. Climatic conditions in this region permit logging to be carried on throughout the year, and the large size of the trees necessitates the employment of heavy and expensive machinery.

The pulp and paper industry comprises a small number of manufacturing units, all of relatively large size. In the lumber industry, on the other hand, there are some very large mills, a greater number of medium size, and very many small mills. Among the mills reporting to the Dominion Bureau of Statistics in 1939 were 63 whose annual production exceeded 10 million board feet, 325 producing from one million to 10 million feet, and 3,553 small mills producing less than one million feet apiece. It is estimated that the large mills produce about 55 p.c. of the annual cut, the medium-sized mills 30 p.c., and the small mills 15 p.c.

In normal times the forest industries depend on export markets for the sale of large proportions of their total production. Although they sell their goods in many different countries, their chief outlets are in the United Kingdom and the United States. Consequently, Canadian forest industries had accumulated, before the War, invaluable experience in meeting both British and United States requirements.

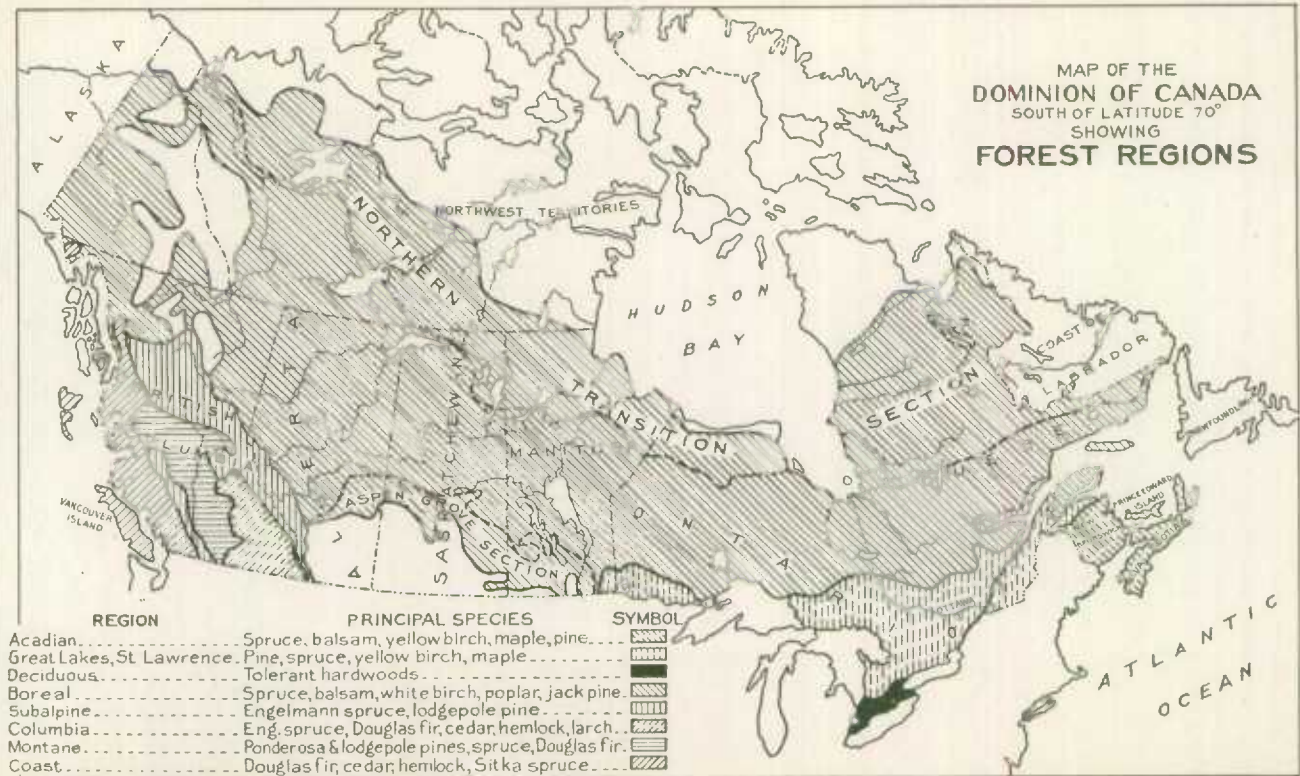
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**Typical Canadian Forest Terrain of the Canadian Shield.**

*Royal Canadian Air Force Photo*



MAP OF THE  
DOMINION OF CANADA  
SOUTH OF LATITUDE 70°  
SHOWING  
FOREST REGIONS





## FORESTRY IN WAR-TIME

**Lumbering.**—At the outbreak of war in September, 1939, the Canadian lumber industry was experiencing a period of reasonable activity. Production of lumber during that year, totalling 3,976 million feet board measure, was about normal, although the proportion of the total cut exported, 55 p.c., was somewhat higher than usual. Shipments to the United Kingdom, amounting to 1,224 million feet, were 33 p.c. greater than the average for the previous five years and reflected the efforts being made in Britain to accumulate stocks before hostilities commenced.

During the winter logging season of 1939-40 the cut of logs was considerably increased, but on the whole the industry underwent no considerable dislocation of its normal activities until early in the summer of 1940. The conquest of Norway in April and the culmination of the German sweep to the west in the Fall of France in June radically altered the whole outlook, and the phrase "business as usual" passed into history for the time being. Canada was now definitely in danger, and the demands on the lumber industry were also increased by the changed position of the United Kingdom. Ordinarily the British Isles constitute the most important import market for lumber in the world, with an annual requirement for about 4,400 million board feet of softwoods and 560 million feet of hardwoods. Before the War, the Scandinavian and Baltic countries supplied a large proportion of Britain's softwoods, but this source was now entirely cut off by enemy action. Overnight, Canada became almost the sole source of supply available and her exports to the United Kingdom in 1940 reached the record total of 1,617 million feet, of which approximately 1,000 million feet were provided by British Columbia.

In Canada, construction programs for naval, military and air-force establishments, and for new munitions factories were at once revised upwards on a scale that promised to tax the construction industry and the suppliers of materials to the utmost. Wood was to be the chief building material and the conflicting needs of different branches of the Armed Forces, of industry, and of timber exporters threatened to create a chaotic market.

In Canada more than 5,000 buildings were erected in 1940 at bases and training establishments of the Navy, Army and Air Force, and work was commenced on many offices and factories. About 430 million board feet of lumber were used for this purpose during the year, in addition to 100,000 squares of shingles and large quantities of flooring and millwork. The building program in 1941 was almost as large and included 4,000 more buildings for the Armed Forces. Still further additions to the list have been made since then.

Sorting Logs that have been floated down stream to their destination.

*(Courtesy, Monetary Times)*





Among the thousands of buildings erected were many hundreds, such as aircraft hangars, drill halls, and storage sheds, in which maximum area of unobstructed floor space was an essential requirement. Columns and roof-trusses, comprising the frames for all but a few of these, were fabricated from structural grades of Douglas fir timber, individual members being fastened together by means of steel ring-connectors. In 1940 alone 335 hangars and similar structures were erected, and by the end of 1942 the number had exceeded 700.

Another major use for wood, which increased rapidly in 1940 and has since surpassed the requirements for war building, is the fabrication of boxes, barrels, and crates. Munitions, food, and other supplies destined for shipment overseas must be packed in containers strong enough to prevent damage, and motor-vehicles and aircraft are protected by wooden crates. The necessity for conserving both lumber and shipping space makes it imperative that packages should be reduced to the smallest sizes consistent with security of the contents, and a great deal of systematic investigation of container design has been necessary. Many types of boxes have been tested and re-designed at the Forest Products Laboratories of the Department of Mines and Resources, with consequent important savings of materials and space.

In addition to building materials, box shook and crating, domestic requirements for lumber for purposes essential to prosecution of the War have included large volumes for use in shipbuilding, essential mines, and the building of truck bodies, aircraft, railway rolling-stock, and bridges and culverts. All these demands, when added to export requirements, have inevitably led to reduction of the quantities of lumber available for ordinary civilian purposes, and have created a very difficult situation for the retail section of the lumber trade, even though loggers and sawmill operators have done their utmost to increase production.

As a first step towards ensuring that available lumber would be used to the best advantage, a Timber Controller for Canada was appointed in the Department of Munitions and Supply, by an Order in Council dated June 24, 1940. The chief immediate tasks were three in number. First, arrangements had to be made for maintaining the flow of supplies of lumber urgently needed in the United Kingdom; secondly, timber had to be secured for Canada's own war building-program, including the British Commonwealth Air Training Plan; and thirdly, exports of lumber to non-



Community Settlement for War Workers in the Shipbuilding Yards at Vancouver, B.C.—These houses were erected by Wartime Housing Ltd., a Crown company.

*Courtesy, National Film Board*

Standing on Springboards, Two Husky Woodsmen Fell a Huge Sitka Spruce.

*Courtesy, National Film Board*



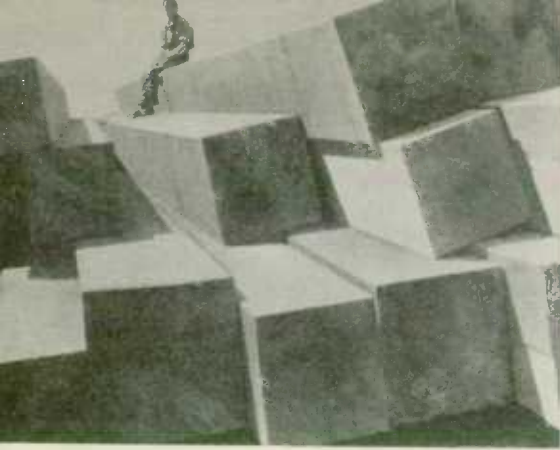
sterling countries had to be kept up as a source of urgently needed foreign exchange. In addition to these, sufficient lumber had to be found to meet the needs of essential civil business.

The abnormal demand for shipping space caused by the War and the high rate of losses of tonnage in the Atlantic combined to make it impossible for vessels to spend the time needed for the long voyage through the Panama Canal and up the west coast of the United States to Vancouver. Accordingly, special freight rates for transcontinental shipment of lumber from British Columbia to eastern ports were adopted by the two great railway systems, and such movements were undertaken for the first time on a large scale. As much as 80 million feet of lumber for the United Kingdom have been handled under this scheme in a single month.

During the first two years of the War the output of lumber steadily increased. In 1942, however, there was a slight decline as compared to the previous year, and preliminary estimates for 1943 indicate that the output will not be greater than in 1939. Official figures in M ft. b. m. for 1939 to 1941, and estimates for the succeeding two years are: 1939, 3,976,000; 1940, 4,629,052; 1941, 4,941,084; 1942, 4,800,000; 1943, 4,300,000.

It is estimated that in 1943 lumber will have been distributed about as follows: the Armed Forces, naval and merchant shipping, and Wartime Housing will require about 500 million board feet; about 600 million feet will be used for boxes and crating; the railroads will consume 130 million feet and essential mines 120 million feet; and miscellaneous war purposes will require 50 million feet. Thus, war requirements will have totalled 1,400 million feet. Exports to Great Britain and her Allies will have amounted to 1,800 million feet, leaving only 1,100 million feet for essential civil uses. The latter figure is very small and explains why many restrictions on the use of lumber have had to be imposed.

The fall in production from 1941 to 1943 does not represent any slackening of effort on the part of the industry; on the contrary, operators have had to work harder, under accumulating difficulties, in the later years. The chief of these difficulties has been shortage of labour in the woods and in the mills. Large numbers of men ordinarily available to the lumber industry have enlisted in the Armed Forces, and additional numbers have found employment in shipbuilding and the munitions industries. Lumbering has now been declared an 'essential industry' and the National Selective Service organization has taken steps to check the drift of men away from the woods and mills; nevertheless, a very tight labour situation seems inevitable



Exceptionally Fine British Columbia  
Fir Logs Selected for High Class  
Construction Purposes.

*Courtesy, Timberland Lumber Co.*

while the War lasts. Other difficulties have arisen in connection with obtaining supplies, restriction of truck haulage, rationing, and so forth, but these have been reduced as far as possible by co-operation of governmental authorities.

The policies respecting control of timber have undergone many changes in order to keep pace with changes in the situation. Perhaps the most significant of these has been the change respecting exports of lumber to non-Empire countries and, more particularly, exports to the United States. In 1940 United States imports of Canadian lumber, totalling 651 million board feet, were only slightly larger than in 1939. During the following year, however, consumption of Canadian lumber in the United States was doubled. Up to this point it was desired that these exports should be as large as possible in order that Canada might secure United States dollars needed to pay for imported war supplies. After the declaration of war by the United States in December, 1941, exports of Canadian lumber increased still further, but the upward trend of Canadian forest production had been checked. So great a drain on stocks was made in 1942 that supplies for the United Kingdom and for Canada's own war effort were seriously threatened. Under the circumstances it was necessary to make all exports of lumber to non-Empire countries subject to permit. At the same time, arrangements were made with authorities in the United States to ensure that all Canadian lumber exported thereto would be used for essential war purposes.

To encourage production of softwood lumber in the face of increased costs and the curtailment of exports to the United States, increases in prices paid to primary producers have from time to time been authorized and the Timber Controller has recently ruled that, effective Sept. 1, 1943, these increases may be reflected in higher retail prices. Much of the lumber sold at retail is for defence purposes, in which case higher prices do not create pressure on the cost of living. It would, however, be inconsistent with the Government's price control policy to require civilian consumers to absorb these increased costs. A subsidy is therefore being paid by the Commodity Prices Stabilization Corporation on essential purchases of softwood lumber, lath, posts and shingles by such users as farmers, fishermen, fruit and vegetable growers, trappers and other persons requiring lumber for use in the pursuit of their personal trades or by civilians generally for maintenance and repair purposes.

**Pulp and Paper.**—In 1939 the pulp and paper industry occupied first place among all manufacturing industries in Canada in respect to amount of capital employed and amount of salaries and wages paid. In numbers of employees and gross value of products it stood second to the sawmilling industry and the base-metal smelting and refining industry, respectively. Its most important product was and is newsprint paper, about 80 p.c. of which is sold in the United States.



## FORESTRY IN WAR-TIME

During the earlier years of the War, production of the industry's principal raw material, pulpwood, increased by leaps and bounds, and the manufacture of wood-pulps and papers increased accordingly. In 1941 both volume and value of production exceeded all previous levels. Notable developments during this period were the large increases in production and exports of all kinds of wood-pulps, and of paper boards and papers other than newsprint. The exceptional demand for pulps made necessary the installation of additional manufacturing facilities, and exports were twice as large in 1941 as in 1939.

The trends of production of wood-pulp and paper are shown in the following statement.

### PRODUCTION OF WOOD-PULP AND PAPER

Year	Wood-Pulp tons	Newsprint Paper tons	Other Papers <sup>1</sup> tons
1939.....	4,166,301	2,926,597	673,905
1940.....	5,290,762	3,503,801	815,613
1941.....	5,720,847	3,519,733	1,010,408
1942.....	5,606,461	3,257,180	984,587

<sup>1</sup> Including paper boards.

Up to the end of 1941 conditions caused by the War had the effect of intensifying the demand for products of the pulp and paper industry, but did not result in any major disturbance of normal operating and trade practices. While the Armed Forces and the munitions industries required more paper to conduct business, and require-

A Modern Pulp and Paper Plant in the Gaspé Region of Quebec.—This is typical of the many pulp and paper establishments that have brought Canada to a foremost position in this industry.

*Courtesy, Canadian Airways Limited*





ments for pulps, wrapping papers, and newsprint increased, these products continued to be distributed through what were pretty much the normal channels. The uses of the products of this industry for direct war purposes may be less obvious than in some other cases, but it has secured for Canada most urgently needed supplies of foreign exchange, particularly United States dollars. This function was of exceptional importance prior to the entry of the United States into the War. Through the processes of foreign trade many thousands of tons of pulp and paper shipped across the southern border reappeared in Canada in the form of training aircraft, guns, tanks and other war supplies which could not at that time be manufactured here.

A special contribution to the general war effort was made by the pulp and paper industry by the adoption of a program for the manufacture of "bits and pieces" in its extensive and well-equipped machine shops, and the diversified list of products made includes parts for naval and cargo vessels, aeroplanes and gun-mountings, as well as gauges and other special devices. During the first year, supplies produced were valued at more than \$1,250,000, and subsequent production has been much greater.

At the beginning of 1942 there were some doubts whether production of pulpwood could be maintained at the rate of the previous year, and meanwhile the outflow to the United States was greater than ever before. Production and distribution of pulpwood were, therefore, placed under direction of the Timber Controller and all exports to non-Empire countries were made subject to permit. Arrangements were made, however, whereby United States mills, which normally depended on Canadian wood, would receive enough to meet their ordinary requirements. During the year all business in wood-pulps and papers was brought under the control of Administrators of the Wartime Prices and Trade Board. The first Newsprint Administrator was appointed in December, 1941.

Newsprint mills are very large consumers of power and Canada is outstanding among nations as a producer of hydro-electric power. Nevertheless, during the latter part of 1942, the needs of munitions industries and other direct war production were so great that restrictions had to be placed on the amount of current available to newsprint mills in parts of Ontario and Quebec. This inevitably resulted in reduction of the quantities of newsprint paper manufactured.

To meet this new situation, the Newsprint Administrator entered into negotiations with United States authorities intending to bring the whole newsprint industry of North America under a more or less uniform system of control. United States publishers were asked by their Government to reduce consumption, and in Canada plans were made for a pooling scheme whereby mills that had been compelled to surrender business by lack of power would be compensated from a fund to be built up from contributions by mills that were able to maintain or increase their output. This fund is held by the Commodity Prices Stabilization Corporation of the Wartime Prices and Trade Board.

At the beginning of 1943 a quota arrangement covering 25 mills was put into effect. Nevertheless, the reduced rate of operation of the industry as a whole placed Canadian manufacturers in a very difficult position because there had been no increase in the standard price of newsprint (\$50 per ton at New York) since 1938. During the intervening period costs of operation had risen steadily and a price increase of \$4 per ton was authorized in February, effective Mar. 1, 1943.

In the early summer of 1943 newly developed hydro-electric projects came into operation, substantially easing the power situation, but no considerable increase in the output of paper then seemed possible because of shortage of labour and consequent



Wooden Fuselage Pieces for a Mosquito Aeroplane.—A lath strip, tongue and groove fitting, and special adhesives bind the parts together so neatly and firmly that the join is not only invisible but as strong as any part of the fuselage.

*Courtesy, National Film Board*

shortage of pulpwood. Shipments of newsprint to the United States were stabilized at 210,000 tons per month and Canada endeavoured to supply her neighbour with 1,550,000 cords of pulpwood and about 1,200,000 tons of wood-pulps during the year. The increasing difficulties of the newsprint industry were recognized by authorization of a further price increase of \$4 per ton, effective Sept. 1, 1943.

### **Special Forest Products**

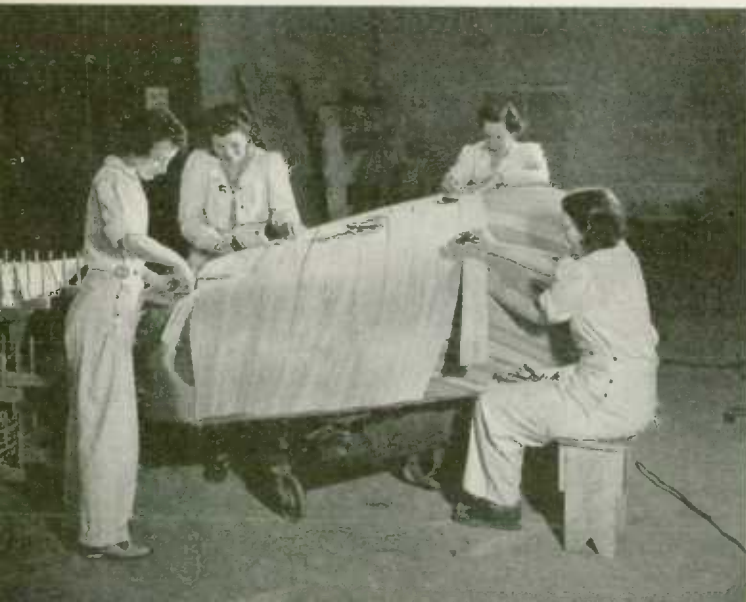
**Pit Props.**—When shipments from the Baltic area to the United Kingdom were stopped by enemy action early in the War, Great Britain lost not only a large proportion of her lumber imports, but also the chief source of supply of the pit props essential to the operation of vitally important coal mines. Round timber to be used for this purpose must be prepared according to very exacting specifications, and these were not familiar to the logging industry of Eastern Canada. In spite of this, operators in the Maritime Provinces immediately accepted large contracts and in a single operating year, 1940-41, shipped 240,000 fathoms of pit props, equivalent to just over 400,000 cords, to Britain. In 1941 arrangements were completed for supplying the mines of the United Kingdom with home-grown timber and operations in Canada were discontinued.

**Aeroplane Components.**—During the War of 1914-18 the frames of all aircraft were made of wood. Sitka spruce, which grows only on the west coasts of Canada and the United States, was found to be superior to all other species for this very exacting use. Output of lumber of suitable quality was expanded rapidly between 1914 and 1918, and as rapidly declined thereafter. During the succeeding 20 years, sales of this high-quality selected spruce were small but, on the outbreak of the present War, the demand suddenly became as great as it had been in 1918. Special steps had

to be taken to encourage production and in 1942 a Crown company, known as Aero Timber Products, Ltd., was created to expedite logging of Sitka spruce on the Queen Charlotte Islands. The specifications of lumber acceptable to the aircraft industry are so rigid that only a relatively small proportion of the lumber sawn from carefully selected logs is good enough to meet requirements. Consequently, the supply of the large quantities of aircraft stock needed by the United Kingdom and by Canada's own aircraft industry imposes a heavy drain on the limited stocks of large-size Sitka spruce trees that are still available. It is estimated that the output of "aeroplane spruce" in 1943 will total 30 million board feet, which figure may be compared with the production of 26 million feet in the last full year of the War of 1914-18.

In addition to Sitka spruce to be used in the fabrication of structural components, the aircraft industry requires large quantities of plywoods for use in covering wings and fuselages. In building up these plywoods, veneers which conform to exceptionally high specifications must be used. It has been found that the yellow birch of Eastern Canada provides the best wood for the manufacture of aircraft veneers and consequently there has been very keen search for birch logs of the requisite quality. Production of this material in quantity is difficult because only occasional trees are large enough and of sufficiently high quality to meet the requirements. Output of yellow birch veneer logs totalled 66,500 tons in 1940 and is estimated at 110,000 tons for 1943. Production and distribution of veneer logs in Eastern Canada has been placed under the control of a Crown company known as Veneer Log Supply Company, Ltd., with headquarters at Montreal. Concurrently with expansion of the output of veneer logs, a number of Canadian factories have undertaken the manufacture of aircraft veneers and plywoods. Production of such plywoods in 1943 is estimated at 33½ million square feet.

**Wood Fuel.**—In the summer of 1942, it became apparent that the country was threatened with a serious shortage of wood fuel. Normal consumption of this commodity is in the order of 9,000,000 cords annually, and most of it is produced by many thousands of individual farmers, rather than by relatively large industrial units. Shortages of farm labour, together with the abnormal demands for production of food of all kinds, have resulted in curtailed production. This shortage is very serious, particularly in sections of the country which normally rely mainly on wood for both



Aircraft Construction.—  
Thin veneer plywood  
strips being skillfully  
wrapped around a solid  
wooden mandrel, in  
three or more layers.

*Courtesy, Cockshutt  
Moulded Aircraft*





A Splendid Stand of  
Sugar Maple in Eastern Canada.

*Courtesy, Ontario Department of Lands and Forests*



A Valuable Sitka Spruce Stand in British  
Columbia.—Such stands are being rapidly denuded  
by the increased war-time demands for this species.

*Courtesy, National Film Board*



A Mixed Stand of Western  
Red Cedar, Hemlock and Douglas Fir.

*Courtesy, National Film Board*



A Growth of Pine in the  
Parklands Area of the Prairie Provinces.

*Courtesy, Dominion Forest Service*



# GRAPHIC RECORD OF FOREST RESOURCES AND FOREST INDUSTRIES

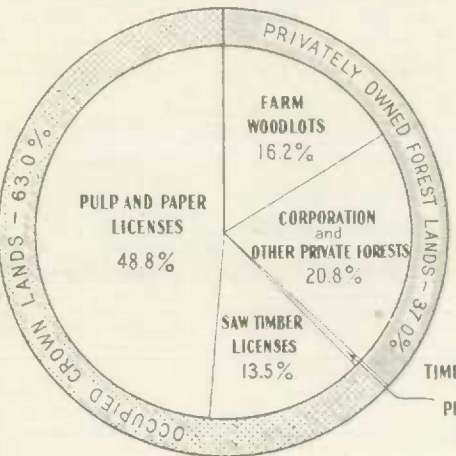
## FORESTED AND NON FORESTED LANDS IN THE NINE PROVINCES

Merchantable forest shown in heavy shading



## OWNERSHIP OF OCCUPIED FORESTED LANDS

Unoccupied Crown Forest Lands are not included in this chart, see →

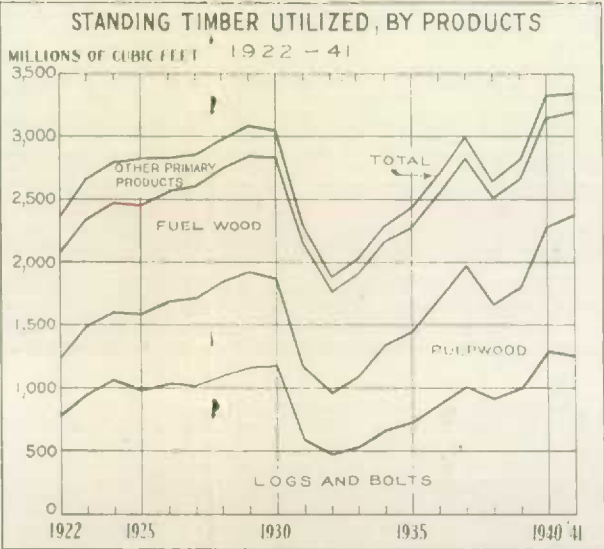
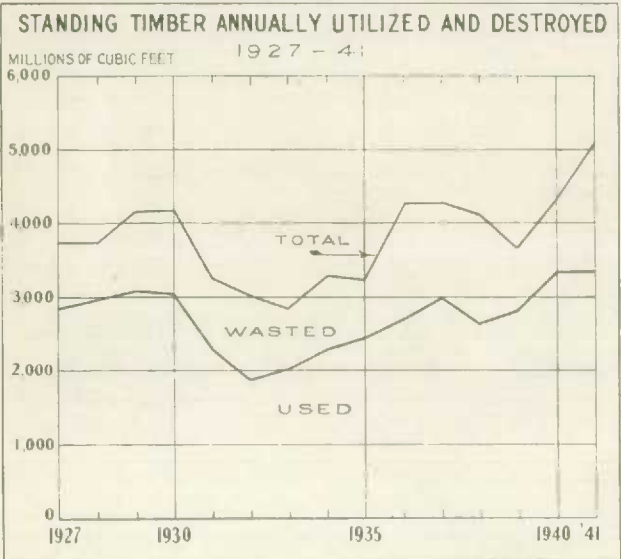
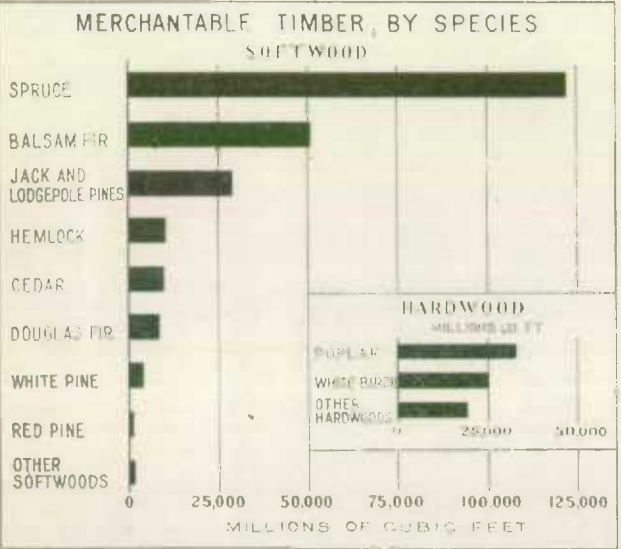
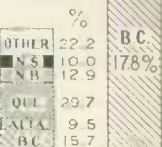


## ALIENATED AND UNALIENATED FOREST LANDS

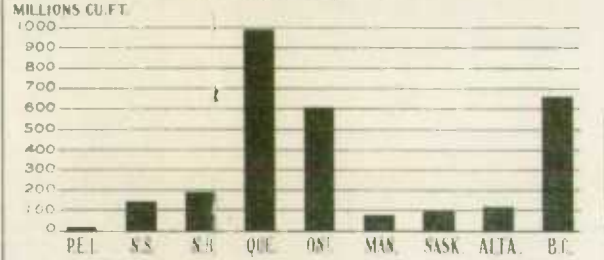
UNALIENATED  
N.B. 11.0% N.S. 0.2%



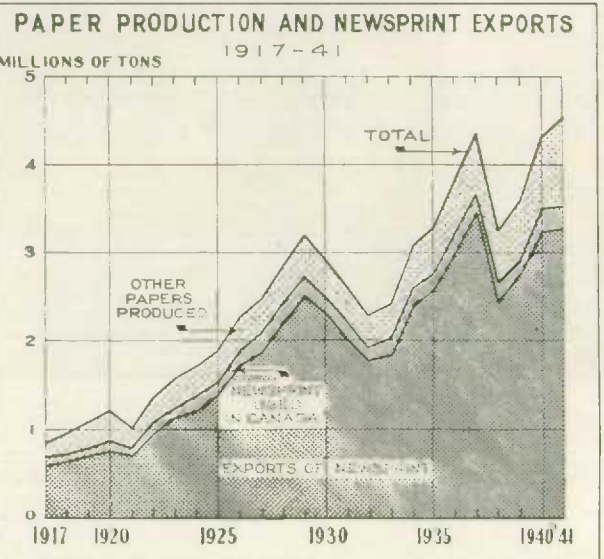
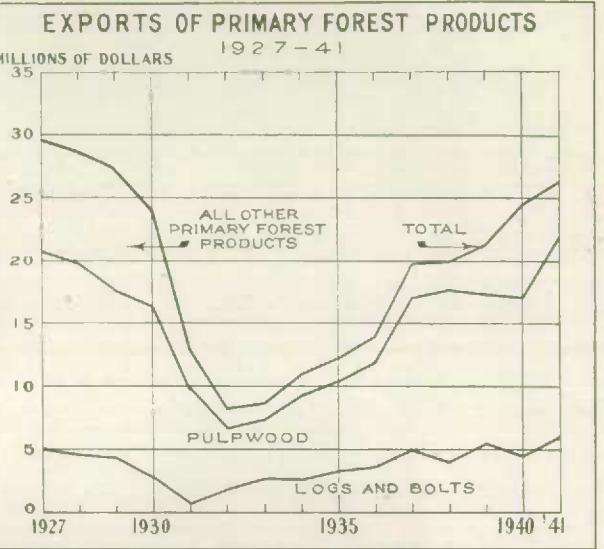
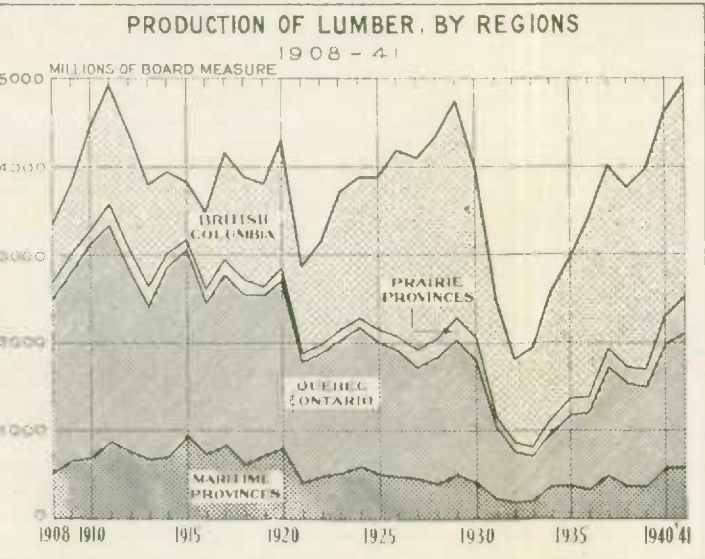
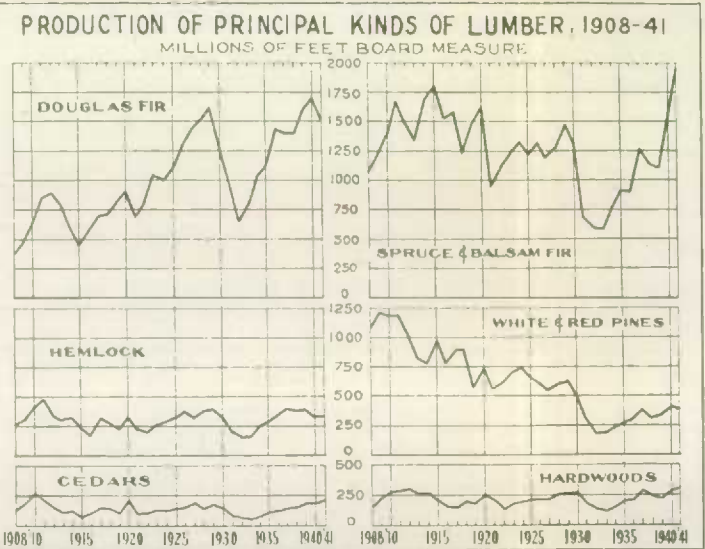
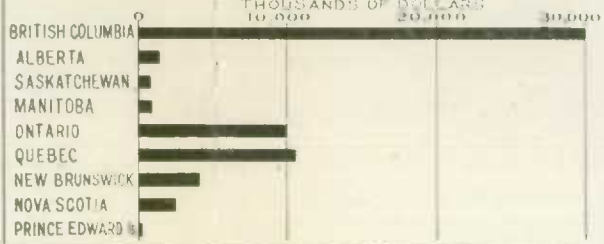
ALIENATED



## AVERAGE ANNUAL UTILIZATION OF STANDING TIMBER BY PROVINCES, 1931-41



## AVERAGE ANNUAL VALUE OF LUMBER PRODUCTION BY PROVINCES, 1931-41



**Firewood for Winter.**—Citizens everywhere are looking to Canadian forests to help solve the present acute fuel situation.

*Courtesy, National Film Board*



heating and cooking. A special condition developed in Vancouver and other coast centres where many homes and buildings are equipped for heating with sawmill refuse, which was also in short supply. A Deputy Administrator of Wood

Fuel was appointed under the Coal Controller of the Wartime Prices and Trade Board in July, 1942, and a survey of the situation was undertaken. Ceiling prices were established and efforts were made to ensure at least a minimum supply for all concerned. In 1943 this activity was transferred to the Department of Munitions and Supply and placed under direction of a Wood Fuel Controller. Normally, cutting is carried on in the autumn and winter to meet the requirements of the following winter, but it became evident by March of 1943 that the season would have to be prolonged if sufficient supplies for 1943-44 were to be obtained. Under the direction of the Wood Fuel Controller the Commodity Prices Stabilization Corporation has therefore paid a subsidy to wood-fuel dealers at the rate of \$1 per cord on cordwood of commercial grade contracted for and cut between Mar. 5 and Dec. 31, 1943, and held for the dealer's account. To encourage dealers to move cordwood and millwood to markets where fuel is needed from areas beyond those from which supplies are normally secured, a further subsidy covering transportation costs is payable. Where these measures are still insufficient to ensure adequate supplies for sale at ceiling prices, it has been announced recently that the Wood Fuel Controller may authorize additional Government assistance as required. The Commodity Prices Stabilization Corporation is prepared to purchase any wood fuel on which the \$1 subsidy has been paid, still in the hands of dealers on May 31, 1944.

#### **Effects of War on the Forests**

It is self-evident that the extraordinary demand created by the War for forest products of all kinds has imposed an abnormal drain on the reserves of merchantable timber. There has been particularly severe over-cutting of such specially valuable trees as Sitka spruce and the finer specimens of yellow birch. In addition, shortages of labour have seriously hampered protection of the forests against fire and other enemies, and forest research has been brought almost to a standstill.

If the forests are not to be impaired, the volumes of wood removed each year to serve useful purposes and the volumes burned or destroyed by pests must be



replaced by annual growth. It becomes very important, therefore, to form at least an approximate judgment as to whether or not such replacement is, in fact, taking place. The relationship between the normal pre-war rate of depletion and the rate effective under war conditions in 1941, when both utilization and losses were abnormally high, is illustrated in the following statement.

## FOREST DEPLETION

NOTE.—Volumes are stated in millions of cubic feet of standing timber.

	<i>Ten-Year Average 1930-39 (Pre-War)</i>	<i>1941</i>
Cut for use.....	2,519	3,354
Destroyed by fire.....	404	1,045
Destroyed by insects and tree diseases.....	700	700
Totals.....	3,623	5,099

In the ten-year period 1930-39, 70 p.c. of the total volume of depletion was used and 30 p.c. was destroyed by fire and pests. In 1941 only 66 p.c. was used while 34 p.c. was so destroyed.

All of the material utilized was taken from that portion of the forest which is classed as productive and accessible, and practically all of the material reported to be destroyed was in the same area, estimated at 275 million acres. A simple calculation will show that the average rate of depletion current before the War could be replaced if the annual rate of growth over the whole accessible productive forest averaged about 14 cubic feet per acre, but replacement of the 1941 depletion would require an average growth rate of 18½ cubic feet.

Although many studies of rates of growth in Canadian forests have been made, it is not yet possible to estimate with confidence the actual growth in the forest as a whole. It is known, however, that in a number of countries in Northern Europe, where the forests have been under relatively intensive management for considerable periods of time, an average annual growth of 28 cubic feet per acre is obtained; and growing conditions in Canadian forests are at least as good as those in Northern Europe. On the other hand, forest management in Canada is only in a rudimentary stage of development, and the full rate of production of which our forest soils are capable cannot be obtained until more intensive methods of management are introduced. It seems probable that, under pre-war conditions, growth was in fact equal to depletion in the forests of Canada, so far as total volume of trees of all species was concerned; but it would be rash to assume that the much higher rate experienced in 1941 could be maintained indefinitely under present methods of operation without serious consequences.

The above summary does not by any means tell the whole story. Even if total growth were equal to total depletion before the War, we are not justified in assuming that the original and very favourable distribution of tree species in the forest was being maintained. In some cases valuable kinds of timber have been removed and replaced by species of inferior utility. For example, a stand of good spruce saw timber may be burned and the site it formerly occupied reproduced to poplar and birch. Again, the whole of the accessible productive forest is not worked uniformly since a large proportion of the annual cut is taken from the most easily reached stands in order to keep current operating costs at a minimum. This tendency has been

accentuated by the War and, unfortunately, has become a necessity in the past two years, in order to maintain production with a dwindling labour force. A third factor, tending to reduce the value if not the volume of the forests, becomes operative when very large trees of great age are felled. Such virgin timber is mature or over-mature and, if it is not used, will eventually die and fall. Nevertheless, the high-quality logs yielded by such timber will eventually disappear from the market because the time needed for their growth, counted in hundreds of years, is too great to be contemplated under any planned system of forest cropping. This is of particular importance on the west coast of British Columbia where Canada's last great virgin forests are being logged, and where one-half of the total Canadian output of sawn lumber is produced. The gradual consumption of these magnificent stands does not necessarily mean that the annual output of wood will be reduced; but it does mean that industry will have to be adapted gradually to the use of smaller logs.

The importance of the wood and paper group of industries to the whole Canadian economy is such that maintenance of the forests in a productive condition is a matter for general concern. So large a proportion of the land area of the nine provinces is better suited for growing crops of trees than for any other purpose that the production of forest products must be regarded as a permanent activity in future if the people of Canada are to obtain a full measure of benefit from their natural resources. Furthermore, the fact that 90 p.c. of all forests are owned by the Crown, and administered by the Provincial Governments in the public interest, gives an added incentive for public support of progressive forest policies.

In the post-war period the forests of Canada will be required to make important contributions to programs of reconstruction both at home and abroad. They offer a broad field in which large numbers of returned members of the fighting forces and former employees of the munitions industry can be given useful work during the period which must elapse while war industries are being transformed to a peacetime basis. Additional facilities which will lead to reduction of annual wastage through fires, insects and tree diseases are urgently needed, especially forest roads; forest inventories must be completed as an essential basis for better management; and much valuable work can be undertaken to improve the productivity of the more accessible forest lands. It is expected that forest industries, normally one of the chief sources of employment in the country, will be able gradually to absorb large numbers of men and thus assist in their permanent re-establishment.

It would be premature to attempt to make any detailed assessment of the future prospects of Canadian forest products in world trade, but it seems certain that very large quantities of Canadian lumber will be needed in Europe, and perhaps in the Orient as well, during the reconstruction period. World demand for wood and its products is very great and scientific research is constantly finding new and hitherto undreamed-of uses for this complex raw material. It seems probable, therefore, that in the long run external demands for Canadian forest products will expand. If such future developments are accompanied by the adoption of wise forest policies at home, the forest industries will continue to be one of the chief sources of Canada's wealth.



## CHAPTER I

# Population—Vital Statistics

## Population

The present population of the earth is estimated at approximately 2,170,000,000.\* The British Empire, which covers slightly less than one-quarter of the land area of the earth, has an estimated population of 500,774,000† or slightly less than one-quarter of the world's population. Canada, which occupies over one-quarter of the area of the British Empire, has a population of 11,506,655 (1941 census) or about one forty-fifth of the Empire population. The latest official estimates of population of other British countries are: the British Isles, 50,744,000 (1940); Union of South Africa, 10,522,000 (1941); Australia, 7,137,000 (1941); New Zealand, 1,639,000 (1942); all India, 388,998,000 (1941 census). While there is no absolute standard for population density, a certain minimum density is desirable.

**Growth of the Canadian Population.**—The general rate of population increase in Canada in the opening decade of the present century was 34 p.c., the greatest for that decade of any country in the world. In the second decade the rate was 22 p.c., again the greatest, with the exception of Australia where growth was greater by a fraction of 1 p.c. A century earlier the United States grew 35 p.c. decade by decade until 1860, but with this exception there has been no recorded example of more rapid population growth than that of Canada in the early decades of the twentieth century. In 1871, only 2·97 p.c. of the population dwelt west of Lake of the Woods. In 1921 the proportion was 28·37 p.c., in 1931, 29·50 p.c. and in 1941, 28·30 p.c.

\* The Statistical Year Book of the League of Nations, 1941-42, gives the population of the world as 2,170,000,000 not including estimates of certain populations, chiefly in Asia and Africa, where censuses are incomplete or do not exist.

† The Statesman's Year Book, 1943.

Populations of Canada, Census Years 1871-1941

Province	1871	1881	1891	1901	1911	1921	1931	1941
P.E.I....	94,021	108,891	109,078	101,259	93,728	88,615	88,038	95,047
N.S....	387,800	440,572	450,396	459,574	492,338	523,837	512,846	577,962
N.B....	285,594	321,233	321,263	331,120	351,889	387,876	408,219	457,401
Que....	1,191,516	1,359,027	1,488,535	1,648,898	2,005,776 <sup>1</sup>	2,360,510 <sup>2,3</sup>	2,874,662 <sup>3</sup>	3,331,882
Ont....	1,620,851	1,926,922	2,114,321	2,182,947	2,527,292 <sup>1</sup>	2,933,662	3,431,683	3,787,655
Man....	25,228	62,260	152,506	255,211	461,394 <sup>1</sup>	610,118	700,139	729,744
Sask....	—	—	—	91,279	492,432	757,510	921,785	895,992
Alta....	—	—	—	73,022	374,295 <sup>4</sup>	588,454	731,605	796,169
B.C....	36,247	49,459	98,173	178,657	392,480	524,582	694,263	817,861
Yukon....	—	—	—	27,219	8,512	4,157	4,230	4,914
N.W.T. <sup>5</sup>	48,000	56,446	98,967	20,129	6,507 <sup>1,4</sup>	8,143 <sup>3</sup>	9,316 <sup>3</sup>	12,028
Canada..	3,689,257	4,324,810	4,833,239	5,371,315	7,206,643	8,787,949 <sup>2</sup>	10,376,786	11,506,655

<sup>1</sup> Corrected as a result of the Boundaries Extension Acts, 1912.

<sup>2</sup> Revised in accordance with the Labrador Award of the Privy Council, Mar. 1, 1927. The total for Canada includes 485 members of the Royal Canadian Navy who were recorded separately in 1921.

<sup>3</sup> Revised since the publication of the 1943 Handbook.

<sup>4</sup> Corrected by transfer of population of Fort Smith (368) to the Northwest Territories.

<sup>5</sup> The decreases shown in the population of the Northwest Territories since 1891 are due to the separation therefrom of vast areas to form Alberta, Saskatchewan and Yukon and to extend the boundaries of Quebec, Ontario and Manitoba.

# POPULATION

**Sex and Age Distribution.**—The population of Canada in 1941 was made up of 5,900,536 males and 5,606,119 females. Thus there were 513 males and 487 females per 1,000 population as compared with 518 males and 482 females in 1931. The trend of masculinity has decreased in late years due to the falling off in immigration which is always a strong influence in building up a masculine predominance in the age groups between 15 and 30 years. However, for 1941 the provinces of Prince Edward Island and New Brunswick showed a small increase in masculinity compared with 1931; elsewhere (with the exception of the Northwest Territories where the masculinity showed a substantial increase from 538 per 1,000 in 1931 to 557 in 1941) the proportion of females has increased.

## Sex and Age Distribution, by Provinces, 1941

Age Group	Prince Edward Island		Nova Scotia		New Brunswick		Quebec	
	Males	Females	Males	Females	Males	Females	Males	Females
0- 4 years.....	4,877	4,648	29,353	28,417	25,337	24,725	179,007	174,428
5- 9 ".....	4,868	4,790	28,268	27,416	24,176	23,732	175,179	172,761
10-14 ".....	4,834	4,656	28,120	27,266	23,957	23,864	181,899	179,539
15-19 ".....	4,678	4,506	28,523	27,898	24,679	23,765	175,941	175,252
20-24 ".....	4,472	3,790	27,934	27,031	22,026	20,281	148,355	155,882
25-34 ".....	7,326	6,165	47,719	42,785	34,916	31,920	262,195	266,555
35-44 ".....	5,242	4,732	32,681	30,511	24,733	23,902	201,846	198,754
45-54 ".....	4,690	4,489	28,084	26,544	21,497	20,156	155,708	146,612
55-64 ".....	3,755	3,573	22,036	20,350	16,362	14,939	106,405	99,609
65-69 ".....	1,531	1,469	8,939	8,188	6,461	5,760	36,162	34,997
70 or over.....	2,955	3,001	14,387	15,512	9,953	10,260	50,285	54,511
All Ages...	49,228	45,819	296,044	281,918	234,097	223,304	1,672,982	1,658,900
	Ontario		Manitoba		Saskatchewan		Alberta	
	Males	Females	Males	Females	Males	Females	Males	Females
0- 4 years.....	151,497	146,427	31,349	30,310	43,312	41,641	37,975	36,926
5- 9 ".....	152,909	148,606	31,657	30,567	44,683	43,550	38,425	37,423
10-14 ".....	164,605	160,199	34,095	33,001	48,231	46,659	39,198	38,505
15-19 ".....	172,133	166,983	36,675	36,718	48,857	47,152	39,335	39,023
20-24 ".....	163,579	160,410	34,898	34,375	44,204	40,893	37,524	36,090
25-34 ".....	305,515	296,695	59,225	58,055	68,850	63,345	63,955	58,583
35-44 ".....	267,392	251,309	45,514	42,594	53,225	46,180	55,124	43,813
45-54 ".....	229,448	217,263	44,422	38,213	54,937	41,261	50,885	36,711
55-64 ".....	169,281	162,079	35,409	27,016	44,343	28,417	39,939	25,494
65-69 ".....	57,724	58,618	10,649	8,390	12,351	7,997	11,150	7,353
70 or over.....	87,118	97,865	14,186	12,426	14,570	11,334	12,948	9,790
All Ages...	1,921,201	1,866,454	378,079	351,665	477,563	418,429	426,458	369,711
	British Columbia		Yukon		Northwest Territories		CANADA	
	Males	Females	Males	Females	Males	Females	Males	Females
0- 4 years.....	30,118	29,394	234	235	844	800	533,903	517,951
5- 9 ".....	27,969	26,946	194	204	764	733	529,092	516,728
10-14 ".....	30,580	30,126	183	166	602	592	556,304	544,573
15-19 ".....	33,727	32,893	128	124	536	509	565,212	554,823
20-24 ".....	34,153	35,094	220	168	591	456	517,956	514,470
25-34 ".....	68,359	65,617	637	348	1,234	837	919,931	890,905
35-44 ".....	57,935	48,461	441	177	936	597	745,069	691,030
45-54 ".....	57,741	46,723	310	139	647	370	648,369	578,481
55-64 ".....	55,565	38,388	335	116	361	271	493,791	420,252
65-69 ".....	17,266	12,327	185	42	99	66	162,517	145,207
70 or over.....	21,618	16,861	286	42	86	97	228,392	231,699
All Ages...	435,031	382,830	3,153	1,761	6,700	5,328	5,900,536	5,606,119

A Recent View of Edmonton.—The commercial centre and railhead of the extended developments that are now going on in the Canadian north-west and Alaska.



**Rural and Urban Population.**—For the purposes of the census, the population residing in cities, towns and incorporated villages has been defined as urban, and that outside of such localities as rural. On the basis of this classification, urban communities absorbed 60.22 p.c. of the total increase in population between 1931 and 1941, with the result that the urban population of Canada in 1941 exceeded the rural by 998,177. Out of every 1,000 persons in the country, 457 were resident on June 2, 1941, in rural and 543 in urban communities, as compared with 463 in rural and 537 in urban communities on June 1, 1931. Details of the population of all cities and towns having over 15,000 inhabitants are given by censuses from 1891 to 1941 in the table on pp. 55 and 56.

Some of the larger cities have in their neighbourhoods "satellite" towns or other densely settled areas in close economic relationship with the central municipality. Computed on the basis of "greater" or "metropolitan area", the total populations at the Census of 1941 were as follows: "Greater Montreal", 1,139,921; "Greater Toronto", 900,491; "Greater Vancouver", 351,491; "Greater Winnipeg", 290,540; "Greater Ottawa", 215,022; "Greater Quebec", 200,814; "Greater Hamilton", 176,110; "Greater Windsor", 121,112; "Greater Halifax", 91,829; "Greater London", 86,740; "Greater Victoria", 75,218; "Greater Saint John", 65,784.

Rural and Urban Populations, by Provinces, 1931 and 1941

Province or Territory	1931		1941		Numerical Increases 1931-41	
	Rural	Urban	Rural	Urban	Rural	Urban
Prince Edward Island..	67,653	20,385	70,707	24,340	3,054	3,955
Nova Scotia.....	281,192	231,654	310,422	267,540	29,230	35,886
New Brunswick.....	279,279	128,940	313,978	143,423	34,699	14,483
Quebec.....	1,061,056	1,813,606	1,222,198	2,109,684	161,142	296,078
Ontario.....	1,335,691	2,095,992	1,449,022	2,338,633	113,331	242,641
Manitoba.....	384,170	315,969	407,871	321,873	23,701	5,904
Saskatchewan.....	630,880	290,905	600,846	295,146	-30,034	4,241
Alberta.....	453,097	278,508	489,583	306,586	36,486	28,078
British Columbia.....	299,524	394,739	374,467	443,394	74,943	48,655
Yukon.....	2,870	1,360	3,117	1,797	247	437
Northwest Territories...	9,316	Nil	12,028	Nil	2,712	-
<b>Canada.....</b>	<b>4,804,728</b>	<b>5,572,058</b>	<b>5,254,239</b>	<b>6,252,416</b>	<b>449,511</b>	<b>680,358</b>



### Populations of Cities and Towns having over 15,000 Inhabitants in 1941, Compared with Census Years 1891-1931

NOTE.—Urban centres in which a Board of Trade exists are indicated by an asterisk (\*), and those in which there is a Chamber of Commerce by a dagger (†). In all cases the populations for previous censuses have been rearranged to cover the same areas as in 1941.

City or Town	Province	Populations					
		1891	1901	1911	1921	1931	1941
*†Montreal.....	Quebec.....	254,278	325,653	490,504	618,506	818,577	903,007
*Toronto.....	Ontario.....	181,215	218,504	381,833	521,893	631,207	667,457
*Vancouver.....	British Columbia.....	13,709	29,432	120,847	163,220	246,593	275,353
*Winnipeg.....	Manitoba.....	25,639	42,340	136,035	179,087	218,785	221,960
†Hamilton.....	Ontario.....	48,959	52,634	81,969	114,151	155,547	166,337
*Ottawa.....	Ontario.....	44,154	64,226	87,062	107,843	126,872	154,951
*Quebec.....	Quebec.....	63,090	68,840	78,118	95,193	130,594	150,757
†Windsor.....	Ontario.....	12,607	15,198	23,433	55,935	98,179	105,311
†Edmonton.....	Alberta.....	—	4,176	31,064	58,821	79,197	93,817
*Calgary.....	Alberta.....	3,876	4,392	43,704	63,305	83,761	88,904
†London.....	Ontario.....	31,977	37,976	46,300	60,959	71,148	78,264
*Halifax.....	Nova Scotia.....	38,437	40,832	46,619	58,372	59,275	70,488
†Verdun.....	Quebec.....	296	1,898	11,629	25,001	60,745	67,349
*Regina.....	Saskatchewan.....	—	2,249	30,213	34,432	53,209	58,245
*Saint John.....	New Brunswick.....	39,179	40,711	42,511	47,166	47,514	51,741
†Victoria.....	British Columbia.....	16,841	20,919	31,660	38,727	39,082	44,068
*Saskatoon.....	Saskatchewan.....	—	113	12,004	25,739	43,291	43,027
†Three Rivers.....	Quebec.....	8,334	9,981	13,691	22,367	35,450	42,007
†Sherbrooke.....	Quebec.....	10,097	11,765	16,405	23,515	28,933	35,965
*Kitchener.....	Ontario.....	7,425	9,747	15,196	21,763	30,793	35,657
†Hull.....	Quebec.....	11,264	13,993	18,222	24,117	29,433	32,947
*Sudbury.....	Ontario.....	—	2,027	4,150	8,621	18,518	32,203
*Brantford.....	Ontario.....	12,753	16,619	23,132	29,440	30,107	31,948
Outremont.....	Quebec.....	795	1,148	4,820	13,249	28,641	30,751
†Fort William.....	Ontario.....	2,176	3,633	16,499	20,341	26,277	30,585
†St. Catharines.....	Ontario.....	9,170	9,946	12,484	19,881	24,753	30,275
†Kingston.....	Ontario.....	19,263	17,961	18,874	21,753	23,439	30,126
*Timmins.....	Ontario.....	—	—	—	3,843	14,200	28,790
*Sydney.....	Nova Scotia.....	2,427	9,909	17,723	22,545	23,089	28,305
†Oshawa.....	Ontario.....	4,066	4,394	7,436	11,940	23,439	26,813
Westmount.....	Quebec.....	3,076	8,856	14,579	17,593	24,235	26,047
*Sault Ste. Marie.....	Ontario.....	2,414	7,169	14,920	21,092	23,082	25,794
†Peterborough.....	Ontario.....	11,391	12,886	18,360	20,994	22,327	25,350
*Glace Bay.....	Nova Scotia.....	2,459	6,945	16,562	17,007	20,706	25,147
†Port Arthur.....	Ontario.....	2,698	3,214	11,220	14,886	19,818	24,426
*Guelph.....	Ontario.....	10,537	11,496	15,175	18,128	21,075	23,273
*Moncton.....	New Brunswick.....	8,762	9,026	11,345	17,488	20,689	22,763
*New Westminster.....	British Columbia.....	6,678	6,499	13,199	14,495	17,524	21,967
Moose Jaw.....	Saskatchewan.....	—	1,558	13,823	19,285	21,299	20,753
†Niagara Falls.....	Ontario.....	4,528	5,702	9,248	14,764	19,046	20,589





The Alaska Highway.—This aerial view shows the type of country through which it passes.

Courtesy, National Film Board

Populations of Cities and Towns having over 15,000 Inhabitants in 1941, Compared with Census Years 1891-1931—concluded

City or Town	Province	Populations					
		1891	1901	1911	1921	1931	1941
†Shawinigan Falls..	Quebec.....	—	—	4,265	10,625	15,345	20,325
†Lachine.....	Quebec.....	4,819	6,365	11,688	15,404	18,630	20,051
†Sarnia.....	Ontario.....	6,692	8,176	9,947	14,877	18,191	18,734
*St. Boniface.....	Manitoba.....	1,553	2,019	7,483	12,821	16,305	18,157
†St. Hyacinthe.....	Quebec.....	7,016	9,210	9,797	10,859	13,448	17,798
*Brandon.....	Manitoba.....	3,778	5,620	13,839	15,397	17,082	17,383
*Chatham.....	Ontario.....	9,052	9,068	10,770	13,256	14,569	17,369
†St. Thomas.....	Ontario.....	10,366	11,485	14,054	16,026	15,430	17,132
*Valleyfield (Salaberry de)	Quebec.....	5,515	11,055	9,449	9,215	11,411	17,052
*Stratford.....	Ontario.....	9,500	9,959	12,946	16,094	17,742	17,038
†Chicoutimi.....	Quebec.....	2,277	3,826	5,880	8,937	11,877	16,040
†Belleville.....	Ontario.....	9,916	9,117	9,876	12,206	13,790	15,710
*North Bay.....	Ontario.....	1,848	2,530	7,737	10,692	15,528	15,599
*Galt.....	Ontario.....	7,535	7,866	10,299	13,216	14,006	15,346

**Racial Origins.**—The object of securing information on racial origin at the census is to ascertain from what basic ethnic stocks the Canadian population, more particularly the recently immigrated population, is derived. The answer "Canadian" does not, therefore, apply here. This information is separate altogether from that of nationality or birthplace where the answer "Canadian" or "Canada" is applicable.

**Racial Distribution.**—The population of English origin increased by 226,983 in 1941 compared with 196,061 in the previous decade; that of Scottish origin by only 57,624 compared with 172,725; and that of Irish origin by 36,894 compared with 123,005. The population of British Isles races increased from 5,381,071 to 5,715,904, or by 334,833, between 1931 and 1941. This represented 29·6 p.c. of the total increase as compared with 32·2 p.c. of the total increase for the previous decade. On the other hand, the population of French origin increased from 2,927,990 in 1931 to 3,483,038 in 1941 or by 555,048 (49·1 p.c. of the total increase for the decade) and showed the greatest absolute increase for any decade since 1871. The following table gives figures from the beginning of the century for the chief racial groups making up the Canadian population.

# POPULATION

## Origins of the People, Census Years 1901-41

Origin	1901	1911	1921	1931	1941
<b>British Isles Races—</b>					
English.....	1,260,899	1,871,268	2,545,358	2,741,419	2,968,402
Irish.....	988,721	1,074,738	1,107,803	1,230,808	1,267,702
Scottish.....	800,154	1,027,015	1,173,625	1,346,350	1,403,974
Other.....	13,421	26,060	41,952	62,494	75,826
<b>Totals, British Isles Races..</b>	<b>3,063,195</b>	<b>3,999,081</b>	<b>4,868,738</b>	<b>5,381,071</b>	<b>5,715,904</b>
French.....	1,649,371	2,061,719	2,452,743	2,927,990	3,483,038
Austrian.....	10,947 <sup>1</sup>	44,036	107,671	48,639	37,715
Belgian.....	2,994	9,664	20,234	27,585	29,711
Bulgarian.....	—	—	1,765	3,160	3,260
Chinese.....	17,312	27,831	39,587	46,519	34,627
Czech and Slovak.....	—	—	8,840	30,401	42,912
Finnish.....	2,502	15,500	21,494	43,885	41,683
German.....	310,501	403,417	294,635	473,544	464,682
Greek.....	291	3,614	5,740	9,444	11,692
Hebrew.....	16,131	76,199	126,196	156,726	170,241
Hungarian.....	1,549 <sup>2</sup>	11,648 <sup>2</sup>	13,181	40,582	54,598
Indian and Eskimo.....	127,941	105,611	133,724	128,890	125,521
Italian.....	10,834	45,963	66,769	98,173	112,625
Japanese.....	4,738	9,067	15,868	23,342	23,149
Negro.....	17,437	16,994	18,291	19,456	22,174
Netherlands.....	33,845	55,961	117,505	148,962	212,863
Polish.....	6,285	33,652	53,403	145,503	167,485
Roumanian.....	354 <sup>1</sup>	5,883 <sup>1</sup>	13,470	29,056	24,689
Russian.....	19,825	44,376	100,064	88,148	83,708
Scandinavian.....	31,042	112,682	167,359	228,049	244,603
Ukrainian.....	5,682	75,432	106,721	225,113	305,929
Yugoslavic.....	—	—	3,906	16,174	21,214
Various.....	7,000	31,381	8,796	27,476	67,357
Unspecified.....	31,539	16,932	21,249	8,898	5,275
<b>Grand Totals.....</b>	<b>5,371,315</b>	<b>7,206,643</b>	<b>8,787,949</b>	<b>10,376,786</b>	<b>11,506,655</b>

<sup>1</sup> Includes Bohemian, Bukovinian and Slavic.

<sup>2</sup> Includes Lithuanian and Moravian.

<sup>3</sup> Includes Bulgarian.

<sup>4</sup> Includes Danish, Icelandic, Norwegian and Swedish; in 1931 they numbered, respectively, 34,118, 19,382, 93,243, 81,306; in 1941, 37,439, 21,050, 100,718, 85,396.

**Birthplaces.**—In addition to, or as supplementary to, the question of racial origin, it is important to know the birthplaces of the population—the number of the population, for instance, born in Canada. Such Canadian born may, of course, be of any racial origin, e.g., English, French, German, etc. The following table gives the birthplaces of the population as shown in the past five decennial censuses.

## Birthplaces of the Population, Census Years 1901-41

Year	Canadian Born	Other British Born <sup>1</sup>	Foreign Born		Total Population	Percentages of Total Population			
			United States Born	Other Foreign Born		Canadian Born	Other British Born	Foreign Born	
								United States Born	Other Foreign Born
	No.	No.	No.	No.	No.	p.c.	p.c.	p.c.	p.c.
1901..	4,671,815	421,051	127,899	150,550	5,371,315	86.98	7.84	2.38	2.80
1911..	5,619,682	834,229	303,680	449,052	7,206,643	77.98	11.58	4.21	6.23
1921..	6,832,224	1,065,448	374,022	516,255	8,787,949	77.75	12.12	4.26	5.87
1931..	8,069,261	1,184,830	344,574	778,121	10,376,786	77.76	11.42	3.32	7.50
1941..	9,487,808	1,003,769	312,473	701,660	11,506,655 <sup>2</sup>	82.46	8.72	2.72	6.10

<sup>1</sup> Includes some hundreds of persons born at sea.

<sup>2</sup> Includes "birthplace not stated".

**Religions.**—Of the total population in 1941 (11,506,655), 4,986,552 or 43.34 p.c. were members of the Roman Catholic faith (including 185,657 Greek Catholics). The United Church of Canada, with 2,204,875 members or 19.16 p.c. of the population, was second and the Anglicans, with 1,751,188 or 15.22 p.c., third. The Presbyterian was the next largest group with 829,147 members or 7.21 p.c. in 1941.

**Membership of the Eight Leading Religious Denominations, Census  
Years 1901-41**

Religious Denomination	1901	1911	1921	1931	1941
Roman Catholic.....	2,229,600	2,833,041	3,389,626	4,285,388 <sup>1</sup>	4,986,552 <sup>1</sup>
United Church of Canada.....	—	—	8,728	2,017,375	2,204,875
Anglican.....	681,494	1,043,017	1,407,780	1,635,615	1,751,188
Presbyterian.....	842,531	1,116,071	1,409,406	870,728 <sup>2</sup>	829,147 <sup>2</sup>
Baptist.....	318,005	382,720	421,730	443,341	483,592
Lutheran.....	92,524	229,864	286,458	394,194	401,153
Jewish.....	16,401	74,564	125,197	155,614	168,367
Greek Orthodox <sup>3</sup> .....	15,630	88,507	169,832	102,389	139,629

<sup>1</sup> Includes 186,654 and 185,657 Greek Catholics, respectively. <sup>2</sup> These are the "continuing Presbyterians" who did not join with the Methodists and Congregationalists to form the United Church of Canada in the 'twenties. <sup>3</sup> Greek Orthodox and Greek Catholics combined under the term Greek Church in 1921, in the Censuses of 1931 and 1941, Greek Catholics are included with Roman Catholics.

**Membership of the Eight Leading Denominations, by Provinces and Territories,  
1941**

Province	Roman Catholic	United Church of Canada	Anglican	Presbyterian	Baptist	Lutheran	Jewish	Greek Orthodox
P.E.I.....	42,743	24,005	5,739	14,724	5,443	45	18	10
N.S.....	188,944	124,301	103,393	47,415	89,272	9,104	2,167	347
N.B.....	220,454	63,268	55,155	15,382	88,766	870	1,196	85
Que.....	2,894,621	100,196	162,056	56,086	12,303	7,081	65,683	12,040
Ont.....	882,369	1,073,425	815,413	433,708	192,915	104,111	69,217	28,383
Man.....	203,259	194,001	125,076	43,073	13,267	48,213	18,715	20,777
Sask.....	243,734	230,495	117,674	54,856	19,460	104,717	4,076	37,699
Alta.....	191,343	193,664	113,279	68,910	32,268	84,630	4,052	34,991
B.C.....	113,282	200,817	245,531	94,300	29,780	41,772	3,235	5,198
Yukon.....	742	404	2,545	422	75	368	2	67
N.W.T.....	5,061	299	5,327	271	43	242	6	32
Canada...	4,986,552	2,204,875	1,751,188	829,147	483,592	401,153	168,367	139,629

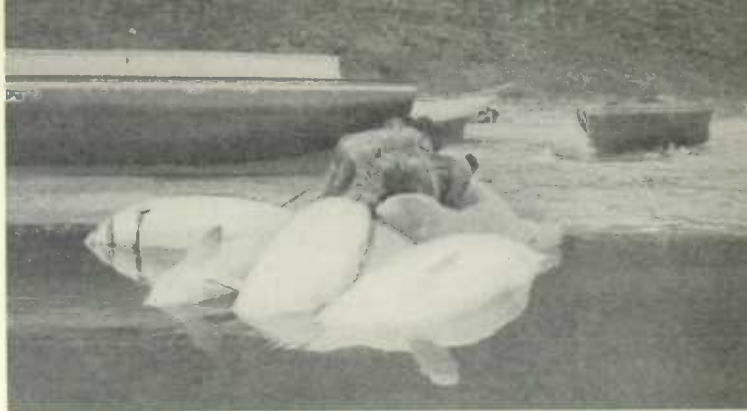
**Aboriginal Races**

According to 1941 Census figures, the aboriginal population amounts in all to little more than 1 p.c. of the total population. The majority is made up of Indians.

**Indians.**—Indian affairs are administered by the Indian Affairs Branch of the Department of Mines and Resources under the authority of the Indian Act. Reserves have been set aside for the various bands of Indians in the Dominion since the earliest times and the Indians located thereon are under the supervision of the local agents of the Branch. The activities of the Branch, as guardians of the Indians, include the control of Indian education, the care of health, etc., the development of agriculture and other pursuits among them, the administration of their funds and legal transactions, and the general supervision of their welfare.

Eskimos rolling over one of a batch of white whales that have been harpooned.

*Courtesy, Hudson's Bay Company*



The Indian Act provides for enfranchisement of Indians. In the older provinces, where the Indians have been longer in contact with civilization, many are becoming enfranchised. Great discretion, however, is exercised by the Government in dealing with this problem. Indians who become enfranchised lose the special protection attached to their wardship, so that premature enfranchisement must be avoided.

According to the Dominion Census of 1941, the total number of Indians was 118,316 (60,182 males and 58,134 females) made up by provinces as follows: P.E.I., 258; N.S., 2,063; N.B., 1,939; Que., 11,863; Ont., 30,336; Man., 15,473; Sask., 13,384; Alta., 12,565; B.C., 24,875; Yukon, 1,508; N.W.T., 4,052.

**Eskimos.**—The Eskimos of Canada are found principally on the northern fringe of the mainland and on islands in the Arctic Archipelago and in Hudson Bay, although in the Baker Lake-Chesterfield Inlet area on the west side of Hudson Bay there are bands of Eskimos who are essentially an inland people, and who subsist chiefly on caribou.

The administrative care of Eskimos devolves upon the Lands, Parks and Forests Branch of the Department of Mines and Resources, which, by regulative measures, conserves the natural resources necessary to their subsistence. Contact with the Eskimos is maintained through permanent stations in the eastern, central, and western Arctic, at a number of which medical officers are located, and by means of the annual Canadian Eastern Arctic Patrol by steamship. Law and order in all regions in Canada inhabited by Eskimos is maintained by the Royal Canadian Mounted Police.

According to the Dominion Census of 1941, there were 7,205 Eskimos in Canada, 75 p.c. of these being in the Northwest Territories. The distribution by provinces was: N.S., 4; Que., 1,778; Ont., 3; Man., 1; Sask., 4; Alta., 4; B.C., 7; N.W.T., 5,404.

## Immigration

Total immigrants into Canada during the fiscal year ended in 1943 numbered 7,445 as compared with 8,865 in 1942 and 11,496 in 1941.

English, Scottish, Irish, and Welsh from overseas numbered 2,418 as compared with 2,182 and 3,104 in 1942 and 1941, respectively; immigrants from the United States totalled 4,827 in 1943 as compared with 6,311 and 7,443, respectively, for the two previous years; from other countries the number was 200 as compared with 372 and 949.

A movement not included in the immigration statistics is that of 'returned Canadians'. These Canadian citizens are divided into three groups: (a) Canadian born; (b) British born (outside of Canada); and (c) naturalized in Canada. The total for 1942-43 was 3,253 as compared with 3,318 in 1941-42.



Although tourists entering Canada are not immigrants, their admission calls for an immigration examination at the International Boundary and at ocean ports. In 1942-43 the number of entries in this class totalled 15,141,000 made up of 10,727,000 tourists, etc., 4,410,000 residents returning and 3,000 Canadians returning after residence in the United States, as mentioned in the preceding paragraph; in 1941-42 the total entries numbered 18,012,000 divided into 13,948,000 tourists, etc., 4,061,000 returning residents and 3,000 returned Canadians.

## Vital Statistics

Canada has had a national system of registration since 1920, organized by the Dominion Bureau of Statistics in collaboration with the Registration Officials of the provinces.

### Births, Deaths and Marriages in Canada

Province	Births			Deaths			Marriages		
	1942 <sup>1</sup>		1926	1942 <sup>1</sup>		1926	1942 <sup>1</sup>		1926
	No.	Rate per M	Rate per M	No.	Rate per M	Rate per M	No.	Rate per M	Rate per M
Prince Edward Is..	2,135	22.2	20.1	959	10.0	10.3	778	8.1	5.3
Nova Scotia.....	15,254	26.0	21.3	6,350	10.8	12.4	6,871	11.7	5.6
New Brunswick.....	12,651	27.2	26.1	5,149	11.1	12.6	4,933	10.6	7.4
Quebec.....	95,041	28.0	31.6	33,801	10.0	14.3	33,857	10.0	6.8
Ontario.....	78,080	20.4	21.4	39,085	10.2	11.3	45,468	11.9	7.5
Manitoba.....	15,670	21.2	22.9	6,410	8.7	8.3	8,395	11.4	7.1
Saskatchewan.....	18,159	20.0	25.2	6,173	6.8	7.4	7,207	8.0	6.7
Alberta.....	18,203	22.6	23.8	6,077	7.5	8.5	9,033	11.2	7.4
British Columbia..	16,798	20.4	16.6	8,860	10.7	9.0	10,826	13.1	7.3
<b>Canada<sup>1</sup>.....</b>	<b>271,981</b>	<b>23.4</b>	<b>24.7</b>	<b>112,864</b>	<b>9.7</b>	<b>11.4</b>	<b>127,368</b>	<b>10.9</b>	<b>7.1</b>

<sup>1</sup> Preliminary figures.

<sup>2</sup> Exclusive of Yukon and the Northwest Territories.

**Births.**—From 1926 to 1930 the number of births showed an upward trend rising from 232,750 to 243,495. This movement was reversed until 1939 when the number of births was 229,468 as against 229,446 in 1938. In 1940 the figure rose to 244,316; in 1941 to 255,317 and in 1942 to 271,981, the highest ever recorded in Canada. Because of the growing population, the rate showed a steady drop from 1926 to 1937 of from 24.7 to 19.8, but in 1940 the rate stood at 21.5, in 1941 at 22.2, and in 1942 at 23.4.

The influence of war on Canadian births is reflected in the sharp increases in both rates and numbers for the years 1940 to 1942, the rate for 1942 being the highest recorded since 1930.

**Deaths.**—The ten leading causes of death accounted for well over 76 p.c. of the total deaths in Canada in 1942 and "diseases of the heart", considered as a group, was the most important cause. Cancer was second; incidentally, the death rate from this cause has advanced almost every year from 1926 to 1942, the increase in that period being from 80.7 to 117.2 per 100,000 population; there is every indication of a smoothing out of the rate curve for this disease. This increase in deaths is rather misleading, being due to improvement in diagnostic and X-ray techniques and to the ageing of the Canadian population. In 1926 pneumonia was in third place with a rate of 89.3. Its drop in 1942 to eighth place with a rate of 49.6 is no doubt attributable to the general use of sulphanilamide and its derivatives as antigens for this disease.

**Blood Donor Service.**  
—Each day hundreds of Canadians donate their blood for use on war fronts. Voluntary donations are made through a country-wide service maintained by the Red Cross.



*Courtesy, National Film Board*

**Infant Mortality.**—In Canada during recent years this rate has shown a substantial reduction, falling from 102 per 1,000 live births in 1926 to 61 in 1939 and 56 in 1940. However, in 1941 the rate increased to 60 per 1,000 live births and dropped again to 54 in 1942.

**Infant Deaths and Death Rates in Canada**

Province	Infants under One Year				Rates per 1,000 Live Births			
	1926	1940	1941	1942 <sup>1</sup>	1926	1940	1941	1942 <sup>1</sup>
Prince Edward Island.....	123	137	163	106	70	65	80	50
Nova Scotia.....	882	802	908	881	80	62	65	58
New Brunswick.....	1,095	934	936	977	106	80	76	77
Quebec.....	11,666	5,856	6,770	6,657	142	70	76	70
Ontario.....	5,302	2,959	3,294	3,132	78	43	46	40
Manitoba.....	1,122	756	788	807	77	51	53	51
Saskatchewan.....	1,681	979	946	785	81	51	51	43
Alberta.....	1,233	834	879	699	85	48	51	38
British Columbia.....	588	526	552	593	58	38	37	35
<b>Canada<sup>2</sup>.....</b>	<b>23,692</b>	<b>13,783</b>	<b>15,236</b>	<b>14,637</b>	<b>102</b>	<b>56</b>	<b>60</b>	<b>54</b>

<sup>1</sup> Preliminary figures.

<sup>2</sup> Exclusive of Yukon and the Northwest Territories.

**Natural Increase.**—Natural increase results from the difference between births and deaths. The birth rate (as indicated in the table at p. 60) is, in general, declining in Canada, although it increased in 1940, 1941 and 1942. The death rate is declining at a somewhat lower rate (1937 and 1941 show a slight rise) with the result that the rate of natural increase has been downward on the whole since 1930. The rate for 1926 was 13.3 per 1,000; for 1929 it was 12.2; for 1933, 11.3; for 1938, 11.0; for 1940, 11.7; for 1941, 12.2; and for 1942, 13.7.

**Marriages.**—In 1929 marriages in Canada numbered 77,288. The depression exercised a marked influence on marriages and the marriage rate, causing a downward trend until 1933 when a gradual recovery commenced. The increase continued until 1938 when the yearly total for marriages stood at 88,438. The influence of the War is reflected in the abnormally large figures and high rates for the years 1939, 1940, 1941 and 1942 of 103,658, 123,318, 121,842 and 127,368, respectively. The 1942 marriage rate of 10.9 per thousand population is the highest Canadian marriage rate on record.

## CHAPTER II

# Survey of Production—National Income

### Survey of Production

In this chapter only those industries generally considered to have a *direct* connection with production are considered, as, for instance, agriculture, fishing, mining, forestry, trapping, power production, manufactures, construction, and custom and repair. However, production in the economic sense includes much more than the tangible production contributed by these groups. Transportation, banking, trade and numerous other services also contribute to the nation's economy and should be taken into account when attempting a complete survey of Canada's productive capacity.

Net production is defined as the value left in producers' hands after the elimination of the cost of materials, fuel and purchased electricity and supplies consumed in the process of production. Net production is, therefore, a much better criterion of the value of an industry to the community in which it operates than gross production.

Mainly due to the requirements of war, Canada's production on the whole reached higher levels in 1941 than ever before. The net output of the nine main branches of production was greater by 18 p.c. in 1940 and by 45.6 p.c. in 1941 than in 1939. The expansion of the manufacturing industries was the most important factor in the two-year period, since the general trend of production was, of course, directed to munitions of war.

Production trends for 1942 and 1943 are indicated by the fact that the index of the physical volume of business recorded a gain of 22.2 p.c. over 1941, while the rise in employment was 14.1 p.c. The index of wholesale prices (1926=100) was 95.7 in 1942, a gain of 6.5 p.c. over the preceding year. Indexes of the physical volume of business and wholesale prices in the first ten months of 1943 showed gains of 17.1 p.c. and 4.2 p.c., respectively, over the standing in the same period of 1942, and the index of employment for Oct. 1, 1943, was 178.5 as against 172.5 on the same date of 1942.



A Single Day's Catch of British Columbia Salmon during the 1942 Season.—In all there are 125,000 fish; the highest catch for a single boat was 16,000. Catches of this size are concentrated in a few days at the peak of the season.

Barrels of Dried Egg Powder being Loaded into a Merchant Vessel for Shipment Overseas.—The people of Britain get both healthful and tasty food in compact form. Shipments of egg powder to the equivalent of over 30,000,000 doz. fresh eggs have been made to Britain in the first nine months of 1943.



*Courtesy, National Film Board*

In 1941, production in agriculture, which constituted nearly 45 p.c. of the aggregate for the six branches of the primary group, rose by 7.4 p.c. The heavy output of animal products to meet increased overseas demand was the main element in this expansion. Mining, second in importance among the primary industries, increased 11.6 p.c. over 1940, and forestry and electric power increased 13.9 p.c. and 11.8 p.c., respectively. Large percentage gains were shown in the operations of the fisheries and trapping industries. The net output of the fisheries rose 35.9 p.c., while the returns from trapping were 35.1 p.c. greater. Fisheries reached a higher standing than in any year since the War of 1914-18, while the revenue of trappers was higher than in any year since 1929.

The three groups engaged in secondary production achieved outstanding expansion in 1941 over the preceding year. The aggregate net production of manufactures, construction and custom and repair rose about one-third in this comparison. As stated above, manufacturing was the main single factor in Canadian industrial expansion during 1941, showing a gain of 34.1 p.c. over 1940. The totals include some industrial enterprises also listed under "primary industries", but the value of output in the latter is deducted in obtaining the grand total for Canada. The value of output in the construction industry increased by 30.3 p.c. and custom and repair posted an advance of 22.2 p.c. over the preceding year.

The size of the working force, without distinction as to status, is an excellent measure of the relative importance of the various industries in the economic life of the Dominion. Agriculture stood head and shoulders above any other industry in regard to the number engaged until the first year of the War. Manufactures, *n.e.s.*, was second in importance in this respect, but occupied only about half the number engaged in agriculture. However, the tremendous expansion in the working force employed in manufacturing industries during the war years, which amounted to about 75 p.c. between 1939 and 1942, and the decrease of 9 p.c. in the number employed in agriculture during the same period, brought manufactures to the leading position. The commodity-producing industries engaged 60.5 p.c. of the manpower in 1942, while the commodity-handling and -facilitating divisions occupied the attention of 19.1 and 20.4 p.c., respectively.



## Value of Production in Canada, by Industries, 1940 and 1941

Industry	1940		1941	
	Gross	Net	Gross	Net
	\$	\$	\$	\$
Agriculture.....	1,265,112,000	885,115,000	1,431,770,000	951,025,000
Forestry.....	627,365,611	370,121,275	711,004,556	421,419,139
Fisheries.....	60,053,631	38,106,690	82,522,675	51,769,638
Trapping.....	11,207,930	11,207,930	15,138,040	15,138,040
Mining.....	748,344,045	446,080,729	866,293,332	497,904,632
Electric Power.....	166,228,773	163,780,757	186,080,354	183,146,426
Totals, Primary Production	2,878,311,990	1,914,412,381	3,292,808,957	2,120,402,875
Construction.....	474,122,778	206,893,992	639,750,624	269,561,885
Custom and Repair.....	180,126,000	110,745,000	199,377,000	135,287,000
Manufactures.....	4,529,173,316	1,942,471,238	6,076,308,124	2,605,119,788
Totals, Secondary Production	5,183,422,094	2,260,110,230	6,915,435,748	3,009,968,673
<b>Grand Totals<sup>1</sup>.....</b>	<b>7,260,597,365</b>	<b>3,823,676,973</b>	<b>9,250,795,729</b>	<b>4,720,073,033</b>

<sup>1</sup> Excludes duplication in "Manufactures" of items included under primary production.

The relative importance of the nine provinces to Canadian production remained substantially the same as in 1940. The position of Ontario and Quebec as the principal producers was rather more than maintained, with Ontario's share in the Dominion's total output rising to 44.2 p.c. as compared with 43 p.c. in 1940. Quebec's contribution also increased somewhat, standing at 27.1 p.c. British Columbia retained third position with 8.1 p.c.

A certain relative recession was noted in the Prairie Provinces. Alberta, as the fourth ranking contributor, accounted for 5.9 p.c. of the total production. Saskatchewan's share dropped to 4.8 p.c. and that of Manitoba increased to 4.4 p.c. It should be remembered, however, that absolute increases in production were recorded in all cases.

Small relative change was noted in the contribution of the Maritime Provinces. The quota for each province was slightly lower at 2.9 p.c. for Nova Scotia, 2.2 p.c. for New Brunswick and 0.3 p.c. for Prince Edward Island.

## Value of Production in Canada, by Provinces, 1940 and 1941

Province	1940		1941	
	Gross	Net	Gross	Net
	\$	\$	\$	\$
Prince Edward Island.....	25,121,038	13,826,491	28,010,446	13,200,776
Nova Scotia.....	232,102,253	132,038,545	265,262,337	136,855,941
New Brunswick.....	164,896,487	90,119,421	205,698,123	103,968,110
Quebec.....	1,960,693,108	1,011,051,952	2,596,572,315	1,279,353,703
Ontario.....	3,237,922,599	1,642,788,599	4,245,649,428	2,087,958,441
Manitoba.....	338,704,815	176,734,411	414,912,902	205,348,561
Saskatchewan.....	358,173,074	219,966,345	355,149,603	228,318,037
Alberta.....	398,076,785	234,388,768	443,175,858	276,898,177
British Columbia <sup>1</sup> .....	544,907,206	302,762,441	696,364,717	388,171,287
<b>Canada.....</b>	<b>7,260,597,365</b>	<b>3,823,676,973</b>	<b>9,250,795,729</b>	<b>4,720,073,033</b>

<sup>1</sup> Includes Yukon and the Northwest Territories.



A Typical Prairie Scene in Harvest Time.—The elevators are seen along the railway line in the background.

*Courtesy, National Film Board*

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## National Income

Canada's national income, being a composite of volume and price, is the best measure of economic fluctuations since the end of the War of 1914-18. The total, due largely to inflated prices, reached a high level of nearly \$4,600 million in 1920 and fell off nearly 24 p.c. during the following year. The recovery was practically continuous until 1929 when a maximum of \$5,273 million was recorded. The low point of the depression was experienced in 1933, when the standing was only 52 p.c. of the total for 1929. The temporary setback of 1938 interrupted the advance, which was markedly accelerated during the war years. The standing in 1942 was \$7,500 million compared with \$6,500 million in the preceding year. An increase of at least \$1,300 million is estimated for 1943.

The relative importance of the income of the various components is a significant phase of any study of the national income. Briefly, the income of the Canadian people may be defined as the net value of the goods produced and services rendered, with certain adjustments for international transactions. The actual computation is made somewhat as follows: from the gross value, at market prices, of goods and services produced, are deducted the cost of materials and services obtained from other enterprises and depreciation charges. The resulting "net" value is the national income. From another point of view, the same result may be achieved by adding together the total payments to individuals in Canada and the undistributed profits of Canadian



'Combining'  
Red Clover  
Seed.

enterprise. By "undistributed profits" is meant that portion of the year's profit of a given firm or corporation which is retained by the company, as "surplus", in contrast to that portion paid out to the owners in the form of dividends or withdrawals.

It is apparent from the foregoing that national income may be considered as either a sum of payments and business savings or as a value of goods and services produced. A third approach considers national income as a sum of purchases and savings. People receive incomes for producing goods, and use these incomes to satisfy their wants, by purchasing food, clothing, automobiles, education and the like. Thus, by adding up the expenditures of individuals for consumption goods and their savings from current income, with certain adjustments, national income is again obtained.

The goods and services included in national income are generally those that pass through the market. Of the non-market elements, account is taken of the value of home-produced food consumed by farm families, since this is undeniably a form of income to the farmer. Estimated net rentals on owner-occupied houses are included since the occupants receive a real income in the form of shelter. On the other hand, the value of services rendered by housewives is excluded. Income from illegal pursuits such as robbery and gambling are disregarded, as are capital gains or losses, charity, gifts, relief payments, and other forms of income which do not result from current production.

The estimates of national income classified by industrial source show that primary production, including processing activities closely associated with forestry, fisheries and mining, accounted for 25.3 p.c. of the income originating during the period from 1919 to 1940. Secondary production, including construction, manufactures, *n.e.s.*, and custom and repair, was in second place with 19.9 p.c. Trade occupied third position, accounting for 12 p.c., while service, government, transportation and finance followed in the order named.

Approaching national income from the standpoint of payments received, it is found that remuneration of employees in the form of salaries and wages is the chief income payment and during the period 1919-40 this amounted to nearly 58 p.c. of the total, or to 61 p.c. if living allowances of so-called "unpaid labour" and other labour income are added. The withdrawals of working proprietors, mainly farmers, retailers and professionals, constituted nearly one-quarter of the total for the twenty-two years. Investment income, embracing dividends, interest, rents, etc., reached 14.6 p.c. of total income payments.

## CHAPTER III

### Agriculture

#### The Effects of War on Canadian Agriculture

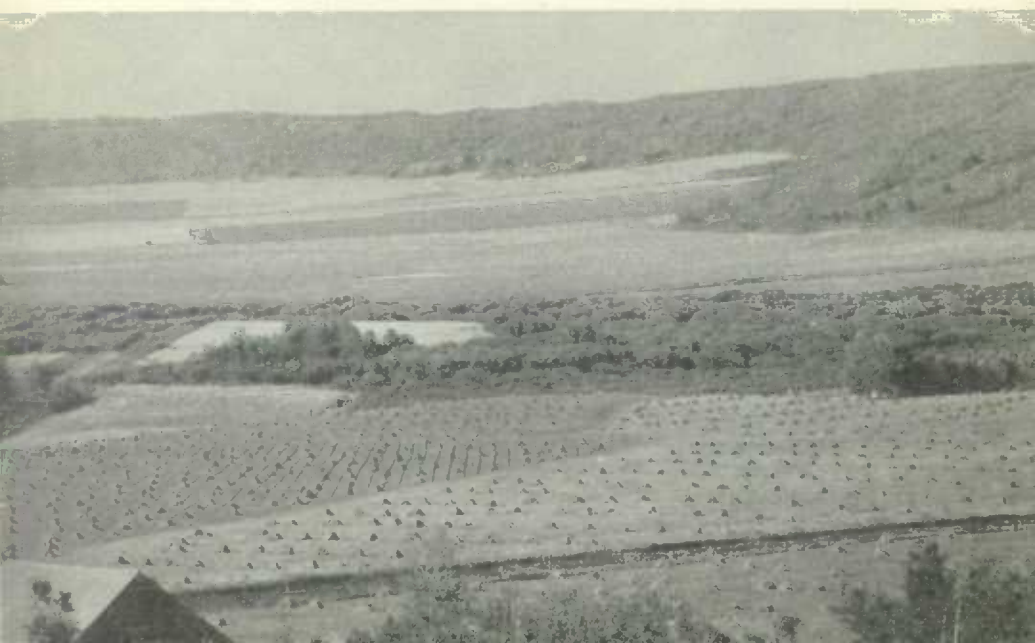
In sharp contrast to the situation in the earlier years of the War, when surplus production in many lines combined with restricted outlets to produce serious marketing problems, Canada's agriculture now faces the challenge of greater and greater production to meet the needs both at home and abroad. Objectives for the 1943 production of field crops, live stock and live-stock products were set at new peaks. While unfavourable weather conditions prevented the realization of the complete program, production in many lines reached record levels.

Government measures for the direction and assistance of the farm-production program covered a wide field. New organizations set up during 1943 included an Agricultural Food Board responsible for directing policies affecting war-time food supplies; an Agricultural Advisory Committee to assist in maintaining close relationships between the Dominion Department of Agriculture and those directly concerned with production; a Joint Agricultural Committee of Canada and the United States, which keeps an eye on food production and distribution in the two countries and furthers programs of concern to both. During the year the Bacon Board was reconstituted as a Meat Board and its scope broadened to include other meats as well as pork.

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An unusual Saskatchewan Landscape.—Saskatchewan ranges from dry sun-baked prairie in the south to rolling forest country in the north. The illustration shows a stretch of undulating country suitable for mixed farming.

*Courtesy, Canadian Pacific Railway*





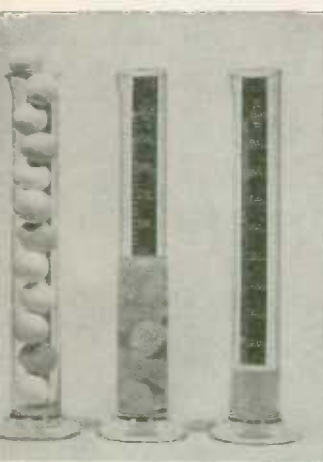
Increasing competition for the available supplies of butter and meat resulted in the application of rationing. Ceiling prices, applied to a wide range of farm produce, have contributed to orderly distribution. The payment of bonuses, subsidies or subventions has been resorted to, in order to assure farmers a reasonable return for their products and to stimulate production along desired lines. Manpower regulations have helped to ease the farm labour situation, while relaxation of restrictions on the manufacture of needed farm machinery, together with the rationing of machinery to place available supplies where the need was greatest, have enabled the Canadian farmer to further his war effort.

Notable achievements have been recorded during the past year. Among these has been the application of scientific research to the techniques for the dehydration of certain farm products. This in turn has enabled Canada to turn out enormous quantities of high-quality dried eggs as well as a wide variety of dehydrated vegetables and fruits. These products fill an important place in the rations of the Armed Forces overseas and the British civilian population and also help to conserve valuable shipping space.

Each year since the beginning of the War, Canada's hog production has risen steadily. At the same time, the quantity of bacon and other pork products exported to Britain has increased sharply, a total of 675,000,000 lb. being the amount called

Canadian industry provides thousands of tons of dried eggs for Britain every year. Quality is controlled by the Department of Agriculture according to tests developed at the National Research Council; the illustration shows the operation of one of these tests (fluorescence method). The insert shows how space is saved by dehydration. A whole case of eggs (30 doz.) can be packed in a ten-pound carton.

*Courtesy, National Research Council*



approached, millions of acres which have been growing wheat for years are now in pasture, hay or being cropped to feed grains. Under the Wheat Acreage Reduction Plan farmers have been assisted in converting wheat acreage to more needed crops.

The demand for oil-seed crops produced in Canada has increased considerably, owing to the decrease in the import sources of oils and fats. Acreage of flaxseed and soybeans has been expanded to record proportions while considerable areas have been planted to sunflowers and rape for the production of much needed oils.

During the early months of 1943 considerable difficulty was experienced in bringing adequate supplies of feed grains from Western Canada to the eastern provinces where it was required in the production of live stock. Severe weather combined with labour shortages and congested transportation facilities hampered the movement. In an effort to forestall similar difficulties in the winter of 1943-44, the Government took steps to encourage the eastern movement of grains early in the season. Interest and storage charges on grain brought east and stored in designated elevators for winter use were paid by the Government. In addition, farmers who bought early and utilized their own storage were given further concessions by way of bonus. Movement was speeded by allowing direct shipment from country points in Western Canada to purchasers in Eastern Canada of carloads containing 3 p.c. dockage.

The Freight Assistance Policy was continued throughout 1943 and under this arrangement large quantities of grains and mill feeds were moved to eastern centres.

These measures should have an important influence in alleviating what would otherwise be a serious shortage of feed in Eastern Canada where adverse weather conditions during the 1943 growing season sharply reduced the usual output.

## Agricultural Statistics

### Values of Agricultural Capital and Production

As shown below, the value of agricultural capital reported in 1942 recorded an increase of about 11 p.c. over that of 1941.

Current Value of Agricultural Capital, by Provinces, 1942

Province	Lands and Buildings	Implements and Machinery	Live Stock <sup>1</sup>	Total
	\$'000	\$'000	\$'000	\$'000
Prince Edward Island.....	46,708	5,847	11,138	63,693
Nova Scotia.....	97,366	7,503	19,278	124,147
New Brunswick.....	88,917	9,123	20,966	119,006
Quebec.....	887,232	66,813	193,802	1,147,847
Ontario.....	1,119,492	120,838	323,251	1,563,581
Manitoba.....	238,900	49,043	99,081	387,024
Saskatchewan.....	629,838	117,413	169,800	917,051
Alberta.....	439,452	90,320	177,113	706,885
British Columbia.....	94,876	10,392	30,530	135,798
<b>Totals.....</b>	<b>1942 3,642,781</b>	<b>477,292</b>	<b>1,044,959</b>	<b>5,165,032</b>
	<b>1941 3,383,475</b>	<b>468,715</b>	<b>809,085</b>	<b>4,661,275</b>
	<b>1940 3,321,328</b>	<b>462,120</b>	<b>698,267</b>	<b>4,481,715</b>
	<b>1939 3,371,018</b>	<b>469,287</b>	<b>656,363</b>	<b>4,496,668</b>
	<b>1938 3,271,970</b>	<b>474,990</b>	<b>594,132</b>	<b>4,341,092</b>
	<b>1937 3,634,981</b>	<b>478,454</b>	<b>607,316</b>	<b>4,720,751</b>

<sup>1</sup> Includes poultry and animals on fur farms.

for in the 1943 Agreement. This amount, together with supplies required for the home market, has strained the capacity of farmers to produce, and packing plants to process, in the face of shrinking manpower. In consequence, a new Agreement has been negotiated which will call for deliveries of 900,000,000 lb. during the next two years. The agreed price for the new contract will be \$22.50 per cwt., which means an advance of 50 cents over the price on the previous contract.

Should increased consumption of hogs in Canada result in a release of beef for export, arrangements will be made to ship it to Britain. It is hoped that alterations in slaughtering restrictions, together with the fact that returns from various farm products are for the most part comparable, will permit farmers to make full use of their experiences of the past two years in determining what they can do to best advantage under the circumstances affecting their separate operation.

Dairy products rank high in importance among the foods that Canadian farmers are producing for the Allied Forces and the civilian populations at home and abroad. During 1943, milk production reached an all-time high, but a sharp increase in home consumption of fluid milk cut down the expected output of manufactured products. Moreover, the rising purchasing power of Canadian consumers was reflected in greater consumption of butter and certain other dairy products.

For 1944, further increases in milk production will be welcomed and no difficulty should be experienced by farmers in finding a profitable outlet for all the milk that can be produced. Subsidies are being paid on milk used for fluid consumption, cheese-making, concentrated milk products and on butterfat. In order to assist in stabilizing the dairy industry, power has been given to the Agricultural Food Board to control the diversion of milk from one use to another.

Cheese will continue to be in strong demand, the British Ministry of Food taking all that can be made available, while the requirements for Red Cross parcels as well as for military and civilian consumption in Canada will account for substantial quantities.

Butter supplies during 1943 proved to be somewhat in excess of requirements and, as a result, Canada was able to make some butter available to the British authorities to tide them over a temporary shortage.

While egg production in 1943 exceeded that of the previous year by about 20 p.c., domestic consumption more than absorbed the surplus and shipments to Britain fell off slightly. Increases in hatchery capacity should facilitate substantial increases in chick production for 1944, although the full effects of this increase may not be realized because of feed difficulties.

One of the more noticeable effects of the War on Canadian agriculture has been the shift from wheat to coarse grains, fodder crops and oil-bearing seeds. With the cutting off of certain export markets and the accumulation in storage of record quantities of wheat and, on the other hand, the phenomenal increase in live-stock production, which created a demand for feed and fodder on a scale never before



## Field Crops

**Acreage.**—A reduction of approximately 4,000,000 acres in the area seeded to wheat in Canada was a feature of the 1943 agricultural season. This curtailment in wheat acreage was in line with production objectives agreed upon at the Dominion-Provincial Agricultural Conference held at Ottawa in December, 1942, when emphasis was again placed on the production of coarse-grain and oil-bearing seed crops. A bonus of \$2 per acre was continued as an incentive to shift from wheat to other more essential war crops.

Field Crops of Canada, 1942 and 1943

Crop	3rd Estimate 1942 Crops			2nd Estimate 1943 Crops		
	Area	Production	Gross	Area	Production	Gross
	acres	bu.	Farm Value \$	acres	bu.	Farm Value \$
Fall wheat.....	757,000	23,391,000	20,584,000	601,000	13,222,000	1
Spring wheat.....	20,829,500	569,293,000	371,721,000	16,886,700	280,482,000	1
All wheat.....	21,586,500	592,684,000	392,305,000	17,487,700	293,704,000	299,038,000
Oats.....	13,782,300	651,954,000	233,466,000	15,406,900	482,860,000	238,581,000
Barley.....	6,972,900	259,156,000	114,649,000	8,396,800	215,816,000	134,683,000
Fall rye.....	1,013,600	18,201,000	7,158,000	351,300	4,468,000	1
Spring rye.....	324,100	6,541,000	2,523,000	224,800	2,676,000	1
All rye.....	1,337,700	24,742,000	9,681,000	576,100	7,144,000	5,665,000
Peas.....	90,100	1,692,000	3,727,000	104,300	1,594,000	3,573,000
Beans.....	80,400	1,553,000	2,804,000	85,200	1,402,000	3,248,000
Buckwheat.....	239,800	5,207,000	3,593,000	285,900	6,225,000	4,969,000
Mixed grains.....	1,680,700	68,622,000	35,723,000	1,463,200	35,906,000	22,166,000
Flaxseed.....	1,492,200	14,992,000	29,614,000	2,797,800	17,700,000	38,937,000
Corn for husking...	358,000	14,372,000	11,393,000	257,000	10,366,000	9,013,000
Potatoes.....	505,900	42,882,000	59,336,000	532,700	42,197,000	70,635,000
Turnips, etc.....	157,800	32,866,000	16,013,000	162,600	34,779,000	22,526,000
Hay and clover.....	9,707,000	16,061,000	169,487,000	9,815,600	17,035,000	180,883,000
Alfalfa.....	1,439,800	3,731,000	34,299,000	1,544,000	3,893,000	40,477,000
Fodder corn.....	484,800	4,401,000	17,412,000	474,800	4,104,000	17,425,000
Grain hay.....	830,000	1,668,000	7,846,000	779,500	1,259,000	7,003,000
Sugar beets.....	63,300	716,000	4,430,000	52,500	472,000	3,308,000

<sup>1</sup> First estimate.<sup>2</sup> Not available.

**Wheat and Other Grains.**—Wheat acreage in Canada in 1943 was at its lowest level in a quarter of a century. From the peak of 28,726,000 acres seeded in 1940, it fell to 17,488,000 acres in 1943. The largest reduction took place in 1941 when nearly 7,000,000 acres were taken out of wheat production and either summerfallowed or devoted to the production of other crops. Only a minor change in wheat acreage occurred in 1942, but the acreage in 1943 was the smallest since 1918.

The 1943 growing season was less favourable than that of the previous year, but the yield of wheat was better than the long-time average of 16 bu. per acre. The second estimate indicated a production of 293,704,000 bu. compared with the third estimate of the 1942 crop, which placed production at 592,684,000 bu. Substantial crops of oats, barley and flaxseed were produced in 1943 on an expanded acreage, while new crops such as rape seed, sunflower seed and soybean were planted on a larger acreage than ever before.

The value of wheat crops has been affected since 1935 by the operation of the Canadian Wheat Board. Fixed minimum prices have been set each year and producers delivering wheat to the Board have been given participation certificates that entitle them to share in profits arising from the sale of this wheat by the Board. The initial price for No. 1 Northern, basis in store Fort William-Port Arthur was 87½ cents





One of the extensive ranches of Western Canada which helps to supply the men of Canada's fighting forces with more than 21,000 tons of beef a year. It has an area of 500,000 acres, and a normal staff of 250.

*Courtesy, National Film Board*

The gross value of agricultural production includes the value of all crops, live stock and animal products produced on farms in Canada. In 1942 the gross value of agricultural production was estimated at \$2,086,361,000 which was 45·7 p.c. higher than in 1941.

#### Gross Value of Agricultural Production in Canada, 1938-42

Item	1938	1939	1940	1941	1942
	\$'000	\$'000	\$'000	\$'000	\$'000
Field crops.....	550,069	685,839	676,682	683,889	1,145,778
Farm animals.....	197,600	218,385	268,679	339,305	409,192
Wool.....	1,565	1,827	2,703	2,571	3,283
Milk production.....	154,550	145,883	164,132	206,543	273,991
Fruits and vegetables.....	57,095	56,804	58,463	71,162	77,254
Poultry and eggs.....	58,933	60,829	67,135	89,008	131,282
Fur farming.....	6,476	5,793	6,143	5,519	6,697
Maple products.....	3,850	3,444	4,210	3,561	6,716
Tobacco.....	20,270	19,444	10,470	18,614	20,255
Fibre flax.....	519	1,249	1,727	3,118	4,687
Clover and grass seed.....	2,996	2,827	2,184	5,165	3,721
Honey.....	3,057	2,616	2,584	3,315	3,505
<b>Totals.....</b>	<b>1,056,980</b>	<b>1,204,940</b>	<b>1,265,112</b>	<b>1,431,770</b>	<b>2,086,361</b>



Sheep in the Hills of Kamloops District, B.C.

*Courtesy, National Film Board*

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increase in storage facilities took place in 1942, principally at country points in Western Canada, and on May 31, 1943, total storage capacity was approximately 603,000,000 bu.

### **Live Stock**

Since the outbreak of war, the United Kingdom has relied on Canada for an ever-increasing percentage of her supplies of meat and animal products. This, combined with the fact that very large stocks of wheat were available at the outbreak of war, has resulted in a substantial shift in Canadian agriculture from grain growing to live-stock production. The shift has been particularly marked in the Prairie Provinces and, although there have been substantial increases in numbers of cattle and sheep, by far the greatest expansion has taken place in the hog industry. The numbers of hogs on farms at June 1, 1943, amounted to 8,148,000 as compared with 3,487,000 at June 1, 1938. The urgent need for increased milk production (see p. 78) has encouraged the building up of dairy herds and there has been a decline in the commercial marketings of cattle. Higher prices to farmers for both wool and mutton have resulted in substantial increases in the numbers of sheep on farms, but it takes much longer to bring about an expansion of sheep raising as compared with hog raising. While the numbers of horses on farms have shown a tendency to decline in recent years, the rationing of gasoline and tires has resulted in an increase in the demand for horses in cities and towns, as well as on farms.

per bu. in the three crop years 1935-36 to 1937-38, inclusive, but in 1938-39 it was reduced to 80 cents and in the following three years 1939-40 to 1941-42, inclusive, it was 70 cents. It should be noted, however, that in the two crop years 1940-41 and 1941-42 farm storage payments were made at the rate of 1/45th of a cent per bu. per day, to growers who stored their wheat on the farm for a certain time before delivery to the Board.

On Aug. 1, 1942, the initial price of wheat was raised to 90 cents per bu., but farm storage payments were not authorized for the crop year 1942-43. On the same date minimum prices became effective for oats and barley and a fixed price of \$2.25 for No. 1 Canada Western flaxseed, basis in store Fort William-Port Arthur, and for No. 1 Canada Eastern, basis domestic freight rates in store Montreal. At the same time ceiling prices on oats, barley and rye established by the Wartime Prices and Trade Board were in effect. The ceiling on rye was removed on Apr. 10, 1943, and the fixed price for No. 1 flaxseed was raised to \$2.50 per bu. as from Aug. 1, 1943.

Trading in wheat futures was halted on the Winnipeg Grain Exchange by order of the Dominion Government, as from the close of trading on Sept. 27, 1943, and the entire handling of the Canadian wheat crop placed in the hands of the Canadian Wheat Board. The initial price of wheat was raised as from Sept. 28, 1943, to \$1.25 per bu. basis in store Fort William-Port Arthur, or Vancouver.

#### Production, Imports and Exports of Wheat for Canada, 1930-43

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	Production	Imports of Wheat and Flour <sup>1</sup>	Exports of Wheat and Flour <sup>1</sup>	Year	Production	Imports of Wheat and Flour <sup>1</sup>	Exports of Wheat and Flour <sup>1</sup>
	'000 bu.	bu.	bu.		'000 bu.	bu.	bu.
1930...	420,672	244,221	258,693,887	1937...	180,210	6,138,819	92,957,047
1931...	321,325	216,328	207,029,555	1938...	360,010	1,891,177	160,034,183
1932...	443,061	173,014	264,304,327	1939...	520,623	444,368	192,674,368
1933...	281,892	413,165	194,779,875	1940...	540,190	122,798	231,206,246
1934...	275,849	896,674	165,751,305	1941...	314,825	29,103	222,007,141
1935...	281,935	291,510	254,424,775	1942...	556,121 <sup>2</sup>	2,978	211,517,686 <sup>2</sup>
1936...	219,218	403,396	195,223,653	1943...	296,259 <sup>2</sup>		

<sup>1</sup> Imports and exports are for the years ended July 31, 1930 to 1943.  
<sup>2</sup> Not yet available.

<sup>2</sup> Subject to revision.

#### Grain Storage Facilities

Although Canada had on Dec. 1, 1939, grain elevators of all types with a licensed capacity of 423,000,000 bu., this was found in the succeeding years to be inadequate for the handling of accumulated surplus grain, chiefly wheat, and by Dec. 1, 1940, the addition of temporary and special annexes, as well as permanent annexes to elevators proper, brought the storage capacity up to approximately 509,000,000 bu. This was not the end of the building program, however, for by Dec. 1, 1941, the licensed storage capacity was up to approximately 600,000,000 bu. A large part of the increase in 1941 came from the erection of large temporary buildings at Fort William and Port Arthur with a licensed capacity of over 52,000,000 bu. A further

prices, however, high labour requirements, including a large proportion of hand labour, have handicapped the efforts to increase sugar-beet production, and although the 1943 goal was 90,000 acres, the acreage dropped to 52,500 from 63,300 in 1942. The greatest reduction was in Ontario where a cold, wet spring reduced plantings to less than 10,000 acres compared with between 30,000 and 40,000 acres in some pre-war years. The output of refined beetroot sugar amounted to 189,066,900 lb. in 1942 with a value at the refinery of \$11,349,746.

**Maple Products.**—There was a considerable decline in the production of maple sugar and maple syrup in the four producing provinces in Canada in 1943, the total production in terms of maple syrup amounting to 2,299,700 gal. The crop was smaller than the 1942 crop of 3,250,600 gal. by 950,900 gal. or 29 p.c. The tapping season was longer and later than usual but weather conditions in the principal producing sections were not favourable for a good flow of sap and runs were very uneven. With supplies insufficient to meet the strong consumer demand, the crop sold readily at close to ceiling prices, the greater proportion of sales being made direct from the sugar bush to the consumer. Only a small volume reached the wholesale and retail trade and there were practically no sales on farmers' retail markets, where trading is usually very active. The total value of the 1943 crop was estimated at \$5,750,000, a decrease of 14 p.c. compared with the 1942 crop which had a farm value of \$6,716,300.

**Honey.**—The 1942 Canadian honey crop totalled 24,086,100 lb. as compared with 27,487,700 lb. in 1941. Although numbers of beekeepers and colonies were the highest on record, average yields were disappointingly low, the average for the Dominion being only 56 lb. per hive as compared with the long-time average of 70 lb. per hive. Nevertheless the 1942 crop of honey and beeswax was valued at \$3,505,000, which was 5.4 p.c. higher than the value of the output of the previous year, namely, \$3,314,800.

The 1943 honey crop, estimated at 33,500,000 lb., was one of the best on record. About 87 p.c. of the crop was light honey. One-third of the total production was from the Province of Ontario where 13,000,000 lb. of honey were produced as compared with the short crop of 7,800,000 lb. in the year previous. About 50 p.c. of the crop had already been marketed direct to the consumer with very little honey moving through normal trade channels when retail sales of honey were suspended by Government order, prior to the introduction of coupon rationing for this commodity effective Sept. 2, 1943.

**Fibre Flax.**—Under the stimulus of the war-time demands for this commodity, there has been considerable expansion in acreage and production during the past four years during which time, through action of the Agricultural Supplies Board, the whole industry has been put on a mechanized basis. Field and mill processing machinery is now manufactured in Canada, and 39 mills in Ontario and Quebec are equipped to process retted flax straw into long fibre and tow. Products of these mills are finding a ready market in Great Britain and the United States where the need for fibre and tow is urgent owing to the fact that the War has closed several sources of this strategic raw material.

The area planted to this crop increased from 10,536 acres in 1939 to 47,070 acres in 1942 and the value of flax products, which include flax fibre, seed and tow, showed a corresponding increase from \$1,249,000 in 1939 to \$4,687,000 in 1942. An objective of 75,000 acres was set for 1943, but unfavourable weather conditions brought about a reduction of the planted area to approximately 35,000 acres.



**Marketings.**—Commercial marketings of cattle in 1942 amounted to 1,288,617 head, of which 861,082 were sold through the stockyards, 336,184 head were sold direct to packing plants and 91,351 head were sold direct for export. Total commercial marketings in 1941 were 1,344,794 head of cattle. While there was some decline in the commercial marketings of cattle in 1942 there was an offsetting increase in the marketings of cattle through non-commercial channels. Commercial marketings of calves in 1942 amounted to 771,690 head as compared with 828,639 head in the previous year. Commercial marketings of hogs in 1942 were 6,232,087 compared with 6,225,274 head in the previous year. Again there was an increase in the non-commercial marketings in 1942 as compared with 1941. Total commercial marketings of sheep and lambs in 1942 were reported at 833,147 head as compared with 829,666 in 1941. In the case of both sheep and cattle the tendency on the part of farmers to hold back animals for the restocking of herds has resulted in increases of inventories on farms rather than in the marketings during the current year. The greater proportion of horses marketed are transferred from one farm to another and these do not appear on the stockyard records. However, there has been a considerable increase in recent years in the number of horses shipped from Western Canada to Eastern Canada through the St. Boniface yards.

### Special Crops

**Tobacco.**—War has checked the rapid expansion in the tobacco industry, which began in 1926 and reached its peak in 1939 when a crop of 107,703,400 lb. with a farm value of \$19,443,800 was harvested. The expansion was due almost entirely to the great increase in the production of flue-cured tobacco, particularly in Ontario. Exports, mainly to the United Kingdom and largely of the flue-cured type, had been increasing during this period and, in the year 1939, amounted to 32,200,000 lb. Following the outbreak of hostilities, the United Kingdom market was virtually closed to Canadian tobacco and the situation became so acute that acreage restrictions were put into effect. Restrictions were relaxed somewhat in 1941 on account of the sharp increase in the domestic demand for unmanufactured tobacco and a slight improvement in the export situation. The full 1939 acreage allotments for flue-cured and burley tobacco were restored in 1942 when the total area was increased to 78,730 acres and a crop estimated at 89,699,400 lb. with a gross farm value of \$21,538,100 was harvested. Although all restrictions on acreage were removed in 1943, production dropped to 62,844,700 lb. from 71,600 acres, owing to unfavourable weather and a shortage of farm labour.

There has been a decided expansion in the amount of domestic leaf taken for manufacture during the war years. The most substantial rise has been in the flue-cured type where withdrawals for manufacture increased from 30,000,000 lb. for the crop year ended Sept. 30, 1939, to 43,600,000 lb. for the twelve months ended Sept. 30, 1942. The increase is due to the sharply increased consumption of cigarettes in Canada, supplemented by the tremendous volume of ships' stores, and exports to the Armed Forces abroad.

**Sugar Beets.**—Restrictions on cane sugar importations stimulated interest in the sugar-beet industry from the early war years, with the result that 82,270 acres were planted in 1940 as compared with 59,603 acres in 1939. A new refinery was opened at Winnipeg in 1941 and processing plants were also operating in south-western Ontario and southern Alberta. In spite of the economic incentive of increased

**Oil-Seed Crops.**—The 1943 agricultural program called for considerable increase in the acreage of oil-bearing seeds, including flaxseed, soybeans, sunflower and rape-seed. The acreage objective for flaxseed of 2,500,000 acres was exceeded by a substantial margin and, although unfavourable weather and other conditions beyond the control of the growers adversely affected the seeding of the other three crops, in every case there was some expansion over the 1942 acreage.

Production of *soybeans* in Canada was negligible prior to 1936, and the crop was grown chiefly in Ontario. The average acreage seeded in the five years 1936-40 was less than 10,000 acres, but war-time demand for oils and fats brought about an increase to about 45,000 acres in 1942, of which more than 41,000 acres were located in Ontario and the balance in Manitoba, British Columbia and Alberta. Weather conditions in the autumn of 1942 were very unfavourable for the harvest and much of the crop was lost through repeated heavy rainfall. The Canadian Wheat Board offered a guaranteed price of \$1.96 for No. 1 beans, basis Toronto, for the 1942 crop and the same price for the 1943 crop. Acreage was again expanded in 1943 to 47,000 acres in Ontario, about 6,000 in Manitoba and 1,000 in British Columbia, while Alberta acreage ranged between 500 and 1,000 acres, making a total of approximately 55,000 acres.

Crushing facilities for soybean are quite limited in Canada, but as only a small portion of the Ontario crop appeared in inspected commercial channels the quantities were insufficient to keep these facilities fully occupied and beans were imported from the United States. Production of soybean oilcake and meal in Canada during the crop year 1942-43 was about 6,000 tons while an additional 17,000 tons was imported for use in animal feeds. A small amount of Canadian soybean was processed for the production of full-fat soya flour used for human consumption.

**A Field of Soybean in Manitoba.**—The production of this crop in Canada is making rapid progress (see text). A large range of goods can be manufactured from soybean, including flour for bread, substitutes for peanut butter and plastics in many forms. The by-product is an excellent protein feed for live stock.

*Courtesy, Industrial Development Board of Manitoba*





**A Crop of Celery in British Columbia.**—The foliage in the background are huge fern trees that look like date palms and are plentiful along the Fraser River.

*Courtesy, National Film Board*

Over 147,000 lb. of *sunflower* seed was distributed by the Department of Agriculture in 1943 to approximately 1,000 growers in Western Canada. There were 10,457 acres planted in Manitoba, 16,665 acres in Saskatchewan, 1,145 acres in Alberta and one acre in British Columbia, a total of 28,268 acres. The yield is estimated at 600 to 800 lb. per acre.

About 40,000 lb. of Argentine *rapeseed* was distributed to growers in Ontario, Quebec and the Prairie Provinces, chiefly in Saskatchewan and Manitoba. Rapeseed yields between 500 and 600 lb. per acre. The oil provides a valuable lubricant used largely for marine engines.

**Forage Seed Crops.**—The demand for forage seed crops has been strengthened by the almost phenomenal expansion which has taken place in live-stock numbers during the war years. The commercial production of hay and pasture seeds increased from 24,767,400 lb. in 1940 to 37,778,000 lb. in 1941, 40,616,000 lb. in 1942 and 43,842,000 lb. in 1943. The 1943 crop was valued at \$4,695,800 which compares with the 1942 crop valuation of \$3,455,000.

**Hops.**—Hop production is largely confined to British Columbia where a crop of approximately 1,500,000 lb. with a value of about \$560,000 is produced annually.

**Vegetables.**—The growing of fresh vegetables for market is an important industry in many districts, particularly the suburban areas. Truck farms located in specially favoured regions provide raw materials for the vegetable-canning industry and cater to the fresh-vegetable market. The commercial production of vegetables in 1943 is estimated at 612,700 tons. Home gardens produced about 167,600 tons, including vegetable production sponsored by the Government's Victory Garden project. These estimates do not take into account the production of potatoes and table turnips.

## **Dairying**

**War-Time Regulations and Prices of Dairy Products.**—Recognizing the importance of dairy products in meeting the essential war-time food requirements, it was found necessary to increase the subsidy payments previously being made to farmers, and in some cases to extend the application of these subsidies, in order to invite increased production during 1943. With regard to butter, the subsidy of 6 cents per



To summarize the situation at the beginning of 1944: it will be seen that cream sold for factory-butter production is covered by a subsidy of 10 cents a pound butter-fat; subject, however, to a reduction of 2 cents a pound on May 1. Cheese, milk, and milk for concentrated milk products (including that used for skim-milk powder) is subsidized at 30 cents a hundred; while fluid milk is now subject to a producer-subsidy of 55 cents per hundred and a consumer-subsidy of 2 cents a quart.

During 1943 creamery butter prices were established at the various markets on the basis of the maximum set by the Wartime Prices and Trade Board. The first of these regulations was issued toward the end of January, setting manufacturers' prices of first-grade solids at 36 cents in the Maritime Provinces, 35 cents in Ontario and Quebec, 32½ cents in Saskatchewan, 33 cents in Manitoba and Alberta, and 34½ cents in British Columbia. Three months later some adjustments were made which placed Saskatchewan and British Columbia prices ½ cent higher. Second-, third- and lower than third-grade butter were subject to a discount of 1 cent for each grade. On Apr. 2, minimum prices were established for first-grade creamery butter. The plan provided for upward adjustments as the season advanced, varying from 33 to 35½ cents in the Maritime Provinces, from 30 to 32½ cents in the Prairie Provinces, and from 32 to 34½ cents in Ontario, Quebec and British Columbia. The Dairy Products Board was also authorized to support the market by purchasing butter at Montreal, Toronto and Vancouver at the minimum prices.

**Production of Dairy Products.**—The production of creamery butter showed a substantial increase during the period January to April, 1943, as compared with the same period of the previous year. This, of course, was a direct result of the subsidized price arrangement which gave farmers an average of 45·7 cents per lb. butter-fat as compared with 32·9 cents in the same period of the previous season. Moreover, even with the reduction of the subsidy to 8 cents a lb., the production of the creamery product continued to advance and, at the end of October, had exceeded the ten-month output of 1942 by approximately 31 million lb., or 12·2 p.c. The total for the year is provisionally estimated at 313 million lb. as compared with over 285 million lb. in 1942.

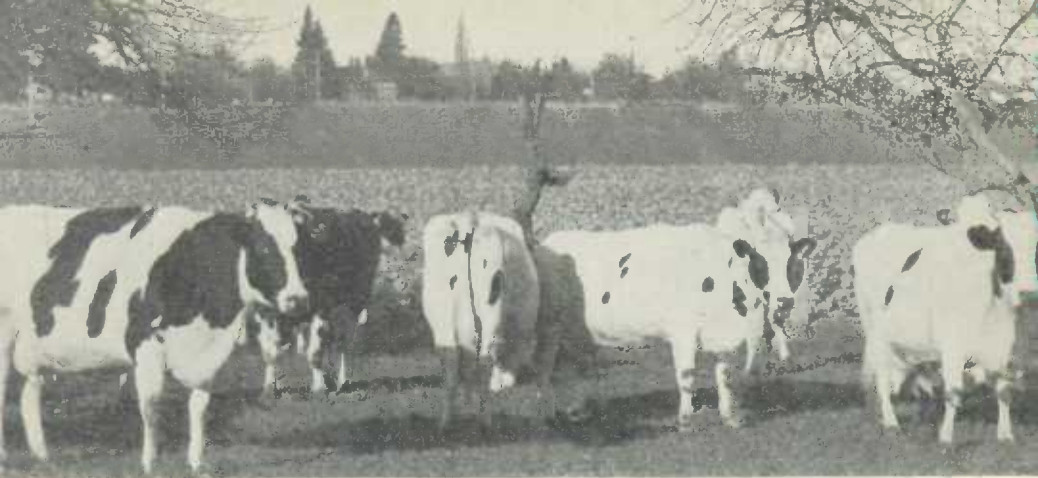
While the butter-fat subsidy tended to increase the creamery output, it reacted in the opposite direction in the production of dairy butter. Up to the end of September, 1943, the dairy make had declined 37 p.c. as compared with the same period of the previous year, and the estimate for the year 1943 has been tentatively placed at 52 million lb. as compared with 79 million lb. for 1942. Nevertheless, regardless of this decline, the supply position at the first of October was exceptionally favourable, and the surplus available, over and above domestic requirements, was sufficient to permit the exportation of a sizeable volume of butter to the United Kingdom to help maintain the existing ration in that country of 2 oz. per week. The gain in creamery butter production, however, was obtained at the expense of cheese which fell to 147 million lb. or 22·5 p.c. below the ten-month production of 1942, and it is estimated





pound of butter-fat which had been introduced in July, 1942, was increased to 10 cents a pound in December, 1942, with the understanding that the subsidy would revert to the lower figure at the end of April. On Apr. 2, 1943, a statement of policy was announced by the Minister of Agriculture providing for a subsidy of 8 cents a pound butter-fat during the period May to December, 1943, and 10 cents during the period Jan. 1 to Apr. 30, 1944.

Commencing with 1943, cheese production had been encouraged by subsidy which increased the basic price to 16 cents f.o.b. Montreal, during the latter part of the season. Under a new agreement with the British Ministry of Food, covering the fiscal year 1942-43, this price had been advanced to 20 cents. Under the 1943-44 agreement, a further increase was made by setting 20 cents as the basic price f.o.b. factory instead of 20 cents f.o.b. Montreal. It was estimated that this would increase the price to the producer by approximately five-eighths to one cent a pound, depending upon the location of the factory or grading station. In addition, the payment of a quality bonus was continued, amounting to 1 cent a pound for 93-score cheese and 2 cents a pound for 94-score cheese. Thus the maximum price was advanced to approximately 22 cents a pound. In Ontario the decision to continue the provincial bonus of 2 cents a pound gave the producers of cheese in that province a maximum of approximately 24 cents. The improved position of the cheese producer was reflected in the prices received during 1943. For the whole of Canada the average farm price of milk for cheesemaking, based on dairy income estimates of the Dominion Bureau of Statistics for the first seven months of the year, was \$1.62 per hundred lb. On a butter-fat basis, this is equivalent to 46.3 cents per lb. as compared with 42.8 cents per lb. butter-fat for cream used in the production of factory-made butter. In order to stimulate cheese production, an Order in Council was passed on Sept. 10, 1943, which provided for a subsidy of 30 cents a hundred on milk used for the production of cheddar cheese on and after Oct. 1. In terms of butter-fat, producers gain an additional 8.6 cents a lb., or based on the January-July average, a total of nearly 55 cents per lb. butter-fat. Milk used for the manufacture of concentrated milk products was awarded a subsidy of 40 cents a hundred from December, 1941, to the end of April, 1942. No subsidy was provided for in the winter period of 1942-43, but on Apr. 2, 1943, it was announced that a subsidy of 25 cents a hundred would be paid to the producers of milk, concentrated into whole milk products between Oct. 1, 1943, and Apr. 1, 1944, and that these payments would be made retroactive to cover deliveries made to plants during March and April, 1943. On Oct. 1, 1943, this subsidy was advanced to 30 cents a hundred and was extended to cover milk used in making skim-milk powder, provided that such milk was not already subsidized. Fluid milk, which had been covered by a subsidy of 30 cents a hundred during the period December to April, 1941-42, was given a subsidy of 25 cents a hundred commencing Sept. 1, 1942 and, due to some adjustments in the minimum prices, the new order really represented a total price increase, equivalent to the original subsidy. On Oct. 1, a subsidy of 55 cents went into effect. The Wartime Prices and Trade Board gave some protection to the interests of consumers by ordering on Dec. 16, 1942, a reduction of 2 cents a qt. on fluid milk with provision for reimbursing the distributors to the extent of this reduction. Consumers, however, were asked to restrict the consumption of cream to provide a larger quantity of milk for other purposes, and on Jan. 1, 1943, the maximum fat content on fluid cream sales was placed at 18 p.c.



A Herd of Holstein Cows in Ideal Surroundings.

*Courtesy, Ontario Milk Producer*

that the total output for the year would not exceed 165 million lb. This represents a considerable decline from the 1942 production of nearly 207 million lb. which was the highest output on record since 1900 when nearly 221 million lb. was produced in the Dominion.

Fluid milk sales (including cream on a milk basis) were increased and, during the first nine months of 1943, exceeded the sales of the same period of the previous year by 9.3 p.c. Milk consumed in farm homes was advanced 3.0 p.c.; ice cream moved up 6.9 p.c.; milk used in concentrated milk products registered an increase of 5.5 p.c., and milk fed to live stock was approximately 1 p.c. higher than that shown in the corresponding period of the preceding year. The total milk production of Canada for 1943 has been provisionally estimated at 17,400 million lb., approximately equal to that of 1942. In 1942 the gross farm value was placed at \$273,991,000 and the total value at \$357,770,000.

#### Dairy Production of Canada, 1939 and 1942

Economic Area	Year	Milk		Products Made from Milk				
		Total Milk Production	Fluid Sales	Butter		Cheddar Cheese	Evaporated Milk	Dairy Butter
				Creamery	Dairy*			
		'000 lb.	'000 lb.	lb.	lb.	lb.	lb.	lb.
Maritime Provinces...	1939	982,653	162,007	11,606,197	13,636,000	1,017,136	1	14,100,000
	1942	1,091,734	194,025	15,165,325	12,900,000	2,935,550	1	12,900,000
Quebec and Ontario....	1939	9,911,655	2,183,363	168,246,067	36,476,000	117,494,901	87,625,449	27,922,000
	1942	10,571,691	2,428,739	154,135,217	25,100,000	193,623,486	141,399,239	25,100,000
Prairie Provinces...	1939	4,712,865	464,707	81,674,203	50,760,000	6,035,017	1	42,750,000
	1942	5,196,542	522,769	109,933,803	38,700,000	9,496,641	1	38,700,000
British Columbia...	1939	539,309	201,438	6,086,079	2,850,000	928,305	1	2,687,000
	1942	568,695	242,412	5,357,027	1,825,000	879,787	1	1,825,000
Totals.....	1939	16,146,482	3,011,515	267,612,546	103,722,000	125,475,359	116,885,119	87,459,000
	1942	17,428,662	3,387,945	284,591,372	78,525,000	206,935,464	183,471,063	78,525,000

\* Less than three firms reporting.

\* Revised figures for "dairy butter", 1939, are given in the right-hand column.

**Marketing and Consumption.**—In the course of the past ten years, more than 98 p.c. of the total make of creamery butter was consumed in Canada. This situation did not always exist. Exports of butter reached their highest point in 1925 when more than 24 million lb. of Canadian butter was shipped out of the Dominion, representing about 15 p.c. of the total make. In the following year, there was a pronounced decline, and since then the surplus available for export has reached an almost negligible quantity. Cheddar cheese, on the other hand, is one of Canada's principal export commodities and, next to wheat and flour, represents an export value greater than that of any other farm product. During the entire period 1933 to 1942, exports were 67 p.c. of the total production. In 1939 (the last year for which official figures were published), 91 million lb. was shipped out of Canada, the greater part of which went to the United Kingdom. In 1940-41 the export cheese quota to the United Kingdom was placed at 78 million lb.; in 1941-42 it was raised to 112 million lb.; in 1942-43 to 125 million lb.; and in 1943-44 to 150 million lb.

The domestic disappearance of butter on a per capita basis amounted to 33.14 lb. in 1942 as compared with 31.24 lb. in 1941. The demand for butter, which had shown a normal increase during the early part of 1942, increased considerably during the fall of the year. This movement was checked with the introduction of rationing on Dec. 16, 1942, whereby the sale of butter to individuals was placed at  $\frac{1}{2}$  lb. per person per week, or 26 lb. per year. To further conserve supplies, the butter ration was temporarily reduced to 2 $\frac{2}{3}$  oz. per week by the extension of the expiry date of two coupons. This represented an allowance of 2 lb. for six weeks. The full ration, however, was restored in the month of March as the result of the favourable supply position, and this ration has since been maintained. The domestic disappearance of butter in Canada for the first ten months of 1943 amounted to 274 million lb., representing an average of 27 million lb. per month or 2.32 lb. per capita. Compared with 1942, these figures represent a considerable decline, the total domestic disappearance during the same period being 321 million lb. or 2.72 lb. per capita.

Canadians are not heavy consumers of cheese. Nevertheless, the per capita disappearance moved up from 3.74 lb. in 1940 to 4.07 lb. in 1942. The consumption of milk during the past two years has also greatly increased, in fact to a degree which threatens to produce a shortage for other purposes. In 1942, fluid sales (including both milk and cream on a milk basis) amounted to 3,388 million lb., and milk consumed in farm homes was 1,674 million lb. The total of 5,062 million lb. represents 29 p.c. of the total production. From January to October, 1943, fluid sales amounted to 319 million lb., an increase of approximately 10.1 p.c. over the sales during the corresponding period of 1942; and, with the addition of the quantity used in farm homes, reached a total of 469 million lb. as compared with 440 million lb. in the same period of the preceding year. After allowing for wastage, the estimated consumption of milk (including cream on a milk basis) represented a per capita consumption of 0.94 pint in 1942 as against 0.86 pint in 1941. It is estimated that the 1943 consumption may approximate one pint per person.

**Income.**—During the past few years, farmers have substantially increased their income from the sale of dairy products. In 1930 it amounted to \$105,600,000 or 16.85 p.c. of the total farm income. In 1942 this figure had risen to approximately \$224,373,000, representing 20.1 p.c. of the total farm income. With the increase that has taken place in the price of dairy products in 1943, including additional



subsidies paid by the Government, the gross farm earnings from dairy products have greatly exceeded this figure. In the first six months of 1943, income from dairy products was \$110,263,900 as compared with \$97,426,000 in the same period of 1942.

## Poultry and Eggs

Poultry farming has expanded considerably during the past ten years and, in response to the war-time agricultural program, an unprecedented development took place in 1942. The production of eggs showed the most noticeable increase, but farmers are also making an important contribution to war-time food requirements by the production of poultry meat. This development has resulted to some extent from a shortage of beef and pork products in 1942; so that the consumption of poultry was greatly increased and farmers found a ready sale for all available supplies.

The population of hens and chickens at June 1, 1943, was estimated at approximately 75,000,000. Turkeys numbered approximately 2,900,000, geese 624,000 and ducks 684,000. These figures showed an increase of 10 p.c. in the number of hens and chickens as compared with those of the previous year. Declines of approximately 19 p.c., 9 p.c. and 15 p.c., respectively, were recorded in the numbers of turkeys, geese and ducks.

During the year 1942, the production of farm eggs amounted to approximately 280,000,000 doz. and is estimated at 315,000,000 doz. for 1943. Over the past few years there has been a considerable increase in the egg production per hen. The gross farm value of poultry products in 1942 was \$49,977,000 and the gross value of production of farm eggs was estimated at \$81,305,000. The domestic disappearance of poultry meat was approximately 23 lb. per capita, of which 18 lb. consisted of hens and chickens. During the war period there has been a marked increase in the exports of eggs to Great Britain, a part of which is shipped in the form of egg powder.

## Fruit Growing

The preliminary estimates of fruit production in 1943 indicate that all crops were substantially smaller than in 1942. The estimates of the 1943 crops followed

A Picturesque Scene  
in Annapolis Valley,  
N.S., Famed for Its  
Apple Orchards.

*Courtesy, Canadian  
Pacific Railway*







The Canadian Horticultural Industry.—  
The War has stimulated the home production of horticultural stock. This Ontario plant is the most completely equipped of its kind in America.

by five-year (1936-40) averages are: apples, 4,225,100 bbl. (4,813,800 bbl.); pears, 557,700 bu. (539,200 bu.); plums and prunes, 354,400 bu. (215,700 bu.); peaches, 571,100 bu. (703,300 bu.); apricots, 17,600 bu. (46,400 bu.); cherries, 184,200 bu. (186,000 bu.); strawberries, 13,927,900 qt. (24,347,500 qt.); raspberries, 8,423,200 qt. (9,617,600 qt.); loganberries, 1,702,600 lb. (1,911,700 lb.); grapes, 53,881,600 lb. (44,319,300 lb.).

**Markets.**—Agreements with the United Kingdom and United States make provision for the movement of a considerable volume of fresh apples from Nova Scotia and British Columbia during the 1943-44 season. In addition shipments to Newfoundland, St. Pierre and Miquelon and Iceland are also planned. A large proportion of the fruit shipped to the United Kingdom will be evaporated, but about 650,000 bushels of fresh apples are to be shipped. As the United Kingdom authorities would take fresh apples in preference to the dehydrated product some adjustment in the quantities of each may be made. Of the 350,000 bushels to be shipped to the United States, 200,000 will be British Columbia Johnathan and Delicious, while the remaining 150,000 bushels will be Nova Scotia apples of varieties suitable for processing.

The annual British Columbia Apple Marketing Agreement makes provision for assistance by the Provincial Government in the marketing of 4,250,000 boxes of apples less the quantity exported during the season. Further, the industry will receive a bonus of 15 cents per pound for choice quality evaporated apples produced in excess of 750,000 pounds. The Nova Scotia Agreement for 1943-44 is similar to that of a year ago. The Nova Scotia Fruit Board must market as much fresh fruit outside the Annapolis Valley as possible and assistance is to be given in the evaporation of the surplus.

## Provincial Assistance to Agriculture

Each of the nine provinces, under Sect. 95 of the B.N.A. Act, has its Department of Agriculture, through which is carried on educational and extension work to assist farmers. Agricultural colleges maintained by the provinces are: the Nova Scotia Agricultural College at Truro, the Ontario Agricultural and the Ontario Veterinary Colleges at Guelph, and the College of Agriculture at Saskatoon. Three agricultural colleges in Quebec are assisted by the Provincial Government, while faculties of agriculture are found in the provincial universities of Manitoba, Alberta and British Columbia.

## CHAPTER IV

### Forest Resources

The special article at the beginning of this Handbook, dealing with the influences of the War on forest resources, gives in broad outline a picture of Canada's forests and of their place in the national economy. Normally, this chapter is introduced by summary figures, but in order to save repetition the reader is referred to the introductory article.

#### Operations in the Woods

Generally speaking, the operations in the woods form the preliminary step in the industry and provide the primary forest products in the form of logs or bolts which are the raw material for the mill operations that form the second stage. An exact separation of the statistics relating to these two stages in the industry cannot always be made nor can the lumber industry be treated as entirely distinct from the pulp and paper industry. Woods operations produce not only sawlogs but pulpwood, ties, poles, piling, square timber, mining timbers, firewood, fence posts, wood for charcoal and excelsior manufacture, and wood for distillation. It is often impossible to state for what purpose the timber being cut will eventually be used. Many lumber manufacturers install machinery for cutting-up and barking pulpwood ;

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**A Stand of Young Forest Growth in Ontario.**

*Courtesy, Ontario Forest Service*



and direct a part of their spruce and balsam logs to pulp manufacture; some pulp and paper companies operate sawmills in connection with their plants for the purpose of utilizing the larger timber on their limits.

Values of the Products of Woods Operations, by Products, 1937-41

Products	1937	1938	1939	1940	1941
	\$	\$	\$	\$	\$
Logs and bolts.....	58,004,070	52,759,660	55,685,197	71,817,471	86,514,625
Pulpwood.....	63,057,205	53,761,999	58,302,668	74,347,132	88,193,045
Firewood.....	32,457,629	32,740,566	33,058,240	33,297,756	26,662,296
Hewn railway ties.....	3,129,207	2,222,509	2,048,186	1,788,001	1,547,780
Poles.....	2,455,345	2,824,512	2,940,361	2,691,107	2,467,336
Round mining timber.....	1,262,658	1,297,993	1,461,507	5,707,677	2,458,435
Fence posts.....	992,610	978,679	1,111,883	999,934	964,568
Wood for distillation.....	309,892	298,110	289,230	518,204	588,747
Fence rails.....	262,160	264,480	267,437	270,320	262,521
Miscellaneous products.....	1,319,111	1,117,349	2,582,689	3,130,273	3,503,736
<b>Totals.....</b>	<b>163,249,887</b>	<b>148,265,857</b>	<b>157,747,398</b>	<b>194,567,875</b>	<b>213,163,089</b>

### The Lumber Industry

Except in the Maritime Provinces, 90 p.c. of the forest land is the property of the Crown, lumbermen being granted cutting rights only. This land is administered by the various provincial departments. Conifers usually form about 95 p.c. of the total cut of all kinds of wood, only 5 p.c. being deciduous-leave trees or hardwoods. Douglas fir is the most important kind of lumber sawn, and is produced almost entirely in British Columbia. Spruce is sawn in every province and comes second, with white pine, hemlock, cedar, and yellow birch next in order of importance.

The industry includes products of: sawmills; shingle, tie, lath, shook, stave, heading and hoop mills; and mills for the cutting-up and barking of pulpwood. Sawn lumber produced in 1941 amounted to 4,941,084 M ft. valued at \$129,287,703. Shingles numbered 4,160,772 squares at \$12,309,632, sawn ties 4,710,556 at \$2,854,958, and lath 204,991 M at \$731,227. The gross value of production for the industry as a whole showed an increase of 22 p.c. over the total for 1940.

Production of Sawn Lumber and All Sawmill Products, 1941

Province or Territory	Sawn Lumber Production		Total Sawmill Products
	M ft. b.m.	\$	\$
Prince Edward Island.....	4,724	98,878	130,977
Nova Scotia.....	252,490	5,822,652	6,291,112
New Brunswick.....	332,211	9,039,197	11,235,582
Quebec.....	914,691	24,401,637	30,000,903
Ontario.....	602,248	19,048,059	23,173,015
Manitoba.....	85,918	2,113,386	2,253,209
Saskatchewan.....	125,853	2,834,480	3,010,671
Alberta.....	214,619	4,294,710	4,928,517
British Columbia.....	2,407,800	61,612,222	82,364,174
Yukon.....	530	22,482	24,132
<b>Totals.....</b>	<b>4,941,084</b>	<b>129,287,703</b>	<b>163,412,292</b>

## CANADA 1944

Newsprint made up 77 p.c. of the total production of Canada's 77 paper mills in 1942; paper boards 14 p.c.; wrapping paper 4 p.c.; book and writing paper 3 p.c.; and tissue and miscellaneous papers the remainder.

### Production of Newsprint and Total Paper in Canada, 1934-42

Year	Newsprint Paper		Total Paper	
	Quantity	Value	Quantity	Value
	tons	\$	tons	\$
1934.....	2,604,973	86,811,460	3,069,516	120,892,225
1935.....	2,765,444	88,436,465	3,280,896	125,752,650
1936.....	3,225,386	105,214,533	3,806,710	146,354,666
1937.....	3,673,886	126,424,303	4,345,361	175,885,423
1938.....	2,668,913	107,051,202	3,249,358	151,650,065
1939.....	2,926,597	120,858,583	3,600,502	170,776,062
1940.....	3,503,801	158,447,311	4,319,414	225,836,809
1941.....	3,519,733	158,925,310	4,524,776	241,450,292
1942.....	3,257,180	147,074,109	4,241,767	230,962,719

Canada's newsprint production in 1942 was over three times that of the United States, a few years ago the world's chief producer. Estimated production for 1943 is 2,961,000 tons.

Monthly figures of Canadian newsprint production for 1943 are:—

	Tons
January.....	233,544
February.....	221,807
March.....	246,855
April.....	229,573
May.....	254,046
June.....	257,845
July.....	262,323
August.....	259,612
September.....	251,827
October.....	259,336
November.....	256,336
December.....	—

Topping a Giant Spruce.

Courtesy, Toronto Star  
Newspaper Service





Breaking a Log Jam.



### The Pulp and Paper Industry

The manufacture of paper was a relatively unimportant industry in Canada until the last two decades of the past century when wood-pulp superseded rags as a raw material. Canada's extensive pulpwood resources and widely distributed water powers have been largely responsible for the remarkable development of the industry.

The pulp and paper industry has headed the lists in net value of production since 1920, and in wage and salary distribution since 1922, replacing the sawmills in both cases. It was the first in gross value of production from 1925 (when it replaced the flour mills) until 1935 (when it was overtaken by the non-ferrous metal group). In these comparisons only the manufacturing stages of the pulp and paper industry are considered, no allowance being made for the capital invested, employment furnished, payroll, or production of those operations in the woods.

The gross value of output of the industry increased rapidly and steadily until the boom years following the War of 1914-18 and jumped to a peak of over \$232,000,000 in 1920. This was followed, in 1921, by a drop that was general throughout the industrial field. Then followed a steady recovery up to a second peak in 1929 of \$243,970,761. The 1942 total exceeded all previous records. Figures from 1930 are:—

	Gross Production	Net Production		Gross Production	Net Production
1930.....	\$215,674,246	\$107,523,731	1937.....	\$226,244,711	\$106,002,017
1931.....	174,733,954	87,858,357	1938.....	183,897,503	89,034,186
1932.....	135,648,729	66,855,923	1939.....	208,152,295	103,123,660
1933.....	123,415,492	56,880,641	1940.....	298,034,843	158,230,575
1934.....	152,647,756	77,243,309	1941.....	334,429,175	174,555,041
1935.....	159,325,546	78,647,626	1942.....	337,390,484	165,193,627
1936.....	183,632,995	85,739,406			

There are three classes of mills in the industry. These, in 1942, comprised 28 making pulp only, 50 combined pulp and paper mills, and 27 making paper only. In 1942 the 78 mills making pulp produced 5,606,461 tons valued at \$192,145,062, representing a decrease of 2 p.c. in quantity but an increase of 9.5 p.c. in value over 1941. About 69 p.c. by quantity was made in combined mills and used by them in papermaking and about 31 p.c. was made for sale in Canada and for export. Of the total pulp production in Canada in 1942, 58 p.c. was ground wood, 20 p.c. unbleached sulphite, 11 p.c. bleached sulphite, 9 p.c. soda, sulphate and other fibre, and the remaining 2 p.c. screenings, etc.

## CHAPTER V

### Fur Production

The fur trade of Canada which, in the early days, dominated all other pursuits and led to the exploration and the eventual settlement of the country, is still of importance, and a strong policy to conserve this resource has been inaugurated by the Provincial Governments in co-operation with the Dominion authorities. Laws have been passed under which provision is made for close seasons, for the licensing of trappers and traders, for the collection of royalties on pelts, and for the regulation of the methods to be employed in trapping animals. In recent years the trade has been assisted by the establishment of fur farms, which now supply nearly all the silver fox and about 44 p.c. of the mink pelts.

**Trends in Production.**—The value of Canada's production of raw furs for the year ended June 30, 1942, exceeded that of the preceding season by 18 p.c. and that of 1940-41 by 49 p.c. The total production comprises pelts taken by trappers and pelts sold from fur farms. It is impossible to make an exact division between the two classes, since statistics of fur farms are for the calendar year, but it is estimated that approximately 19 p.c. of the total value of raw-fur production in the season 1941-42 may be credited to fur farms.

The increase in the total value of raw-fur production in 1941-42 over 1940-41 was due in part to the rise in prices for most kinds of furs: ermine advanced from 93 cents to \$1.20; silver fox from \$21.58 to \$22.96; new-type fox from \$25.30 to \$41.54; red fox from \$6.75 to \$8.81; white fox from \$18.38 to \$25.74; muskrat from \$1.79 to \$2.06; and squirrel from 27 cents to 31 cents. During the two-year period, 1940 to 1942, the price of each of these furs has risen by between 49 p.c. in the case of silver fox, and 197 p.c., in the case of white fox.

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A Platinum Mink. This is a recently developed Colour-phase of the mink.

*Courtesy, Margill Fur Farm,  
Westhill, Ont.*



The total number of pelts produced showed an increase over the preceding season of 170 p.c. Muskrat, squirrel and rabbit, which are among the less expensive furs, are the kinds most largely used; in 1941-42 the number of muskrat pelts entering into the fur trade was 2,408,436, or 12.3 p.c. of the total for all kinds, squirrel pelts, 5,761,433, or 29.5 p.c., and rabbit pelts, 9,012,329 or 46.1 p.c. The percentage of the value sold from fur farms rose from 4 p.c. in earlier years to as high as 43 p.c. in 1937-38, but dropped to 19 p.c. in 1941-42.

The manufacture of fur goods (coats, collars, scarves, muffs, etc.) constitutes an important Canadian industry, which gave employment in 1941 to 4,362 persons and produced goods valued at \$26,461,326. The bulk of the fur goods produced in Canada is for domestic consumption and practically the entire Canadian demand for fur goods is met by the home product; the imports and exports of fur goods are of small



An Ontario  
Muskrat Farm

*Top:* Feeding muskrats  
through the ice.

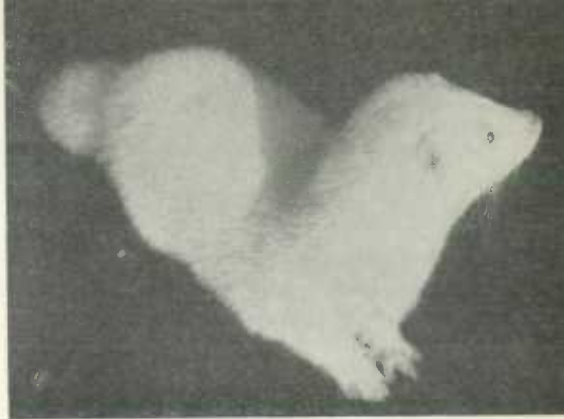
*Bottom:* Muskrat traps.

*Inset:* A trapped animal.

*Courtesy, National  
Film Board*

An Albino Mink.

Courtesy, Industrial  
Development Board



importance. The fur dressing and dyeing industry operates on a custom basis; the number of skins treated in 1941 was 14,592,079, mainly rabbit, squirrel and muskrat. The total amount received by the plants for the treatment of the furs was \$2,476,289.

Numbers and Values of Pelts Taken, Seasons 1928-29 to 1941-42

Season	Pelts	Total Value	Season	Pelts	Total Value
	No.	\$		No.	\$
1928-29.....	5,150,328	18,745,473	1935-36.....	4,596,713	15,464,883
1929-30.....	3,798,444	12,158,376	1936-37.....	6,237,640	17,526,365
1930-31.....	4,060,356	11,803,217	1937-38.....	4,745,927	13,196,354
1931-32.....	4,449,289	10,189,481	1938-39.....	6,492,222	14,286,937
1932-33.....	4,503,558	10,305,154	1939-40.....	9,620,695	16,668,348
1933-34.....	6,076,197	12,349,328	1940-41.....	7,254,787	21,123,161
1934-35.....	4,926,413	12,843,341	1941-42.....	19,561,024	24,859,869

**Fur Farming.**—In the early days of the fur trade it was the practice in Canada for trappers to keep foxes caught out of season alive until the fur was prime and from this custom arose the modern industry of fur farming. Silver fox was the first important commercial fur bearer successfully raised in captivity and is still of greatest importance from the standpoint of total value. Experiments have lately been made at fixing the strains for such colour phases of the fox as platinum, pearl-platinum, white-face, silver-blue, ring-neck, etc. There were 6,511 of these new-type foxes on farms at the end of 1941.

Second to the silver fox in importance is the mink, which is easily domesticated and thrives in captivity if care is exercised in the selection of environment and proper attention given to diet. The high prices obtainable for fisher and marten pelts have encouraged efforts to raise these animals and a moderate amount of success has been attained in each case. The valuable chinchilla has recently been added to the animals raised in captivity on Canadian farms and the raising of nutria is also showing progress.

The Dominion Department of Agriculture conducts, at Summerside, P.E.I., an experimental fur farm for the study of matters affecting the health of fur-bearing animals, especially the silver fox, in captivity, and has, in addition, organized a service to assist in the marketing, both at home and abroad, of the pelts of Canadian fur bearers. Several of the Provincial Governments also have established branches that engage in experimental work and various other activities of value to the fur-farming industry.

**Statistics of Fur Farming.**—The number of fur farms in operation in Canada in 1941 was 8,440 compared with 9,164 in the preceding year and it is expected



that there will be a further decrease in 1942 due to the effects of the War. Although there were fewer farms in 1941, the value of fur-farm property at \$15,171,845 increased by \$826,459 or by 6 p.c. Ontario stood first among the provinces in value of fur-farm property with 20.5 p.c. of the total. The other provinces ranked as follows: Que., 19.4 p.c.; Alta., 16.6 p.c.; Man., 14.1 p.c.; Sask., 8.7 p.c.; P.E.I., 6.8 p.c.; B.C., 6.0 p.c.; N.B., 4.6 p.c.; N.S., 3.2 p.c.; and Yukon, 0.1 p.c.

The total revenue of the fur-farming industry in 1941 was \$5,582,339, 86 p.c. of which was received from the sale of pelts and the remainder from the sale of live animals. Silver and new-type fox pelts accounted for \$2,829,207, or 59 p.c. of the total pelt sales, and mink for \$1,888,189, or 39 p.c. The average value of silver-fox pelts was \$22.81 compared with \$17.92 in 1940, and of mink pelts \$10.62 compared with \$9.64. Live silver fox sold numbered 6,994 and were valued at \$327,845; mink numbered 12,018 valued at \$291,618; and new-type fox, including platinum, white-face, silver-blue, etc., numbered 826 valued at \$148,041. Compared with 1940, the total value of pelts sold showed a decrease of \$808,891, while the value of live animals sold increased by \$238,156.

The value of the animals on the farms at the end of 1941 was \$7,928,971, of which 55 p.c. was of silver and new-type fox and 40 p.c. of mink. The 98,054 silver and new-type fox on the farms was an increase over the preceding year of 2,025, and the 153,447 mink an increase of 20,833. The total number of fur-bearing animals on farms was 256,928 compared with 234,269 in 1940.

From information received direct from the fur farmers, it is estimated that 119,700 standard silver fox, 17,900 new-type fox and 198,300 mink will be pelted in the season 1943-44.

**Export Trade in Furs.**—For many years London and New York have been the chief markets for Canadian furs, but the present war has altered this situation and Canadian furs are now disposed of on the home market. Since 1920 Montreal has occupied a position as an international fur market and Winnipeg, Edmonton and Vancouver also operate auction sales.

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The natural beauty of fine fur is not only well preserved but is enhanced by modern processing and manufacturing methods.

*Courtesy, Manitoba Travel and Publicity Bureau*



## CHAPTER VI

### Fisheries Production

Canada has perhaps the largest fishing grounds in the world. On the Atlantic, from Grand Manan to Labrador, the coast line, not including the lesser bays and indentations, measures over 5,000 miles. The Bay of Fundy, 8,000 square miles in extent, the Gulf of St. Lawrence, fully ten times that size, and other ocean waters comprise not less than 200,000 square miles or over four-fifths of the area of the fishing grounds of the North Atlantic. In addition there are on the Atlantic seaboard 15,000 square miles of inshore waters controlled entirely by the Dominion. The Pacific Coast of the Dominion measures 7,180 miles in length. Inland lakes contain more than half of the fresh water on the planet; Canada's share of the Great Lakes alone has an area of over 34,000 square miles.

#### Statistics of Production

Canada's list of food fishes embraces nearly 60 different kinds, chief among which are the salmon, the cod, the herring, the lobster, the whitefish, the halibut, the haddock, the pickerel and the trout. The total quantity of fish of all kinds taken by Canadian fishermen in 1942 was 12,062,763 cwt., for which fishermen received, at the point of landing, a total of \$41,734,723 compared with a catch of 11,988,652 cwt. with a landed value of \$36,046,019 in 1941.

Fisheries Production, by Provinces, 1914, 1941 and 1942

Province or Territory	Values of Production			Percentages of Total Values		
	1914	1941	1942	1914	1941	1942
	\$	\$	\$	p.c.	p.c.	p.c.
Prince Edward Island.....	1,261,666	952,026	1,639,539	4.1	1.5	2.2
Nova Scotia.....	7,730,191	12,634,957	15,297,446	24.7	20.3	20.4
New Brunswick.....	4,940,083	6,484,831	7,088,302	15.8	10.4	9.4
Quebec.....	1,924,430	2,842,041	4,194,092	6.2	4.5	5.6
Ontario.....	2,755,291	3,518,402	4,135,205	8.8	5.7	5.5
Manitoba.....	849,422	3,233,115	3,577,616	2.7	5.2	4.8
Saskatchewan.....	132,017	414,492	585,782	0.4	0.7	0.8
Alberta.....	86,720	440,444	492,182	0.3	0.7	0.6
British Columbia.....	11,515,086	31,732,037	38,059,559	36.8	51.0	50.7
Yukon.....	69,725	6,652	3,056	0.2	—	—
<b>Totals.....</b>	<b>31,264,631</b>	<b>62,258,997</b>	<b>75,072,779</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

The salmon fishery of British Columbia gives to that province first place in respect to value of production, the position that in earlier times belonged to Nova Scotia on account of her cod fishery. The herring fishery (on both the Atlantic and Pacific Coasts) is of rising importance and in British Columbia is now second only to salmon in value of output. Canned herring is the chief product of this fishery, but herring meal and oil are also of importance. On the Atlantic Coast, the cod, lobster and sardine fisheries are of main importance, while among the inland fishes, whitefish occupies first place.



Indian Harbour, a Fishing Village on St. Margaret's Bay, N.S.

*Courtesy, Provincial Bureau of Information, Halifax*

### Fisheries Production, by Principal Kinds, 1941 and 1942

Kind of Fish	1941		1942	
	Quantity Caught	Value Marketed	Quantity Caught	Value Marketed
	cwt.	\$	cwt.	\$
Salmon.....	1,938,182	21,475,275	1,646,558	22,926,861
Herring.....	2,785,264	6,702,947	3,619,720	10,886,522
Cod.....	1,957,153	7,494,604	1,942,293	9,962,312
Lobsters.....	278,023	3,858,733	280,250	5,084,558
Whitefish.....	178,659	2,492,671	167,062	3,055,373
Halibut.....	149,525	2,425,561	121,757	2,455,970
Sardines.....	443,733 <sup>1</sup>	2,846,808	320,558 <sup>1</sup>	2,143,623
Pilchards.....	1,200,913	1,781,876	1,317,673	2,016,607
Haddock.....	287,766	1,410,227	262,060	1,734,410
Pickarel.....	126,304	1,253,244	128,041	1,440,774

<sup>1</sup> Bbl.

The fish-processing industry is connected entirely with the sea fisheries, the plants being scattered along the coasts in locations of easy accessibility to the fishermen in delivering their catches. Capital invested in fish-processing establishments, vessels, boats, nets, traps, etc., in 1942 amounted to \$62,629,585, and the number of persons employed in the fisheries was 77,101.

**Production and Demand in 1943.**—Various requirements of the United Nations continued to put great demand upon Canada's fisheries production in 1943. There was an increase in the need for frozen fish for Great Britain and a new demand for salted fish for Allied countries. At the same time, there were, of course, ordinary domestic requirements to be met which were increased by the continuing need for fish to take the place of certain other foods being sent in large quantities to the United Nations. On the other hand, the working force in the fishing industry was greatly reduced, though the peak rate of reduction had already been passed. However, aggregate production was well maintained during the year, although the final figures showing actual output are not yet available.

The new war demand for salted fish was for supplies needed in the British West Indies, Puerto Rico, the United States, the United Kingdom, and some Latin American areas. Canada became a participant in a plan devised by the Combined Food Board for the world rationing of salt fish and undertook to make available for the purposes of the scheme its entire 1943 exportable surplus of such fish, or approximately 27,000,000 lb., a quantity equivalent, in terms of raw material, to more

than 80,000,000 lb. of fresh fish. In the case of frozen fish the Dominion undertook to supply Great Britain, during 1943, with 9,000,000 lb. of frozen fillets of cod and pollock and frozen flounders, an increase of 100 p.c. as compared with the preceding year. However, the 1943 pack of canned salmon from the Pacific Coast, the Canadian fish product most needed by the British people, was substantially smaller than in either of the two preceding years, because the salmon run was less abundant. As a result, the canneries produced something less than 1,300,000 cases, as compared with 1,811,000 cases, roundly stated, in 1942 and the record pack of more than 2,248,000 cases in 1941. The great bulk of the 1943 output was delivered to the British authorities, under an agreement between Ottawa and London—the total pack with the exception of a limited quantity for parcels sent to Canadian prisoners of war by the Red Cross and for certain supply services, and 200,000 cases retained for domestic consumption.

Similarly, by far the greater part of the year's production of canned fresh herring, from both coasts, was made available to the United Kingdom. Expansion of herring canning to meet the needs of the United Nations has been one of the outstanding industrial developments of war-time Canada. In 1938, the last full year of peace, the pack of canned fresh herring was only about 80,000 cases and in 1942 the production exceeded 1,640,000 cases, although such large packs may not necessarily be produced year after year.

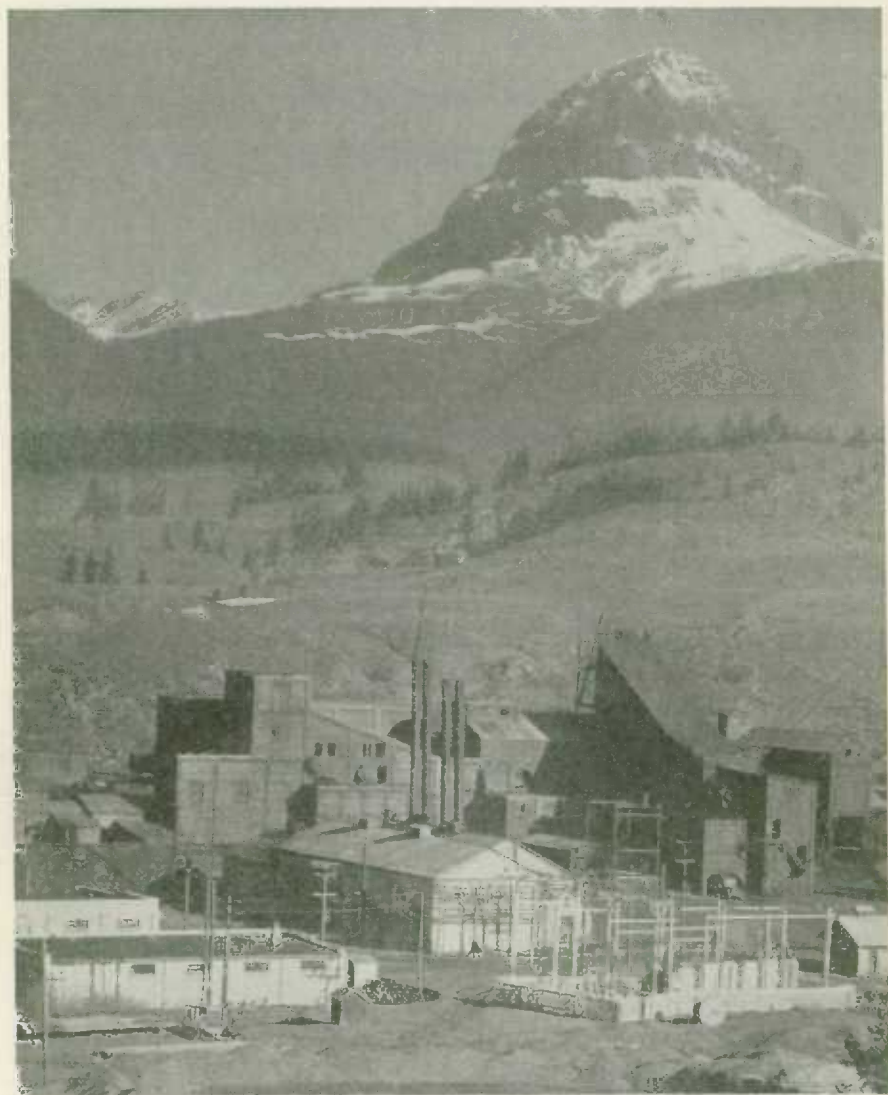
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**Seining for Herring.**—Two boats divide the big "purse seine" nets between them, half on one boat, half on the other. When a school of herring is found, the boats separate, dropping the net as they go.

*Courtesy, Toronto Star Newspaper Service*







An Alberta Coal Mine.

## CHAPTER VII

### Mines and Minerals

Canada is endowed with a wide variety of minerals, and her mining industry has passed the five-hundred million dollar mark in the annual value of its production.

**Metallics.**—The most important metal in the peace-time economy is *gold* and the value it represents. For some years gold mining has been predominant and the export of gold was one of the most important factors in Canada's export trade.

At the beginning of the present war the gold mines were encouraged to maintain or increase their production, since gold was of great assistance in making purchases in foreign countries. As the War progressed, and the need of the Allied Nations for base metals increased, the production of gold became of less importance. When the United States placed gold mining in that country in a non-essential category and ordered closing of the mines, the influence was immediately felt in Canada. Canadian gold mines soon found it difficult to secure United States supplies and equipment, and further pressure was placed upon the industry by Selective Service regulation which put gold mining in the lowest category for labour supply.

Though gold may be important from the monetary and export angles, in time of war base metals and other minerals used in the manufacture of munitions are given first place. Fortunately, Canada's base-metal industry was well equipped and prepared for the great expansion which was required of it. While at first only a small part of this production was used in Canada, the amount has grown to a rate of almost 40 p.c. of total metal production.

It is a fact of great importance that, over a period of twenty years, or since the War of 1914-18, Canada has changed from an exporter of ores or semi-finished mine products to the position where smelting and refining operations are now completed within her own borders. Thus it was that, when war broke out and the British Empire was practically alone, Canada's base-metal mines stood out in importance. Immediately, the British Government contracted to purchase at the then prevailing prices all of Canada's copper, lead and zinc not needed in Canada. The only condition on which the price at which the contracts were made could be raised was higher cost of production caused by influences outside the producers' control. Plans were made to increase the output of the operating mines and then to locate, develop and bring to fruition all likely properties that, prior to the War, were having difficulty in producing at a profit. This might be considered the first stage relating Canadian mining industry to the War.

The rarer metals necessary to the manufacture of war machines were produced in Canada only in minor quantities, if at all, before the War. Small stocks were available but, as the sea lanes became narrower and shipping conditions more dangerous, it became increasingly evident that something had to be done to locate such minerals as were in short supply. This was the second stage of the program.

A Metals Controller was appointed to direct the production of the base metals into the war effort, to transfer the usual requirements of civilian consumption to war industry and, in conjunction with similar bodies at Washington and London, to do everything possible to develop the production of the more or less rare metals and to increase the supply of certain industrial minerals.



A Pot of Molten Magnesium.—Magnesium is a rare metal in its pure form, light and tough enough to make aeroplane parts, yet, as ribbon or powder, inflammable enough for incendiary bombs and flares.

Courtesy, National Film Board

As a result, a large *mercury* mine was established at Pinchi Lake in British Columbia, the output of which was sufficient for Canada's needs, with a surplus for export; two other properties were also brought into production. *Tungsten*, known to occur in association with gold, was recovered, where possible, from gold-mining operations, and the Emerald Mine in British Columbia was put into production. Although deposits of *molybdenum* were known to exist in Canada, very little success had been achieved in their development, and it was believed that the United States mines would be able to supply the war-time needs of this country. As the demand for molybdenum increased, it became evident that the most promising molybdenum deposits in Canada should be developed regardless of cost. A molybdenum deposit of major importance in northwestern Quebec is now in production, and authorities are hopeful that it will be able to compete in peace-time with other known deposits on this continent.

*Magnesium*, one of the lightest metals known, is in great demand for the construction of aeroplanes and parts of aeroplane engines. In addition, it has wide uses in powdered form for flares and incendiaries. No magnesium was being produced in Canada at the outbreak of War. Investigations at the National Research Council, Ottawa, resulted in the development of an all-Canadian process for the extraction of magnesium from dolomite rock; this has eventuated in the erection of a Government-owned plant for the production of magnesium which, operating at capacity, produces sufficient metal for domestic needs and permits the export of the balance to the United Kingdom or other Allied Nations.

*Chromite* was imported from different parts of Africa, Turkey and other places across the sea. Canada had chromite deposits in Quebec which, though low in grade, could be used if necessary. Plans were made to develop these properties and two mines are now in full operation.

The greater part of the *tin* resources of the world are in countries bordering the west side of the Pacific. When Japan overran this part of the globe, tin became a very strategic material. The tin content of alloys used in Canada was reduced where possible and all available sources of material were tapped. Tin was known to occur in the zinc-lead ores of the Sullivan Mine in British Columbia where the Consolidated Mining and Smelting Company had done considerable research on its recovery. Immediately plans were made to recover tin from the mill tailings which had been stock-piled, and from the ores as they were milled. Thus Canada contributed towards the supply of this metal.

*Antimony* was produced at Trail, B.C., from the Sullivan ores and no shortage of antimony was experienced. *Cobalt* metal plays an important part in certain alloys

used in the manufacture of munitions. Canada's supply of cobalt ore was running low and arrangements were made to bring material containing cobalt from Africa to be treated in this country. The Canadian plant formerly treating Ontario cobalt ores was transformed to treat this imported material, and the Canadian ores were stock-piled for use in an emergency.

The tremendous demand for steel created by the present world war has awakened a long dormant Canadian iron-mining industry, and the development of *iron ore* deposits in various parts of the Dominion is now taking place. This is particularly evident in northwestern Ontario, where important tonnages of beneficiated siderite ores are being produced at the New Helen Mine in the Michipicoten District, and in the same area the large deposits of the Josephine Mine are being

### Coal Mining in Canada

Coal miners, since the outbreak of war, have increased substantially the per capita output of coal in Canada; to make sure that this coal output will be maintained and increased still further, ex-miners who had left for the Armed Forces or other occupations are being released in order that they may return to the mines.

*Top:* The heavy arm of a cutting machine is seen biting through the coal in a Cape Breton colliery. *Bottom:* Loading the cars in a British Columbia mine.



Courtesy, National  
Film Board



rapidly developed. Farther to the west, and in the Rainy River District of the same Province, possibly the largest and most impressive base-metal mining operation in Canada is under way. This activity is centred at Steep Rock Lake where the flow of the Seine River has been diverted by an elaborate engineering project in order to expose for mining a very large deposit of high-grade hematite. Commercial shipments of ore from this mine are expected to commence in 1944. During 1943 iron ore was shipped to Sydney, N.S., from the Bathurst Mine located in New Brunswick. Field parties are engaged in investigating the large iron-ore bearing formations of Ungava and Labrador which promise to be of major importance in the post-war era to the economic life of Canada.

**Non-Metallics.**—Several of the more important non-metallics were, as a result of the War, in short supply. *Mica* came from Madagascar and India, and both of these countries were in danger of being overrun by the enemy, but just about this time one of the most important mica discoveries in years was made of muscovite mica in the vicinity of Mattawa, Ont., and the situation was immediately eased.

*Fluorspar* deposits were opened up with the financial assistance of the Government. Interest in *graphite* grew and the Black Donald Graphite Mine in Ontario, the only producer in Canada, was rejuvenated and is now an important producer. The situation with regard to graphite, a very strategic material, was eased when shipping conditions from Ceylon and Madagascar improved.

A *brucite* mine near Gracefield, Que., was opened up in 1941. Though *brucite* is a source of magnesium metal, its main use at present is in the manufacture of refractory bricks for lining smelting furnaces. Research on its recovery from the rock in which it occurs and in its use in refractories has achieved considerable success.

The result of this control and direction of mineral production and the change in the War outlook has eased the critical metal situation that existed a year ago. It may be said that the Canadian war effort in relation to Canada's mineral production has now reached the third stage. As an indication, it has been announced that no financial assistance will be given for the development of new tungsten and molybdenum properties. The situation is improved also with regard to the supply of the most common base metals.

**Fuels.**—The domestic situation in Canada with regard to fuel is one that causes grave concern. The manpower shortage and the greatly increased demand for *coal* for industrial and domestic use have brought about a critical shortage in coal supply. Canada is in a somewhat anomalous position with regard to coal. Large deposits exist in the eastern and western provinces, but no coal is produced in Ontario and



Tanks at Fort Norman where the Oil from the Norman Wells is Stored.—In the foreground are supplies including casing pipe for the wells, which has been unloaded from river barges.

gold production with a value of \$140,512,000 was down nearly \$46,000,000, the lowest output since 1935, and reflected the decrease in labour at the gold mines and the difficulties in obtaining necessary process supplies during wartime. Production of gold from Ontario mines was less by 24 p.c., Quebec output decreased 16 p.c., and British Columbia output 49 p.c. Decreases were also registered in all other gold-producing provinces.

### Mineral Production of Canada, by Provinces, 1941, 1942 and 1943

Province or Territory	1941		1942		1943 <sup>1</sup>	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
	\$		\$		\$	
Nova Scotia.....	32,569,867	5.8	32,783,165	5.8	30,154,332	5.8
New Brunswick.....	3,690,375	0.7	3,609,158	0.6	3,703,275	0.7
Quebec.....	99,651,044	17.8	104,300,010	18.4	100,830,007	19.2
Ontario.....	267,435,727	47.7	259,114,946	45.7	229,760,526	43.8
Manitoba.....	16,689,867	3.0	14,345,046	2.5	13,149,775	2.5
Saskatchewan.....	15,020,555	2.7	20,578,749	3.6	26,531,213	5.0
Alberta.....	41,364,385	7.4	47,359,831	8.4	48,578,388	9.3
British Columbia.....	76,841,180	13.7	77,247,932	13.7	67,777,068	12.9
Yukon.....	3,117,992	0.5	3,453,568	0.6	1,659,251	0.3
Northwest Territories.....	3,860,298	0.7	3,976,267	0.7	2,283,015	0.5
<b>Totals.....</b>	<b>560,241,290</b>	<b>100.0</b>	<b>566,768,672</b>	<b>100.0</b>	<b>524,426,850</b>	<b>100.0</b>

<sup>1</sup>Preliminary estimate.

Steps were taken to increase the labour force in coal mines and during the past half year the monthly output showed an upward trend. Production in 1943 at 17,878,778 short tons was 5.3 p.c. less than in 1942. Nova Scotia produced 6,086,733 tons; New Brunswick, 380,001 tons; Saskatchewan, 1,777,833 tons; Alberta, 7,631,803 tons; British Columbia, 2,001,409 tons; and Manitoba 999 tons. Crude petroleum at 9,958,000 bbl., exclusive of that produced in the Northwest Territories which is omitted for reasons of security, showed a decrease of 3 p.c. Alberta produces 99 p.c. of the Canadian total; the remainder comes from Ontario and New Brunswick wells. Natural gas production was estimated at 43,237,500 thousand cu. ft., or 5 p.c. less than in 1941; Alberta produces 80 p.c. of the total Canadian production.

The value of other non-metallics, including such important industrial minerals as asbestos, graphite, feldspar, salt, sodium sulphate and gypsum, was only slightly less than in 1942.

The structural materials group declined 12 p.c. This group includes cement,



Poling the Lead.—The final stage in the refining of lead at Trail, B.C. The lead, which comes from the electrolytic cells, is almost pure but remaining traces of impurity must still be removed. Some 300 tons of molten lead are oxidized by forcing air through the metal and thus removing final traces of arsenic, antimony and tin.

*Courtesy, National Film Board*

Right: Inspecting a Section of the Norman Wells-Whitehorse Pipeline. This pipeline is more than 600 miles in length.

Courtesy, National Film Board

Quebec where the population is more dense, and these provinces, because of transportation difficulties, must look for most of their supply to the United States. Great efforts are being made to increase employment in the coal mines and consumers have been asked to conserve their supply wherever possible. Strenuous efforts are being made to increase production in Alberta. The construction of the Alaska Highway has increased the demand for oil products in the northern part of Canada, and the Fort Norman oil field in the Northwest Territories is being further developed.

Alberta is also the largest producer of *natural gas* in the Dominion; Ontario is next in importance with New Brunswick in third place. A small amount is also recovered from Saskatchewan.

Canada's mineral industry plays an important part in the industrial life of the nation. Large and progressive cities and towns have been built in northern areas and these create a market for the products of the farm and the highly industrialized sections in the older parts of the Dominion.

**Review for 1943.**—A preliminary estimate put Canada's mineral production in 1943 at \$524,426,850, a decrease of \$42,300,000 from the previous year. Production of base metals was greater but a lower output of gold was mainly responsible for the over-all drop. Metals as a group totalled \$357,269,458, a decrease of 9 p.c. The combined production of copper, nickel, lead and zinc was valued at \$180,272,000 as compared with a 1942 value of \$167,426,611 and other strategic metals also registered an increase. But



Left: Highway, airway and pipeline routes now link together Canada's great northwest. More than 1,250 miles of the Alaska Highway lies within Canada. "B" route on this map is the proposed highway suggested by the B.C. Yukon-Alaska Highway Commission in 1941.

## CHAPTER VIII

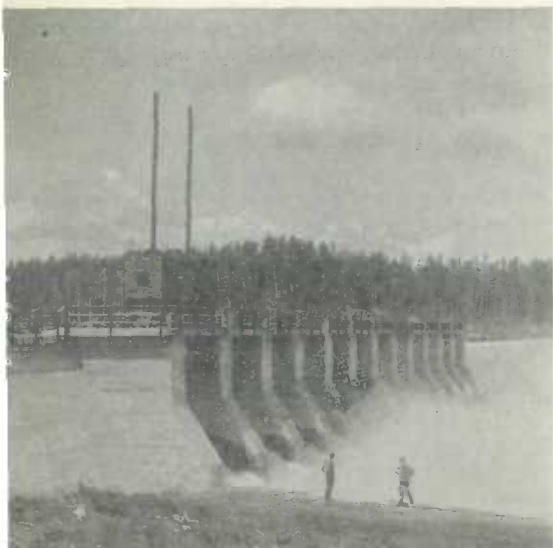
### Water Powers

Canada, with only about one-half of one per cent of the world's population, has become the third greatest trading nation and the fourth greatest producer of war weapons among the United Nations. This outstanding position is due very largely to the possession of ample resources of water power which, in war as in peace, have been the mainspring of Canada's industrial success.

Available and Developed Water Power, by Provinces, Jan. 1, 1944

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.
Prince Edward Island.....	3,000	5,300	2,617
Nova Scotia.....	20,800	128,300	133,384
New Brunswick.....	68,600	169,100	133,347
Quebec.....	8,459,000	13,064,000	5,667,322
Ontario.....	5,330,000	6,940,000	2,673,443
Manitoba.....	3,309,000	5,344,500	422,825
Saskatchewan.....	542,000	1,082,000	90,835
Alberta.....	390,000	1,049,500	94,997
British Columbia.....	7,023,000	10,998,000	796,024
Yukon and Northwest Territories.....	294,000	731,000	19,719
<b>Canada.....</b>	<b>25,439,400</b>	<b>39,511,700</b>	<b>10,034,513</b>

The aluminum industry of Canada provides, perhaps, the most spectacular story of the use of water power. Canada now supplies 40 p.c. of the United Nations' requirements of this commodity; her production is six times greater than it was in 1939 and is also greater than total world production was in 1939. The use of water power in the production of copper, steel, zinc, nickel, lead and chemicals and



Main Dam at Waboose Rapids, Ogoki Diversion Project of the Ontario Hydro-Electric Power Commission.— This diversion project is one of the Commission's outstanding achievements and will result in the moving of a great body of water from the Hudson Bay watershed to the Great Lakes.

*Courtesy, Hydro-Electric Power Commission of Ontario*



# MINES AND MINERALS

which is down by 20 p.c., indicating that construction for war purposes had passed its peak. Lime output was 6 p.c. higher, sand and gravel showed a slight increase, and stone production was down by 25 p.c.

## Mineral Production of Canada 1942 and 1943<sup>1</sup>

Item	1942		1943 <sup>1</sup>	
	Quantity	Value \$	Quantity	Value \$
<b>METALLICS</b>				
Gold.....fine oz.	4,841,306	186,390,281	3,649,671	140,512,334
Silver.....fine oz.	20,695,101	8,726,296	17,230,939	7,797,689
Other precious metals.....	—	19,177,782	—	13,549,470
Copper, nickel, lead, zinc.....	—	167,426,611	—	180,271,613
Antimony, bismuth, cadmium, chromite, cobalt, magnesium, manganese, molybdenite, tin, tungsten.....	—	4,338,808	—	7,079,350
Miscellaneous—arsenic, iron ore, mercury, pitchblende products <sup>2</sup> , selenium, tellurium, titanium ore.....	—	6,132,674	—	8,059,002
<b>TOTALS, METALLICS.....</b>	—	392,192,452	—	357,269,458
<b>NON-METALLICS</b>				
<b>Fuels</b>				
Coal.....ton	18,865,030	62,897,551	17,878,778	62,429,662
Natural gas.....M cu. ft.	45,697,359	13,301,655	43,237,500	11,699,894
Peat, for fuel.....ton	172	1,204	434	4,467
Petroleum, crude.....bbl.	10,364,796	15,968,851	9,958,000	16,149,000
<b>TOTALS, FUELS.....</b>	—	92,169,291	—	90,283,023
<b>Other Non-Metallics</b>				
Asbestos, fluorspar, graphite, mag- nesitic-dolomite and brucite, mica, sulphur.....	—	26,365,058	—	25,872,555
Barytes.....ton	19,667	188,144	24,474	255,525
Diatomite.....ton	365	9,088	108	3,220
Feldspar.....ton	22,270	213,941	25,903	236,991
Nepheline syenite.....	—	246,893	—	213,197
Garnets (schist).....ton	17	176	3	3
Grindstones.....ton	216	10,000	3	3
Gypsum.....ton	566,166	1,254,182	429,968	1,176,269
Iron oxides.....ton	9,304	151,653	7,879	126,195
Magnesium sulphate.....ton	1,140	38,760	—	—
Mineral waters.....Imp. gal.	157,085	74,505	156,000	74,000
Peat moss.....ton	53,506	1,069,372	63,635	1,352,183
Phosphate.....ton	1,264	17,431	1,435	19,460
Quartz.....ton	1,738,174	1,538,162	1,750,744	1,692,302
Salt.....ton	653,672	3,844,187	699,858	4,040,918
Silica brick.....M	4,273	263,006	13,208	272,463
Sodium carbonate.....ton	256	2,048	427	3,629
Sodium sulphate.....ton	131,258	1,079,692	87,297	854,152
Talc and soapstone.....	29,868	310,824	25,145	244,599
<b>TOTALS, OTHER NON-METALLICS</b>	—	36,677,122	—	36,437,658
<b>CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS</b>				
Clay products (brick, tile, sewer pipe, etc.).....	—	7,081,723	—	6,391,621
Cement.....bbl.	9,126,041	14,365,237	7,299,210	11,619,092
Lime.....ton	884,830	6,530,839	938,143	6,750,093
Sand and gravel.....ton	26,349,907	9,005,414	26,425,694	9,065,533
Stone.....ton	7,978,066	8,746,594	5,962,952	6,610,372
<b>TOTALS, CLAY PRODUCTS, ETC.</b>	—	45,729,807	—	40,436,711
<b>Grand Totals.....</b>	—	566,768,672	—	524,426,850

<sup>1</sup>Preliminary estimate.

<sup>2</sup> Production value not included.

<sup>3</sup> Reports not received.

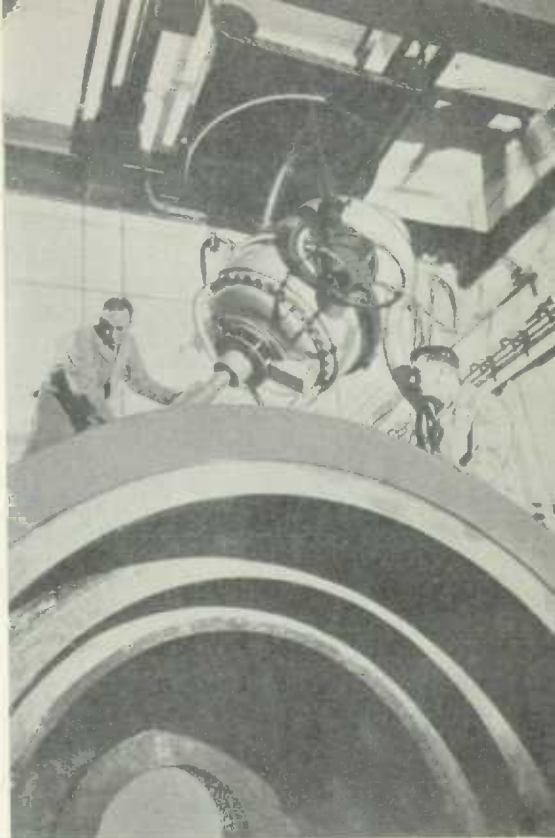
A 1,000,000-Volt X-Ray Unit being used in the detection of hidden flaws in a giant turbine casting. The X-ray, which has been applied in the field of medicine for many years, has only recently found its place in industry where it is used to probe the internal structure of castings, etc.

*Courtesy, Canadian General Electric Co. Ltd.*

in the conversion of these and many other materials into implements of warfare is almost equally impressive.

As it has proven sound commercial practice to install hydraulic power equipment averaging 30 p.c. in excess of the six-month flow power, it is estimated that Canada's presently recorded water powers provide for an installation of more than 51,350,000 h.p. That is, the present development represents only 19.54 p.c. of the possible development.

**Provincial Distribution of Water Power.**—The water powers of the Maritime Provinces, while small in comparison with the sites in the other provinces, constitute a valuable economic resource, the development of which is supplemented by power from abundant indigenous coal supplies. Quebec, with large resources of water power, has achieved a remarkable development; the present installation in the province represents more than 52 p.c. of the total for Canada. Almost 84 p.c. of this total installation is operated by six large central station organizations. The Province of Ontario has extensive water-power resources. The Hydro-Electric Power Commission of Ontario, province-wide in its field, operates plants aggregating more than 66 p.c. of the total hydraulic installation of the province and serves some 900 municipalities. A notable feature of electric distribution by the Commission is the operation of more than 20,000 miles of rural lines serving some 131,000 consumers. Of the Prairie Provinces, Manitoba has the greatest power resources and the greatest power development, 70 p.c. of the total hydraulic development of the three provinces being installed on the Winnipeg River to serve the city of Winnipeg and adjacent municipalities and more than 150 cities, towns and villages in southern Manitoba over the 1,825-mile transmission network of the Manitoba Power Commission. In the districts containing the least water power—southern portions of Alberta and Saskatchewan—there are large fuel resources. British Columbia, traversed by three



distinct mountain ranges, ranks second in available power resources and hydraulic development is exceeded in Quebec and Ontario only. The water powers of Yukon and Northwest Territories, while considerable, are so remote from markets as to limit their present commercial development to local mining uses.

**Hydro-Electric Construction during 1943.**—New hydro-electric installations during 1943 totalled 1,002,273 h.p. This total includes the capacity of three units transferred to newer stations and should be reduced to 810,973 h.p. net, bringing Canada's total hydraulic development as of Jan. 1, 1944, to 10,034,513 h.p.

The outstanding development of the year was the completion, in the Province of Quebec, of the great Shipshaw power station of the Aluminum Power Company where turbines of a total preliminary rating of 1,020,000 h.p. were installed with the final tests being expected to show a considerably higher rating. The installation of this plant is almost double that of the next largest Canadian development and, in conjunction with the other Saguenay River developments of the Aluminum Power Company and the Saguenay Power Company, provides power for the immense aluminum industry at Arvida.

Additional power for the Shawinigan Water and Power Company's system has been provided by the installation of a 40,000-h.p. unit at Rapide Blanc generating station and a 44,500-h.p. unit at La Tuque generating station, both on the St. Maurice River. Farther east the municipality of Tadoussac has completed a 300-h.p. development on the Moulin-à-Baude River.

The Hydro-Electric Power Commission of Ontario completed the initial installation—one unit of 65,000 h.p.—in its new DeCew Falls station, which draws water from the Welland Ship Canal. The Commission also completed the Ogoki River diversion structures by which the flow of that river was diverted from James Bay to the Lake Nipigon-St. Lawrence drainage. The additional flow from this and a previously completed diversion from Long Lake provides an additional power potential of 360,000 h.p. in the Great Lakes-St. Lawrence waterway system. Due to these diversions, the Commission has already been able to provide some 70,000 h.p. of additional power at Niagara for munitions production.

In British Columbia, the West Kootenay River Power and Light Company (Consolidated Mining and Smelting Company) proceeded with the construction of its new generating station at Brilliant on the Kootenay River. Two turbines of 34,000 h.p. each are now being installed, with provision for two similar units later. This is the company's fifth station on the Kootenay River and its full installation in conjunction with those of the other four plants will provide a total of 414,000 h.p. and result in the complete utilization of the power possibilities of the river.

The Nova Scotia Power Commission completed its development at Eel Lake on the Medway River by the installation of one unit of 1,290 h.p.

### Central Electric Stations

Over 90 p.c. of all developed water power in Canada is developed by central electric stations and, although there is a large number of stations (294) that derive their power entirely from fuels and 43 hydraulic stations that also have thermal auxiliary equipment, 98 p.c. of all electricity generated for sale is produced by water power.

## CANADA 1944

The production of electricity by central electric stations amounted to 5,500,000,000 kwh. in 1919, the first year for which such data are available. Six years later it was almost doubled, by 1928 it had more than trebled, and by 1930 it amounted to 18,000,000,000 kwh. With continued depression in manufacturing industries the output started to decline late in 1930 and continued into 1933, but from 1933 to 1943 there has been an almost continuous succession of increases each average month as shown in the table below. For 1943, production was at the rate of nearly 40,000,000,000 kwh.

The demands for primary power for war requirements have greatly increased the primary power production, partly by switching secondary power to primary power uses and partly by increases in total output. Primary power produced for use in Canada for September, 1943, was 84 p.c. greater than for September, 1939, and secondary power, which was used largely in electric boilers of the pulp and paper mills, was reduced by 67 p.c., and instead of constituting 25 p.c. of the total output of central electric stations it was only 5.4 p.c. This greatly increased production of electricity resulted from new developments, additional equipment in existing plants, and by increased diversion of water for power purposes at Niagara Falls.

The rated capacity of electric motors in manufacturing industries in Canada in 1941 was 81.6 p.c. of the total capacity of all power equipment in these industries, the increase from 61.3 p.c. in 1923 being almost continuous. In the mining industries this conversion to electric drive has been even greater, growing from 57.3 p.c. in 1923 to 76.9 p.c. in 1941. In 1941, 85 p.c. of these electric motors in manufacturing industries and 88 p.c. in mining industries were driven by power produced in central stations. Mechanical power, particularly electric motors, has been increasing in manufacturing industries during the past decade much more rapidly than the number of employees.

Average Monthly Output of Central Electric Stations, 1927-43

Year	From Water	From Fuel	Total	Year	From Water	From Fuel	Total
	'000 kwh.	'000 kwh.	'000 kwh.		'000 kwh.	'000 kwh.	'000 kwh.
1927.....	1,193,481	18,944	1,212,425	1936.....	2,078,739	37,452	2,116,191
1928.....	1,340,292	21,192	1,361,484	1937.....	2,256,779	41,882	2,298,661
1929.....	1,441,203	27,622	1,468,825	1938.....	2,130,006	37,728	2,167,734
1930.....	1,463,330	25,230	1,488,560	1939.....	2,321,815	40,811	2,362,626
1931.....	1,339,907	26,071	1,365,978	1940.....	2,460,466	46,222	2,506,688
1932.....	1,296,360	25,845	1,322,205	1941.....	2,731,880	55,233	2,787,113
1933.....	1,436,486	26,150	1,462,636	1942.....	3,037,823	62,109	3,099,932
1934.....	1,733,810	29,484	1,763,294	1943 <sup>1</sup> .....	3,261,125	60,968	3,322,093
1935.....	1,917,958	32,410	1,950,368				

<sup>1</sup>Nine-month average.

Electricity, principally hydro-electric energy, is displacing coal and oil to heat furnaces and ovens, and is doing enormous quantities of work in electrolytic refining of metals, production of fertilizers, metal plating, and so forth.

Investments in central electric stations for 1941 amounted to \$1,641,460,451, which was larger than for any manufacturing industry; revenues amounted to \$186,080,354 and 1,755,917 domestic customers were served, representing approximately 60 p.c. of all families in Canada, both urban and rural.



## Electronics

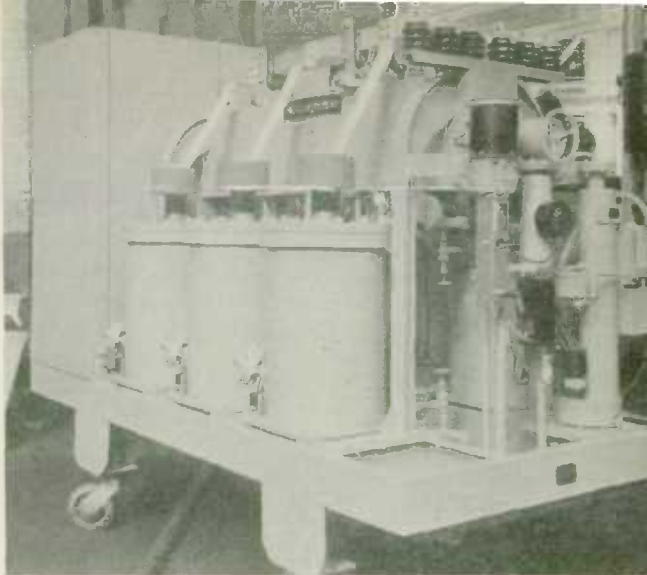
The work of Fleming and Lee de Forest in the early years of the present century developed the electronic tube in its application to radio reception to such a degree that small electrical impulses were transformed and amplified so that the wireless set, as we know it to-day, was developed.

The application of the electronic principles to perform a wide range of industrial functions has developed rapidly in recent years, stimulated by the requirements of war. One of the chief present uses of the electronic tube is to change alternating current to direct current, but electronic devices are used to operate high-speed relays and in delicate detection and measuring instruments. Electronic tubes can be utilized to measure or control sound, colour, speed, light, pressure or temperature. They can count, sort, calculate and locate defects in steel or stone (see illustration at p. 105).

*Top:* A 575-volt electronic ignitron rectifier, which is used to transform alternating to direct current for street-car service by the Toronto Transportation Commission. It occupies only 25 p.c. of the space used by the old form of rotary transformer; there are no moving parts and operation is almost noiseless.

*Centre:* An electron microscope, by which magnification far beyond the limits of optic microscopy is made possible. The first electron microscope on the North American continent was constructed in the Department of Physics of the University of Toronto.

*Bottom:* Filaments being inserted in a 50-kw radio transmitter tube.



*Courtesy, Canadian Westinghouse Co. Ltd. and Canadian General Electric Co. Ltd.*

## Historical Summary of Statistics of Manufacturers, 1870-1941—concluded

Province and Group	Establishments	Capital	Employees	Salaries and Wages	Cost of Materials	Net Value of Products <sup>1</sup>	Gross Value of Products
	No.	\$	No.	\$	\$	\$	\$
<b>Province</b>							
P.E.I....	213	3,106,369	1,105	680,883	3,229,433	1,347,990	4,649,476
N.S....	1,177	124,409,791	24,577	27,527,339	76,779,821	51,318,369	133,873,428
N.B....	791	97,952,799	19,600	21,718,407	59,234,107	47,296,960	111,433,726
Que....	8,711	1,700,527,405	327,591	393,819,671	961,162,209	815,086,832	1,841,088,523
Ont....	10,250	2,336,788,884	468,230	660,722,278	1,683,912,216	1,360,055,756	3,121,756,568
Man....	1,184	163,489,471	32,262	40,894,267	132,330,823	74,450,721	211,584,751
Sask....	945	42,158,738	8,546	9,979,974	65,836,308	28,172,441	96,020,975
Alta....	1,108	95,076,318	16,761	20,151,705	94,176,887	45,958,219	142,651,493
B.C....	1,905	340,609,179	62,447	89,256,478	219,755,738	181,232,637	412,957,807
Yukon & N.W.T.	9	785,012	59	111,641	129,477	199,863	341,377
<b>Totals.</b>	<b>26,293</b>	<b>4,905,503,966</b>	<b>961,178</b>	<b>1,264,862,643</b>	<b>3,296,547,019</b>	<b>2,605,119,788</b>	<b>6,076,308,124</b>
<b>Purpose Group</b>							
Producers materials.	7,984	2,076,914,285	295,725	399,181,962	999,572,243	893,134,840	2,002,417,597
Food...	8,420	549,342,529	115,206	127,744,973	816,983,921	300,507,296	1,134,805,943
Industrial equipment, Vehicles and vessels	2,324	877,509,129	158,669	232,294,504	520,044,553	521,882,705	1,066,702,761
Clothing	370	436,853,387	117,492	188,325,103	388,382,775	317,741,324	714,510,718
Drink and tobacco	2,301	230,532,584	117,898	116,131,601	235,698,630	177,250,936	415,471,018
Books and stationery	688	221,539,178	26,472	33,036,981	96,986,623	101,091,731	201,126,763
House furnishings and equipment...	2,515	154,150,551	45,500	65,523,631	66,324,919	114,190,171	182,686,318
Personal utilities	827	120,765,916	35,583	42,614,722	71,511,798	77,189,733	150,988,355
Miscellaneous	651	61,170,967	17,675	20,510,038	42,064,391	42,627,908	85,627,622
	213	176,725,440	30,958	39,499,128	58,977,166	59,503,144	121,971,029

<sup>1</sup> For and since 1929 the figures for the net value of production represent the gross value less the cost of materials, fuel and electricity. Prior to this, only the cost of materials is deducted.

<sup>2</sup> Includes all establishments employing five hands or over. <sup>3</sup> From 1920 to 1941 the figures include all establishments irrespective of the number of employees but exclude construction, and custom and repair work.

**Food Industries.**—Some leading industries, with gross values of production in 1941, were as follows: slaughtering and meat packing \$296,240,415; butter and cheese, \$180,223,633; flour and feed mills, \$144,171,637; bread and other bakery products, \$92,116,307; fruit and vegetable preparations, \$75,598,310; biscuits and confectionery, \$74,514,061; miscellaneous foods, \$69,452,785; sugar, \$62,402,709; fish-curing and packing, \$48,176,091; condensed milk, \$21,437,808; and stock and poultry foods, \$19,769,235. Each of these industries showed a substantial increase over 1939.

**Slaughtering and Meat Packing.**—Slaughtering and meat packing is the leading industry of the food group. In 1942 its output was valued at \$369,047,175, an increase of 99 p.c. over 1939; it furnished employment to 17,397 persons who were paid \$26,695,879 in salaries and wages. About \$263,000,000 was paid out by packers for live stock. Of the 146 establishments in 1941, 42 contributed 91 p.c. of the total output,

## CHAPTER IX

### Manufactures

The present century has witnessed the chief forward movement in Canadian manufactures, mainly as the result of three great influences: first, the opening up of the West, which greatly increased the demand for manufactured goods of all kinds and especially construction materials; secondly, the War of 1914-18 which left a permanent imprint upon the variety and efficiency of Canadian plants; and thirdly, the present War.

To-day, the manufacturing industries of Canada stand on the threshold of a new era in their development. The situation created as a result of Canada's strategic position as a source of food supply and armaments, has had far-reaching effects on the magnitude and diversification of Canadian manufacturing production and Canadian manufacturers have risen to the demands made upon them with marked success.

#### Statistics of Manufactures

In the paragraphs following the table on p. 110 a short review is given of some of the groups of industries that have felt the increased demands occasioned by the War.

Historical Summary of Statistics of Manufactures, 1870-1941

Year	Estab- lish- ments	Capital	Em- ployees	Salaries and Wages	Cost of Materials	Net Value of Products <sup>1</sup>	Gross Value of Products
	No.	\$	No.	\$	\$	\$	\$
1870...	41,259	77,964,020	187,942	40,851,009	124,907,846	96,709,927	221,617,773
1880...	49,722	165,302,623	254,935	59,429,002	179,918,593	129,757,475	309,676,068
1890...	75,964	353,213,000	369,595	100,415,350	250,759,292	219,088,594	469,847,886
1900...	14,650	446,916,487	339,173	113,249,350	266,527,858	214,525,517	481,053,375
1910 <sup>2</sup> ...	19,218	1,247,583,609	515,203	241,008,416	601,509,018	564,466,621	1,165,975,639
1920 <sup>3</sup> ...	22,157	2,914,518,693	591,753	711,080,430	2,083,579,571	1,609,168,808	3,692,748,379
1929...	22,216	4,004,892,009	666,531	777,291,217	2,029,670,813	1,755,386,937	3,883,446,116
1933...	23,780	3,279,259,838	468,658	436,247,824	967,788,928	919,671,181	1,954,075,785
1934...	24,209	3,249,348,864	519,812	503,851,055	1,229,513,621	1,087,301,742	2,393,692,729
1935...	24,034	3,216,403,127	556,664	559,467,777	1,419,146,217	1,153,485,104	2,653,911,209
1936...	24,202	3,271,263,531	594,359	612,071,434	1,624,213,996	1,289,592,672	3,002,403,814
1937...	24,834	3,465,227,831	660,451	721,727,037	2,006,926,787	1,508,924,867	3,625,459,500
1938...	25,200	3,485,683,018	642,016	705,668,589	1,807,478,028	1,428,286,778	3,337,681,366
1939...	24,805	3,647,024,449	658,114	737,811,153	1,836,159,375	1,531,051,901	3,474,783,528
1940...	25,513	4,095,716,836	762,244	920,872,865	2,449,721,903	1,942,471,238	4,529,173,316
1941...	26,293	4,905,503,966	961,178	1,264,862,643	3,296,547,019	2,605,119,788	6,076,308,124

For footnotes see p. 110.

Workmen in a Canadian foundry pouring steel which later finds its way into ships, guns, tanks or bayonets.

Courtesy, Hydro-Electric  
Power Commission of Ontario



Canning meat for shipment  
in carload lots to Cana-  
dians on Active Service.



Courtesy, Manitoba Travel  
and Publicity Bureau

while 7 of the largest plants had an average production of about \$19,000,000. The same is true of employment. Forty-six plants reported 92 p.c. of the total number of persons employed, while 7 of the largest plants averaged 1,003 employees each. During the war years this industry has been called upon to supply ever increasing quantities of products to Great Britain (see pp. 68 and 69).

*Dairy Products.*—Manufacturing statistics of dairy production are given in the chapter on Agriculture at pp. 80 and 81.

*Canned Foods.*—The development in the production of canned foods in Canada has shown remarkable expansion since the beginning of the twentieth century. In 1900 the total value did not exceed \$8,250,000 but by 1939 it had increased to \$69,792,697. The War, however, is bringing about many changes in the canning industry. Since the supply of tin has been cut off, it has been found necessary to allocate limited quantities to the canners to be used only where necessary. The canning of many products, formerly with large packs, has been prohibited and the packs of others strictly curtailed. Glass, plastics, waxed paper and cardboard containers are being substituted for tins so far as possible.

In spite of these unavoidable restrictions and other difficulties under which the canning industries have had to carry on, the value of the output in 1941 advanced 50 p.c. over the pre-war high mark attained in 1939.

Principal Foods Canned in Canada, 1940 and 1941

Product	1940		1941	
	Quantity	Value	Quantity	Value
		\$		\$
Fish.....lb.	132,124,047	17,873,376	190,073,678	26,829,659
Fruits.....doz.cans	5,221,419	6,740,876	4,817,305	7,501,161
Vegetables....."	18,972,699	16,812,119	23,560,220	22,689,459
Meats.....lb.	9,123,105	1,818,757	16,415,193	3,813,181
Soups.....doz.cans	7,874,789	6,912,546	11,065,144	10,207,193
Other foods.....	-	9,828,268	-	14,416,090
Concentrated milk.....	-	14,478,543	-	19,570,999
Totals.....	-	74,464,485	-	165,027,742

*Flour Milling.*—The flour-milling industry has a tremendous capacity to produce whatever flour may be needed under present war conditions. The present maximum daily capacity of the mills is 88,125 bbl. per day of 24 hours, or an annual capacity



of over 32,000,000 bbl. The output of wheat flour during the 1942-43 crop year amounted to 23,549,707 bbl., an increase of 27 p.c. over the previous ten-year average. Substantial as this increase may be, the milling industry is capable of still greater effort, since the mills were operating at only about 75 p.c. of maximum capacity.

**Textile Industries.**—The need for clothing and equipment for Canada's rapidly expanding Navy, Army and Air Force throws a heavy burden upon the textile industries. These industries are, to a high degree, centralized in the Provinces of Quebec and Ontario. In 1941 the gross value of production was \$666,438,539, an increase of 70 p.c. over 1939, employment was given to 156,892 persons, and \$159,339,028 was paid out in salaries and wages. Of all females employed in the manufacturing industries, almost 40 p.c. were in the textile group.

The variety of individual industries included with those of the textile group is representative of practically all stages of manufacturing necessary to convert the various raw materials into products ready for purchase by the public. Yarn is spun, and fabrics and goods are woven and knitted. Cotton yarn and cloth led the group with a gross value of production amounting to \$128,421,012; this was an increase of 82 p.c. over 1939. Men's factory clothing came a close second with a gross production of \$116,508,885, an increase of 65 p.c. Other leading industries, in order named, were: women's clothing, hosiery and knitted goods, woollen cloth, and silk and artificial silk, which showed increases of 58 p.c., 34 p.c., 97 p.c., and 64 p.c., respectively.

**Iron and Steel Industries.**—Canada's steel production in 1943 will amount to about 3,100,000 tons or nearly double the best pre-war tonnage. At the beginning of 1940 the rated capacity of steel furnaces in the Dominion was 2,300,000 net tons, but new installations have raised this potential to 3,400,000 tons as at the end of September, 1943. Canada now is the fourth greatest steel producer among the United Nations, exceeded only by the United States, Russia and Great Britain.

Most notable new expansion has been in connection with alloy steels and steel plates. For alloy steels, the production capacity and output has been multiplied six times, making this country practically independent in providing alloy steels of the types used in guns, armour plate and machine tools. Prior to the War, the Dominion Foundries and Steel Limited at Hamilton, Ont., was the only maker of steel plates in Canada. In April, 1941, the new 112-inch mill of the Steel Company of Canada came into operation just in time to provide much needed plates for the shipbuilding program and for tanks, guns and carriers. In March, 1942, the Dominion Steel and Coal Corporation Limited at Sydney, N.S., reopened its plate mill, idle since the War of 1914-18. Output of steel plates is now nearly six times that of 1939.

The three major steel corporations that constitute the core of the industry in Canada are self-contained in that they process iron and steel from the ore through to the semi-finished and finished articles. The activities of the Steel Company of Canada Limited cover a wide range of products. The main plant at Hamilton, Ont., has 3 iron blast furnaces, 13 open-hearths, 1 electric furnace, and rolling mills for making billets, bars, wire rods, sheets, plates and light shapes. Its capacity, the largest in Canada, is about 1,100,000 net tons of ingots annually. In addition, it operates several works in Ontario and Quebec for the production of wire, fencing, nails, screws, bolts, nuts, forgings, pipe, horseshoes, etc. The Algoma Steel Corporation Limited has 4 blast furnaces, 12 open-hearths, and also rolling mills. Its capacity is about 720,000 tons of ingots yearly and its chief products are billets, rails and rail

fastenings, carbon and alloy merchant bars, tinplate, black sheets, structural steel and sheet piling. It is Canada's chief producer of heavy structural shapes which are made in all standard sizes and forms. The Dominion Steel and Coal Corporation Limited operates 4 blast furnaces and 16 steel furnaces with yearly ingot capacity of 750,000 tons. Its rolling mill makes billets, rails, rail fastenings, merchant bars, wire rods and plates and in other plants or plants of subsidiary companies it makes wire, fencing, nails and similar lines.

In addition to these larger concerns, there are 31 other steel makers which use electric or open-hearth furnaces to produce steel from pig-iron and scrap. In all, there are 122 steel furnaces in Canada, including 50 open-hearth units, 69 electric units and 3 converters.

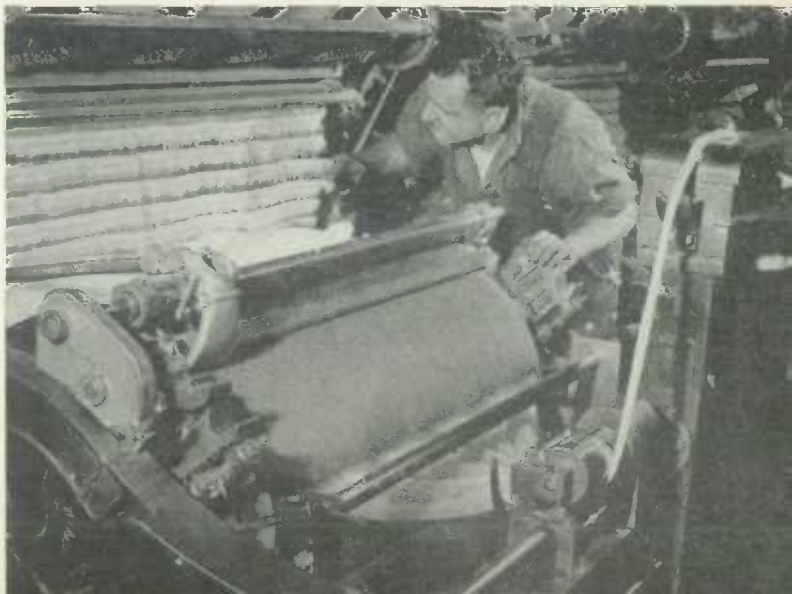
Canada has recently built 2 of the largest blast furnaces in the British Empire, and when the second of these is blown in the output of pig iron will be at the rate of about 2,500,000 tons a year, or about three times that in 1939. Actual output in 1943 will be about 2,000,000 net tons compared with 846,418 tons in 1939.

In the secondary industries there has been tremendous expansion. Three years ago shipbuilding was practically inactive; at present there are 60,000 workers in 21 major and 65 smaller yards which, to date, have launched more than 500 cargo, patrol and escort ships. The aircraft industry, which had fewer than 1,000 persons on the payroll before the War, now has 55,000 workers in main and sub-assembly plants, which now make about 80 'planes each week. The automobile industry has switched entirely to military vehicles, of which more than 500,000 have been produced to date. Guns and shells are being produced in large quantities, and the output of machine tools, cutting tools, gauges, jigs and fixtures has been stepped up enormously to meet the requirements of the war program.

**Chemicals.**—No phase of Canada's great industrial expansion has been more important or more spectacular than the explosives and chemicals program. Before the War the explosives industry in this country was occupied almost entirely on commercial requirements, and the chemicals industry was in no position to feed a large-scale munitions output. In October, 1939, the Chemicals and Explosives

Canadian Cotton Mills are producing material for camouflage cloth, web equipment, tire fabrics, powder bags, rifle slings, parachute strappings, uniforms, aircraft fabric, etc. The picture shows an employee engaged in the preparation stages of spinning the yarn. The cotton, after being thoroughly dusted, prepared and blended, makes its first appearance as a thread on the right end of the carding machine.

Courtesy, National Film Board



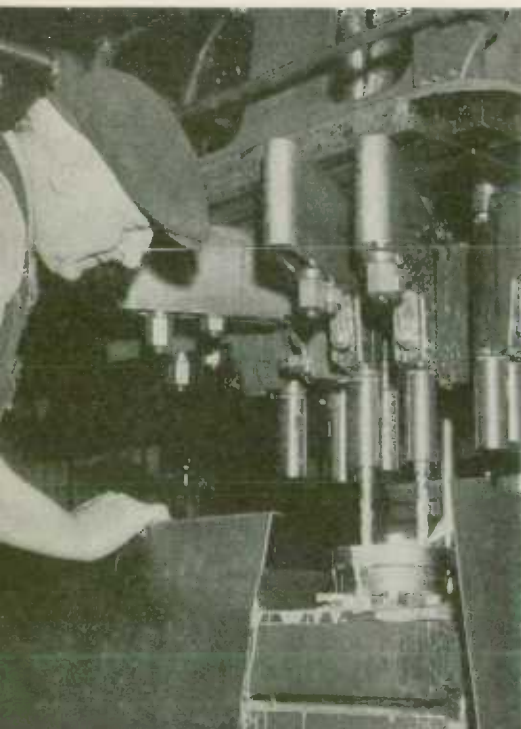
Branch of the Department of Munitions and Supply was set up to expand explosives production and to place the chemicals industry on a parallel course of development. Since that time in every part of the country great plants have sprung up. Capital expenditures for new factories in this field have amounted to more than \$125,000,000, and further expansion is currently underway by the addition of several new plants which, when completed, will make 40 projects in all. Now in operation are some 34 units of which 18 are classed as major undertakings. Three of these are making explosives, 3 are mammoth shell-filling plants, 2 are large fuse-filling undertakings and the others make chemicals of various kinds, some new to Canadian industry. Of the 13 smaller projects, 8 are making chemicals, 1 makes fuse powder and 4 are making or filling smoke bombs. Three of the new units are for large-scale alkylation of petroleum fractions for high-octane aviation gasoline. Over 50,000 employees are working in these establishments. Production of special war chemicals and explosives, including the cost of shell-filling but excluding shell components, has increased from \$2,000,000 in 1940 to \$50,000,000 in 1941 and \$120,000,000 in 1942, according to figures released by the Wartime Information Board.

In 1940 Canada made only 3 types of small arms ammunition to a value of \$4,500,000. This has been increased to 20 types, the value of which was \$23,000,000 for the first four months of 1943. About 30,000 workers are employed in small arms arsenals.

With war production at such high levels, it is not surprising to note an increase of 55 p.c. in the value of production for the chemicals and allied products group of industries in 1942 as compared with 1941. Output in the former year totalled \$471,000,000 as against \$304,000,000 in the latter. The bulk of the increase was, of course, in special chemicals and explosives, but most other lines showed substantial gains also. Percentage gains by the principal industrial groups were as follows:

coal tar distillation, 32; heavy chemicals, 24; compressed gases, 27; fertilizers, 32; medicinals, 15; paints, 13; soaps, 14; toilet preparations, 16; inks, 0.5; adhesives, 23; polishes, 13; and miscellaneous, 130. There was a decline of 6 p.c. in the wood distillation industry.

Altogether there were 869 establishments in operation, represent-



A Multiple Drill in a Shipyard Machine Shop.

*Courtesy, Hydro-Electric  
Power Commission of  
Ontario*

## Canada's New Sheet Glass Industry

War-time conditions, which cut off Canada's main sources of supply of sheet glass, have created an entirely new, thriving industry during the past year; to-day 60 p.c. of Canada's requirements are manufactured near Montreal.

*Top:* Raw material being pushed into the furnace and spread out evenly. The blue glass shield over the face of the operator enables him to look into the glowing furnace. *Bottom:* An expert cutting large sheets into window panes of various sizes.



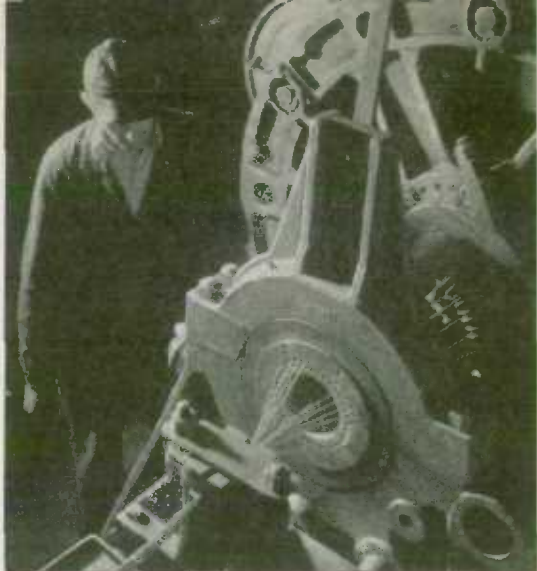
*Courtesy, Toronto Star  
Newspaper Service*

ing an investment of \$410,000,000 and giving employment to a monthly average of 80,000 workers during the year. These firms paid out \$115,000,000 for salaries and wages, \$209,000,000 for materials for processing and \$9,000,000 for fuel and electricity. The increase in capital compared with 1941 was 14 p.c.; in employment, 48 p.c.; in salaries and wages, 52 p.c.; and in cost of materials, 56 p.c.

**Synthetic Rubber.**—One year after Japan's attack on Pearl Harbour, rubber supplies were so low and civilian curtailments so severe, that every ounce consumed was going into essential manufacture, and it was no longer possible to distinguish between war and necessary civilian requirements. By the end of 1942, only 10 p.c.



The Aluminum Industry.—*Left:* Manufacturing aluminum cable; practically all the high-tension electrical transmission lines in Canada are made of this cable. *Centre:* An extrusion press making an aluminum section for an aeroplane wing. *Right:* Forging an aluminum aircraft propeller.



*Courtesy, Aluminum Co.  
of Canada Ltd.*

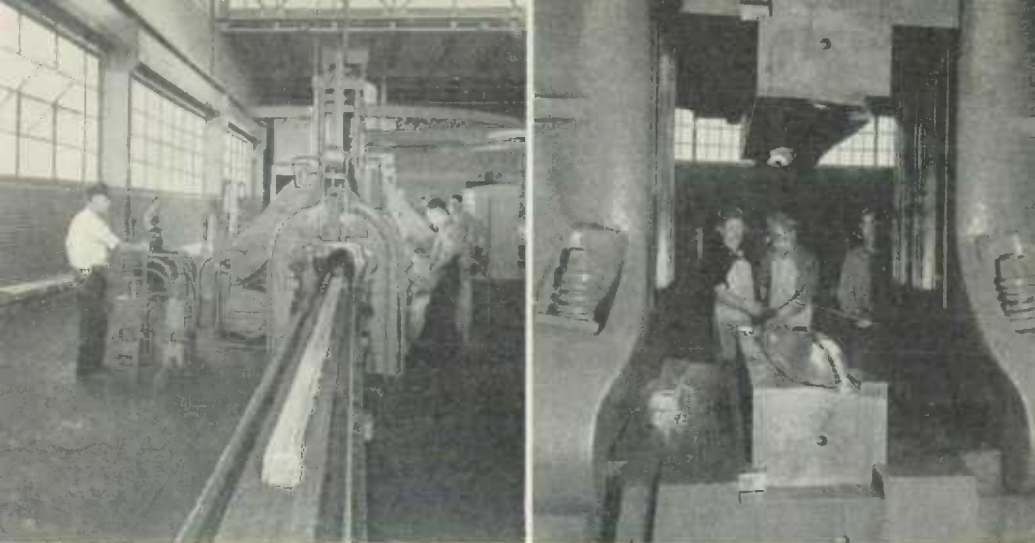
of the necessary meagre consumption was being supplied by continuing imports from Ceylon, South America, Central America and Africa. The balance of the requirements was being drawn from stockpiles gathered before December, 1941, and closely conserved by the United Nations since then.

As a result of the measures adopted by the Rubber Control, consumption of rubber for civilian purposes has been reduced to a mere 10 p.c. of what it was before the War. Out of this 10 p.c., tires have been provided for essential vehicles, but since Pearl Harbour no tires have been made, or will be made, for the non-essential car. Much of the saving of the rubber supply has been achieved by the use of substitutes and reclaim in the manufacture of hundreds of essential articles, including military tires and other war supplies. This progressive reduction in the use of rubber is still going forward. Month after month technical experts are devising new formulae for substitutions and as soon as these have been tested their adoption is made compulsory. Early in 1943 the manufacture of some war-grade tires from entirely reclaim material was begun. These tires are being released under rationing regulations for use on essential vehicles only.

As a result of the restrictions and substitutions, it appears possible that conversion from crude to synthetic may be achieved without any unfavourable effect on the war effort. Construction of the giant Government-owned synthetic rubber plant near Sarnia, Ont., is progressing rapidly and several of the vital units are nearing completion. When operating at capacity, the plant will have an output of 34,000 tons of buna-S and 7,000 tons of butyl rubber per year. It must be emphasized that this production of 41,000 tons of synthetic rubber has been earmarked. It will be used for direct war purposes only and for such other essential purposes as require crude rubber. It will provide no relief for the shortage experienced by the ordinary civilian.

#### **Leading Individual Industries and Manufactures in Leading Cities**

The incidence of the depression between 1930 and 1936 resulted in a rearrangement in the ranking of many industries. The suspension of capital expenditures



greatly reduced the output of such industries as sawmills, electrical equipment, automobiles, primary iron and steel, etc., but under the impetus of war production these industries, which are engaged in producing the equipment needed by the Armed Forces, have again advanced to high positions.

Principal Statistics of Fifteen Leading Industries, 1941

Industry	Estab-lish-ments	Capital	Em-ployees	Salaries and Wages	Cost of Materials	Gross Value of Products
	No.	\$	No.	\$	\$	\$
Non-ferrous metal smelting and refining	14	309,963,342	16,014	27,482,689	232,814,167	379,322,270
Pulp and paper.....	106	678,937,841	37,154	63,677,818	125,437,012	334,428,875
Slaughtering and meat packing.....	146	93,740,090	16,260	23,254,484	253,579,825	296,240,415
Automobiles.....	10	100,507,806	22,401	44,783,064	201,124,930	279,958,339
Butter and cheese.....	2,427	68,466,579	18,922	19,790,679	135,610,642	180,223,633
Electrical apparatus and supplies.....	211	128,317,208	33,086	47,210,886	77,466,516	177,903,626
Primary iron and steel	60	168,750,344	23,735	45,037,095	78,824,366	164,566,392
Sawmills.....	4,655	100,982,006	45,104	41,465,433	84,435,483	163,412,292
Petroleum products.....	49	82,475,508	5,406	10,326,846	125,982,237	156,635,495
Flour and feed mills.....	1,129	59,941,631	6,528	7,898,329	115,939,001	144,171,637
Cotton yarn and cloth	39	93,362,427	26,375	27,178,142	69,284,679	128,421,012
Automobile supplies.....	102	61,183,370	16,138	25,764,272	73,307,685	124,386,867
Machinery.....	247	110,809,396	23,376	37,676,055	44,617,850	124,159,341
Rubber goods, (including footwear)	56	71,985,540	17,191	22,792,376	59,340,321	119,137,776
Railway rolling-stock.	34	113,881,540	28,126	46,126,832	63,310,071	118,080,141
<b>Totals, Fifteen Leading Industries</b>						
1941.....	9,285	2,243,304,628	335,816	490,465,000	1,741,074,785	2,891,048,111
1940.....	9,493	1,962,038,556	295,496	381,923,595	1,323,519,231	2,247,821,322
<b>Grand Totals, All Industries</b>						
1941.....	26,293	4,905,503,966	961,178	1,264,862,643	3,296,547,019	6,076,308,124
1940.....	25,513	4,095,716,836	762,244	920,872,865	2,449,721,903	4,529,173,316
<b>Percentages of Fifteen Leading Industries to all Industries, 1941.</b>	35.3	45.7	34.9	38.8	52.8	47.6

### Cities of Canada with a Manufacturing Production of Over Twenty-Five Million Dollars in 1941

NOTE.—Arvida, Que., and Trail, B.C., each had a gross production of over \$25,000,000 in 1941, but statistics for these places cannot be published because there are less than three concerns operating in these cities.

City	Estab- lishments	Capital	Em- ployees	Salaries and Wages	Cost of Materials	Value of Products
	No.	\$	No.	\$	\$	\$
Montreal.....	2,669	556,538,023	147,917	187,239,445	444,557,884	803,685,931
Toronto.....	3,045	554,317,600	133,099	184,267,132	391,328,916	756,923,939
Windsor.....	223	138,929,934	29,486	57,653,986	175,847,231	289,027,790
Hamilton.....	491	255,862,917	45,421	72,845,604	136,403,197	283,670,019
Vancouver.....	864	115,960,608	25,223	34,132,996	90,720,812	162,982,858
Winnipeg.....	677	105,406,381	23,831	30,169,726	73,427,543	127,913,351
Oshawa.....	47	31,919,789	9,319	15,283,971	78,364,118	108,756,736
Montreal East.....	11	51,887,596	3,117	5,073,043	76,083,857	93,346,346
Kitchener.....	151	42,060,163	12,261	15,059,833	41,047,253	73,818,892
Shawinigan Falls.....	36	113,057,252	6,499	9,638,016	25,989,607	69,015,639
London.....	234	45,757,598	12,016	15,641,963	34,431,649	68,565,946
New Toronto.....	28	46,343,023	5,470	9,660,811	38,828,932	65,683,663
St. Catharines.....	87	40,821,862	9,463	14,017,171	38,478,232	64,747,804
Welland.....	51	49,343,108	7,724	11,777,347	31,547,973	62,671,436
Quebec.....	307	82,674,306	16,742	19,385,584	27,249,540	61,396,297
Edmonton.....	198	23,583,365	5,518	7,301,021	37,778,295	52,114,637
Calgary.....	207	40,492,678	5,239	7,291,833	32,582,536	49,869,493
Brantford.....	111	40,431,382	10,429	13,339,504	22,356,167	49,621,578
Peterborough.....	75	27,349,729	7,062	9,724,524	30,837,808	48,238,602
Niagara Falls.....	58	42,219,399	6,353	9,405,815	15,990,316	45,040,066
Sarnia.....	44	22,873,024	3,826	6,372,703	31,482,452	44,752,711
Sault Ste. Marie.....	49	58,625,543	5,574	9,486,497	20,892,289	44,056,386
Three Rivers.....	58	94,650,777	6,623	8,534,950	18,082,974	43,866,962
Ottawa.....	203	37,702,926	9,974	13,823,792	18,772,117	43,359,820
Lachine.....	34	32,635,748	5,532	10,371,857	15,245,978	40,000,595
Leaside.....	39	40,738,415	5,846	8,521,147	19,700,458	39,500,930
St. Boniface.....	47	13,134,345	2,246	3,154,575	30,825,874	38,753,448
Sherbrooke.....	74	27,006,202	7,544	8,278,081	16,652,156	35,943,105
Fort William.....	41	35,362,807	6,602	8,850,322	9,195,541	32,942,553
Saint John.....	123	21,316,260	4,809	5,899,099	18,749,941	31,588,775
Sydney.....	35	34,622,909	3,014	5,180,376	16,130,994	30,606,032
Guelph.....	90	17,405,639	6,109	7,072,329	15,031,019	29,986,611
Cornwall.....	44	33,977,880	5,279	6,795,884	9,958,303	28,120,891
Halifax.....	105	20,035,169	5,474	7,093,181	11,947,672	26,933,018
Regina.....	106	11,611,660	2,269	3,272,297	17,023,588	25,938,113

### Conditions During the Years 1938-43

A good all-round barometer of industrial activity is afforded by the indexes of employment maintained from month to month in the Dominion Bureau of Statistics. These are based on returns received from establishments having 15 or more employers and include the great majority of employees.

### Monthly Indexes of Employment in Manufactures, 1938-43

(1926 = 100)

Month	1938	1939	1940	1941	1942	1943	Month	1938	1939	1940	1941	1942	1943
Jan. 1....	108.6	104.3	118.2	142.5	187.1	219.6	July 1....	111.8	111.3	130.3	172.4	209.5	226.5
Feb. 1....	110.3	106.0	120.5	147.4	191.2	222.1	Aug. 1....	110.0	112.8	134.4	176.8	212.4	227.7
Mar. 1....	110.5	107.0	122.6	150.8	195.7	223.4	Sept. 1....	113.8	115.3	138.4	181.4	215.6	229.9
Apr. 1....	110.8	107.1	123.4	158.2	199.4	224.1	Oct. 1....	112.5	119.7	143.8	184.9	218.3	231.3
May 1....	110.6	108.4	125.7	162.3	202.3	222.9	Nov. 1....	110.9	122.1	144.6	187.5	218.6	230.8
June 1....	112.3	111.4	129.2	168.0	205.9	224.1	Dec. 1....	110.1	122.2	144.7	188.4	221.7	.....

## CHAPTER X

### Transportation—Communications

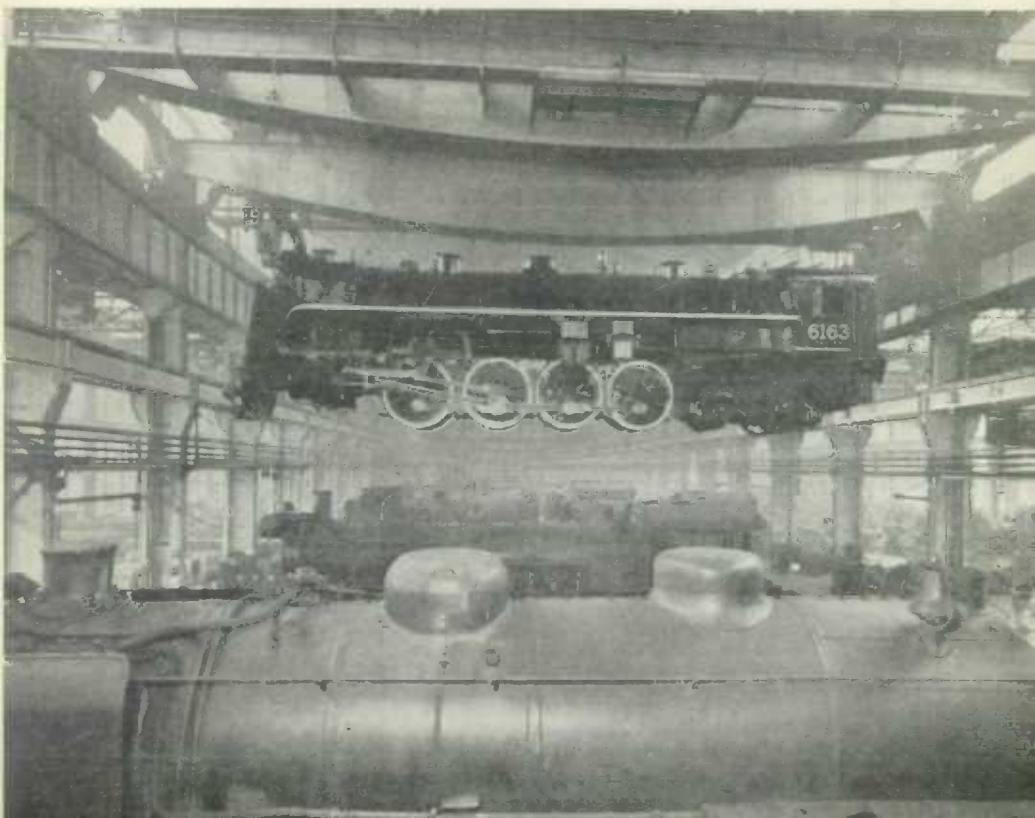
**Steam Railways.**—Over half of the railway mileage in Canada is owned and operated by the Dominion and Provincial Governments and the remainder by incorporated companies. The mileage of railways publicly operated as at Dec. 31, 1942, was as follows: Dominion, 22,586 miles; provincial, 922 miles; municipal, 92 miles; total 23,600 miles. Incorporated companies operated 18,739 miles.

The importance of adequate and efficient transportation service in war-time is too obvious to require emphasis. With restrictions on tires and gasoline, much of the traffic formerly carried by the motor-vehicle has been transferred to the railways, especially passenger traffic, and the increase in total traffic has been enormous. The tons of freight carried during the first seven months of 1943 increased by 116 p.c. over the same period in 1939, but because of longer hauls the ton miles increased by 153 p.c. Passengers carried increased by 171 p.c., and here also the longer journeys increased the passenger miles by 257 p.c. At the same time the amount of coal used by the railways almost doubled and the use of other supplies, of course,

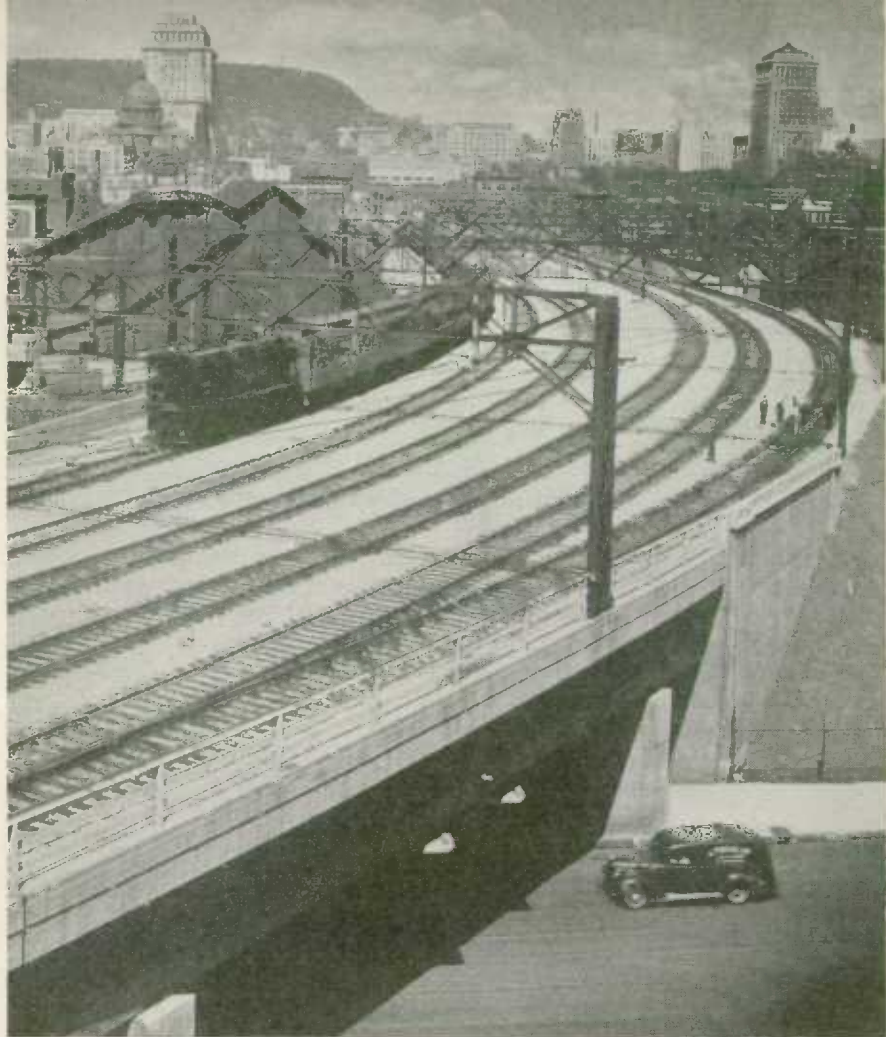
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**Overhauling Locomotives in a Railway Motive Power Shop.**—Locomotives that have run 100,000 miles or more are quickly overhauled and put back into service to speed up the war effort.

*Courtesy, Canadian National Railways*







Looking North along the Overhead Viaduct Leading to the New Canadian National Central Station in Montreal.

*Courtesy, Canadian National Railways*

showed corresponding increases. The manner in which this greatly increased traffic has been handled is remarkable and it has been accomplished in spite of the enlistment of a great number of regular railway employees in the Armed Forces and an increase in the number of employees of only 33 p.c.

During the War of 1914-18 railway traffic increased 41 p.c. in ton miles and 28 p.c. in passenger miles, while the number of employees decreased 10 p.c. Both the railways and the Government profited by the mistakes made during that War and in November, 1939, a Controller of Transport was appointed to control railway traffic by prohibiting freight from being shipped unless provision were made for prompt unloading, by facilitating the heavier loading of cars, and by restricting passenger travel, etc.

Railway Statistics, by Months, 1941-43

Month	Railway Gross Operating Revenues			Total Revenue Freight Loadings		
	1941	1942	1943	1941	1942	1943
	\$ '000	\$ '000	\$ '000	tons '000	tons '000	tons '000
January.....	36,113	45,422	50,679	5,936	6,845	6,517
February.....	34,620	44,044	53,025	5,547	6,571	7,110
March.....	40,613	50,858	62,811	6,317	7,287	8,305
April.....	41,887	50,597	65,338	6,404	7,391	8,097
May.....	46,595	53,036	64,366	7,722	7,722	8,121
June.....	44,817	55,247	66,682	7,367	7,924	8,486
July.....	45,442	57,529	69,727	7,502	8,090	8,583
August.....	46,524	58,881	69,815	7,704	7,777	8,995
September.....	47,215	58,590	66,620	7,717	7,692	8,941
October.....	51,239	61,281	.....	8,443	8,749	-
November.....	48,219	56,926	.....	8,110	8,248	-
December.....	50,050	63,593	.....	7,347	7,567	-

**Canadian Railways and the War.**—Transportation of freight and passengers by Canadian railways is being maintained at a high standard of efficiency and is making a vital contribution to the country's war effort. Prior to the outbreak of hostilities, track, motive power and rolling-stock were maintained in good order and were in condition to meet the constantly increasing volume of traffic imposed by the War.

The railways have kept pace with the expansion of Canada's war industries producing munitions, armaments and other war supplies in ever increasing quantities, and are handling more than double the volume of freight carried in the peak movement during the War of 1914-18. The volume of freight moved during the first eight months of 1943 was 116 p.c. greater than in the corresponding period of 1939—the period immediately preceding the outbreak of War. The revenue ton-mile shows an increase of 150 p.c. over this period as the increased volume of freight is carried a much longer distance than in pre-war days.

Passenger traffic also has increased correspondingly, reflecting the extensive movement of the Armed Forces, the migration of war workers to the industrial centres and the generally increased tempo of business in the Dominion. Passengers carried in the first eight months of 1943 numbered 36,955,896, an increase of 175 p.c. over the corresponding period of 1939. The passenger revenue mile comparison showed an increase of 259 p.c.

The Concourse of the New Canadian National Central Station, Montreal.

Courtesy, Canadian National Railways



While the railway companies were equipped with rolling-stock sufficient to meet the country's peace-time requirements, an acute shortage of locomotives and freight cars was threatened by the ever increasing requirements under war-time conditions. The Canadian Government, through the Department of Transport, has therefore, since 1939, placed orders for sufficient rolling-stock and equipment to meet possible shortages. To November, 1943, 92 locomotives of the newest type and design, and 8,115 freight and passenger cars have been acquired on the Department's orders and delivered to the Canadian National and Canadian Pacific Railways on a hire-purchase basis. In addition, outdated equipment has been rehabilitated and placed into service and luxury-type equipment has been remodelled to meet existing war requirements.

The new locomotives provided for war work operate on new methods of steam supply with corresponding increase in power. Modern locomotives are capable of hauling loads of 6,000 or more gross tons or double that of the average freight train load during 1914-18. The speed of locomotives has been increased by 60 p.c., while the consumption of coal per ton of freight hauled has been greatly reduced in the past quarter-century.

War services have imposed numerous tasks on the railways and have required the development of special units of equipment. These include commissary kitchen cars for feeding troops in movement on trains. For military parties travelling in smaller numbers, special dining cars equipped with long tables accommodating 54 at one sitting are provided. Cafe cars capable of seating 40 passengers at one time have been developed to speed up dining-car service on crowded trains.

Canadian railways are doing much more than looking after the transportation of passengers and freight, the carrying of messages, and the operation of hotels, etc. They have assisted industries in locating and establishing new plants; they are building guns, gun carriages, tanks, ships and secret devices and their own steamships are on active service either with the Merchant Navy or as auxiliary cruisers with the Royal Navy. One Canadian vessel, the SS *Lady Nelson*, has been converted into a hospital ship.

**Electric Railways.**—Electric railways continue to be replaced by motor-buses except in the larger cities, and three systems have inaugurated trackless buses, namely: Edmonton, Winnipeg and Montreal. In the large cities and centres where war industries are located, the local passenger traffic has increased to unprecedented proportions. New equipment has been almost impossible to secure and the peak loads in the mornings and especially in the evenings have been spread somewhat by staggering the working hours of industries, stores and office staffs.

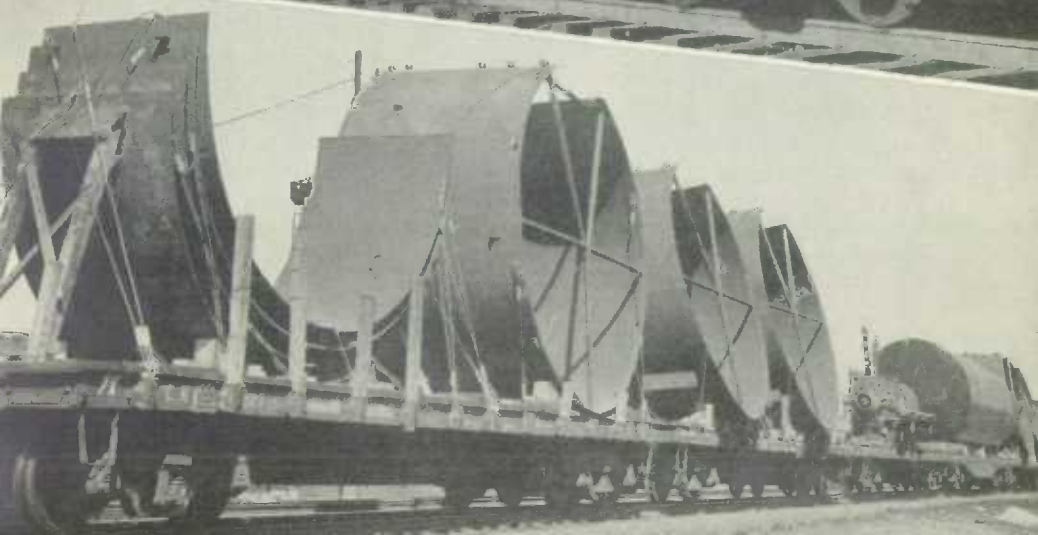
In Montreal the number of passengers carried increased in 1942 over 1939 by 110,000,000 or 53 p.c.; in Toronto by 89,000,000 or 56 p.c.; in Halifax by 163 p.c.; in Kitchener, Niagara, St. Catharines and Toronto by 158 p.c.; in Fort William by 156 p.c.; in Lévis by 115 p.c.; and in Ottawa by 99 p.c.

A Transit Controller was appointed by the Dominion Government to control local traffic and motor-bus traffic. Under his instructions, equipment has been transferred from one city to another, car stops have been eliminated, working hours staggered and bus trips cancelled or reduced in an effort to improve traffic conditions.

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Freight traffic men on the steam railways have to solve transport problems daily which tax all their ingenuity. The pictures show how a few of these difficulties have been met in transporting war equipment from plants far inland to their destinations. →

*Courtesy, Canadian National Railways*







A Modern Snow Plough—  
The problems created by Canadian winters are immense, and the necessity of keeping highways and airports open throughout the year calls for the large-scale use of such equipment.

*Courtesy Niagara Science and Museum Society*

**Roads and Highways.**—Construction of roads suitable for motor traffic has been one of the principal items of provincial expenditure during the past twenty years. The Dominion Government has built roads in National Parks and has granted subsidies to the provinces, first in 1920 and again as an unemployment relief measure in 1930-39, but has not constructed any rural roads outside of Dominion lands.

The mileage at the end of 1942 was 122,689 miles of surfaced roads, and 441,849 miles of earth roads. Of the surfaced roads, 106,389 miles were gravel or crushed stone; 13,758 bituminous surfaces; 2,496 portland cement concrete.

The expenditures for 1942 amounted to \$62,839,937, including \$26,133,751 for construction of roads, \$1,734,252 for construction of bridges, \$29,503,836 for maintenance of roads, \$3,206,840 for maintenance of bridges, \$8,190 for footpaths and sidewalks, and the remainder for administration and general expenses.

**The Alaska Highway.**—The Alaska Highway, a 1,600-mile roadway, 24 to 36 feet wide, extends from Fort St. John, B.C.,\* through Whitehorse, to Fairbanks, Alaska. It was virgin territory, and a pioneer air route, in the spring of 1942; on Nov. 20, 1942, it was officially opened for wheeled traffic. About 10,000 United States engineer troops and 4,000 civilians, of whom half were Canadians, hewed their way through the bush, bridged the rivers, overcame mountain grades and surfaced a roadbed, to permit a continuous journey by car before the year was out.

The maximum grade in hill country is 10 p.c.; in foothill country, 5 p.c. The Agreement between Canada and the United States requires that the United States complete the work and maintain it for six months after the War after which all sections in Canada will be returned to Canadian jurisdiction.

**Motor-Vehicles.**—The number of motor-vehicles registered in Canada increased steadily and rapidly from 3,054 in 1908 to 276,893 in 1918. The highest point in the pre-depression period was reached in 1930 when the total registration numbered 1,232,489 cars; this figure was exceeded in 1935 and each year since then showed an increase until 1942 when the number was reduced by war conditions.

Since 1941 there has been a drastic curtailment in the use of motor-vehicles for passenger transportation, which has applied not only to privately owned passenger

\*Dawson Creek, about 30 miles to the southwest, is the railhead from which supplies are trucked in to Fort St. John. The existing road between Dawson Creek and Fort St. John has been improved and to all intents and purposes forms part of the main highway.

## TRANSPORTATION

cars but also to bus transportation and taxi service. This has been a direct result of the diversion of all manufacturing facilities to war production and of the rigid restrictions in the use of rubber and gasoline for any but vital war needs.

Provincial revenue from motor-vehicles for 1942 totalled \$85,323,087, including: \$28,498,676 from motor-vehicle registrations, drivers' permits, etc., and \$56,824,411 from gasoline tax of which \$9,372,589 was paid by the Dominion Government to offset reduced taxes. During 1942 there were 1,386 persons killed in motor-vehicle accidents, which was a decrease of 466 from the peak of 1,852 reached in 1941.

**Motor-Vehicles Registered in Canada, 1935-42**

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada <sup>1</sup>
1935...	8,231	43,952	31,227	170,644	564,076	70,660	94,792	93,870	98,411	1,176,116
1936...	7,632	46,179	33,402	181,628	590,226	74,940	102,270	97,468	106,079	1,240,124
1937...	8,011	50,048	36,780	197,917	623,918	80,860	105,064	100,434	116,341	1,319,702
1938...	7,992	51,214	37,110	205,463	669,088	88,219	109,014	107,191	119,220	1,394,853
1939...	8,040	53,008	38,116	213,148	682,891	88,864	119,018	113,702	122,087	1,439,245
1940...	8,070	57,873	39,000	225,152	703,872	90,932	126,970	120,514	128,044	1,500,829
1941...	8,015	62,805	41,450	232,149	739,194	96,573	131,545	126,127	134,499	1,572,784
1942...	7,537	58,872	37,758	222,622	715,380	93,147	130,040	125,482	132,893	1,524,153

<sup>1</sup> Includes Yukon.

**Canals.**—There are six canal systems under the Department of Transport, namely: (1) between Fort William and Montreal, (2) from Montreal to the International Boundary near Lake Champlain, (3) from Montreal to Ottawa, (4) from Ottawa to Kingston, (5) from Trenton to Lake Huron, and (6) from the Atlantic Ocean to Bras d'Or Lakes in Cape Breton. These canals have opened to navigation from the Atlantic about 1,890 miles of waterways. Under the Department of Public Works or other authority are minor canals and locks that facilitate local navigation.

Standing Guard over One of  
Canada's Merchant Ships  
in Dry Dock.



*Courtesy, Canadian  
National Railways*

The Great Lakes and St. Lawrence River form one of the busiest waterways in the world. More traffic passes up and down the Detroit River than any other waterway and the traffic through the canals at Sault Ste. Marie, Ont., in 1929 reached a peak of 92,616,898 tons, more than through the Panama and Suez Canals combined. Due to heavy war requirements for iron ore this margin was increased to a total of 111,120,556 tons in 1941. War-time restrictions preclude the publication of later figures.

The maximum draught of vessels plying between the lakes is governed by channels in the Detroit and St. Mary's Rivers, and is limited to about 21 feet. Since 1932 when the New Welland Ship Canal, with 25 feet in the stretches between locks (the locks have 30 feet of water above the sills), was opened, larger upper-lake vessels have passed down as far as Prescott. The St. Lawrence canals have a depth of 14 feet (reduced in periods of low water) so that ocean vessels, except of small tonnage, cannot sail up into the lakes; a few such vessels were engaged in the Great Lakes traffic for several years, bringing cargoes from European ports.

**Shipping.**—Canadian shipping is divided into two classes: (1) foreign service, and (2) coasting service. The first is subdivided into: (a) seagoing, i.e., between Canadian ports on the Pacific and Atlantic Oceans and on the St. Lawrence up to Montreal, including fishing at sea and at ports in other countries; and (b) inland, i.e., between Canadian and United States ports on the Great Lakes and connecting rivers. The second is service between Canadian ports, including fishing in Canadian waters.

Shipping statistics are collected only from ports at which there is an official of the Customs and Excise Division of the National Revenue Department, and consequently do not include shipping on Mackenzie River, Lake Winnipeg, etc.

#### Vessels Entered at Canadian Ports, 1935-42

Fiscal Year	Foreign Service <sup>1</sup>		Coasting Service		Total	
	No.	Tons Register	No.	Tons Register	No.	Tons Register
1935.....	34,918	41,852,110	68,441	43,146,037	103,359	84,998,147
1936.....	37,800	41,746,953	69,809	42,979,361	107,609	84,726,314
1937.....	41,755	45,030,914	73,033	45,973,830	114,788	91,004,744
1938.....	42,582	45,603,055	75,537	44,471,834	118,119	90,074,889
1939.....	43,601	44,775,116	73,386	45,386,457	116,987	90,161,573
1940.....	46,241	46,666,396	78,212	44,361,232	124,453	91,027,628
1941.....	25,122	32,579,900	79,951	50,471,166	105,073	83,051,066
1941 <sup>2</sup> .....	26,203	31,452,400	77,592	48,111,082	103,795	79,563,482
1942 <sup>2</sup> .....	24,066	25,640,763	73,366	43,990,764	97,432	69,631,527

<sup>1</sup> Sea-going and inland international.

<sup>2</sup> Calendar year.

**Canadian Scheduled Air Transport Services.**—*Government Air Policy.*—In a statement to the House of Commons in April, 1943, the Prime Minister said that Trans-Canada Air Lines would "continue to operate all trans-continental systems and such other services of a mainline character as may from time to time be designated by the Government" and that Trans-Canada was "the sole Canadian agency which may operate international air services".

*Trans-Canada Air Lines in 1943.*—During 1943, Trans-Canada Air Lines continued to grow. It was not so much a year of expansion as of intensification of

Canada has been a pioneer in the transportation of freight by air; to-day facilities are taxed to their limit in carrying defence cargo and war personnel to points along the Alaska Highway and in the Far North.



*Courtesy, Canadian Pacific Railway*

existing services. The only route extension was from Vancouver to Victoria, but in September three daily flights were added to the schedules between Montreal and Winnipeg and between New York and Toronto. In the first seven months of the year (July is the latest month for which figures are available), T.C.A. aircraft flew 4,990,244 miles, an increase of 608,507 miles over the corresponding period in 1942.

From Jan. 1, 1943, to the end of July, Trans-Canada carried 2,048,774 lb. of mail, an increase of 991,708 lb. over the first seven months of the previous year; an express load of 406,206 lb., an increase of 265,049 lb.; and 78,215 revenue passengers, an increase of 21,125. An example of the growth of traffic was July, the heaviest month for air mail in the Company's history up to that time. The amount carried was 316,547 lb., an increase over June of 7,428 lb., and over July, 1942, of 123,576 lb.

An important event of the year was the inauguration of a transatlantic service, a war-time operation Trans-Canada assumed on behalf of the Government. The Air Line continued its maintenance work for the British Overseas Airways Corporation return ferry service across the Atlantic and, in its Winnipeg shops, overhauled many aircraft engines, propeller assemblies, instruments and accessories for the Royal Canadian Air Force, for schools operating under the British Commonwealth Air Training Plan, and for the British Overseas Airways Corporation.

Trans-Canada has created at Winnipeg one of the most complete aircraft engineering and maintenance shops on the continent. Here, trained staffs keep the fleet of twenty-four transports in the finest flying trim and provide shop service for military aircraft.

Routes now in operation total 4,903 miles, made up as follows: St. John's, Newfoundland, to Victoria, B.C., 3,911 miles; Halifax to Moncton, 120 miles; Toronto to New York, 365 miles; Toronto to London and Windsor, 206 miles; Lethbridge to Calgary and Edmonton, 301 miles.

A high percentage of the male personnel of T.C.A. has enlisted in the Armed Forces and manpower is one of the serious problems confronting the company. The policy of employing women and ex-service men was continued during the year. More than 35 p.c. of the staff is now female.

*Canadian Pacific Air Lines.*—The consolidation of the many independent commercial operators chiefly engaged in servicing the mining industry in northern Canada has been proceeding gradually for the past two years. The Canadian Pacific Air Lines now controls the operation of Canadian Airways Limited, Arrow Airways





Control Terminal Telephone Equipment, Montreal.—This St. John's, Newfoundland, circuit has a "speech inverter" which makes the voice currents unintelligible to anyone who might attempt to listen in with a radio set. A telephone call between any point on this Continent and Newfoundland must pass through this equipment since it is the only telephone link with Newfoundland.

*Courtesy, National Film Board*

Limited, Ginger Coote Airways, Prairie Airways, Mackenzie Air Service, Yukon Southern Air Transport Limited, Dominion Skyways Limited, Quebec Airways, Wings Limited, Starratt Airways and Transportation Company.

The component companies of the C.P.A. in 1942 flew approximately 5,300,000 miles, carried 60,000 passengers and 10,000,000 lb. of freight, express and mail. Their employees numbered 7,000. Ninety per cent of the Company's business is now for war purposes—in the northwest for the important developments in these remote districts arising out of the Joint Defence Programs of Canada and the United States for the defence of northwestern Canada and Alaska; in the northeast in connection with the construction of plants for war industries and of aerodromes. "Bush" services have been maintained in all important areas; the reduction in activity due to the decline in gold mining has been compensated for by the increased war-time search for essential war minerals.

To meet the increasing traffic, more efficient and larger twin-engined aircraft have been placed in operation on several routes replacing the former ski-float operations. Up-to-date air navigation facilities, including aerodromes, radio ranges, improved weather and communication services and lighting are also being installed so as to permit of all-weather, night and day operation. Every effort is being made to bring such services up to mainline standards as rapidly as possible.

*Independent Air Lines.*—Although many of the principal operating companies have been absorbed by C.P.A., there still remain independent organizations in this field. Typical of these are Maritime Central Air Lines which operates a mail, passenger and express service between Moncton, Saint John, Summerside and Charlottetown; the M. and C. Aviation Company, which at present operates a licensed air-mail, passenger and express service from Prince Albert to northern Saskatchewan points and (under contract with the Department of Munitions and Supply) an engine and overhaul shop.

**Telegraphs.**—Six telegraph systems are operated in Canada, five in conjunction with the railways and one small system that is owned and operated independently. One United States company operates lines across Canadian territory; one private Canadian company operates a wireless system; and three cable companies, in addition to the telegraph companies, operate cables from Canadian stations. In all 22 cables are operated between Canada and England, Azores, Australia, New Zealand, Newfoundland, St. Pierre and Miquelon, and Bermuda, and 2 cables between North Sydney and Canso, N.S.

These systems operate 376,548 miles of telegraph wire in Canada, 5,405 miles outside of Canada, and 32,805 nautical miles of submarine cable between Canada and other countries. Multiple circuits normally produce 731,826 miles of channels for telegraphic use. During 1942 a total of 15,422,131 telegrams and 1,149,824 cablegrams, excluding messages between foreign countries, were handled over these wires.

**Telephones.**—There were 3,209 telephone systems in Canada in 1941, operating 5,882,223 miles of wire and 1,562,146 telephones. The estimated number of conversations during the year was 3,011,527,000 or 1,928 per telephone. Almost half of the telephones are dial telephones and are operated by automatic switchboards, the increase in dial telephones during 1941 being 94,383 as against an increase of 6,725 telephones connected with manually operated switchboards.

**National Broadcasting.**—In addition to the Canadian Broadcasting Corporation, there were 97 private commercial broadcasting stations operating in Canada in 1943. The CBC, however, operates under the Canadian Broadcasting Act which gives it regulatory powers over all broadcasting stations and its network gives effective coverage to almost the entire population.

Since November, 1936, when the CBC succeeded the former Canadian Radio Broadcasting Commission, many changes in radio-listening habits throughout the Dominion have been noted. Audience have grown steadily, as reflected in the increased revenues from licence fees. There is much less listening to stations located outside of Canada than there was a few years ago, while program selection, rather

**Behind the Scenes.**—This odd accumulation of paraphernalia is the apparatus by which the operator produces the wide variety of sound effects required for the average radio dramatic broadcast.



*Courtesy, Canadian  
Broadcasting Corporation*

than station tuning as such, is steadily becoming more prevalent. In the more isolated areas, radio has come to represent the main source of entertainment, of news, of adult education and, indeed, in many communities, of cultural development.

The progressive step of setting up a publicly owned broadcasting organization grew out of a national necessity. The extension of coverage to embrace the vast rural, as well as urban, areas was vital. This has been brought about by the erection of more powerful stations and by extending land lines to numerous other stations. Hours of network operation have been extended from a limited schedule to a full 16-hour schedule. Regular interchanges have been established with the BBC and United States networks, so that to-day CBC listeners enjoy much of the very best from six great networks.

The members of the Board of Governors are appointed for three years, in rotation, to act as "trustees of the national interest in broadcasting". They are responsible for the policies of the Corporation, and for guaranteeing to the public that broadcasting will be administered in a non-partisan and business-like manner. The CBC is responsible to Parliament through the Minister of National War Services.

*Transmission Facilities.*—The so-called CBC national network consists of 10 CBC owned and operated stations (four 50,000-watt regional and six other transmitters), together with 26 privately owned affiliated stations. This network also carries CBC sustaining features, which are distributed over many other stations not at present on the basic network. The four 50,000-watt stations of the Corporation are located in strategic areas where they reach numerous listeners who otherwise are largely in isolated areas. In addition, several low-power shortwave stations augment this network and carry CBC programs to remote parts of the country. Eight low-power stations, operating automatically on the network, have been constructed and put into operation by the CBC at Sioux Lookout, Ont., at Edmundston, N.B., and in British Columbia at Kimberley, Fernie, Cranbrook, North Bend, Creston, Revelstoke, Quesnel, Williams Lake and Prince George.

Consideration is being given to the setting up of a second national network of domestic radio broadcasting stations to provide alternative program service, especially during evening hours. It is expected that by 1944, an international short-wave transmitter centre with two 50,000-watt transmitters and three elaborate antenna systems will be in operation at Sackville, N.B., relaying CBC and specially designed programs to all parts of the world.

*Programs.*—During the fiscal year ended Mar. 31, 1943, the CBC's total program production amounted to 15,699 hours and 51,672 individual programs, representing the highest peak yet reached in terms of individual programs and hours of operation. The primary reason for this growth is the trend towards a more complete and comprehensive service to each of the five geographical time zones with emphasis being placed on the presentation of specialized programs directed to specific audiences at the most appropriate time for listening. Such programs as farm, educational, children's and women's come in this category and show a marked increase over the past few years.

*CBC and the War.*—To-day, while the task of gradually improving programs goes steadily on, the CBC recognizes that its chief responsibility is to the nation at war. With industry and the Armed Forces absorbing larger and larger sections of the community, the task of providing accurate information about events at home and abroad and of retaining the links that bind Canadians in other parts of the

Short-wave Programs are Received at the CBC Listening Post.—The operator carefully regulates the tuning and volume of the "signal" fed by special telephone wires to all of the stations making up the CBC national network.

*Courtesy, Canadian Broadcasting Corporation*



world with their homeland takes precedence. Such programs as those devoted to the interests of farmer and labour take on a new significance in time of war and cannot be considered less than essential to the national effort. Naturally, too, programs designed to interpret the latest governmental regulations and legislation, as they affect the individual, find place in broadcasting schedules. Attention is also directed to regularly scheduled talks originating in Canada, Britain and the United States, which deal with one of the War's many phases. The CBC co-operates with all Government War Departments and has staffs, including war correspondents and engineers, with the Canadian troops in North Africa and Italy.

*Broadcasting CBC News.*—The CBC news service is available to all radio stations in Canada to which there are land lines. Private stations may release the CBC news service only on a sustaining, non-sponsored basis. Newsrooms are maintained by the CBC at Halifax, Montreal (which provides news in both English and French), Winnipeg and Vancouver with a central newsroom at Toronto. The Canadian Press and British United Press both provide full news services to the CBC, while reports are picked up by the CBC shortwave listening-post at Ottawa and also received from CBC war correspondents overseas. The CBC pays for its news service from CP and BUP, but rewrites the bulletins for radio consumption, incorporating items of unusual interest from the other sources mentioned.

*The Post Office.*—War-time conditions have brought a continuing and enormous expansion of postal business of all kinds throughout Canada; war industries, governments, and private citizens are utilizing postal facilities as never before. This is revealed by the gross postal revenue, which has increased from \$42,896,179 in the fiscal year 1938-39 to \$59,175,138 in 1942-43.\* In the latter year, money orders to the amount of \$233,004,136 payable in Canada and \$3,921,784 payable in other countries were issued, together with postal notes to the value of \$22,246,021.

*Air Mail.*—To-day, with the emphasis on speed in war production, the Trans-Canada Air Mail System—now operating twice daily each way from the Atlantic to the Pacific over some 3,300 miles—is proving an invaluable asset, and air-mail volume continues to increase, over 278,593 lb. being carried during the last month

\*The increase in postal rates allowed for in the 1943 Budget was not effective until the next fiscal year.





Opening Table and Primary Sortation of Parcel Post at an Army Base Post Office.

*Courtesy, National Film Board*

of the fiscal year 1942-43. Swift connections are made with the United States and other air-mail networks of the world. Canada's expanding use of the air-mail services is reflected in the following figures:—

	<i>Miles Flown No.</i>	<i>Mail Carried lb.</i>
1938-39.....	3,711,987	1,822,399
1939-40.....	5,769,257	2,351,172
1940-41.....	8,330,121	2,842,367
1941-42.....	10,021,579	3,541,625
1942-43.....	10,799,670	5,373,021

*Military Mails.*—The Canadian Postal Corps was originally recruited from executives and personnel of the Canadian Post Office in 1939 and is serving all branches of the Armed Forces. The Base Post Office in 1942-43 despatched overseas the record volume of over 21,800,000 lb. of parcels, 534,000 lb. of letters and 1,597,000 lb. of news to the fighting services. Members of the Armed Forces overseas, including Auxiliary Services, have been allowed free mailing on letters to Canada and special reduced rates on gift parcels mailed from Canada. New facilities have been established to expedite correspondence with the Armed Forces in the form of Airgraphs—letters on film that travel by air—and the Armed Forces Air Letter—a combined lightweight letter and envelope operating at the low postage rate of 10 cents. Special arrangements are also in effect for communication with prisoners of war interned abroad. Since December, 1943, flying fortresses have carried mail to the Armed Forces to speed up mail delivery to Italy and North Africa.

## CHAPTER XI

# Labour—Employment and Unemployment—Pensions

## Labour Legislation in Canada

**The Dominion and Provincial Fields.**—In Canada most labour laws have been enacted by the provinces as they relate to civil rights or to local works and undertakings, subjects which, with the exception of certain specified works, railways, shipping, telegraphs and other works extending beyond the boundary of a province, are, under the British North America Act, reserved to the provinces. In all provinces, except Prince Edward Island in which there is little industrial employment, there are laws for the regulation and inspection of mines, factories, shops and other workplaces and dealing with wages, hours of work, the employment of women and children and workmen's compensation. In some provinces laws have been enacted to protect the right of association, to require employers to bargain with the representatives of employees or with trade union officers and to prohibit any strike or lockout until after inquiry.

The Dominion regulates working conditions of its own employees, provides compensation for them in case of accident or certain diseases arising out of their employment and requires observance of specified wage and hour conditions in the execution of Dominion public works and of contracts for supplies. There are Federal laws relating to employment on railways and in the mercantile marine and, under its power over criminal law, Parliament enacted legislation freeing trade unions from liability to prosecution as conspiracies, permitting peaceful picketing, and prohibiting employment on Sunday except under certain conditions. In 1940, a statute was passed providing for a national system of unemployment insurance and of employment offices (see pp. 145-6).

The Dominion and the provinces have co-operated to enable the former to deal with certain classes of labour disputes under a Dominion statute, the Industrial Disputes Investigation Act. This Act prohibits a strike or lockout, pending investigation of the dispute by a tripartite board, in mining, transport, communication services and certain public utilities within Dominion jurisdiction or in any such industries within provincial jurisdiction if legislation of the province in question has made the Act applicable. In all provinces, except Prince Edward Island, Alberta and British Columbia, there is legislation to this effect.

In 1900 a Dominion Department of Labour was established under the Conciliation Act to aid in improving labour conditions and settling disputes through mediation and the dissemination of information. The Minister of Labour is charged with the carrying out of the Fair Wage Policy for Government contracts, the Industrial Disputes Investigation Act, Government Annuities Act, Combines Investigation Act, Vocational Training Co-ordination Act, Unemployment Insurance Act and Re-instatement in Civil Employment Act. Information on the operation of these statutes is given in the annual reports of the Department and of the Unemployment Insurance Commission and also in the *Labour Gazette*, which is issued monthly.

Departments of Labour in all provinces, except Alberta, Saskatchewan and Prince Edward Island, administer most provincial labour laws, but in the four western provinces the Workmen's Compensation Boards are independent and in New Brunswick the Board, which is under the Provincial Secretary, enforces the Factory Act. In Alberta the Department of Trade and Industry, through the Board of Industrial Relations, deals with wages and hours legislation and with factory inspection. The Saskatchewan Bureau of Labour and Public Welfare is under the Minister of Municipal Affairs. In all provinces laws for the protection of miners are administered by the respective Departments of Mines.

*War Regulations.*—To deal with problems arising out of the War, a number of Orders in Council have been made under the War Measures Act. A declaration of principles for the conduct of industrial relations in war-time was embodied in an Order in Council. The Industrial Disputes Investigation Act was extended to war industries and provision was made for preliminary inquiries into disputes by industrial disputes inquiry commissioners with a view to settlement, if possible, without recourse to the appointment of a board of conciliation and investigation (see pp. 136-7).

A comprehensive National Selective Service Program has been put into effect which is designed to secure the most effective distribution of manpower both within industry and between industry and the Armed Forces (pp. 146-7). Skilled workers for these categories are trained under a War Emergency Training Program (see p. 148). A comprehensive wages control policy is in effect (see below) and is supplemented by the control of salaries. Persons discharged from the Armed Forces must be re-instated in their former jobs and other steps have been taken to assist them in re-establishing themselves in civil life. Pensions and compensation are provided for Canadian seamen and salt-water fishermen who suffer disability, loss of effects, etc., as a result of enemy action.

### Control of Wages

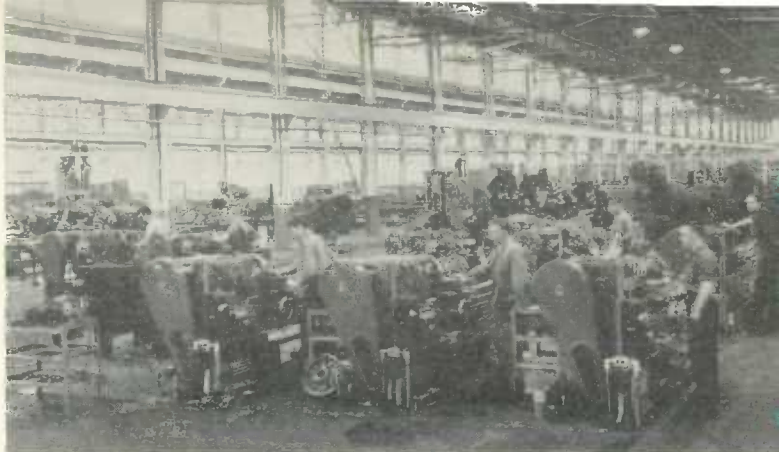
This policy is part of the Government's general anti-inflationary program. It was first introduced in December, 1940, but, at that time, though it was recommended for all employers, it applied only to Boards of Conciliation and Investigation in their recommendations on wages. In October, 1941, when comprehensive price control was introduced, the wages-control policy was amplified and extended to cover all employers and workers.

The present policy is embodied in the Wartime Wages Control Order under which wage rates are stabilized at the level in effect on Nov. 15, 1941, though provision is made for raising rates that are unduly low. At the same time, the imposition of undue hardship on wage-earners is avoided by the payment of a cost-of-living bonus, which is adjusted with changes in the cost-of-living index. A National War Labour Board and nine Regional War Labour Boards have been set up to administer the Order.

In building and construction, wages for the skilled trades in cities are from 60 cents to \$1.25 and for labourers 40 to 65 cents per hour, all plus cost-of-living bonus of \$2.25 per week.

On steam railways, shop mechanics are paid 72 to 79 cents and sectionmen 38 to 43 cents per hour, plus the full cost-of-living bonus of \$4.25 per week. On steamships, seamen or deckhands on the east coast and lower St. Lawrence are paid \$52.50

Men and Machines in  
a Large Munitions  
Plant in Ontario.



*Courtesy, Canadian  
Westinghouse Co.  
Ltd.*

to \$90 per month with board and lodging; on the west coast \$65 to \$90 and on the Great Lakes and upper St. Lawrence \$62.50 to \$78, plus \$2.60 to \$15.60 per month cost-of-living bonus. In addition, crews of ships operating in coastal waters designated by the National War Labour Board receive a war risk bonus of \$25 per month and \$45 if on trans-oceanic vessels.

In the shipbuilding industry skilled workers are paid 70 to 90 cents, other workers 40 to 80 cents per hour plus cost-of-living bonus of \$4.25 per week. In the aircraft industry rates for skilled trades range from 70 cents to \$1.05; for production workers (assemblers), 50 to 85 cents per hour, most of whom receive the full cost-of-living bonus of \$4.25 per week. In other manufacturing, wages for skilled metal trades are generally 50 cents to \$1.25 per hour, for printing trades \$25 to \$51 per week, for clothing factory cutters from \$35 to \$50 per week and for newsprint machine tenders \$1 to \$1.75 per hour. The predominant rates for semi-skilled male workers are 45 to 80 cents per hour; for female workers 30 to 60 cents. The cost-of-living bonus in general manufacturing ranges from 60 cents to \$4.25 per week (or 2.4 to 17.0 p.c. to certain classes earning less than \$25 per week).

In the principal coal mines, wages for contract miners are \$6 to \$8 per day, for labourers \$3 to \$5; in metal mines, rates for miners and skilled mechanics are \$5 to \$6.50 per day and for labourers \$4 to \$4.50. The full cost-of-living bonus (71 cents per day) is paid in most mines, both coal and metal. The average wage for male farm help with board and lodging is \$3.51 per day and \$61.26 per month (August, 1943). In logging camps in Eastern Canada, choppers, sawyers or cutters receive an average wage of \$60 per month with board and lodging, and in British Columbia fallers and buckers are paid an average rate of \$7.80 per day. The compulsory cost-of-living bonus of 60 cents per week is most common throughout the logging industry in both areas.

The standard or normal working hours in manufacturing are in general 48 to 54 per week in textile factories, 40 to 50 in clothing factories, 48 in the pulp and paper industry, 44 to 55 in paper products, 47 to 55 in woodworking, 44 to 60 in metal manufacturing, shipbuilding and aircraft industries, 40 to 55 in the boot and shoe and rubber industries. The 8-hour day prevails in building trades in cities, on steam railways and in mining. The 10-hour day is common in logging, except in British Columbia where the 8-hour day is standard. Considerable overtime is worked in many industries owing to war demands and the shortage of workers.



### Organized Labour in Canada

Trade unions in Canada are divided into four principal groups: those affiliated with the Trades and Labour Congress; those affiliated with the Canadian Congress of Labour; the unions in the Province of Quebec, which are linked with the Confederation of Catholic Workers of Canada; and the railroad brotherhoods of men in train and engine service. The railroad brotherhoods and many of the unions affiliated with the two Congresses are "international unions" in the sense that they have branches in both Canada and the United States and, in some cases, in Newfoundland, Mexico, Panama or the Philippines.

In December, 1942, there were 578,380 trade union members reported to the Department of Labour, an increase of 116,699 over 1941. The 1942 membership exceeded that for 1919, a peak year, by 200,333. The number of branches of unions and of local unions was 3,426, a gain of 108 during the year. The international unions showed an increase of 94,125 in their Canadian membership. The outstanding increase in members was in the metal-working industries chiefly steel workers, automobile workers and machinists.

The Trades and Labour Congress reported, in 1942, a membership of 164,375 and in 1943, 190,778. The Canadian Congress of Labour reported in 1942 a membership of 160,000 and in 1943, approximately 200,000, and the Confederation of Catholic Workers of Canada 46,447 in 1942 and 53,384 in 1943.

### Industrial Disputes

For the first ten months (January to October) of 1943, the preliminary figures showed a total of 354 strikes and lockouts, involving 162,773 workers and causing a time loss of 878,344 man-working days. During 1942, there were 354 strikes and lockouts, involving 113,916 workers with a time loss of 450,202 man-working days. The lowest time loss since the inception of the record in 1901 was in 1930 when 91,797 man-working days were lost in 67 disputes involving 13,768 workers. The highest occurred in 1919 when 336 disputes involved 148,915 workers and caused the loss of 3,400,942 man-working days.

**Industrial Disputes Investigation Act.**—This Act, which was passed in 1907, provides that when there is a dispute that threatens to cause a stoppage of work, the Minister of Labour, on the application of either party or of the municipality concerned, or on his own motion, may refer the matter to a tripartite Board of Conciliation and Investigation. The Board secures a settlement if possible and, if not, makes a report to the Minister, which is published, containing recommendations for settlement "according to the merits and substantial justice of the case".

The Act normally applies to mines, agencies of transport and communication and certain public utilities, and with the consent of the parties its machinery may also be used in connection with disputes in other industries. At the beginning of the present War, its scope was extended to cover all disputes in industries producing munitions and war supplies and in construction work on defence projects. Shortly afterwards the Government issued a declaration of principles for the regulation of labour relations in war-time, in which it was recommended to employers and workers that fair and reasonable standards of wages and other conditions should be established, that hours of work should not be unduly extended but a shift system

should be established where possible, that every precaution should be taken to ensure safe and healthful conditions of work, that the right of workers to organize in trade unions and bargain collectively with their employers should be recognized, that disputes should be settled by negotiation, with the assistance of the Government conciliation service or under the provisions of the Industrial Disputes Investigation Act and that collective agreements should provide for machinery for adjusting grievances.

The extension of the scope of the Industrial Disputes Investigation Act, together with the great expansion in industrial activity caused by the War, brought about such an increase in the number of applications for boards of conciliation and investigation that provision was made, in 1941, for informal inquiries into disputes by industrial disputes inquiry commissioners with a view to prompt settlement, if possible, without recourse to the more formal and expensive procedure of establishing a board. Commissioners may also be used to examine allegations of discrimination against workers for trade union activity and to inquire into any situation that appears to the Minister of Labour to be detrimental to the most effective use of labour in the War.

Later in 1941, it was provided that workers who were dissatisfied with the recommendations of a board could not strike until a strike vote was conducted among those concerned, under the supervision of the Department of Labour. The Act itself forbids any strike or lockout while a board is dealing with a case.

The increase during the War in the number of cases dealt with under the Act is indicated by the following figures. In the ten years immediately preceding the War, 1929-38, 215 applications were received for the establishment of boards and 92 boards were established. In four years of war, from Sept. 1, 1939, to Sept. 30, 1943, 462 applications were received and 168 boards established. This increase took place in spite of the fact that since October, 1941, disputes over wages have not been dealt with under the Industrial Disputes Investigation Act but by the National War Labour Board (see pp. 134-5).

A Girl Operating a  
Turret Lathe in the  
Naval Gun Plant of  
a Munitions Plant.



*Courtesy, Canadian  
National Railways*

## Employment and Unemployment

### The Effects of the War on Employment in the Dominion

The conduct of war waged under modern conditions must obviously be accompanied by many and profound changes in the industrial lives of the nations involved therein; the numbers, the occupations, the sex and the age distributions of wage-earners in all countries are inevitably influenced to an important extent by the exigencies of such a conflict. The impact of the present War upon the Canadian industrial life may, in part, be measured by the current statistics of employment and payrolls maintained in the Dominion Bureau of Statistics; these depict the month-to-month changes in the geographical and industrial distributions of large proportions of the total salary- and wage-earning population of the Dominion. They do not, however, yield any information respecting changes in the age and occupational distributions, although valuable data in regard to the sex of the workers in recorded employment as at Oct. 1, 1942 and 1943, were collected in connection with the monthly surveys.

The effects of the War upon industrial employment, generally, in the Dominion during the first four years may be roughly divided into three phases. The first of these dated from the period immediately preceding the outbreak of hostilities, when a European conflict appeared inevitable to the Fall of France in June, 1940. In this period, recognition was given to the importance of utilizing Canadian industrial and material resources, largely immune from the danger of bombing but relatively close to the theatre of operations. Accordingly, preliminary plans were laid for the organization of industry which, in a country only partially industrialized, would be required to adapt and extend peace-time production to meet vast war-time needs and to co-ordinate such production with that of Great Britain. The initial development of the Commonwealth Air Training Plan likewise tended to stimulate industrial activity. Nevertheless, no particularly marked upswing resulted immediately from these causes; the reserve of unemployed persons remained large, while work undertaken for the relief of unemployment continued to be an important factor in the situation.

The outbreak of war early in September, 1939, intensified the activity of what may be termed the organization period; considerable numbers of men enlisted in the Armed Forces, others were employed to guard against sabotage, there was an increase in employment in the production of commodities required in the conduct of war, and also in the manufacture of consumers' goods, the latter largely resulting from panic-buying in expectation of increased prices and shortages. These influences were reflected in a moderately rising level of employment until the end of the year; the advances at Nov. 1 and Dec. 1, which were contra-seasonal, brought the index of employment at the latter date to a position rather higher than at Dec. 1 in any earlier year of the record.

The seasonal contraction indicated at Jan. 1, 1940, was on a scale decidedly below-average. Although the trend in succeeding weeks was slightly retrogressive, industrial activity generally continued at a somewhat higher level than in the opening months in preceding years of the record. This superiority was lost at May 1, however, when the index of employment fell below that of May 1, 1929; the curve at June 1, 1940, was also below its level at June 1, 1929. Thus this initial phase of the war effort was marked by some increase in general industrial employment, but the expansion was not of outstanding dimensions. The curtailment in unem-



Thousands of boys across Canada spent their 1943 summer vacations on farms to help relieve the farm labour shortage.

*Courtesy, Family Herald and Weekly Star and National Film Board*

ployment relief undertakings, and the virtual elimination of public works (other than those required for defence purposes), were among the factors contributing to the early changes that took place in the industrial distribution of workers as a result of the outbreak of the War, from which event date substantial and almost uninterrupted advances in manufacturing. The employment of women, in many cases, to fill vacancies due to enlistments in the Armed Forces was the first step in a movement that was later to grow to considerable proportions.

As the pattern of the War unfolded, with the developments in Norway and the Low Countries, climaxed by the Fall of France in June, 1940, the effect of the War upon industry entered upon its second and more dynamic stage. The critical position in which Great Britain was placed as a result of these events, together with the large-scale bombing of her industrial centres, gave a great stimulus to industrial production throughout the British Empire and the United States. Evidence of this in Canada was provided by the sharply upward direction taken by the curve of industrial employment. This expansion, which practically eliminated seasonal influences, except in industries wholly dependent upon climatic conditions, extended in greater or lesser degree to all parts of the country, and to a great many of the industrial divisions; it was accompanied by relatively large advances in the pay-rolls. Thus, the annual Census of Industry reported a rise of 26 p.c. in employment in manufacturing as a whole from 1940 to 1941, while the gain in aggregate payrolls was 37 p.c. The sex distribution of manufacturing operatives also underwent considerable variation, partly resulting from the replacement of large numbers of recruits by female workers, and partly from the reorganization of industrial processes to permit the work to be carried on by women, or by adolescents. The gain in the number of females engaged in manufacturing in 1941 as compared with 1939 was 50.3 p.c.; that reported for male employees was 44.9 p.c.

The development of war production brought with it increasing shortages of labour and materials; to cope with this situation, drastic curtailment of consumer goods was ordered by the Government, which also took steps to regulate the labour market. Regulation and stabilization of wages and salaries was also decided upon to prevent important loss of production through industrial disputes, as well as to curb the inflationary tendencies inherent in a state of full, or practically full employ-



ment, accompanied by short supplies of consumer commodities. The steps taken involved the payment of a cost-of-living bonus, fluctuating with the cost-of-living index, and the imposition of ceilings on salary- and wage-rates.

In this second phase of the industrial war effort, the reserve of unemployed persons was virtually exhausted; the employment of women, and of the older and the younger workers, substantially increased, and there were important changes in the industrial distribution of the wage-earning population. Evidence of these changes is found in the data obtained in the monthly surveys of employment; these show that the persons employed by manufacturing establishments, who had constituted 50.7 p.c. of the total personnel reported at the outbreak of war, formed 58.0 p.c. of the much greater total indicated at Dec. 1, 1941. Within the manufacturing division, the proportion engaged in the production of durable goods rose from 40 p.c. to 50 p.c. in the same period. In that period, the number employed in this class of manufactures considerably more than doubled, whereas those in the production of non-durable goods increased by about 40 p.c. The all-industries index ( $1926=100$ ) increased from 119.6 at Sept. 1, 1939, to 168.8 at Dec. 1, 1941, or by 41 p.c.

The third stage of the Dominion's industrial war effort followed the outbreak of war in the Pacific in December, 1941. This period was characterized by increasing shortages of labour and materials, and by a considerable degree of co-ordination of Canadian production with that of United States industry; the former resulted in further curtailment of the manufacture of consumer goods, and of non-essential services, together with a tightening of the regulations regarding the distribution of manpower, in a market seriously affected by a relatively enormous expansion in industrial employment, and by increasing enlistments in the Armed Forces. During this phase of the changing situation, the general advances in employment were at a rather retarded pace, due to the great strides that had been made in the mobilization of the resources—human and material—of a country with a relatively small population. Thus, from the 1942 low point at Mar. 1, to its high at Dec. 1, the gain amounted to about 13 p.c., while in 1941, the rise from the minimum to the maximum employment had been almost 26 p.c. In manufacturing, the movement continued steeply upward, although here too, a tendency for the curve to flatten was discernible. The increase in employment, month by month, in 1942, as compared with the same period in 1941, became progressively less—a trend which was continued in 1943. The movement in the first five months of 1943 was, indeed, almost continuously unfavourable, partly owing to the reassertion of seasonal influences, while the expansion in succeeding months was limited in extent.

The general upswing in industrial employment in the Dominion as a result of the War has been accompanied by relatively greater advances in the payrolls; monthly data respecting the latter have been collected only from the early months of 1941. From June 1 of that year, to Oct. 1, 1943, the increase in employment amounted to 22.7 p.c., and that in the payrolls to 50.7 p.c. In manufacturing, the gains were even more pronounced, being 37.7 p.c. in recorded employment, and 71.8 p.c. in payrolls. The weekly average earnings per employee rose from \$25.25 at June 1, 1941, to \$31.48 at Oct. 1, 1943.

**Summary.**—From Sept. 1, 1939, to the latter part of 1943, employment in all parts of the Dominion, and in most industrial divisions, showed greatly heightened activity. Geographically, the gains were naturally most marked in the more highly industrialized cities and provinces. Industrially, the largest expansion was in manu-

Employee Co-operation in Industry.—A metallizing gun in action; a stainless steel wire is being fed into the gun, then melted in the oxygen-acetylene flame, and sprayed on an undersize shaft—a simple operation which saves time, money and materials. The idea behind the operation was developed by an employee of a large pulp and paper company and has resulted in an estimated saving of \$1.075 for each worn shaft thus treated.



Company, Shipping and Shipbuilding Register

facturing, especially in the metal-using, chemical and miscellaneous manufactured product divisions, all of which were engaged mainly in the production of munitions. Logging, transportation, communications, services and trade also afforded more employment; in the last-named, however, the prevailing shortage of labour was mainly responsible for a falling-off from the peak reached some months previously, a decline that was partly concealed by the employment of increasingly large proportions of part-time workers. In construction and mining (particularly of precious metals), employment was in smaller volume in the later months of 1943 than at the opening of hostilities, also largely as a result of the labour stringency, together with shortages of materials. Heavy demands for the products of a number of these industries, notably logging and coal-mining, made the shortage of labour available for work therein a matter of considerable concern.

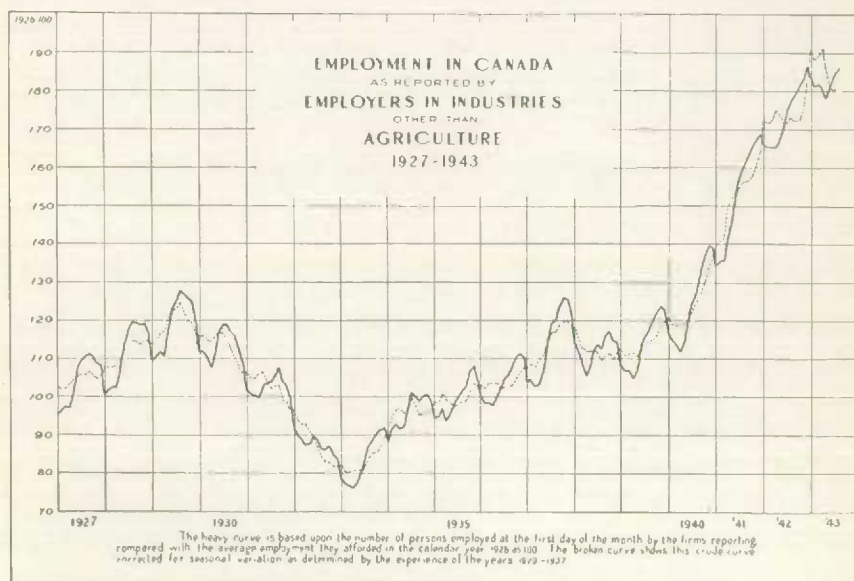
In the latter months of 1943, 60 and 65 p.c. of all those in recorded employment were in the manufacturing industries, compared with less than 51 p.c. of the much smaller number reported at the outbreak of hostilities. The greatest declines as compared with the 1939 distribution were in trade, which employed approximately 8.5 p.c. of the total at Sept. 1, 1943, as compared with over 11 p.c. at Sept. 1, 1939, and in construction, where the falling-off was from 15.8 p.c. at the commencement of war, to some 9.3 p.c. at Sept. 1, 1943.

The increasing employment of women during the period of the War is partly in recognition of their equal or superior efficiency in certain types of work, and partly because they have not been subject to draft for military service. These and other factors resulted in an increase of 15 p.c. in the number of females in recorded employment at Oct. 1, 1943, as compared with Oct. 1, 1942. The number of male workers showed a slight decline. In manufacturing, the increase in the number of women workers was also about 15 p.c. in the twelve months, while the proportion of 282 females per 1,000 workers at Oct. 1, 1943, greatly exceeded that of 220 per 1,000 in 1939, according to the Annual Census of Industry. This upward trend in the employment of women will no doubt continue for the duration of the War, as will the increasing concentration of workers in the industries engaged particularly in the production of munitions and other essential commodities, at the expense of the less-essential production and services.

**Employment 1942 and 1943.**—The generally upward trend in industrial employment, which has been indicated since the outbreak of war, continued during 1942 and most of 1943. In recent months the rate of acceleration diminished, as the supply of labour became depleted and the war effort reached a more advanced stage of organization. In spite of these factors (the former resulting from large-scale absorption of workers by the Armed Forces as well as as by industry), employment generally was rather more active in the first eight months of 1943 than in the same period of any earlier year, while, commencing with Sept. 1, new all-time peaks were established. At Oct. 1, the index of employment in all industries, based on 1926=100, was 187·6, while in the first 10 months the index averaged 183·0; the latter was 6·7 p.c. higher than in the same period of 1942.

The payrolls reported in 1943 also reached a new maximum in the relatively brief experience of these statistics, for which the record goes back only to June 1, 1941. Based upon the disbursements of the co-operating firms at that date as 100, the index of payrolls in the first 10 months of 1943 averaged 143·5, exceeding by 14·4 the figure for the same part of 1942. This increase is relatively greater than that already given as having been shown by the index of employment over the same period.

The Dominion Bureau of Statistics tabulated monthly statistics of employment and payrolls from an average of 13,742 employers in the first 10 months of 1943; their employees averaged 1,836,717 while their aggregate weekly payrolls averaged \$56,221,303 in the same period. This represented an average weekly pay envelope of \$30·61 for the typical worker in recorded employment. As compared with the statistics for the same months in 1942, there were increases of 6·7 p.c. in employment, 14·4 p.c. in aggregate weekly payrolls, and 8·2 p.c. in the average weekly earnings. A number of factors contribute to the gain in the average per employee,

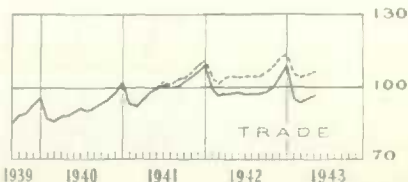
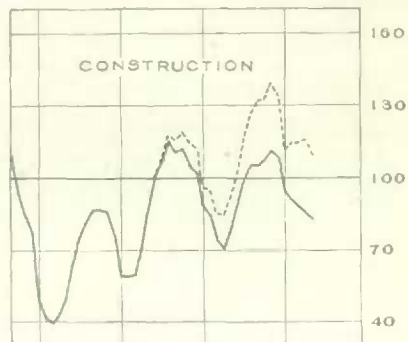
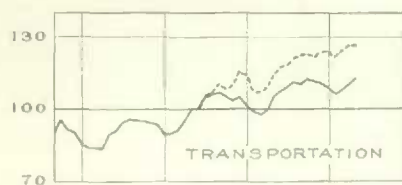
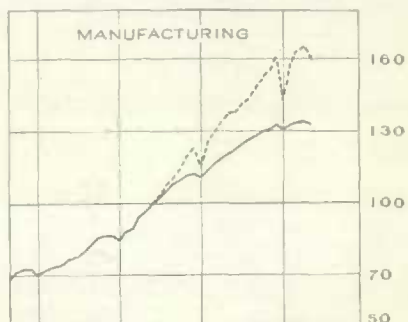
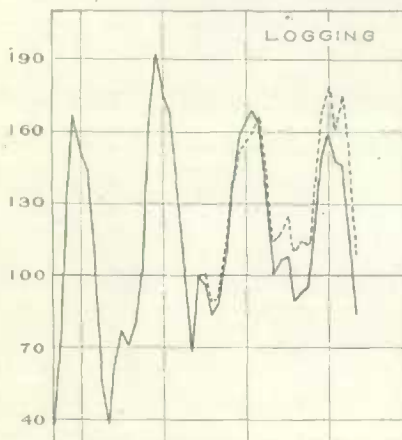
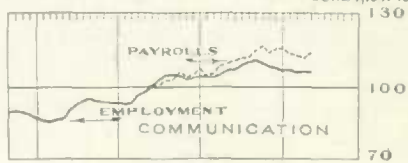
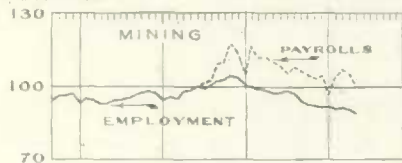


# INDEX NUMBERS OF EMPLOYMENT AND PAYROLLS BY INDUSTRIES

1939 - 1943

JUNE 1, 1941=100

JUNE 1, 1941=100





# INDEX NUMBERS OF EMPLOYMENT AND PAYROLLS

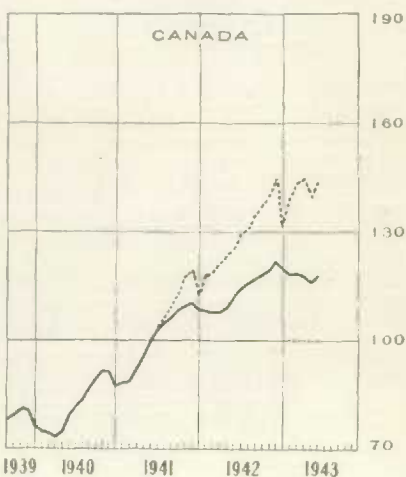
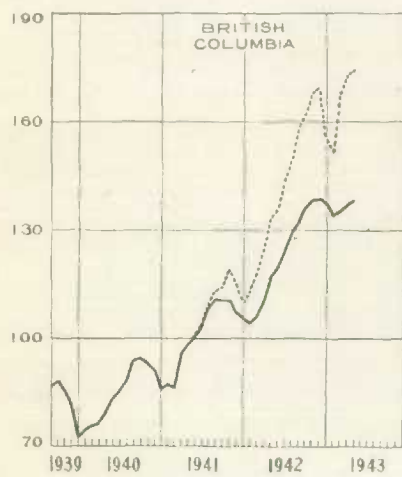
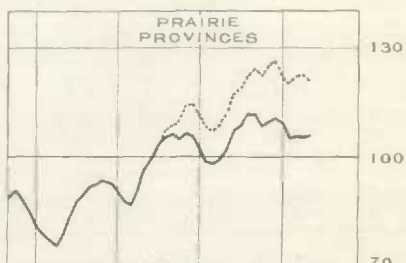
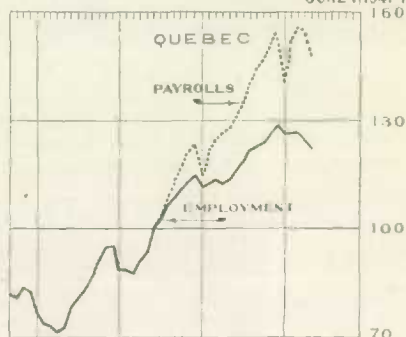
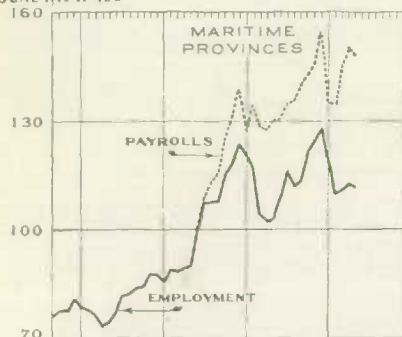
BY

## ECONOMIC AREAS

1939 - 1943

JUNE 1, 1941=100

JUNE 1, 1941=100



which has taken place in spite of continued dilution of labour. Prominent among these factors is the growing concentration of workers in the more highly paid heavy industries, and the progressive up-grading of employees as they acquire experience.

The index number of employment in manufacturing in the first 11 months of 1943 averaged 225·2, a figure which was higher by 10·6 p.c. than that indicated in the corresponding period of 1942. The payrolls reported in manufacturing advanced by 19 p.c. in this comparison. Although these percentages of increase are noteworthy, they are not so pronounced as those that were indicated in 1942 as compared with 1941. Nevertheless, activity in manufacturing reached successive new all-time high levels month by month from February, 1943.

The production of durable goods, especially of those in the iron and steel group, such as shipbuilding, aircraft and other vehicles and firearms, employed particularly large staffs in 1943, while the non-ferrous metal and electrical apparatus groups also reported substantial expansion. The situation in the lumber industries, and in a number of the non-durable goods industries, was in many cases seriously affected by shortages of labour; in spite of this factor, however, employment generally was maintained at a relatively high level.

Among the non-manufacturing industries, transportation, communications and construction were comparatively brisk; in the first-named, the number of persons employed reached a point rather higher than in any earlier period. The shortage of labour and materials had an adverse effect upon private and commercial building, but other classes of work, mainly connected with defence establishments, showed considerable activity. In logging and mining, the trend of employment generally was unfavourable in the earlier months of 1943, owing to increasingly acute shortages of labour. The services and trade industries also suffered from lack of personnel; however, establishments in these divisions were able to relieve the situation by the employment of additional women, and by part-time workers, to a greater extent than was possible in many other lines. As a result, employment therein, on the whole, showed relatively little change from 1942.

#### Unemployment Insurance and National Selective Service

**Unemployment Insurance.**—The Unemployment Insurance Act, which became law on Aug. 7, 1940, authorized an Unemployment Insurance Commission to set up and administer a co-ordinated program of unemployment insurance and employment service. The Commission—consisting of a Chief Commissioner and two Commissioners (one Commissioner appointed after consulting employees and one after consulting employers)—was appointed on Sept. 24, 1940.

The Head Office of the Commission is at Ottawa. For the purpose of administration, Canada is divided into five areas known as: the Pacific, Prairie, Ontario, Quebec and Maritime regions. Regional offices located at Vancouver, Winnipeg, Toronto, Montreal and Moncton act as clearing houses for local offices, which are the units through which the employment service and unemployment insurance are operated. Two hundred and ten of these local offices are operating in centres across Canada. The employment service of the Commission now functions as the field organization of National Selective Service.

As at Aug. 31, 1943, the number of registered employers with insured employees was 132,484 and the number of persons in insured employment was 2,650,622.

Unemployment insurance contributions became payable in Canada commencing July 1, 1941. Insured workers and their employers make contributions according

to a graded scale, but in the country as a whole they contribute approximately equal amounts. The Dominion Government adds one-fifth of the total amount contributed by employees and employers to the Unemployment Insurance Fund and, in addition, pays the administrative costs of the scheme.

From July 1, 1941, to Aug. 31, 1943, \$145,008,416 was deposited in the Unemployment Insurance Fund, which includes employee, employer and Government contributions, and interest. Employer and employee contributions to the fund were \$118,148,435. In the same period, the Dominion Government paid \$23,629,687 to the fund.

The Unemployment Insurance Fund is deposited with the Bank of Canada and reserves are invested in Dominion of Canada bonds on the authorization of an Investment Committee, composed of the Governor of the Bank of Canada, the Deputy Minister of Labour and the Deputy Minister of Finance. The total interest derived from investments in the period up to Aug. 31, 1943, amounted to \$3,230,294.

The first date on which claimants could qualify for benefit was Jan. 27, 1942. From that date to Aug. 31, 1943, the amount paid in insurance benefit was \$1,150,672. In this period there were 48,077 claims received at Insurance Offices for adjudication, 37,800 of which were allowed, 9,954 were not allowed and 323 were pending. In the same period the number of appeals made by claimants to the Courts of Referees, in this period there were 48,077 claims received for adjudication at Insurance Offices, was 1,302, 1,125 of which were heard, 70 were pending on Aug. 31, 1943, and 107 were withdrawn. The Courts of Referees allowed 343 claims and disallowed 782.

The Unemployment Insurance Advisory Committee, established under the Act, submits an annual report on the condition of the fund to the Governor in Council. The Committee also gives assistance and advice on questions relating to the operation and scope of the Act referred to it by the Commission.

The National Employment Committee, representing labour, industry, veterans, women's organizations and other interested groups, assists the Commission in an advisory capacity in carrying out the purposes of the employment service. Five Regional Employment Committees and a number of Local Employment Committees have been set up to assist in this work.

**National Selective Service.**—Organization and allocation of Canada's manpower in such a way that it will contribute most effectively to the War is carried out chiefly under two sets of regulations: the National Selective Service Mobilization and the National Selective Service Civilian Regulations. These regulations are administered by the Director of National Selective Service who is responsible to the Minister of Labour. The Director is advised by a Selective Service Advisory Board consisting of representatives of Government departments and agencies, industry and labour. Under his jurisdiction there are several Associate Directors, who are in charge of the different aspects of the program, and there are also regional directors. Local administration of the mobilization side of the program is carried on through 13 Divisional Registrars and of the civilian side through Selective Service Officers who are the managers of the local Employment and Selective Service Offices.

All men between the ages of 18½ and 30 with or without dependants and all men up to 41 who are without dependants are required to undertake military service if they are medically fit. In order to prevent the absorption into the Forces of men needed elsewhere, however, postponement orders may, under certain circumstances,

be granted to men employed in essential industries, seasonal occupations and agriculture. In addition, men who enlist in the Forces or are already serving may be granted leave to return temporarily to industry if they are urgently needed there.

On the purely civilian side, there are two aspects of the policy: control over the movement of workers and direction of certain workers into more essential jobs. The basis of the program is a carefully drafted schedule of labour priorities, which shows exactly which establishments should be given first call on available labour in any locality.

Control over the movement of workers has been possible chiefly because of the fact that, with insignificant exceptions, all employers and workers are required to use the local employment offices. No worker can resign or be fired without giving or receiving seven days' notice of separation, a copy of which goes to the local office. Similarly, no employer may interview or engage any worker and no worker may seek or accept employment unless he has a permit from the local office. Advertising for workers is also carefully controlled and employers must requisition all the labour they need from the local offices. In addition, since Sept. 20, 1943, workers in establishments designated by the Director have not been able to resign or to be fired without the written permission of a Selective Service Officer.

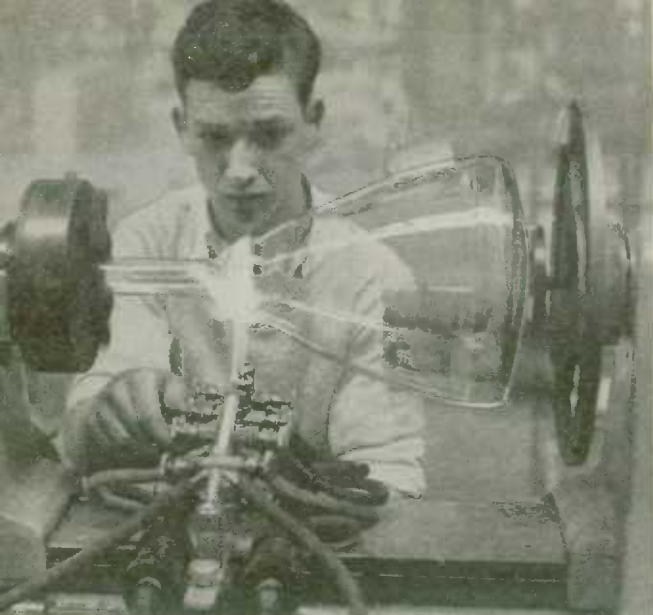
Considerable numbers of workers have been compelled to leave their jobs and to take essential employment elsewhere. Employers in a long list of less essential civilian industries have been ordered to discharge all men between the ages of 16 and 40 who, for medical or other reasons, are not in the Armed Forces, and these men have been assigned to essential jobs. Since Oct. 7, 1943, the Selective Service Officers have had the power to direct any person employed in any industry specified by the Director to enter other employment in another or the same industry. Men between the ages of 18 and 64 who have experience in coal-mining and all men in Nova Scotia and New Brunswick who were formerly longshoremen may be directed back to employment in the mines or on the docks, as the case may be. Any man between the ages of 16 and 64 may be directed to accept employment in cutting wood fuel, fishing or fish processing.

Special steps have been taken to make available an adequate supply of labour for the farms. No farm worker may seek or accept employment outside agriculture without a permit, except short-term employment in related seasonal industries, and former farmers have been returned to agriculture. Under agreements between the Dominion and the provinces, farm workers from one province have been moved to other provinces where they are more urgently needed. Soldiers, students, treaty Indians, prisoners of war and Japanese are used on the farms, and Mennonites, Doukhobors and conscientious objectors who are relieved from the obligation to undertake military service have been directed into agriculture.

**Employment and Selective Service Offices.**—In the first eight months of 1943, Employment and Selective Service Offices received 1,867,932 applications for employment, were notified of 2,120,868 vacancies and effected 1,331,482 placements. During the same period of 1942, offices of the Employment Service of Canada reported 597,690 applications for work, 425,774 vacancies and 280,392 placements.

The exceptionally heavy increases shown for the first eight months of 1943 as compared with the same period of 1942 are due to the fact that since Sept. 1, 1942,





A Graduate of a Technical High School Engaged in the Manufacture of Catalase Ray Tubes.

*Courtesy, National Film Board*

it has been obligatory for employers to seek workers and for workers to seek employment through the Employment and Selective Service Offices, and also for employers to report all vacancies and lay-offs to these Offices.

#### **War Emergency Training and Youth Training**

War Emergency Training has been carried on during 1943 under the Vocational Training Co-ordination Act with funds provided from the War Appropriation. Agreements are operative in all provinces, except Prince Edward Island, and provide for the training of workers for war industries as well as tradesmen for the Armed Forces.

From Jan. 1 to Aug. 31, 1943, there was a total enrolment for industrial workers of 41,368. Training was given under three main divisions:—

(1) Full-time pre-employment courses lasting from two to six months. The enrolment, which declined considerably from the previous year owing to the decreased supply of eligible trainees, was approximately 14,000, including nearly 6,000 women: 13,046 trainees from these courses were placed in employment.

(2) Part-time training, mostly of a technical nature, for persons already employed in industry, to facilitate their upgrading and promotion. Enrolment: approximately 12,000, including 2,330 women.

(3) Training in plant schools in industrial establishments. This training lasts from two weeks to three months and is given chiefly in occupations for which training cannot be given in the regular vocational schools because of the lack of specialized equipment. Up to Aug. 31, 1943, 107 plant schools had been officially approved and the enrolment was 12,641, of whom slightly over 50 p.c. were women: 8,402 persons, after completing their training, were transferred to production.

In addition, job instructor training, job relations training and job methods training were made available to foremen, supervisors, etc. The total enrolment from the beginning of 1942 to Aug. 31, 1943, was 31,466.

Up to Aug. 31, 1943, rehabilitation training was also provided under the program for 830 persons discharged from the active Armed Forces. This training is provided

in co-operation with the Department of Pensions and National Health who select the trainees, and is given in regular vocational schools, special centres, privately owned schools and industrial and commercial establishments.

In the training provided for enlisted tradesmen in the Armed Forces, the men were selected and followed a syllabus drawn up by their respective services. The courses lasted from three to eight months, those for the Navy being substantially longer than for the other services. From Jan. 1 to Aug. 31, 1943, training was given to 24,967 from the R.C.A.F., 10,589 from the Army and 3,407 from the Navy.

Youth Training for persons between 16 and 30 years of age was provided on a much reduced scale. It consisted mainly of special courses for rural young people and courses in physical training, as well as financial assistance to university students—chiefly those in medicine, dentistry, engineering and science, as well as nurses in training in hospitals—whose services might be needed in a professional or technical capacity in connection with the War.

### **Unemployment in Trade Unions**

Monthly statistics are tabulated by the Department of Labour from reports furnished by trade unions showing the unemployment existing among their members. In the first eight months of 1943, 2,288 organizations reported an average membership of 432,170, of whom 3,879 were on an average unemployed; this was an average percentage of 0.9 compared with 2.9, 5.0 and 8.8 in the first eight months of 1942, 1941 and 1940, respectively. The percentage of unemployment declined from 1.5 in both January and February to 0.4 in the months of July and August. The trade union report was begun as a quarterly record in December, 1915, and was continued on that basis until the close of 1918. From January, 1919, to date it has appeared monthly. The percentage of 0.4 in the months of July and August, 1943, was the lowest for any month in trade union records and was identical with that shown in June, 1918, when the percentage reached the lowest point attained in any of the quarterly reports. The highest figure in these records was 25.5 p.c. for December, 1932, and for January, 1933.

### **Old Age Pensions and Pensions for Blind Persons**

**The Old Age Pensions Act, 1927.**—The Act provides for a Dominion-Provincial system of non-contributory old age pensions in such provinces as have enacted and given effect to special legislation for this purpose. The provinces are charged with the payment of pensions, the Dominion reimbursing each province, quarterly, to the extent of 75 p.c. of the net cost of its payments on account of old age pensions. All the provinces are now operating under such agreements. Old age pensions are also payable in the Northwest Territories. Authority was given in 1927 to the Gold Commissioner of the Yukon to enter into an agreement with the Dominion Government for the purpose of obtaining the benefit of the Old Age Pensions Act, but no scheme has as yet been formulated.

**Pensions for Blind Persons.**—By an amendment to the Old Age Pensions Act, assented to Mar. 31, 1937, provision is made for the payment of pensions, under certain conditions, to blind persons who have attained the age of forty years. All

provinces have made agreements with the Dominion for the payment of pensions in respect of blindness. Under the terms of the agreements the Dominion pays 75 p.c. of the net amount paid out by the provinces for pensions. The payment of pensions in respect of blindness in the Northwest Territories has also been authorized. The maximum pension payable to old age and blind pensioners is \$300 a year, subject to reduction by the income of the pensioner in excess of certain specified amounts.

### Summary of Old Age Pensions and Pensions for the Blind, 1928-43

NOTE.—The effective dates of commencement of Old Age Pensions and Pensions for Blind Persons in the various provinces were, respectively, as follows: P.E.I.—July 1, 1933, Dec. 1, 1937; N.S.—Mar. 1, 1934, Oct. 1, 1937; N.B.—July 1, 1936, Sept. 1, 1937; Que.—Aug. 1, 1936, Oct. 1, 1937; Ont.—Nov. 1, 1929, Sept. 1, 1937; Man.—Sept. 1, 1928, Sept. 1, 1937; Sask.—May 1, 1928, Nov. 15, 1937; Alta.—Aug. 1, 1929, Mar. 7, 1938; B.C.—Sept. 1, 1927, Dec. 1, 1937; N.W.T.—Jan. 25, 1929, Mar. 30, 1938.

Year ended Mar. 31—	Old Age Pensions		Pensions for the Blind	
	Pensioners	Dominion Government Contribution <sup>1</sup>	Pensioners	Dominion Government Contribution <sup>1</sup>
	No.	\$	No.	\$
1928.....	2,712	131,452	—	—
1929.....	10,588	832,687	—	—
1930.....	42,553	1,537,174	—	—
1931.....	57,930	5,658,143	—	—
1932.....	67,006	10,032,410	—	—
1933.....	71,705	11,512,543	—	—
1934.....	86,873	12,313,595	—	—
1935.....	101,051	14,942,459	—	—
1936.....	108,415	16,764,484	—	—
1937.....	146,524	21,149,352	—	—
1938.....	175,673	28,524,587	1,946 <sup>2</sup>	128,418 <sup>2</sup>
1939.....	181,514	28,283,284	4,512	760,354
1940.....	186,035	29,080,631	5,404	895,923
1941.....	185,946	28,901,933	5,913	1,009,767
1942.....	185,922	28,530,908	6,243	1,080,889
1943.....	183,601	28,861,186	6,374	1,114,828
<b>Totals, Government Contributions from Inception of Act.</b>	—	<b>267,056,828</b>	—	<b>4,990,179</b>

<sup>1</sup> 50 p.c. of net cost of payments to Oct. 31, 1931, and 75 p.c. thereafter.

for complete statistics, see headnote.

<sup>2</sup> First year

### Old Age Pensions and Pensions for the Blind, by Provinces, as at Mar. 31, 1943

Province or Territory	Old Age Pensions		Pensions for the Blind	
	Pensioners	Average Monthly Pension	Pensioners	Average Monthly Pension
	No.	\$	No.	\$
Prince Edward Island.....	1,904	13.48	116	16.14
Nova Scotia.....	14,080	15.65	620	19.22
New Brunswick.....	11,818	15.27	722	19.67
Quebec.....	47,045	17.20	2,173	19.61
Ontario.....	57,692	18.86	1,502	19.70
Manitoba.....	12,498	18.78	348	19.72
Saskatchewan.....	13,074	17.53	320	19.86
Alberta.....	11,134	18.69	239	19.76
British Columbia.....	14,348	19.28	334	19.42
Northwest Territories.....	8	20.00	—	—
<b>Totals.....</b>	<b>183,601</b>	—	<b>6,374</b>	—

## CHAPTER XII

### Construction

#### Government Assistance to and Control of Construction in War-Time

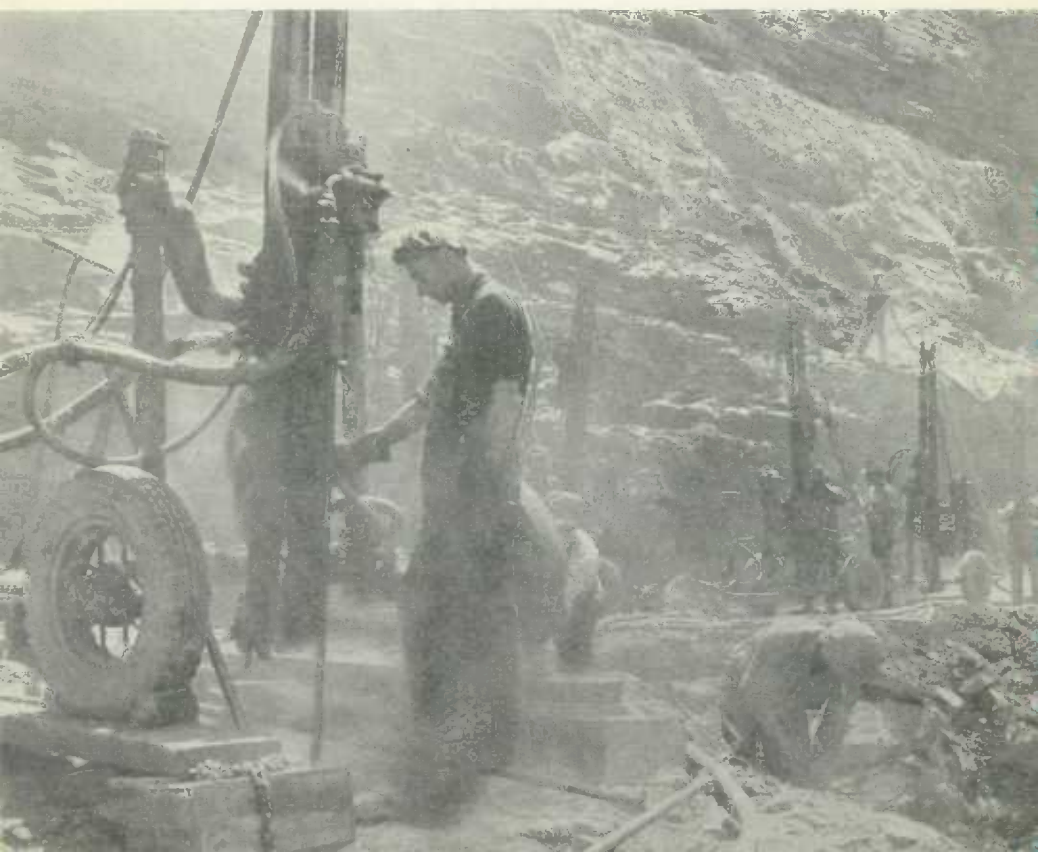
Peace-time measures of the Dominion Government designed to improve housing conditions and to stimulate the building industry during the depression years preceding the War have been fitted into the requirements of war-time where possible. Where they have served their purpose or where they represented a drain on the financial, material or labour resources of the country they have been discontinued.

**The National Housing Act, 1938.**—The most important of these measures is the National Housing Act, which succeeded the Dominion Housing Act, 1935. The purposes of the legislation and the conditions under which loans can be made have been dealt with in previous editions of the Handbook, notably at pp. 113 and 114 of *Canada 1942*.

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**Men at Work on the New Six-Million Dollar DeCew Falls Power Development.**

*Courtesy, Hydro-Electric Power Commission of Ontario*





To Aug. 31, 1943, 20,309 loans made under the Dominion Housing Act and Part I of the National Housing Act, and actually proceeded with, amounted to \$82,348,551. These loans provided a total of 24,913 family units. In the 1943-44 Estimates a further \$2,000,000 was appropriated to assist in the construction of new low-cost houses under the National Housing Act. Houses built under this appropriation must be located in areas where a shortage of permanent housing exists, upon sites having the essential services already installed. So far as possible these houses must be constructed of materials that are not essential to the war effort. Loans from this new appropriation are limited to \$3,200.

**The Home Extension Plan, 1942.**—To further alleviate the housing shortage, provision was made in the 1942-43 Estimates for the Dominion Government to guarantee, upon an arrangement similar to the Home Improvement Loans Guarantee Act, loans made by the chartered banks for the purpose of financing the creation of new housing units in existing dwellings. These loans, which are limited to an aggregate of \$2,000,000 with a maximum liability on the part of the Government of \$300,000, may be made only in areas designated by the Minister of Finance as those in which a housing shortage exists or impends. These loans may be made to an owner of the property or a purchaser under an agreement of sale that has been in existence for one year before the loan is granted. Approval of the proposed alterations must be obtained from the Minister. To Aug. 31, 1942, 42 loans providing 76 units and amounting to \$78,633 had been made under the plan.

**Housing Conversion Plan.**—As another means of supplying accommodation, the Housing Conversion Plan has been established. Under this plan the Minister of Finance is authorized to lease buildings from their owners for a period of five years with the right to renew the lease for a further period of three years. Additional housing units are then created in these buildings and sub-leased to suitable tenants. The average estimated cost per unit in each building is not to exceed \$1,500. Upon the termination of the lease, the building is returned to the owner in its then existing condition. The Minister reserves the right to cancel the lease at any time upon thirty days' notice. To Sept. 15, 1943, the plan had been brought into force at Ottawa, Vancouver, Victoria, Toronto, Montreal, Quebec City, Hamilton, St. Catharines, Brantford, and municipalities contiguous to each of these cities. It is expected that other cities will be added to this list.

**Government Control of Civilian Construction Since the Outbreak of War.**—Owing to the demands on materials and labour brought about by the sudden expansion of the direct war industries, it was found necessary to control new construction, repairs to buildings, expansion or replacement of existing facilities, or new installation of equipment. This control was put in force in May, 1941, by means of a licensing provision, and the control was centred under the Priorities Officer of the Department of Munitions and Supply. In August of that year a Controller of Construction was appointed. In January, 1942, this control was broadened to include the control over materials and their use.

A policy of rigid curtailment has been followed in order that construction for war purposes might have precedence. In October, 1942, it was necessary to further curtail such construction and the monetary limits under which such work or expansion of facilities could proceed without licence was drastically reduced. The lowering of the limits brought a close control on the expansion of retail and wholesale outlets, as well as the manufacturing facilities, and also governed the construction of housing.

Welding the Plates of a Tunnel Liner.—This liner, one inch thick, is pushed up the tunnel to form a link between the rock of the tunnel and the 'penstocks' in a hydro-electric development project.



Courtesy, National Film Board

In 1943, a branch of the control was instituted to ensure that all construction be carried out in the most economical method in regard to the supply of materials.

**Construction for War Purposes.**—Construction related to Canada's war effort may be divided into the following groups:—

(1) Building of defence projects for the Air Force: (a) aerodromes and training schools under the British Commonwealth Air Training Plan; (b) development of Canada's Home War Establishment for Air; (c) Royal Air Force Schools in Canada.

(2) Building of army defence projects.

(3) Construction of naval projects, including harbour installations.

(4) Construction of new industrial plants and plant extensions involving Government capital assistance.

(5) Provision of necessary housing incidental to industrial expansion for war purposes.

Most contracts under groups (1) to (3), as well as some contracts under (4) are awarded by the Construction Branch of the Department of Munitions and Supply. For the calendar year 1942 the value of these contracts, 1,733 in number, amounted to \$172,490,448, as compared with 1,208 contracts aggregating \$97,538,743 in 1941, and 756 contracts totalling \$85,154,764 in 1940. For the calendar year 1943 an estimated 1,200 contracts will be awarded aggregating \$105,000,000.

Contracts under (5) are let by Wartime Housing Limited, a Crown company, established under the Department of Munitions and Supply for the purposes specified. Such housing expenditures to Dec. 31, 1942, amounted to \$39,730,590. It is estimated that Wartime Housing expenditures in 1943 will amount to approximately \$20,000,000. Total Government expenditures on construction amounted to \$260,000,000 for 1942 compared with \$189,000,000 for 1941.

## General Statistics of Construction

**Annual Census of the Construction Industries.**—A census of construction was first made by the Dominion Bureau of Statistics for 1934, but the basis of compilation was not standardized until 1935, so that, with the compilation of the 1936 figures, data are now available on a comparative basis for the years shown in the table on p. 155.

## CANADA 1944

It should be pointed out that no relationship exists between these figures and those of values of contracts awarded as shown on p. 156. In the latter case all values are included since awards are made irrespective of whether the contract is completed or even begun in that year, whereas the industrial statistics show only the work performed in the years specified.

Since September, 1939, war construction has shown rapid expansion. The increase has been most marked in industrial, military and air services construction. Large war contracts let in the latter part of 1939 would not, ordinarily, be under way before 1940 and a similar lag—not quite so long perhaps—would follow later contracts. The vast amount of Government construction going on across Canada, apart from the indirect stimulus to private construction that rising costs have encouraged, has meant wide activity for this industry, which had suffered severely throughout the depression and the recovery of which has lagged behind other branches.

Of the 1942 total value of work performed, 77 p.c. was represented by entirely new construction. The remainder was for alterations, repairs, maintenance, etc. With regard to type of construction buildings accounted for 55 p.c. compared with 59 p.c. in 1941 and engineering contracts (such as for streets, highways, harbour and river work, etc.) accounted for 34 p.c. as compared with 31 p.c.

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**Sectionmen Replacing a 100-Pound Rail.**—There are 271 rails to a mile of track, and laying one mile per day is no mean feat.

*Courtesy, Canadian National Railways*



## Statistics of the Construction Industry, 1942, with Totals for 1937-41

Province or Group	Persons Employed	Salaries and Wages Paid	Cost of Materials Used	Value of Work Performed
	No.	\$	\$	\$
Totals, 1936.....	142,346	112,846,384	122,189,238	258,040,400
Totals, 1937.....	151,652	150,637,291	175,844,435	351,874,114
Totals, 1938.....	147,191	147,405,398	176,562,208	353,223,285
Totals, 1939.....	148,414	153,442,443	189,497,342	373,203,680
Totals, 1940.....	149,830	180,229,498	267,228,786	474,122,778
Totals, 1941.....	176,358	235,631,781	370,188,739	639,750,624
<b>Province, 1942</b>				
Prince Edward Island.....	388	502,066	749,447	1,468,348
Nova Scotia.....	18,715	19,571,153	29,238,099	54,259,398
New Brunswick.....	4,743	5,972,713	7,831,286	14,194,800
Quebec.....	60,449	94,031,142	94,610,394	205,400,748
Ontario.....	57,144	86,854,556	119,386,879	217,829,022
Manitoba.....	5,626	8,295,036	12,546,655	22,091,947
Saskatchewan.....	4,032	5,647,247	7,478,755	15,602,922
Alberta.....	7,214	10,931,748	16,481,229	33,389,725
British Columbia and Yukon.....	16,956	30,237,810	36,409,636	71,412,660
<b>Totals, 1942.....</b>	<b>175,267</b>	<b>262,043,471</b>	<b>324,732,380</b>	<b>635,649,570</b>
<b>Group, 1942</b>				
Contractors, builders, etc.....	141,234	226,641,122	308,185,527	575,215,433
Municipalities.....	10,048	12,429,116	5,978,043	19,608,132
Harbour Commissions.....	711	926,543	412,055	1,454,960
Provincial Govt. Depts.....	20,526	18,430,087	8,381,407	33,157,163
Dominion Govt. Depts.....	2,748	3,616,603	1,775,348	6,213,882

As shown in the following figures, the construction of industrial buildings declined 10.33 p.c. in 1942 as compared with 1941. Residential building declined 12.83 p.c.

## Values of Construction, by Types, 1942 as Compared with 1941

Type of Construction	1942	1941	Increase or Decrease
	\$	\$	\$
Residential.....	76,346,090	87,586,340	-11,240,250
Institutional.....	14,246,025	15,174,464	- 928,439
Commercial.....	30,638,095	41,157,146	-10,519,051
Industrial (includes factories, warehouses, mine buildings, etc.).....	159,346,630	177,698,268	-18,351,638
Other (includes armouries, barracks, hangars, etc.).....	71,197,840	52,874,955	+18,322,885
<b>Totals, Building Construction.....</b>	<b>351,774,680</b>	<b>374,491,173</b>	<b>-22,716,493</b>
Streets, highways, etc.....	59,619,536	68,358,529	- 8,738,993
Bridges, watermains, sewers, dams, reservoirs, etc.....	34,044,730	40,490,146	- 6,445,416
Electric stations and transmission lines.....	60,697,808	37,090,038	+23,607,770
Docks, wharves, piers, etc.....	10,099,471	6,475,872	+ 3,623,599
Other engineering (includes landing fields, parks, canals, dredging, pile driving, etc.).....	52,817,517	48,241,454	+ 4,576,063
<b>Totals, Engineering.....</b>	<b>217,279,062</b>	<b>200,656,039</b>	<b>+16,623,023</b>
<b>Totals, Building Trades.....</b>	<b>66,595,828</b>	<b>64,603,413</b>	<b>+ 1,992,415</b>
<b>Grand Totals.....</b>	<b>635,649,570</b>	<b>639,750,625</b>	<b>- 4,101,055</b>



**Railways.**—The expenditures of railways on maintenance of way, and structures and equipment are not included in the census figures of the construction industries given at p. 155 and are therefore summarized here. For steam railways expenditures for these purposes in 1942 amounted to \$219,276,767 as against \$178,359,319 in 1941 and \$194,000,000 in 1929. For electric railways the total for 1941 was \$7,532,510 as against \$5,424,539 in 1940 (1942 figures were not available at time of going to press). Expenditures of steam railways for additions and betterments (exclusive of equipment) were \$6,418,260 in 1942 compared with \$9,031,067 in 1941.

**Volume of Construction, 1943.**—The recovery in construction, on the whole, has not paralleled that indicated in many other industries, although substantial improvement has been reported recently. According to the records of the construction contracts awarded, as maintained by MacLean Building Reports, Limited, the value rose from \$162,588,000 in 1936 to \$224,056,700 in 1937, dropped to \$187,178,500 in 1939, rose to \$346,009,800 in 1940 and \$393,991,300 in 1941, and dropped to \$281,594,100 in 1942 and reached \$194,114,600 for the first eleven months of 1943.

### Construction Contracts Awarded in Canada, 1942 and 1943

(MacLean Building Reports, Limited)

Type of Construction	1942		1943 <sup>1</sup>	
	No.	Value	No.	Value
		\$		\$
Apartments.....	67	868,200	77	786,900
Residences.....	29,823	78,411,600	28,114	74,181,700
<b>Totals, Residential.....</b>	<b>29,890</b>	<b>79,279,800</b>	<b>28,191</b>	<b>74,968,600</b>
Churches.....	172	1,250,700	267	1,142,100
Public garages.....	253	959,200	277	1,197,600
Hospitals.....	141	5,037,600	142	4,431,300
Hotels and clubs.....	293	5,211,300	257	2,220,400
Office buildings.....	468	5,090,300	472	2,495,800
Public buildings.....	988	65,856,300	728	29,372,800
Schools.....	233	3,261,200	402	4,155,300
Stores.....	992	2,994,600	599	1,627,400
Theatres.....	55	302,200	61	231,200
Warehouses.....	1,252	8,201,400	3,855	9,314,200
<b>Totals, Business.....</b>	<b>4,847</b>	<b>98,164,800</b>	<b>7,060</b>	<b>56,188,100</b>
<b>Totals, Industrial.....</b>	<b>1,639</b>	<b>74,084,500</b>	<b>1,772</b>	<b>31,029,300</b>
Bridges.....	67	1,351,200	70	2,012,000
Dams and wharves.....	64	6,950,900	73	3,422,100
Sewers and watermains.....	229	3,567,800	153	1,617,300
Roads and streets.....	313	12,414,200	247	10,662,200
General engineering.....	120	5,780,900	82	14,215,000
<b>Totals, Engineering.....</b>	<b>793</b>	<b>30,065,000</b>	<b>625</b>	<b>31,928,600</b>
<b>Grand Totals.....</b>	<b>37,169</b>	<b>281,594,100</b>	<b>37,648</b>	<b>194,114,600</b>

<sup>1</sup> Eleven month figure

The Dominion Bureau of Statistics collects monthly statistics showing the anticipated cost of the building represented by the permits taken out in 58 cities, the record going back to 1920. The value of such work was \$55,949,687 for the first eleven months of 1943, as compared with \$70,237,650 for the same period of 1942.

The population of the 58 centres mentioned constituted about 36 p.c. of the total population; for Jan. 1 to Nov. 1, 1943, their building authorizations amounted to 29 p.c. of the total value of the construction contracts awarded for the same period throughout Canada.

## CHAPTER XIII

### External Trade

The trade of Canada for 1940, the first full year of the War, showed a pronounced jump from pre-war levels, both imports and exports registering marked increases. This trend was continued during 1941, when total trade was greater than ever before. In 1942 the accelerated rate of growth carried the figure to a value of over \$4,000,000,000, almost \$1,000,000,000 over 1941. Imports exceeding those of 1941 by \$195,000,000 and exports by \$745,000,000. An estimated total trade of \$4,500,000,000 was reached in 1943 (see chart on next page).

During 1942 per capita imports amounted to \$142·89 and per capita exports reached \$205·43. These amounts compare with averages for the ten years preceding the War, of \$59·50 for imports and \$69·58 for exports.

	<i>Imports</i>	<i>Domestic Exports</i>	<i>Total Trade</i>
1938.....	\$ 677,451,354	\$ 837,583,917	\$ 1,526,135,487
1939.....	751,055,534	924,926,104	1,686,977,247
1940.....	1,081,950,719	1,178,954,420	2,275,168,311
1941.....	1,448,791,650	1,621,004,175	3,089,246,191
1942.....	1,644,241,933	2,363,773,296	4,029,707,979
1943 (8 months)...	1,139,702,053	1,874,269,155	3,029,435,464

Army Truck Chassis Awaiting Shipment.

*Courtesy, National Film Board*



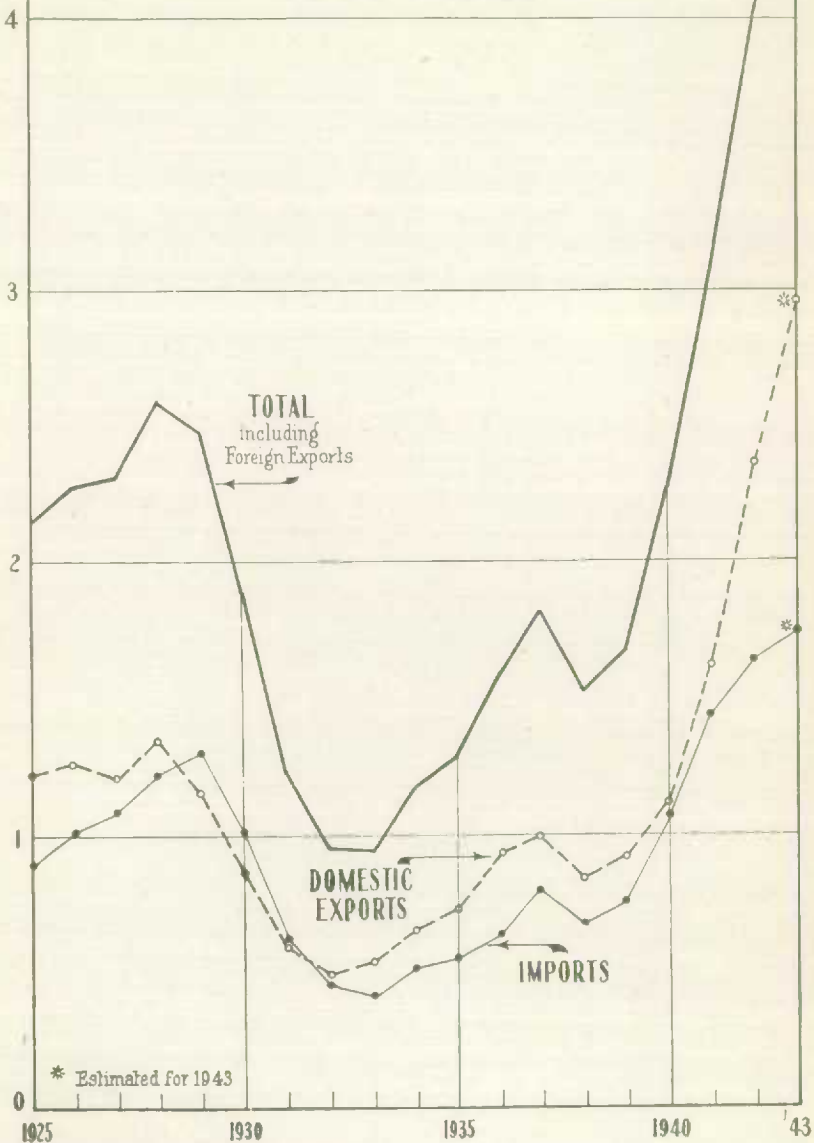
000,000,000

# AGGREGATE EXTERNAL MERCHANDISE TRADE

OF

## CANADA

1925 - 1943



**Imports.**—Actually, imports in the latest year showed a slackening of the rate of increase. During the years preceding 1942 the necessity of conservation of foreign exchange was overshadowed by the demand for machines, machine-tools, dies, etc., and other equipment and materials basic to all-out war production in Canada. The increases of imports of \$331,000,000 for 1940 compared with 1939, and \$367,000,000 for 1941 compared with 1940 reflect this demand. Since in 1942 industrial production had not reached maximum proportions, it is logical to assume that the smaller expansion in 1942 indicates that tooling-up and expansion of industry have passed the peak and that present and future requirements can more nearly be supplied by Canadian production. Furthermore, a study of the trend of imports during the first eight months of 1943 reveals a levelling-off at about \$150,000,000 per month. Imports of \$1,140,000,000 during this period compare with a value of \$1,114,000,000 during the corresponding period of 1942.

**Exports.**—The increase in exports was much more rapid during 1942 than in previous years. The increase for 1940 compared with 1939 was \$254,000,000 and for 1941 compared with 1940 amounted to \$443,000,000, whereas 1942 recorded an increase of \$743,000,000 over 1941. Owing to censorship regulations, it is impossible to study the breakdown of this trade by commodities, but there is no doubt that the acceleration of export shipments is a clear indication of the volume reached in the production of arms and munitions of war. Available statistics for the first eight months of 1943 disclose the fact that the upward trend of exports has been continued. From January to August, inclusive, domestic exports amounted to \$1,874,000,000, an increase of more than \$400,000,000 over the same period of 1942.

A study of the favourable balance of commodity trade (excess of exports over imports) further emphasizes the rapid expansion of export shipments. This balance amounted to \$111,000,000 in 1940; \$192,000,000 in 1941; and to \$741,000,000 in 1942, and has already reached \$750,000,000 during the first eight months of 1943. During the month of July, 1943, exports attained the all-time record value for one month of over \$303,000,000, reflecting the increasing scale of operations of the Allied armies as well as the high volume of war production attained by Canadian industry. The movement of war supplies, foodstuffs and essential civilian goods has no doubt been greatly facilitated by the increased output of merchant vessels and the subsidence of the submarine menace.

**Analysis of Trade with the United Kingdom and the United States.**—As in all previous years the great bulk of Canada's trade in 1942 was with the United Kingdom and the United States. Imports from the United Kingdom fell off sharply from 1941 owing, no doubt, to a slackening in shipments of equipment for R.A.F. training schools, war factories, etc. On the other hand, imports from the United States continued to rise, reflecting the demand for materials necessary for the continually expanding war production.\* Trade with South America declined from the high level of 1941, but was still maintained well above the figures for the immediate pre-war years. Imports from other parts of the world remained about the same, whereas exports to countries other than the United Kingdom and the United States more than doubled in 1942 as compared with 1941, reaching a total of \$736,000,000. This was made up, to a large extent, of motor transports, fighting vehicles, guns, ammunition and war materials shipped to every theatre of war.

\* For the first time since 1939, exports to the United States exceeded those to the United Kingdom. Here again censorship restrictions do not allow a study of the detail comprising this trade. However, it is a clear indication that Canada is playing an ever increasing part in the arming and supplying of the Armed Forces of the United Nations.



## CANADA 1944

	<i>Imports</i>		<i>Exports (Domestic)</i>	
	<i>U.K.</i>	<i>U.S.</i>	<i>U.K.</i>	<i>U.S.</i>
			<i>(millions of dollars)</i>	
1938.....	119.3	424.7	339.7	270.5
1939.....	114.0	496.9	328.1	380.4
1940.....	161.2	744.2	508.1	443.0
1941.....	219.4	1,004.5	658.2	599.7
1942.....	161.1	1,304.7	741.7	885.5
1943 (8 mos.).....	90.4	933.3	686.2	703.9

## Non-Commodity Items of Foreign Exchange

A nation's commodity trade alone cannot be taken as a complete index of its prosperity, for there are many other exchanges besides those of goods, all of which must be taken into account in order to find out the basic state of affairs in regard to total international transactions.

### The Tourist Trade

The tourist trade is normally a substantial source of external revenue to Canada and is particularly important to certain sections of the country. Tourist expenditures are, in part, the return that Canada derives from scenic attractions, fish and game, winter sports activities and other attractions. As a large part of the traffic usually travels from the United States to Canada by motor-car, the curtailment in the use of automobiles in recent years has had the effect of reducing the volume of international expenditures. The effects of the decline in motor traffic were most pronounced in 1942, when total expenditures in Canada of travellers from other countries were estimated at \$81,000,000 compared with \$111,000,000 in 1941. The expenditures of automobile tourists dropped more in proportion since expenditures of persons travelling by rail increased in 1942. This total of expenditures in Canada in 1942 compares with pre-war levels indicated by revised estimates of \$166,000,000 in 1937, \$149,000,000 in 1938 and \$149,000,000 in 1939.

Expenditures of Canadians abroad, involving the use of United States dollars, have been sharply reduced as a result of official restrictions on pleasure travel intro-



Armoured Vehicles Form  
a Large Part of  
Canadian Exports.

*Courtesy, National  
Film Board*

duced in July, 1940, in order to conserve foreign exchange. Overseas travel has also declined with the War. In 1942, total expenditures of Canadians outside of Canada are estimated at \$26,000,000 compared with \$21,000,000 in 1941 and pre-war expenditures estimated at \$87,000,000 in 1937.

Greatly increased information on travel expenditures, resulting from new methods introduced in 1940 and 1941, have facilitated and improved the measurement of tourist expenditures. Estimates for the years from 1940 to 1942 are a result of the new procedure, while the estimates for 1937, 1938 and 1939 were made by relating the increased information on expenditures obtained in recent years to the volume of traffic in the pre-war years. It is believed that these pre-war estimates are now fairly representative of expenditures before the War. It should be noted that the new estimates for the pre-war years point to much lower levels of expenditures, particularly in the case of expenditures of United States travellers in Canada, than the estimates originally published.

**Expenditures of Foreign Travellers in Canada and Canadian Travellers Abroad, 1941 and 1942**

Class of Traveller	1941			1942		
	Foreign Expenditures in Canada	Canadian Expenditures Abroad	Excess of Foreign Expenditures in Canada	Foreign Expenditures in Canada	Canadian Expenditures Abroad	Excess of Foreign Expenditures in Canada
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Travellers from and to overseas countries.....	4,000	2,750	1,250	2,900	3,300	-400
Travellers from and to the United States—						
Automobile.....	54,000	3,750	50,250	26,000	2,600	23,400
Rail.....	28,000	8,500	19,500	32,000	13,900	18,100
Boat.....	7,000	700	6,300	4,000	500	3,500
Bus (exclusive of local bus).....	7,000	1,500	5,500	6,000	2,600	3,400
Aeroplane.....	3,000	1,200	1,800	3,000	1,100	1,900
Other (pedestrians, local bus, etc.).....	8,000	2,600	5,400	8,000	3,700	4,300
Totals, United States.....	107,000	18,250	88,750	79,000	24,400	54,600
Totals, All Countries.....	111,000	21,000	90,000	81,900	27,700	54,200

**The Canadian Balance of International Payments, 1942\***

Most of the more striking effects of the War on the Canadian balance of payments, which first appeared in the 1940 statement, were accentuated in the statement for 1941 and are even more so in that for 1942 (p. 165). Gross credits on current account were the highest on record, being \$3,384,000,000. Gross debits of \$2,275,000,000 were at a record level, too, although the increase was less than in the case of credits. Consequently, the net balance on current account transactions with all countries increased very sharply. These impressive proportions are, of course, related to the great growth in national income that has taken place.

\* The Canada Year Book 1943-44, which will appear in July, 1944, will present a detailed review of the transactions on both current and capital account. The interested reader is referred to that publication. The report on Canadian Balance of International Payments 1937-42, published by the Dominion Bureau of Statistics, deals with the entire subject in still more detail and is obtainable from the Dominion Statistician, price 25 cents.

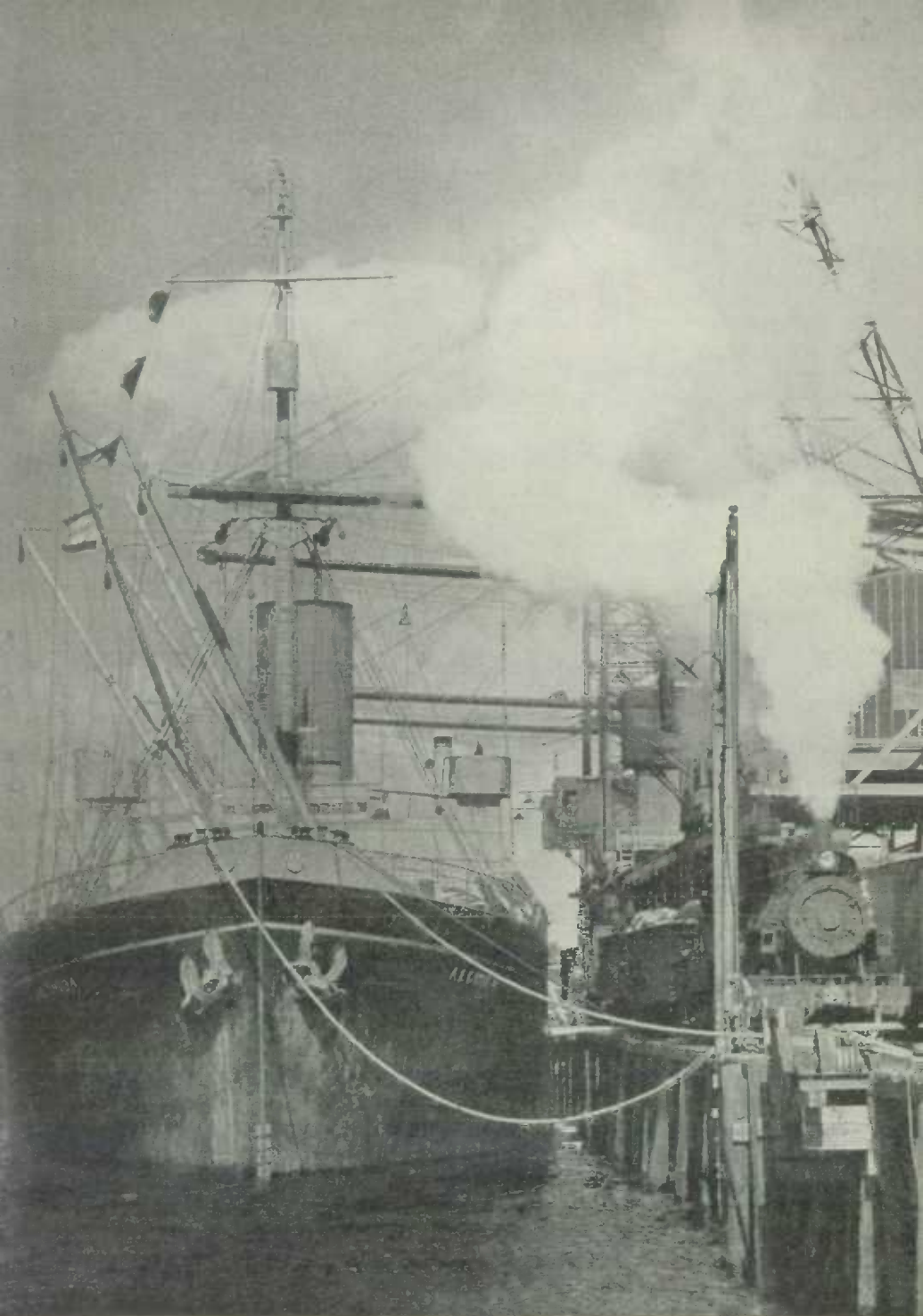
From the point of view of exchange and finance the balance of payments is divided into two clearly defined divisions: the balance of payments between Canada and the sterling area, and the balance of payments between Canada and the rest of the world with which Canada's dealings are on a United States dollar basis. Because of conditions arising from the War, Canada's balance of sterling income over disbursements is no longer freely convertible into United States dollars whereas, before the War, sterling balances were employed in part to cover the deficit in United States dollars. Accordingly, separate statements are shown for transactions with Empire countries and non-Empire countries. In so far as is possible, the statement for Empire countries represents the sterling area and the statement for non-Empire countries represents the United States dollar area. In the case of the balance of payments with the sterling area there has been a greatly expanded surplus of current credits over debits, while in the balance of payments with the United States dollar area there was, in 1940 and 1941, a growing net deficit on current account, which, however, declined in 1942.

**Current Transactions with the Sterling Area.**—There was a net credit on current account with the sterling area of \$1,277,000,000 in 1942 compared with \$805,000,000 in 1941, \$419,000,000 in 1940 and \$176,000,000 in 1939. The principal contributing factor was the expenditure by the British Government on war equipment, food and materials produced in Canada. The value of exports to the sterling area, including certain prepayments for goods in the process of production in 1942 increased from \$436,000,000 in 1939 to \$1,549,000,000 in 1942. These figures exclude exports on Canadian account such as equipment for the Canadian Army in the United Kingdom. Imports of merchandise from the sterling area increased only moderately, being \$177,000,000 in 1939 and \$226,000,000 in 1942. Most of the increase was from Empire countries other than the United Kingdom.

"Interest and dividend payments" and "all other current transactions" both produced substantial net debits. Interest and dividends paid on British investments in Canada decreased in 1942, mainly because of the reductions in interest paid on Canadian bonds repatriated from the United Kingdom. The item "all other current transactions" shows an excess of debits over credits of \$80,000,000. The expenditures of the Dominion Government in connection with the maintenance of the Canadian Armed Forces overseas constitutes the bulk of the debits in this item. Among the principal credits in this item are the expenditures on air training in Canada by the British, Australian and New Zealand Governments and other expenditures by Allied Governments on services in Canada connected with the War. The expenditures of Canadian travellers in other parts of the Empire and of Empire travellers in Canada offset each other.

**Current Transactions with the United States Dollar Area.**—Canada's debit balance on current account with the United States dollar area was \$50,000,000 in 1939, \$270,000,000 in 1940, \$314,000,000 in 1941 and \$168,000,000 in 1942. The debit balance with the United States alone amounted to \$116,000,000 in 1939, \$292,000,000 in 1940, \$318,000,000 in 1941 and \$180,000,000 in 1942. The pre-war credit balance on current transactions with other foreign countries shrank from \$66,000,000 in 1939 to \$22,000,000 in 1940 and to \$4,000,000 in 1941 but rose to \$12,000,000 in 1942.

The principal factor in the growth of the debit balance with the United States dollar area has been the great expansion in imports of merchandise. Such imports from the United States increased from \$472,000,000 in 1939 to \$702,000,000 in 1940,



The Loading and Shipping Wharves at a Nova Scotia Port.—Note the freight cars drawn alongside the ship at the right. The Atlantic ports of Canada are operating at capacity, shipping overseas the large quantities of munitions and foodstuffs that Canadian industry is producing for the Allied Nations.

*Courtesy, Dominion Steel and Coal Company*



\$910,000,000 in 1941 and \$1,116,000,000 in 1942. Most disbursements of United States dollars are for aircraft, for materials, fuel, capital equipment and component parts required for the war-production program, although there have been increased demands for civilian goods from the United States resulting from the high level of incomes.

Exports to the United States dollar area increased from \$470,000,000 in 1939 to \$503,000,000 in 1940, \$634,000,000 in 1941 and \$974,000,000 in 1942. The increase in exports to the United States alone was greater than this rise, owing to the loss of European and Oriental markets, and therefore of exports, to "other foreign countries". The great increase in exports in 1942 is principally a result of transactions under the agreements entered into between the Canadian Prime Minister and the President of the United States at Hyde Park in April, 1941. Exports resulting from the agreements first became substantial in 1942 when deliveries of munitions, metals and other war produce rapidly expanded. The Hyde Park element in the total exports to the United States is covered by the cash received for deliveries of production rather than the value of exports, since the goods themselves were not all shipped to destinations in the United States.

The \$184,000,000 received from net exports of non-monetary gold in 1942 compares with \$204,000,000 received in 1941. Net receipts from the tourist trade were \$55,000,000 in 1942 compared with \$90,000,000 in 1941. Most of this decline resulted from smaller expenditures by United States tourists in Canada and reflects the contraction in automobile travel. Net payments on account of freight and shipping increased sharply from \$65,000,000 in 1941 to \$85,000,000 in 1942. The principal factor in this growth was the large increase in ocean shipping costs brought about by the sharp rises in shipping and war risk insurance rates.

All other current transactions gave rise to a credit balance in 1942 because of war-time factors in contrast to debit balances in preceding years.

**The Chief Features of Capital Transactions.**—It is impossible in the space available to deal with these transactions in the same detail as with current transactions. The aim is to draw attention to the outstanding influences. In the case of the sterling area the principal transactions have been inter-governmental.

The principal means adopted by the Canadian Government of financing the residual needs of the United Kingdom on current and capital accounts was the billion-dollar gift to the Government of the United Kingdom. With this contribution of funds the British supply of dollars from other sources was supplemented so that British purchases in Canada would not be limited by a shortage of dollars. Consequently, the British Government was enabled to purchase munitions, raw materials and food, and to make other expenditures necessary for the prosecution of the War. In addition to the billion-dollar contribution, other Dominion Government transactions also had the effect of increasing the United Kingdom's supply of Canadian exchange. Among these were the official repatriations by Canada of Dominion and Canadian National Railway issues held in the United Kingdom. This alone resulted in the transfer of \$296,000,000 to the United Kingdom; miscellaneous payments to adjust previous transactions amounted to \$74,000,000, and a special purchase of gold resulted in the transfer of an additional \$23,000,000 to the United Kingdom. There were also capital debits of \$700,000,000, reflecting the conversion of the major part of the accumulation of sterling balances into a special loan to the United Kingdom in 1942. The accumulation of these sterling balances by the Foreign Exchange Control Board in 1940 and 1941 was the principal means of meeting the requirements of the United Kingdom up until 1942.

## EXTERNAL TRADE

Transactions with non-Empire countries are more directly affected by exchange control which has imposed restrictions on the export of capital from Canada. The outstanding features in the capital account with this area in 1942 were the unusually heavy imports of capital arising from the purchase of outstanding Canadian securities by United States investors, and the receipt of certain prepayments and capital advances arising out of the Hyde Park Agreements.

**Estimated Canadian Balance of International Payments, 1941 and 1942**  
(Millions of Canadian dollars)

Item	1941 <sup>1</sup>			1942 <sup>2</sup>		
	Credits	Debits	Net	Credits	Debits	Net
<b>I. CANADA AND ALL COUNTRIES—</b>						
Current Account—						
Merchandise trade, after adjustment	1,732	1,264	+ 468	2,523	1,406	+ 1,117
Net exports of non-monetary gold	204	—	+ 204	184	—	+ 184
Tourist expenditures	111	21	+ 90	81	26	+ 55
Interest and dividends	60	286	— 226	67	270	— 203
Freight and shipping	185	167	+ 18	221	228	— 7
All other current transactions	166	229	— 63	308	345	— 37
<b>TOTALS—Current Account</b>	<b>2,458</b>	<b>1,967</b>	<b>+ 491</b>	<b>3,384</b>	<b>2,275</b>	<b>+ 1,109</b>
Special gold transactions <sup>3</sup>	—	—	—	23	23	—
Capital movements	566	1,063	— 497	1,235	1,341	— 106
Billion dollar contribution	—	—	—	—	1,000	— 1,000
Balancing item <sup>4</sup>	6	—	+ 6	—	3	— 3
<b>II. CANADA AND EMPIRE COUNTRIES—</b>						
Current Account—						
Merchandise trade, after adjustment	1,098	279	+ 819	1,549	226	+ 1,323
Tourist expenditures	3	3	—	2	2	—
Interest and dividends	5	68	— 63	7	51	— 44
Freight and shipping	119	36	+ 83	127	49	+ 78
All other current transactions	96	130	— 34	149	229	— 80
<b>TOTALS—Current Account</b>	<b>1,093</b>	<b>359</b>	<b>+ 734</b>	<b>1,641</b>	<b>434</b>	<b>+ 1,207</b>
United Kingdom	228	157	+ 71	193	123	+ 70
Other Empire Countries	1,321	516	+ 805	1,834	557	+ 1,277
Special gold transactions <sup>3</sup>	—	—	—	—	23	— 23
Capital movements	181	990	— 809	884	1,129	— 245
Billion dollar contribution	—	—	—	—	1,000	— 1,000
Balancing item <sup>4</sup>	4	—	+ 4	—	9	— 9
<b>III. CANADA AND NON-EMPIRE COUNTRIES—</b>						
Current Account—						
Merchandise trade, after adjustment	634	985	— 351	974	1,180	— 206
Net exports of non-monetary gold	204	—	+ 204	184	—	+ 184
Tourist expenditures	108	18	+ 90	79	24	+ 55
Interest and dividends	55	218	— 163	60	219	— 159
Freight and shipping	66	131	— 65	94	179	— 85
All other current transactions	70	99	— 29	159	116	+ 43
<b>TOTALS—Current Account</b>	<b>1,045</b>	<b>1,363</b>	<b>— 318</b>	<b>1,461</b>	<b>1,641</b>	<b>— 180</b>
United States	92	88	+ 4	89	77	+ 12
Other Foreign Countries	1,137	1,451	— 314	1,550	1,718	— 168
Special gold transactions <sup>3</sup>	—	—	—	23	—	+ 23
Capital movements	385	73	+ 312	351	212	+ 139
Balancing item <sup>4</sup>	2	—	+ 2	6	—	+ 6

<sup>1</sup> Revised figures.

<sup>2</sup> Preliminary.

<sup>3</sup> This represents gold received from the United Kingdom in part settlement of her deficiency with Canada, and used in turn to settle part of Canada's deficiency with the United States.

<sup>4</sup> This balancing item reflects possible errors and the omission of certain factors that cannot be measured statistically, such as changes in the timing of payments for goods and services.

## CHAPTER XIV

# Internal Trade—Prices—Cost of Living

### Internal Trade

The task of providing goods and services for home consumption by 11,506,655 (1941 Census) people requires a greater expenditure of economic activity than that required for the prosecution of external trade, though Canada now ranks third among trading countries of the world. Internal trade includes the transportation and distribution of goods within the country through the medium of railways, steamships, warehouses, wholesale and retail stores, and other agencies. It also includes all services such as those carried on by doctors, theatres, hospitals, schools, banks, insurance companies, and innumerable others. All such activities, even if not productive of material goods, add substantially to the national income.

Unfortunately, owing to the many ramifications of internal trade, its statistical measurement presents great difficulties. Nevertheless, some idea of its extent may be gathered from the fact that in the latest year for which figures have been published (1942), the national income arising from productive operations in Canada was estimated at \$7,500,000,000 while the value of exports of Canadian produce (excluding gold) though proportionately very much higher than normal was \$2,364,000,000 in that year.

### Wholesale Trade

Complete statistics covering the activities of wholesalers during recent years are not available, but results of annual and monthly surveys based on a sampling plan serve to give some indication of the trend in sales. Conforming with the trend in other spheres of economic activity, sales of wholesale merchants, the dollar volume of which exceeded \$3,300,000,000 in 1930, had declined 34 p.c. by 1933. Apart from a slight reversal in 1938, the trend since 1933 has been upward, sales for 1939 reaching the 1930 level and 1940 showing a gain of 11 p.c. over 1939. This upward movement continued in 1941 when an increase of 18 p.c. over 1940 was recorded. Sales in 1942 averaged 10 p.c. higher than in 1941, a decline in the automotive equipment trade and a minor gain of 3 p.c. in the hardware trade serving to modify more substantial gains in other lines. Wholesale trading continued to expand during the first half of 1943, although at a lesser rate; sales for the first half of the year averaged 6 p.c. higher than in the corresponding period of 1942.

### Retail Trade

The final stage in the distribution of consumer goods is effected through a great number of retail stores ranging in size from small shops, with meagre daily takings, to large enterprises, whose annual sales are reckoned in millions of dollars. Two complete surveys of retail trading establishments in Canada have been made, one relating to the year 1930 and the other forming part of the Decennial Census of 1941 and covering the business transacted in that year. Comparisons of the results for the two periods serve to indicate the changes that have taken place in the marketing structure of the country during the past decade.



War-Time Freight has the Right-of-Way over all other Goods.

*Courtesy, Canadian Pacific Railway*

Preliminary results of the 1941 Census of Merchandising show that there were 131,474 stores with sales amounting to \$3,311,143,800, increases of 12 p.c. in number of retail outlets and 22 p.c. in value of sales over 1930 being recorded. A marked increase in the business of stores selling both grocery and meat products, classified for census purposes as combination stores, forms an outstanding feature revealed by a comparison of the results for the two years. There were 6,155 such stores with sales amounting to \$297,261,300 in 1941, compared with 5,162 stores with sales amounting to \$161,704,100 in 1930. This increase represents, in some degree, the development of grocery stores into retail outlets of the combination type. The more pronounced increase in volume of sales than in number of businesses reflects also the shift towards larger stores by the chain companies and the development of larger outlets of the super-market type.

Major increases in the variety-store type of business, the restaurant trade, the automotive trade generally, and the filling-station business in particular, are other important recent developments in Canada's retail trade. There were 5,503 filling stations with sales amounting to \$66,449,300 in Canada in 1930, while in 1941 the number of stations had increased to 9,581 and the volume of business had risen to \$148,914,800. Although changes in definition and methods of classification are factors to be considered in these comparisons, it is apparent that there was a marked increase both in the number and value of business of gasoline filling-stations between 1930 and 1941.



**Chain Stores.**—Although there have been shifts between chains and independents within individual trades, the relative position of the chain store in the over-all retail trade of Canada has varied but little during the past ten years. Results of the 1941 Census of Merchandising show that there were 535 companies, each with four or more stores and classified as chains, and that these companies operated a total of 8,009 stores with a volume of business amounting to \$648,605,600, an amount which formed 19.6 p.c. of the total retail trade of the country. In 1930 the corresponding ratio was 18.3 p.c.

**Current Trends.**—Although the dollar volume of consumer expenditure at retail stores is still at a high level, the rate of gain as measured by percentage increases over corresponding periods of earlier years has slackened greatly. Retail sales for the first six months of 1943 averaged less than 5 p.c. above the corresponding period of 1942, whereas similar comparisons for preceding years reveal increases of 17 p.c. in 1942 over 1941, 16 p.c. in 1941 over 1940, and 11 p.c. in 1940 over 1939. Direct comparison between the first half of 1943 and the corresponding period of 1939 shows an increase of 58 p.c. About 40 p.c. of this increase in dollar volume may be attributed to higher prices, while the remaining 60 p.c. represents an increase in the physical quantity of goods purchased.

Current trends in retail purchasing are not uniform for all trades. Volume of sales for restaurants, drug stores, women's specialty shops, and specialty shoe shops continued to expand in the first half of 1943 while sales of stores specializing in durable consumer goods such as hardware, furniture, radios, and household appliances were less than in the first half of 1942.

### Retail Services

In addition to the more than 131,000 retail merchandise stores in operation in 1941, there were 45,173 service establishments recorded in the results of the Census of Merchandising and Service Establishments and these had total receipts of \$223,952,300 in the census year. These figures cover a wide range of establishments of various types, located generally in the retail marketing sections of urban areas and whose revenue represents receipts from services rendered rather than the sale of merchandise. Professional services, transportation services, and services related directly to the building trades, masonry, plumbing, etc., are not included.

The provision of amusement and personal services of various kinds form a large proportion of the totals. Included in the personal services group are 14,117 barber shops, beauty parlours, or combined barber shops and beauty parlours with total receipts of \$25,735,300. Included in the amusement group are 1,244 motion-picture theatres with box-office receipts (exclusive of taxes) amounting to \$41,569,300. Preliminary figures for 1942 reveal a further expansion in motion-picture attendance and receipts. Admissions to motion-picture houses in 1942 numbered 179,611,306, while receipts (exclusive of taxes) amounted to \$46,930,278, an increase of 13 p.c. over the business recorded in the census year.

### Co-operative Associations

Members of farmers' co-operatives in Canada are doing their part in supplying the working population, the Armed Forces at home and abroad, and Great Britain with urgently needed food products. For the year ended July 31, 1942, in comparison

A Retail Butcher Store in a  
Large City.



*Courtesy, National Film Board*

with 1941 the value of live-stock marketings increased from \$26,000,000 to \$40,000,000, dairy products from \$24,000,000 to \$39,000,000, fruits and vegetables from \$11,000,000 to \$15,000,000, and poultry and eggs from \$4,500,000 to \$7,000,000. Improvement in price accounts, in part, for these increases, but it is safe to say that the physical volume of the marketings has increased by 25 p.c. According to reports received in the year 1942, a record in co-operative activity has been established in Canada. For the first time in the past eleven years, reported membership has exceeded 500,000 and total business has passed the \$250,000,000 mark. Reserves and surplus, which reached a high point of \$46,000,000, and an improved working capital position, indicate that expansion of co-operatives has been accompanied by a strengthening of their whole financial structure.

In Canada early expansion of co-operative activity took place most rapidly and to the greatest degree in the marketing of farm products. Presumably this field offered the farmer the greatest opportunity to effect savings and to provide needed services. However, in recent years with the establishment of co-operative wholesales in nearly every province, the purchasing of farm supplies and household needs on a co-operative plan has shown a marked increase.

Out of the 1,722 co-operative associations reporting in 1942, a total of 558 handled food products to the value of \$9,000,000 and 180 associations handled nearly \$1,500,000 worth of clothing and home furnishings for their members and patrons. These associations included the business of approximately 250 urban consumer societies. Petroleum products, handled by 561 associations, were valued at \$7,000,000.

In order to increase crop and live-stock production, farmers of 834 associations purchased \$16,000,000 worth of feed, fertilizer and spray material on a co-operative basis.

Credit unions are active in all provinces of Canada. At Dec. 31, 1942, there were 1,486 credit unions chartered in Canada with a membership of 295,984. More than \$137,000,000 has been lent to the members of the various credit unions in Canada during their period of operation. Loans in the year 1942 totalled about \$11,000,000.

A mutual fire insurance company was formed in Ontario in 1836 and several others, still functioning as farmers' mutuals, were organized between 1850 and 1860. To-day there are about 365 such companies in Canada with net assets of over \$9,000,000 and insurance at risk amounting to over \$1,000,000,000. These have a long history of successful operation.

Approximately 103,000, or 6 p.c., of the telephones in Canada are operated by rural co-operative companies in which there is a total investment of \$20,000,000.

Societies have been formed by fishermen on both coasts for the purpose of canning and marketing fish and buying gear on the co-operative plan. During 1942, 67 fishermen's co-operative societies in Nova Scotia, Quebec and British Columbia with a membership of 4,826 did business amounting to \$2,628,380.

Co-operative housing and co-operative hospitalization and medical service are other forms of newer co-operative ventures that are operating successfully.

### Combinations in Unlawful Restraint of Trade

The Combines Investigation Act (R.S.C. 1927, c. 26) provides for the investigation and prevention of trade combinations, monopolies, trusts and mergers formed or operated against the public interest through agreements affecting the supply or price of any class of goods in unlawful restraint of trade. Such organizations are described by the law as combines. Participation in the formation or operation of a combine is an indictable offence. Methods of unlawfully lessening competition and controlling trade include arrangements among competitors or others to enhance prices, to fix common selling prices or resale prices, and to unduly limit production or facilities for manufacturing or distribution. Provisions with respect to similar offences are contained in the Criminal Code of Canada.

Investigations of alleged combines are conducted under the direction of a Combines Investigation Commissioner reporting to the Minister of Labour. Proceedings under this Statute by way of investigation, negotiation and, in circumstances where deemed warranted, by prosecution, have been instrumental in checking undue private trade restrictions and in reducing excessive prices arising from monopolistic restrictions and agreements. Recent cases have included alleged combines of wholesalers of fruits and vegetables in Western Canada, manufacturers of corrugated and fibre-board boxes, and manufacturers and wholesalers of tobacco products. In 1942, under charges of unlawful combination laid at Toronto against four companies manufacturing shipping-case materials and against a trade association officer, fines of \$17,000 were imposed. Previous convictions of members of an alleged combine of shipping-case manufacturers were upheld by the Supreme Court of Canada. Appeals by all but one of a group of tobacco manufacturers and wholesalers convicted under the Combines Investigation Act in 1941 and sentenced to pay fines totalling \$221,500 were allowed in 1942 by the Supreme Court of Alberta.

### Wholesale Prices

Wholesale prices moved steadily upward in the first ten months of 1943 to reach a peak unexceeded since the beginning of 1926. Upward adjustments over the past year in ceiling levels for a large number of items, including newsprint, meats and lumber, have been the main cause of this advance. Live stock and wheat were among other important items registering substantial increases. A minimum price of \$1.25 per bushel for No. 1 Northern wheat, basis in store Fort William, Port Arthur and Vancouver, was set for the 1943-44 crop year which compared with a 90-cent per bushel minimum for the previous crop year. Between December, 1942, and October, 1943, the general level of wholesale prices advanced 5.1 p.c. to reach 101.9, while the war-time increase amounted to 40.9 p.c.

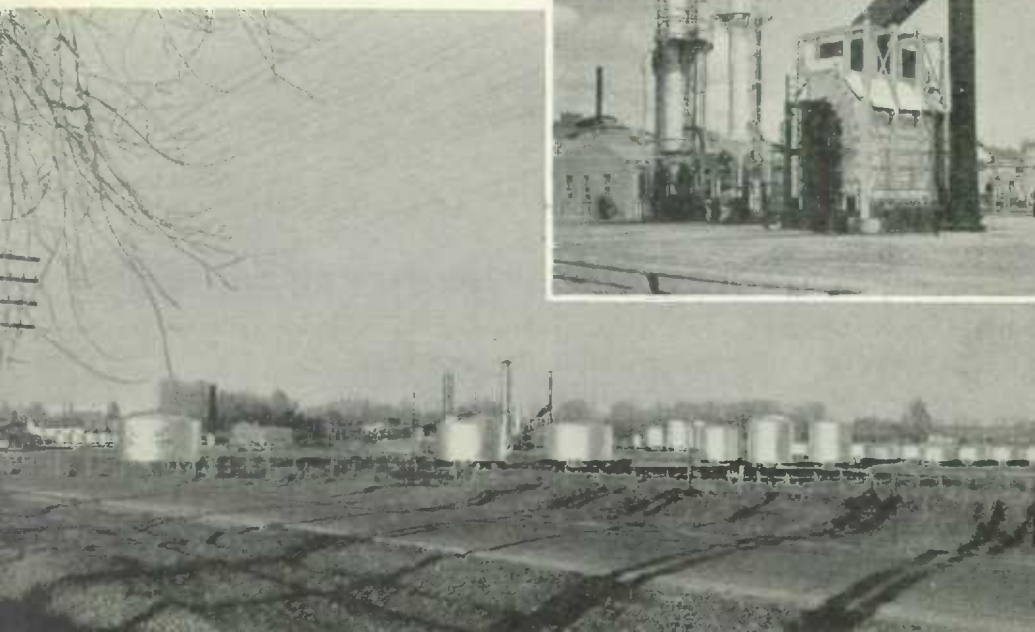
## PRICES

Group changes for the period under review varied considerably. Wood, wood products and paper rising to 113·9 between December, 1942, and October, 1943, ranked first with a gain of 10·5 p.c., reflecting two increases, each of \$4 per ton for news-print, as well as substantial ones for a number of lumber descriptions. Included in this list were fir, pine, spruce, hemlock and cedar. Vegetable products registered an advance of 9·4 p.c. to 94·1 on higher prices for wheat, rye, flax, potatoes, hay, rosin, etc. The increase of 4·4 p.c. to 109·6 recorded for animal products was due to higher prices for furs, fishery products, live stock and meats and poultry which offset declines for milk and its products. Changes among other main groups were relatively insignificant; non-metallic minerals and their products stiffened 1·0 p.c. to 100·5, while non-ferrous metals at 79·7, fibres, textiles and textile products at 91·9 and iron and its products at 115·8 were unchanged. Chemicals and allied products registered a decline of 0·8 p.c. to 100·3.

The advance in Canadian farm-product prices in the first ten months of 1943 was substantially greater than that noted for wholesale prices. It reflected establishment of several bonuses for farm products such as payment of 10 cents per bushel for oats and 15 cents for barley; an increase in the subsidy on fluid milk from 25 cents per cwt. to 55 cents beginning on Oct. 1 and a four-cent per lb. bonus for graded raw

Storage Tanks at a New Manitoba Oil Refinery.—  
This refinery takes its crude from the Alberta  
oil fields. *Inset:* A view of the cracking unit.

*Courtesy, Industrial Development  
Board of Manitoba*





wool from the 1943 clip. In addition there was the establishment of a substantially higher minimum price for wheat (already noted) as well as a 25-cent per bushel advance to \$2.50 in the minimum price for flax. The ceiling price on rye was removed early in the year and prices rose substantially for this cereal while sharp gains were noted also for live stock. The December, 1942, to October, 1943, increase in farm-product prices amounted to 18.9 p.c. and the index at 103.6 was the highest reached since the first month of 1930. The cumulative war-time increase for farm-product prices is 77.4 p.c. Most of the increase in these prices over the past ten months has been in field products which showed a gain of 31.6 p.c. to 90.8. Animal products, on the other hand, recorded a relatively small gain of 6.6 p.c. to reach 125.0.

**Index Numbers of General Wholesale Prices and Wholesale Prices of Industrial Materials, August, 1939, and January, 1942 to October, 1943**

(1926=100)

Year and Month	Index Numbers of—		Year and Month	Index Numbers of—	
	General Wholesale Prices	Industrial Materials Prices		General Wholesale Prices	Industrial Materials Prices
<b>1939</b>			<b>1942—concluded</b>		
August.....	72.3	65.3	November.....	96.9	94.0
			December.....	97.0	95.1
<b>1942</b>			<b>1943</b>		
January.....	94.1	92.4	January.....	97.1	96.1
February.....	94.6	93.2	February.....	97.5	96.3
March.....	95.0	93.3	March.....	98.5	96.6
April.....	95.0	93.5	April.....	98.9	96.7
May.....	95.2	94.2	May.....	99.2	97.0
June.....	95.8	94.8	June.....	99.6	97.3
July.....	96.0	94.6	July.....	100.1	97.6
August.....	95.5	94.3	August.....	100.4	98.7
September.....	95.8	94.8	September.....	101.2	98.7
October.....	96.6	95.0	October.....	101.9	99.1
			November.....	102.4	99.2

## Retail Prices, Rents and Services

**Problems During Two Years of the Price Ceiling.**—After the imposition of the price ceiling, the cost-of-living index recorded only moderate increases—from 114.6 on Oct. 1, 1941, to 118.4 on Oct. 1, 1943 (August, 1939=100). The bulk of the increase was due to the higher prices of certain foods.

Under the general price-ceiling plan, the prices of most goods and the more important services and rents were frozen at levels prevailing in the basic period, Sept. 15-Oct. 11, 1941. Only a few types of commodities, of which the most important were fresh fruits and vegetables, were originally exempted from the ceiling. Owing to the rising prices and despite the administrative difficulties, it was decided in 1942 to impose ceilings on onions, potatoes, oranges and bananas, and in 1943 on peaches, pears, plums, apples and grapes and on certain other vegetables.

Another special problem arose in connection with the prices of certain farm products that follow a marked seasonal pattern. Since the basic period found some farm commodities at the lower points in their seasonal cycle, it was necessary to allow seasonal price increases. In some cases, notably beef, seasonal price schedules

commensurate with the retail price ceiling (see p. 172). The main impetus for bulk below which the price could fluctuate seasonally was generally adopted. The tendency for the seasonal movement to narrow under conditions of short supply, the necessity of ensuring adequate production and the advance in vegetable prices resulted in a gradual rise in food prices.

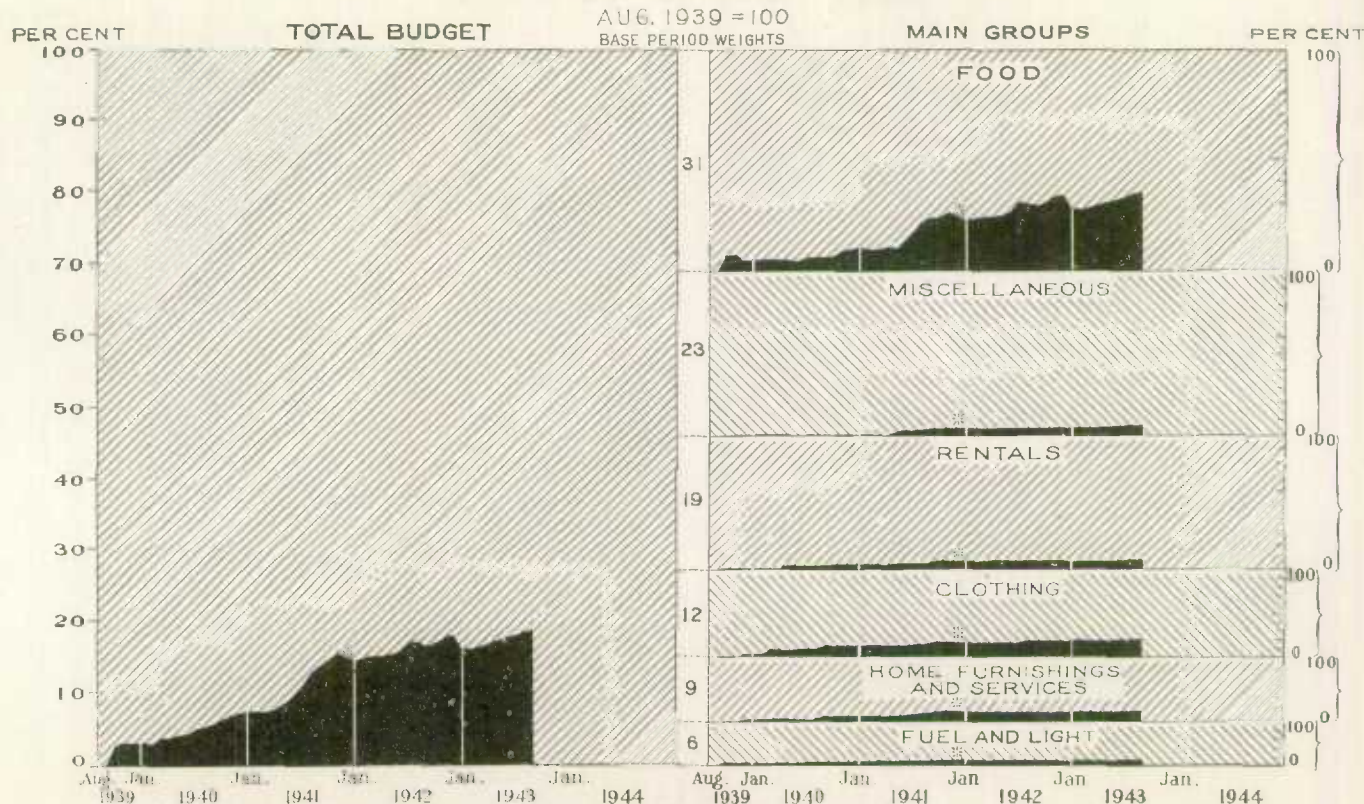
By July 1, 1942, the cost-of-living index had risen 2.4 points over Oct. 1, 1941, necessitating the payment of a cost-of-living bonus of 60 cents a week. In the late autumn further advances in the index, largely because of higher meat prices, made it appear probable that another increase in the bonus would become necessary. For this reason, in December, 1942, the Government decided to reduce the prices of certain widely used foodstuffs, by payment of subsidies, with a view to bringing the cost of living at least part way back to the level of the basic period. The articles selected for the price reductions were milk, oranges, tea and coffee; later butter was added. By this method the cost of living was kept down and the pressure on production costs of a further cost-of-living bonus, which might have seriously aggravated inflationary tendencies, was avoided. The so-called consumer subsidies had the additional merit of benefiting all the lower-income groups in the population, rather than just those who were entitled to a cost-of-living bonus.

From the beginning, rising costs have constituted a serious threat to the price ceiling. Initially, these pressures arose because retail prices during the basic period did not fully reflect the rise in costs that had taken place earlier. With rising prices in other countries on which Canada depended for supplies and higher shipping costs, the costs of imported goods continued to rise. As war production expanded and shortages of materials and labour became more widespread, unit costs frequently increased for a variety of reasons, among which were greater labour turnover, dilution of labour skills, the use of inexperienced help, necessity of using substitute materials, lack of the usual means of transportation and, in some cases, reductions in the volume of output and sales and the uneven flow of supplies. To a substantial degree the "squeeze" of higher costs has been absorbed by producers and distributors and arrangements have frequently been made to roll back or roll forward part of the "squeeze" arising at one stage of production to earlier or later stages in the production and distribution system. Continuous efforts have been made to reduce costs by simplification of manufacturing and distributing processes, and by elimination of frills and unnecessary services. Where these methods proved insufficient, and where continued supply of the commodity at ceiling prices was considered necessary, subsidies have been paid or commodities purchased in bulk by Crown companies.

The principles in accordance with which subsidies are paid on imports have been set forth in a series of "Statements of Import Policy". Subsidies are payable only on an increasingly restricted range of imports. Of all the import subsidies, that on petroleum products has proved the most costly. Others of importance include agricultural supplies such as fertilizers, feed ingredients, and agricultural implements and cotton fabrics. Domestic subsidies have been paid on leather footwear and glove and garment leather, certain groceries and canned goods, wood fuel, etc. Transport subsidies have been paid in connection with shipments of beef, potatoes, fertilizers, feed, etc. Subsidies that had been paid to producers on butter and fluid milk are now being administered by the Department of Agriculture.

Bulk purchases of a number of products, mostly imports, are made by the Commodity Prices Stabilization Corporation, which distributes these products at prices

# COST OF LIVING INDEX



The solid black areas superimposed on the shaded basic areas show the percentage increases that have taken place in the index over the period indicated. The "over-all" price ceiling became effective December 1, 1941 (indicated by the asterisk)

commensurate with the retail price ceiling (see p. 172). The main impetus for bulk purchasing, however, has come from the difficulty experienced by importers in obtaining supplies, shipping difficulties, and the necessity of securing priority considerations from the United States and British authorities.

Another problem complicating the maintenance of the price ceiling was that of pricing goods not sold in the basic period. In the case of spring and summer products (e.g., spring and summer clothing), provision was made that the increase in costs, which had occurred between the spring, summer, and autumn of 1941, might be added to manufacturers' prices, and maximum wholesale and retail prices were to be calculated by adding the mark-up normally obtained on the same or substantially similar goods. The increase in the number of new or modified goods because of the use of substitute materials and the introduction of simplification programs has resulted in the adoption of special formulas to determine manufacturers' and ceiling prices.

By the autumn of 1942, the problem of equitable distribution became of major importance in a great many fields of civilian production and distribution. Where manufacturers and wholesalers can no longer supply the full requirements of retailers, they allocate their available supply among their customers according to the proportion supplied to each in the year 1941. Where extraordinary changes in population have taken place, quotas have been adjusted. In addition, new entries into business have been placed under a permit system.

With a general shortage of goods, rationing has become more extensive. In some cases shortages have been due to lower domestic production (farm machinery), or to a reduced volume of imports (tea and coffee). In other cases (butter and meats), total production has increased, but total demand, both from the civilian population, with its increased purchasing power, and from the Armed Services and Allied Nations, has increased by an even greater amount. For certain durable goods in short supply, the permit system has been used (tires and tubes, farm machinery, typewriters). Prior to coupon rationing, the "honour system" of rationing was used for sugar, tea and coffee. Coupon rationing, under which each person receives the same basic ration, has been in force since the dates indicated for the following products: sugar, July 1, 1942; tea and coffee, Aug. 3, 1942; butter, Dec. 21, 1942; meat, May 27, 1942; and honey and preserves, Sept. 2, 1943.

Rationing and other controls over supply has been accompanied by a general strengthening of control over prices. For example, to facilitate the rationing of meats, a standard pricing system for beef, lamb and pork sold at retail has been adopted, based on a system of standard cuts. New price schedules have also been established for meats and substitutes for meats that were not rationed (bologna and weiners, poultry products, and several varieties of fish). To prevent any undue fall in prices of live cattle which might result from meat rationing, the Board and the Department of Agriculture announced a series of floor prices for beef. In periods of surplus supplies, when prices might ordinarily be expected to fall, the market is to be supported by Government purchases of beef through the Department of Agriculture.

### **Cost of Living**

Reflecting the continued success of the rigorous system of price control that has been in effect in Canada since the autumn of 1941, the Dominion Bureau of Statistics cost-of-living index number showed little net change in the first ten months



of 1943. The Oct. 1 index indicated an advance of only 0.5 points since December, 1942. The war-time advance in the index to date has amounted to 18.4 p.c. and is in sharp contrast to the 53.3 p.c. rise for the corresponding period of 1914-18.

With the exception of the first two months of the year 1943, the movement of the index was steadily upward until October, when a drop of 0.1 points occurred. A sharp decline in the index at the first of the year was mainly a result of subsidy payments for milk, tea, coffee and oranges. Between December, 1942, and January, 1943, the cost-of-living index fell 1.7 points to 117.1 as a result of this measure. A further small decline in February reduced the index to 116.9, and this proved to be the low point for the year.

Point changes among sub-groups between December, 1942, and October, 1943, showed miscellaneous items up 1.1 to 108.3; foods 0.1 to 132.9; fuel and light 0.5 to 113.3; clothing 0.9 to 121.1; home furnishings and services 0.4 to 118.2; and rentals 0.6 to 111.9.

Analysis of cost-of-living index numbers for eight regional cities on the base August, 1939=100, indicated some small divergencies over the past ten months. Halifax, with an increase of 1.7 p.c. to 118.2, registered the greatest gain between December, 1942, and October, 1943, while Winnipeg declined 0.2 p.c. to 115.4; no other city index moved lower during this period. War-time increases to Oct. 1, 1943, were as follows: Montreal, 21.5 p.c.; Saskatoon, 19.0 p.c.; Saint John, 18.4 p.c.; Halifax, 18.2 p.c.; Vancouver, 17.7 p.c.; Toronto, 17.5 p.c.; Edmonton, 15.9 p.c.; and Winnipeg, 15.4 p.c.

When comparing the increases in living costs for different cities, cognizance should be taken of the fact that the advance is related only to the base period for each city. It does not mean that because the cost-of-living index for Montreal, for example, has advanced more than that noted for Winnipeg that the actual cost of living in dollars and cents is greater in the former city. This is explained by the fact that the base period budget amount in dollars and cents varied for each city in accordance with typical wage-earner family expenditures in each area.

Index Numbers of Living Costs in Canada, 1935-42, and by Months, 1943  
(Av. 1935-39 = 100)

Year and Month	Food	Rent	Fuel and Light	Clothing	Home Furnishings	Sundries	Total
1935.....	94.6	94.0	100.9	97.6	95.4	98.7	96.2
1936.....	97.8	96.1	101.5	99.3	97.2	99.1	98.1
1937.....	103.2	99.7	98.9	101.4	101.5	100.1	101.2
1938.....	103.8	103.1	97.7	100.9	102.4	101.2	102.2
1939.....	100.6	103.8	101.2	100.7	101.4	101.4	101.5
1940.....	105.6	106.3	107.1	109.2	107.2	102.3	105.6
1941.....	116.1	109.4	110.3	116.1	113.8	105.1	111.7
1942.....	127.2	111.3	112.8	120.0	117.9	107.1	117.0
1943							
January.....	127.3	111.3	112.8	120.2	117.8	107.5	117.1
February.....	126.7	111.3	112.7	120.1	117.8	107.5	116.9
March.....	127.7	111.3	112.7	120.1	117.8	107.5	117.2
April.....	128.7	111.3	112.7	120.2	117.8	107.7	117.6
May.....	129.9	111.5	112.7	120.2	117.8	108.0	118.1
June.....	130.9	111.5	113.0	120.4	117.8	108.2	118.5
July.....	131.8	111.5	113.4	120.5	117.8	108.2	118.8
August.....	133.2	111.5	113.4	120.6	117.9	108.2	119.2
September.....	133.5	111.5	113.4	120.6	118.2	108.3	119.4
October.....	132.9	111.9	113.3	121.1	118.2	108.3	119.3

## CHAPTER XV

### Public Finance

The enormous outlays of government funds made necessary by the War, and the adoption of a "pay-as-you-go" policy so far as possible, have made a heavy drain on the resources of the ordinary tax-paying citizen. Provincial and municipal requirements have been curtailed as much as possible in order to free money to enable the Government to finance the war effort.

### Dominion Finance

Among the powers conferred on the Dominion Government by the British North America Act were: the right to deal with the public debt and property; the right to raise money by any system of taxation (the provinces were limited to direct taxation); and the borrowing of money on the credit of the Dominion. The Department of Finance, established in 1869, exercises supervision, control and direction over all matters relating to the financial affairs, public accounts, etc., of the Dominion.

Dominion Finances, 1868-1943

Fiscal Year	Total Revenue	Per Capita Revenue <sup>1</sup>	Total Expenditure	Per Capita Expenditure <sup>1</sup>	Net Debt at End of Year	Net Debt Per Capita <sup>1</sup>
	\$	\$	\$	\$	\$	\$
1868.....	13,687,928	3.90	14,071,689	4.01	75,757,135	21.58
1871.....	19,375,037	5.25	19,293,478	5.23	77,706,518	21.06
1881.....	29,635,298	6.85	33,796,643	7.82	155,395,780	35.93
1891.....	38,579,311	7.98	40,793,208	8.44	237,809,031	49.21
1901.....	52,516,333	9.78	57,982,866	10.80	268,480,004	49.99
1911.....	117,884,328	16.36	122,861,250	17.05	340,042,052	47.18
1921.....	436,292,184	49.65	528,302,513 <sup>2</sup>	60.12	2,340,878,984	266.37
1931.....	357,720,435	34.48	441,568,413 <sup>2</sup>	42.56	2,261,611,937	217.94
1933.....	311,735,286	29.19	532,369,940 <sup>2</sup>	49.84	2,596,480,826	243.09
1936.....	372,595,996	33.79	532,585,555 <sup>2</sup>	48.29	3,006,100,517	272.59
1937.....	454,153,747	40.84	532,005,432 <sup>2</sup>	47.84	3,083,952,202	277.33
1938.....	516,692,749	46.10	534,408,117 <sup>2</sup>	47.68	3,101,667,570	276.71
1939.....	502,171,354	44.37	553,063,098 <sup>2</sup>	48.88	3,152,559,314	278.62
1940.....	562,093,459	49.21	680,793,792 <sup>2</sup>	59.60	3,271,259,647	286.40
1941.....	872,169,645	75.80	1,249,601,446 <sup>2</sup>	108.60	3,648,691,449	317.09
1942.....	1,488,536,343	129.36 <sup>2</sup>	1,885,066,055 <sup>2</sup>	163.82 <sup>2</sup>	4,045,221,161	351.55 <sup>2</sup>
1943.....	2,249,496,177	195.50 <sup>2</sup>	4,387,124,118 <sup>2</sup>	381.03 <sup>2</sup>	6,182,849,101	537.30 <sup>2</sup>

<sup>1</sup> Per capita figures for census years are based upon census populations and for intervening years on official estimates.

<sup>2</sup> Includes advances to railways and transfers from active to non-active assets.

<sup>2</sup> 1941 Census figure of population used (11,506,655).

### The Financing of the Present War

**The War Budgets.**—In September, 1939, immediately following the outbreak of war, Parliament passed a Special War Budget, the main features of which were the introduction of an Excess Profits Tax, a 20 p.c. increase in both personal and corporate income taxes, higher rates of taxes and customs duties on liquors, tobaccos, wines, tea and coffee.

In June, 1940, came the second Budget of the war period which undoubtedly surpassed in severity any that the Canadian people had previously been called upon

to meet. In this Budget emphasis was placed on direct taxation as a means of distributing the war burdens as much as possible according to ability to pay. The income tax was extended to include many new taxpayers and the rates were revised sharply upwards. (See also section headed *Income Tax*, p. 183). The National Defence Tax was introduced, and took the form of a flat-rate tax, levied at rates of 2 p.c. and 3 p.c. on total income. The Excess Profits Tax Act was extensively revised. The amended Act provided a tax rate of 75 p.c. of excess profits (previously 50 p.c.) and a proviso that the minimum tax payable would be 12 p.c. of total profits in the taxation year. Taxes on automobiles and smokers' supplies were again raised substantially, and new levies were imposed on radios, radio tubes, cameras and phonographs. Under the Customs Tariff, rates on tobacco and tea were increased and other technical changes made.

The War Exchange Conservation Act passed by Parliament in December, 1940, was designed to discourage the importation of goods from hard-currency countries and to stimulate trade with countries in the sterling area. Amendments to the Special War Revenue Act were passed at the same time providing for higher taxes on passenger automobiles, cameras, phonographs, radio sets and tubes, and for new taxes on electrical and gas appliances, including stoves, refrigerators, lighting fixtures, etc., and on coin- or disc-operated slot machines and vending machines.

In the third War Budget, passed in April, 1941, the rates of personal income tax were again raised sharply, while the rates under the National Defence Tax were increased to 5 p.c. and 7 p.c. The tax on interest and dividends going abroad was increased from 5 p.c. to 15 p.c. The minimum rate of tax payable under the Excess Profits Tax Act was increased from 12 p.c. to 22 p.c. With the introduction of a Succession Duties Act, the Dominion stepped into a field hitherto left exclusively to the provinces.

Sharp increases in rates and heavy new taxes were also introduced in the field of indirect taxation affecting mainly gasoline (hitherto taxed only by the provinces), motion-picture and other entertainments, travel tickets and bottled soft drinks. Existing tax rates on a considerable list of items—sugar, automobiles and buses, beer, malt and wine, cosmetics, playing cards, cigarette lighters and long-distance telephone calls—were subject to heavy increases.

An important feature of this Budget was the offer to compensate the provinces if they would agree to vacate the personal income and corporation tax fields for the duration of the War. All nine provinces accepted the proposals. (See p. 172, *Canada 1943*.)

The tremendous and increasing cost of Canada's part in the War was reflected in the fourth Budget of the war period brought down in June, 1942. The tax changes followed the predominant pattern of the previous Budgets. The changes in the income tax on individuals and the excess profits tax applying to corporations were numerous and complex in character. Briefly, the main changes in the personal income tax were: (a) the National Defence Tax was incorporated into the general income tax; (b) the graduated rates of tax were steeply increased, and the credit for dependants was changed from a deduction from income to a deduction from tax; (c) it was provided that part of the total tax would be a form of compulsory saving to be refunded after the War; (d) a plan was introduced for deduction of income tax at the source from all salaries and wages paid after Sept. 1, 1942, and for compulsory payments of income tax on a quarterly instalment plan in the case of other forms of income.

The Bank of Canada,  
Ottawa.



*Courtesy, National Film Board*

Under the Excess Profits Tax Act, rates of tax were considerably increased with the result that corporations having profits in excess of 116% p.c. of their standard profits (average 1936-39) pay a tax at the rate of 100 p.c. and no corporation is allowed to retain, after tax, profits equal to more than 70 p.c. of its standard profits. Provision was made, however, for a 20 p.c. refund after the War for corporations to which the 100 p.c. rate of tax applies. Payment of corporate income tax and excess profits tax on a monthly instalment plan parallels the system of deduction at the source in the case of individuals.

In the field of indirect taxation, additional revenue was found by raising existing taxes on spirits, tobacco, cigarettes, soft drinks, passenger transportation, communications and miscellaneous other articles and services. Certain new taxes were introduced at the manufacturer's level, the normal point of levying sales and excise taxes under Dominion tax law, including taxes on candy, chewing gum, photographic films and supplies, luggage, fountain pens and pencils, and pipes and other smokers' accessories, while a radical departure was made with the introduction of taxes to be collected by stamps at the retail level on a list of luxury articles, including jewellery, cut glass and crystal ware, clocks and watches, articles made wholly or in part of certain materials, and chinaware other than that used in preparing and serving food and drink. Another innovation was a tax collected directly on expenditures made by patrons of certain cabarets and dance halls.

The Budget of Mar. 2, 1943, again provided for revenues and expenditures considerably increased over those of any previous year and carried the principle of "pay-as-you-go" to its logical conclusion. Total expenditures for the fiscal year 1943-44 were estimated in this Budget at \$5,500,000,000. It was estimated that revenue on the basis of existing tax rates (including revenue from the refundable taxes) would amount to \$2,601,000,000 and tax changes were introduced to provide an additional \$151,200,000, bringing the revenue forecast up to \$2,752,200,000, or to almost exactly one-half of the estimated expenditure. The balance of the requirements, approximately \$2,748,000,000, was expected to be met through the sale of war savings stamps, certificates and Victory Bonds and, to some extent, through bank borrowing.

Tax changes introduced by this Budget were relatively limited. The rates on cigarettes, cigars, manufactured tobacco, raw leaf tobacco and cigarette papers and tubes were all increased. The duty on alcoholic spirits and the tax on cabarets and night clubs were raised and a one-cent increase in the postage rate was provided.

There were no changes in the general rates or exemptions under the income tax. Substantial alteration was made in the basis of taxing the oil industry, in order



to encourage new development and production, and the special income tax allowances granted to members of the Armed Services were amended to provide further relief. Tax alleviation was also given to Canadian personnel of the Merchant Marine and the R.A.F. Transport Command. Payments on a Dominion Government annuity, as a deduction from the savings portion of the tax, were also allowed. Changes made in the Excess Profits Tax Act, and the customs tariff were of minor importance.

*The "Pay-As-You-Go" Plan.*—The adoption of the "pay-as-you-go" plan of income tax payment represented an important break with the traditional method of tax collection—a break that Canada was the first country to make. Under the system of deductions from income in the 1942 Budget (see p. 178), tax deductions were made at the source from salaries and wages, but these deductions did not relate to the current income but to the income of an earlier period. They were made *from* current earnings but not *for* current earnings. Thus, a taxpayer was, at all times, considerably in arrears to the Government for income tax, a situation that created a difficult problem for those suffering a reduction or loss of income through entering the Armed Forces, retirement from active earning or on death. In these circumstances a tax debt remained to be paid on the former higher income.

The basic step in wiping out this tax debt and bringing taxpayers up-to-date was the cancellation of 50 p.c. of the 1942 tax liability on earned income and on investment income up to \$3,000. Investigation had shown that owing to the deduction of National Defence Tax for the first eight months of 1942 and of the much larger amounts under the 90 p.c. plan in effect during the last four months of 1942, the majority of taxpayers had already paid at least 50 p.c., and, in many cases, considerably more than 50 p.c. of their 1942 liability. For the majority of taxpayers the 50 p.c. cancellation thus completely wiped out the tax arrears for 1942 and brought them up-to-date in their payments. All deductions made during 1943 have been for the tax on income earned in 1943.

Taxpayers will continue to file an annual return (in respect of 1943 income on or before Apr. 30, 1944) in which they will take account of deductions withheld from their income during the year, and make up whatever balance may be owing against their full annual liability or make any other adjustment that may be necessary. A new table of tax deductions introduced on Apr. 1, 1943, designed to withhold 95 p.c. of the full tax liability, will leave a smaller balance to be paid than under the 90 p.c. table previously in use.

Certain changes were also made affecting other groups. The quarterly plan of instalment payments for taxpayers, other than wage and salary earners, was made to coincide with the calendar year, while farmers will be required to pay two-thirds of their tax by Dec. 31 and the balance before Apr. 30 of the following year.

### Revenues and Expenditures

In the fiscal year ended Mar. 31, 1943, both revenues and expenditures far exceeded any year in the history of the Dominion. Revenues increased by \$760,960,000 to \$2,249,496,000, mainly accounted for by the increase in income tax and excess profits tax collections. Of total disbursements of \$4,387,124,000, expenditures on the War accounted for \$3,724,249,000 or approximately 85 p.c. Ordinary expenditures, covering the normal operating costs of the Government, increased by \$116,000,000 mainly owing to increased debt charges arising out of the War and the payment

of compensation to the provinces under the Dominion-Provincial taxation agreements (see p. 178). Special expenditures, mainly for agricultural relief purposes, decreased by \$33,000,000, while expenditures on Government-owned enterprises remained unchanged. The over-all deficit or increase in net debt for the year amounted to \$2,137,628,000 compared with \$396,530,000 in the previous fiscal year.

### War Loans

The First and Second War Loans and the 1941 Victory and Second Victory Loans were sold by the Government to the Canadian public to provide a part of the funds required for various purposes that were not covered by revenue. The First War Loan, dated Feb. 1, 1940, was sold in an amount of \$250,000,000 (\$200,000,000 for cash); the Second War Loan, dated Oct. 1, 1940, was sold in an amount of \$324,945,700 (\$300,000,000 for cash); the 1941 Victory Loan, dated June 15, 1941, was sold in a total amount, for the two maturities, \$836,820,250 (\$730,376,250 for cash). The Second Victory Loan dated Mar. 1, 1942, was sold in a total amount, for the three maturities, of \$996,706,900 (\$843,127,900 for cash) from 1,681,267 subscribers. The Third Victory Loan, dated Nov. 1, was sold in a total amount for two maturities, of \$991,389,050 (all cash) from 2,041,610 subscribers.

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Service Pilots from many Countries Buying Victory Bonds at an Airport Branch of a Chartered Bank.  
*Courtesy, Royal Bank of Canada*



The Fourth Victory Loan, dated May 1, 1943, was sold in a total amount, for two maturities, of \$1,291,000,000 (all cash) from 2,431,949 subscribers. The Fifth Victory Loan, dated Nov. 1, 1943, was sold in a total amount, for two maturities, at \$1,571,311,550 (\$1,383,275,250 for cash) from 3,033,051 subscribers.

*War Savings Certificates.*—To provide a form of savings for those not able to purchase the bonds of larger denominations of Victory and War Loans and to provide a means of regular savings, the Government instituted the sale of War Savings Certificates and Stamps in May, 1940. The Stamps are sold in the denomination of 25 cents and may be accumulated for the purchase of War Savings Certificates. The Certificates are issued at a cost to the purchaser of \$4, \$8, \$20, \$40 and \$80, and if held to maturity, seven and one-half years after issue date, are redeemable at \$5, \$10, \$25, \$50 and \$100, respectively, and for lesser amounts if redeemed prior to maturity. The yield to the investor, if held to maturity, is 3 p.c., compounded semi-annually. From May 27, 1940, to Oct. 31, 1943, Certificates having a purchase value of \$250,142,960 were sold.

In June, 1940, arrangements were made to issue Non-Interest Bearing Certificates in the denomination of one dollar or over, maturing June 15, 1945, but subject to redemption at the option of the holder at any time after six months from the date of issue.

#### Summary of Total Revenues and Expenditures, Fiscal Years 1939-43

Item	1939	1940	1941	1942	1943
	\$'000	\$'000	\$'000	\$'000	\$'000
<b>Revenues</b>					
Customs Import Duties.....	78,751	104,301	130,757	142,392	118,963
Excise Duties.....	51,314	61,032	88,608	110,091	138,721
Income Tax.....	142,026	134,449	220,471	403,606	860,189
National Defence Tax.....	—	—	27,672	106,637	—
Excess Profits Tax.....	—	—	23,995	135,168	434,581
Sales Tax.....	122,139	137,446	179,701	236,183	232,929
War Exchange Tax.....	—	—	61,932	100,874	94,553
Other taxes.....	41,477	30,457	37,404	125,962	186,784
Totals, Revenues from Taxation...	435,707	467,685	770,540	1,360,913	2,066,720
Non-tax revenues.....	62,310	73,931	89,215	102,911	116,079
Totals, Ordinary Revenues.....	498,017	541,616	859,755	1,463,824	2,182,799
Special receipts and other credits..	4,154	20,477	12,415	24,712	66,697
<b>Totals, Revenues.....</b>	<b>502,171</b>	<b>562,093</b>	<b>872,170</b>	<b>1,488,536</b>	<b>2,249,496</b>
<b>Expenditures</b>					
Ordinary Expenditures.....	413,032	398,323	390,629	444,778	561,251
Capital Expenditures.....	5,424	7,030	3,358	3,430	3,276
War Expenditures (special).....	—	118,291	752,045	1,339,674	3,724,249
Other special expenditures <sup>1</sup> .....	71,895	89,113	42,869	63,976	31,288
Government-owned enterprises <sup>2</sup> .....	58,944	42,079	18,182	1,214	1,248
Other charges.....	3,768	25,958	42,518	31,994	65,812
<b>Totals, Expenditures.....</b>	<b>553,063</b>	<b>680,794</b>	<b>1,249,601</b>	<b>1,885,066</b>	<b>4,387,124</b>
<b>Deficits.....</b>	<b>50,892</b>	<b>118,701</b>	<b>377,431</b>	<b>396,530</b>	<b>2,137,628</b>

<sup>1</sup> Includes \$27,000,000, \$10,500,000 and \$12,600,000 reserve against estimated loss on wheat guarantees for 1939-40, 1940-41, and 1941-42, respectively.

<sup>2</sup> Includes net income deficit of the Canadian National Railways incurred in the calendar years 1938 to 1940 as follows: \$54,314,000, \$40,096,000 and \$16,965,000, taken into the accounts of the Dominion in the fiscal year after the close of the calendar year.

Designing Postage Stamps.—The artist preparing the design for the six-cent air-mail stamp for which he carefully studies four R.C.A. photographic prints.

*Courtesy, National Film Board*



### Analysis of Income Tax Collections

The income tax was introduced during the War of 1914-18, as part of what is still known as war-tax revenue. It is a war tax in name only, for even before the outbreak of the present War it had become a permanent and important part of the taxation structure, and the chief means of raising ordinary revenue. It is now, of course, playing a still more important role in the raising of revenue. In many respects, it is an ideal form of direct taxation; the incidence is admittedly fair and just and the machinery for the collection of this tax was ready to hand.

The pressure of war financing naturally forced the Government to lower the exemption limits and this broadening of the field, as well as the switch over to a "pay-as-you-go" basis, has made it impossible to compile statistics relating to income groups and occupational classes on a comparable basis. At the present time, work is under way on the compilation of detailed statistics regarding the incomes assessed for the taxation year 1941. These will be the beginning of a new series of income tax compilations and will relate the collection more closely to the year in which the income is actually earned.

As an indication of the manner in which the income tax is broadening out to cover a greater proportion of the population than was formerly the case, the table showing the number of assessable returns filed is of interest. This table covers the taxation year, i.e., the year in which the income was earned, while the second table shows the amounts collected under the various sections of the Income Tax Act in the fiscal years ended Mar. 31, 1935-43.

Record of Assessable Returns Filed, by Taxation Years, 1935-41

Taxation Year	Individual Returns Filed	Corporation Returns Filed	Total Returns Filed
	No.	No.	No.
1935.....	189,748	9,950	199,698
1936.....	212,112	11,343	223,455
1937.....	240,956	12,539	253,495
1938.....	245,134	11,761	256,895
1939.....	257,186	12,619	269,805
1940.....	684,359	14,806	699,165
1941.....	896,947	15,725	912,672

<sup>1</sup> Calendar year in which income earned in the case of individuals and, for corporations, the business year ending within the calendar year.



## Collections Under the Income War Tax Act, Fiscal Years 1935-43

Fiscal Year	General Income Tax		Tax on Dividends and Interest Sect. 9B	Tax on Rents and Royalties Sect. 27	Gift Tax Sect. 88	Total
	Individuals Sect. 9-1	Corporations Sect. 9-2				
	\$	\$	\$	\$	\$	\$
1935.....	25,204,392	35,790,239	5,816,435	—	—	66,808,066
1936.....	32,788,746	42,518,971	7,207,601	—	194,485	82,709,803
1937.....	35,358,302	58,012,843	8,910,014	—	84,083	102,365,242
1938.....	40,070,942	69,768,605	10,152,088	—	373,897	120,365,532
1939.....	46,591,449	85,185,887	9,903,046	—	345,756	142,026,138
1940.....	45,008,858	77,920,002	11,121,632	—	398,074	134,448,566
1941.....	75,636,231	131,565,710	12,282,259	759,957	226,847	248,143,022 <sup>1</sup>
1942.....	189,237,538	185,835,699	26,642,106	1,626,669	264,258	510,243,017 <sup>1</sup>
1943.....	533,915,059	347,969,723	26,710,946	1,369,851	223,093	910,188,672

<sup>1</sup> Includes National Defence Tax amounting to \$27,672,018 in 1941 and to \$106,636,747 in 1942.

## Provincial Finance

Provincial revenues, originally obtained from Dominion subsidies, the public domain and certain limited forms of taxation, increased from \$5,519,000 in 1871 to \$355,311,000 in the provincial fiscal years ending nearest Dec. 31, 1940. In 1940, six sources accounted for 71.9 p.c. of the total revenue as follows: Dominion of Canada subsidies and subventions, \$63,130,000 (17.8 p.c.); gasoline taxes, \$54,077,000 (15.2 p.c.); corporation taxes, \$51,208,000 (14.4 p.c.); liquor control, \$35,515,000 (10.0 p.c.), public domain, \$26,971,000 (7.6 p.c.); motor-vehicle licences, \$24,591,000 (6.9 p.c.).

## Aggregate Provincial Revenues and Expenditures

NOTE.—Figures for 1940 are not strictly comparable with preceding years. Years following 1939 include provincial fiscal years nearest to Dec. 31 instead of the fiscal years ended in the year specified

Fiscal Year	Gross Ordinary Revenues	Gross Ordinary Expenditures	Fiscal Year and Province	Gross Ordinary Revenues	Gross Ordinary Expenditures
	\$	\$		\$	\$
1901.....	14,074,991	14,146,059	1940—		
1921.....	102,030,458	102,569,515	P.E. Island.....	1,970,000	2,195,000
1926.....	146,450,904	144,183,178	Nova Scotia.....	16,962,000	15,790,000
1929.....	183,598,024	177,542,192	New Brunswick...	12,859,000	12,427,000
1930.....	188,154,910	184,804,203	Quebec.....	72,228,000 <sup>2</sup>	68,598,000 <sup>2</sup>
1935.....	160,567,695 <sup>1</sup>	181,175,687 <sup>1</sup>	Ontario.....	131,216,000	116,857,000
1936.....	232,616,182	248,141,808	Manitoba.....	23,514,000	22,306,000
1937.....	268,497,670	253,443,737	Saskatchewan...	28,756,000	33,203,000
1938.....	287,955,846	273,861,417	Alberta.....	25,956,000	21,597,000
1939.....	296,873,259	289,228,598	Br. Columbia...	41,850,000	37,957,000
1940.....	355,311,000 <sup>2</sup>	330,930,000 <sup>2</sup>			

<sup>1</sup> Nova Scotia figures are for fourteen months and Ontario figures for five months. figures are for nine months.

<sup>2</sup> Quebec

The gross provincial funded debt, which totalled \$218,876,000 in 1916 and increased steadily until it reached \$1,734,274,912 in 1940, declined in 1941 to \$1,708,049,903. A further decrease is indicated for 1942, but actual figures are not available for all provinces.

## Aggregate Provincial Direct Liabilities, 1940 and 1941

Item	1940 <sup>1</sup>	1941 <sup>1</sup>	Province	1940 <sup>1</sup>	1941 <sup>1</sup>
	\$	\$		\$	\$
Gross funded debt.....	1,734,274,912	1,708,049,903	Prince Edward Island.....	9,467,733	9,489,494
Less sinking funds.....	156,735,820	151,437,610	Nova Scotia.....	98,478,264	98,977,109
Net funded debt.....	1,577,539,092	1,556,612,293	New Brunswick.....	97,043,223	97,008,979
Treasury bills.....	270,742,723	279,187,921	Quebec.....	387,747,347	383,542,315
Savings deposits.....	41,731,668	38,192,476	Ontario.....	729,815,356	724,938,879
Temporary loans.....	8,820,073	8,277,713	Manitoba.....	116,384,140	112,251,698
Superannuation and other deposits.....	18,532,354	18,425,574	Saskatchewan.....	207,460,114	208,593,307
Accrued interest.....	21,360,343	21,129,559	Alberta.....	151,963,036	150,827,448
Accounts payable and other liabilities.....	18,552,423	14,128,226	British Columbia.....	158,919,463	150,324,533
<b>Totals, Direct Liabilities (less sinking funds)</b>	<b>1,957,278,676</b>	<b>1,935,953,762</b>	<b>Totals, Direct Liabilities (less sinking funds)</b>	<b>1,957,278,676</b>	<b>1,935,953,762</b>

<sup>1</sup> For fiscal years ending nearest to Dec. 31.

## Municipal Finance

In 1941 there were 4,018 incorporated municipalities in Canada, including, in Ontario and Quebec, 114 counties, comprised of the local towns, villages and rural municipalities situated therein, which provide the necessary funds for the services falling within the scope of county administration. There are also counties in Nova Scotia and New Brunswick, but these are basically the same as rural municipalities in the other provinces. In two of the western provinces, Saskatchewan and Alberta, there are also areas that are similar to rural municipalities, except that they enjoy a lesser degree of local services and are not self-governing. These are called "Improvement Districts". The Provincial Governments administer the services provided in these areas and also levy and collect the necessary taxes.

**Revenues and Expenditures.**—The chief source of municipal revenues is the taxation of real estate. Other major revenues are derived from business and personal property taxes, as well as from taxes on retail sales, although these types of revenues are not general in all provinces. Municipal revenues, including local schools, for 1941 are estimated at \$320,300,000.\* Of this amount, \$243,800,000 or 76 p.c. represents taxes on real estate; \$36,500,000 or 11 p.c. other taxes; and \$40,000,000 or 13 p.c. comes from miscellaneous sources. In 1938, revenues were \$309,500,000†; 78 p.c. was derived from real property taxes and other taxes represented 10 p.c. of the total.

Expenditures in 1941 are estimated at \$313,200,000.\* The support of local schools represented the largest single item of expenditure and required \$84,000,000 or 26 p.c. of the total. Other services such as public welfare, streets and roads, police and fire protection, etc. (but excluding debt service charges) amounted to \$149,300,000 or 47·7 p.c., and debt service charges, including debt retirement, amounted to \$79,900,000 or 25·5 p.c. of the total. Total expenditures in 1938 were \$318,300,000 with \$79,000,000 or 24·8 p.c. going for the support of local schools; \$154,900,000 or 48·7 p.c. for other services and \$84,400,000 or 26·5 p.c. for debt service and debt retirement.

\*Statistical Summary, Bank of Canada, Aug.-Sept. 1942.  
 Aug.-Sept. 1941.

†Statistical Summary, Bank of Canada



Selling Bonds at a Rural Branch Bank, during the Fifth Victory Loan Campaign.

*Courtesy, Bank of Montreal*

**Bonded Debt.**—Municipalities in Canada have experienced rapid growth, which, coupled with increased demands and responsibilities for improvements (schools, utilities and other services or facilities), resulted in the incurring of a heavy burden of debt. The following table shows the debt for 1919 in comparison with figures for 1940 and 1941, together with sinking funds held on debt account. The figures for 1919 are not entirely comparable with those for recent years as more complete detail is now available. The later figures are

not entirely inclusive, because the debt for rural schools in the Maritimes and for Separate School Boards and district schools in Ontario are not shown.

**Municipal Bonded Debt and Sinking Funds, by Provinces, 1919 and 1940-41**

Province	Gross Bonded Debt			Sinking Funds	
	1919	1940	1941 <sup>1</sup>	1940	1941 <sup>1</sup>
	\$'000	\$'000	\$'000	\$'000	\$'000
Prince Edward Island.....	970	3, 215	3, 168	569	643
Nova Scotia.....	17, 864	35, 593	34, 092	13, 790	13, 045
New Brunswick.....	11, 188	26, 358	26, 142	8, 683	9, 009
Quebec.....	199, 706	515, 801	502, 707	87, 175	92, 400
Ontario.....	243, 227	365, 661	335, 393	53, 420	52, 786
Manitoba.....	55, 563	78, 849	73, 836	34, 626	33, 745
Saskatchewan.....	39, 585	51, 054	50, 078	22, 152	23, 259
Alberta.....	66, 870	54, 869	52, 753	9, 324	8, 580
British Columbia.....	94, 742	112, 401	108, 514	29, 604	29, 032
<b>Totals.....</b>	<b>729, 715</b>	<b>1, 244, 601</b>	<b>1, 186, 683</b>	<b>259, 343</b>	<b>262, 499</b>

<sup>1</sup> Subject to minor revision.

During the depression years, capital undertakings and works requiring debenture financing were severely curtailed. With the advent of the present War, this policy of deferment has been continued, if not further extended, so as to leave the financial market as free of municipal borrowings as possible and available to the needs of the Dominion Government in meeting its war-financing requirements. As a result, the trend of municipal bonded debt in recent years has been downward, as illustrated in the above figures for 1940 and 1941. A further significant factor in this regard is that the greater part of the total municipal debt is represented by serial or instalment type debentures, which require yearly repayments of principal.

## CHAPTER XVI

### Currency—Banking—Insurance

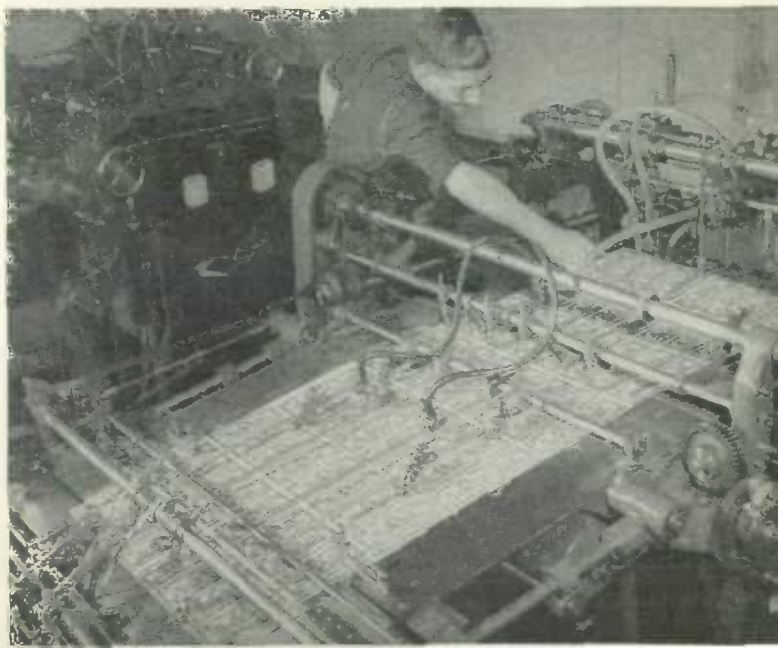
#### Currency

The use of the dollar as a monetary unit was extended throughout the new Dominion by the Uniform Currency Act of 1871. The Canadian gold dollar weighs 25·8 grains, nine-tenths fine gold, and thus contains 23·22 grains of gold. Only very limited issues of gold coin have ever been made. British and United States gold coin are legal tender in Canada. Subsidiary silver coin is legal tender up to \$10; the 5-cent piece (now made of zinc and copper) is legal tender up to \$5; and the 1-cent bronze coin, up to 25 cents. Since 1931, the Government has permitted the export of gold only under licences issued by the Department of Finance, thus conserving the gold resources of the nation to meet the external obligations, and Canadian mines now dispose of their gold through the Royal Canadian Mint according to definite conditions of purchase.

**Bank Notes.**—Under the Bank Act the chartered banks may issue notes of the denominations of \$5 and multiples thereof to the amount of their paid-up capital. This amount was reduced by 5 p.c. per annum for a period of five years from Jan. 1, 1936, and is to be reduced by 10 p.c. per annum for a period of five years from Jan. 1, 1941. In case of insolvency, bank notes are a first lien on assets and for over sixty years no note holder has lost a dollar.

In addition to notes of the chartered banks, there are also in circulation notes of the Bank of Canada. These notes may be issued to any amount as long as the Bank maintains a reserve in gold equal to at least 25 p.c. of its note and deposit liabilities (but see p. 188).

Over-Printing the Signatures of the Governor and the Deputy Governor on Banknotes.—This is done at the Bank of Canada under closely guarded conditions.





## Bank Notes Outstanding, Representative Years, 1900-43

(Yearly Averages)

Year	Dominion or Bank of Canada Notes Outstanding	Chartered Bank Notes Outstanding	Year	Dominion or Bank of Canada Notes Outstanding	Chartered Bank Notes Outstanding
	\$	\$		\$	\$
1900.....	26,550,465	46,574,780	1936.....	105,275,223 <sup>1</sup>	119,507,306
1910.....	89,628,569	82,120,303	1937.....	141,053,457 <sup>1</sup>	110,259,134
1920.....	305,806,288	288,800,379	1938.....	161,137,059 <sup>1</sup>	99,870,493
1929.....	204,381,492	178,291,030	1939.....	184,904,919 <sup>1</sup>	94,064,907
1931.....	153,079,362	141,969,350	1940.....	277,095,305 <sup>1</sup>	91,134,378
1932.....	165,878,510	132,165,942	1941.....	406,433,409 <sup>1</sup>	81,620,753
1933.....	179,217,446	130,362,488	1942.....	572,256,208 <sup>1</sup>	71,743,242
1934.....	190,261,981	135,537,793	1943.....	756,217,471 <sup>2</sup>	51,523,607 <sup>2</sup>
1935.....	127,335,340 <sup>1</sup>	125,644,102			

<sup>1</sup> Since Mar. 11, 1935, the figures used represent Bank of Canada notes.<sup>2</sup> Ten-month figure.

## Banking

Banking in Canada began to develop some of the features of a central bank system soon after Confederation. These in chronological order are:—

(1) *Central Note Issue*, permanently established with the issue of Dominion notes under legislation of 1868.

(2) *The Canadian Bankers' Association*, established in 1900 to effect greater co-operation in the issue of notes, in credit control, and in various other ways.

(3) *Central Gold Reserves*, established in 1913.

(4) *Re-discount Facilities*, made a permanent feature of the system in 1923, provided the banks with a means of increasing their legal tender cash reserves at will.

(5) *The Bank of Canada*, established as a central bank in 1935.

**The Bank of Canada.**—Legislation was enacted in 1934 to establish the Bank of Canada as a central or bankers' bank. All of its stock is now vested in the Dominion Government. The Bank regulates the statutory cash reserves of the chartered banks, which are required to maintain not less than 5 p.c. of their deposit liabilities payable in Canadian dollars in the form of deposits with, and notes of, the Bank of Canada. The Bank also acts as the fiscal agent of the Dominion of Canada and may, by agreement, act as banker or fiscal agent for any province. Bank of Canada notes, which are legal tender, are the main source of paper money in Canada and will become increasingly so since the chartered banks must gradually reduce their note issues to 25 p.c. of their paid-up capital.

The Bank of Canada is empowered to buy and sell securities in the open market; to discount securities and commercial bills; to fix minimum rates at which it will discount; to buy and sell bullion and foreign exchange. Under the Exchange Fund Order, 1940, the Bank transferred its reserve of gold to the Foreign Exchange Control Board in which Canada's exchange reserves have now been centralized. At the same time the Bank of Canada's statutory 25 p.c. minimum gold reserve requirement against its note and deposit liabilities was temporarily suspended.

**The Canadian Banks and the Dominion's War Effort.**—Because they operate for the most part on a nation-wide scale, the chartered banks of Canada from the first have been in a position to exercise an extraordinarily potent influence on Canada's

#### Ration Banking.—

Ration banking is a new and major war-time undertaking for the banks. It means checking, sorting and entering thousands of ration coupons daily. In an average week one branch alone handles as many as 400,000 coupons.



*Courtesy, Royal Bank of Canada*

war effort. The experience, resources and organization of these banks, with their thousands of branches throughout the country, have been placed unreservedly at the disposal of the Dominion Government, and have been of great assistance not only in carrying out much of the administrative work connected with the control of measures necessary for the maintenance of financial equilibrium but also for the services of experts to assist in operations connected with the financing of war operations.

To-day, the volume of business handled by the banks is on a level phenomenally higher than at any time in their history, yet their staffs of experienced men are much smaller than in peace-time, owing to the fact that nearly 7,000 of their younger men are serving in the Armed Forces. These men have had to be replaced by women, quickly and intensively trained for their work.

The most onerous war work devolving on the chartered banks has been the administration of the regulations of foreign exchange control. These regulations, which are numerous and complicated, entail much extra work by the staffs of the leading offices, involving as they do explanations to customers, advice as to procedure, the filling out of forms and full responsibility for all the innumerable international transactions involved.

Other war work includes handling details connected with the offering and sale of Victory Bonds; selling war savings certificates and war savings stamps; ration-coupon banking; establishment of branches at military camps; cashing of innumerable cheques for Government employees and members of the Armed Forces and their dependants; the cashing of coupons for the hundreds of thousands of holders of Victory Bonds; the administering of much detail of Canada's cheque stamp law; the collecting and clearing of millions of income tax certificates relative to coupons, cheques and other items cashed and received for deposit.

**Commercial Banking.**—The branch bank is perhaps the most distinctive feature of the Canadian system as it exists to-day, and for a country such as Canada, vast in area and with a small population, the plan has proved a good one. A result of the growth of branch banks was the development of a partly centralized system. The number of chartered banks, which was 36 in 1881 and 34 in 1901, decreased to

## CANADA 1944

25 in 1913 and is now only 10, but has been accompanied by a great increase in the number of branches. In 1868 there were only 123 branch banks in Canada. By 1902 the number, including sub-agencies, had grown to 747, by 1916 to 3,198 and by 1929 to 4,069, but by the beginning of 1943 the number had decreased to 3,129. Commencing in 1941, in the effort to conserve manpower, numerous branches of the chartered banks have been closed down temporarily, but this has been planned between the banks so that no area in Canada is left without adequate banking facilities. From 1867 to October, 1943, the total assets have grown from \$78,000,000 to \$5,267,000,000.

Statistics of Individual Chartered Banks as at Oct. 31, 1943

Bank	Branches in Canada and Abroad <sup>1</sup>	Total Assets	Liabilities to Share- holders	Liabilities to the Public	Total Liabilities	Loans and Dis- counts	De- posits by the Public
	No.	\$ '000,000	\$ '000,000	\$ '000,000	\$ '000,000	\$ '000,000	\$ '000,000
Bank of Montreal.....	446	1,313	75	1,236	1,311	266	1,170
Bank of Nova Scotia.....	277	466	36	428	464	115	391
Bank of Toronto.....	165	230	18	211	229	59	206
Banque Provinciale du Canada..	134	93	5	87	92	18	85
Canadian Bank of Commerce...	487	1,003	50	952	1,002	268	900
Royal Bank.....	622	1,401	55	1,343	1,398	326	1,275
Dominion Bank.....	123	224	14	209	223	67	198
Banque Canadienne Nationale...	215	235	12	221	233	49	216
Imperial Bank of Canada.....	171	270	15	254	269	73	243
Barclay's Bank (Canada) <sup>2</sup> .....	2	32	2	30	32	4	24
<b>Totals, Oct., 1943.....</b>	<b>-</b>	<b>5,267</b>	<b>282</b>	<b>4,971</b>	<b>5,253</b>	<b>1,245</b>	<b>4,708</b>
<b>Totals, 1942.....</b>	<b>2,642</b>	<b>4,400</b>	<b>281</b>	<b>4,102</b>	<b>4,383</b>	<b>1,370</b>	<b>3,834</b>
<b>Totals, 1941.....</b>	<b>2,830</b>	<b>4,008</b>	<b>279</b>	<b>3,712</b>	<b>3,991</b>	<b>1,403</b>	<b>3,465</b>
<b>Totals, 1940.....</b>	<b>2,846</b>	<b>3,707</b>	<b>279</b>	<b>3,411</b>	<b>3,690</b>	<b>1,324</b>	<b>3,180</b>
<b>Totals, 1939.....</b>	<b>2,861</b>	<b>3,592</b>	<b>279</b>	<b>3,298</b>	<b>3,578</b>	<b>1,244</b>	<b>3,061</b>
<b>Totals, 1938.....</b>	<b>2,875</b>	<b>3,349</b>	<b>279</b>	<b>3,057</b>	<b>3,336</b>	<b>1,201</b>	<b>2,824</b>
<b>Totals, 1935.....</b>	<b>2,978</b>	<b>2,957</b>	<b>278</b>	<b>2,668</b>	<b>2,946</b>	<b>1,276</b>	<b>2,427</b>
<b>Totals, 1930.....</b>	<b>3,598</b>	<b>3,237</b>	<b>305</b>	<b>2,910</b>	<b>3,215</b>	<b>2,065</b>	<b>2,517</b>
<b>Totals, 1920.....</b>	<b>4,876</b>	<b>3,064</b>	<b>252</b>	<b>2,784</b>	<b>3,036</b>	<b>1,935</b>	<b>2,438</b>
<b>Totals, 1910.....</b>	<b>2,621</b>	<b>1,211</b>	<b>179</b>	<b>1,019</b>	<b>1,198</b>	<b>870</b>	<b>910</b>
<b>Totals, 1900.....</b>	<b>641</b>	<b>460</b>	<b>98</b>	<b>356</b>	<b>454</b>	<b>279</b>	<b>305</b>

<sup>1</sup> As at Dec. 31 of previous year. Does not include sub-agencies.

commenced operations in Canada in September, 1929.

<sup>2</sup> Barclay's Bank commenced operations in Canada in September, 1929.

<sup>3</sup> Averages from the respective monthly statements, except in the case of the numbers of branches in Canada and abroad, which are as at

Dec. 31.

<sup>4</sup> 1911.

Payroll Line-Up at the Alaska Highway Sub-agency of a Dawson City Branch Bank.

Courtesy, Canadian Bank of Commerce



The banks of Canada had among them, at the beginning of 1943, 135 branches (not including sub-agencies) in foreign countries, mainly in Newfoundland, the West Indies, Central and South America.

**Bank Clearings and Bank Debits.**—Inter-bank transactions recorded through the clearing houses form a valuable indication of the trend of business. However, they do not tell the whole story, since numerous transactions between persons who carry their accounts in the same bank are not recorded in bank clearings; also, every amalgamation of banks lessens the total volume of clearings. Again, head-office clearings have been effected through the Bank of Canada since Mar. 11, 1935, and this has tended to increase exchanges compared with previous years. For these reasons, a record of cheques debited to accounts at all branches at clearing-house centres is considered to possess greater reliability as a barometer of economic conditions. From 1929 there was a steady decline to the 1932 level of \$25,844,000,000, but in the next four years the movement was generally upward, reaching \$35,929,000,000 in 1936. In 1937 and 1938 there were recessions, a slight increase was shown for 1939, but for 1940 the increase for the year amounted to 9 p.c., and in 1941 and 1942 the annual increases over the preceding years amounted to 14 p.c. and 16 p.c., respectively. Cheque transactions were \$38,378,000,000 in the first nine months of 1943, representing a gain of 18.8 p.c. over the same period of the preceding year. The economic expansion, due mainly to war production, was the chief cause of the acceleration in deposit turnover.

Bank Debits at the Clearing-House Centres, by Economic Areas, 1938-42

Economic Area	1938	1939	1940	1941	1942
	\$	\$	\$	\$	\$
Maritime Provinces.....	639,682,953	679,947,972	824,489,836	940,712,152	1,075,736,890
Quebec.....	9,965,182,391	9,820,399,452	9,973,060,607	11,068,666,580	12,751,093,627
Ontario.....	13,810,063,008	13,618,490,448	15,384,403,480	18,214,788,841	22,136,164,250
Prairie Provinces..	4,572,383,521	5,478,229,879	6,118,407,201	6,591,645,027	6,722,376,622
British Columbia..	1,937,050,855	2,020,284,080	2,137,113,355	2,427,144,584	2,840,882,813
<b>Totals.....</b>	<b>30,924,362,731</b>	<b>31,617,351,831</b>	<b>34,437,474,479</b>	<b>39,242,957,184</b>	<b>45,526,254,202</b>

## Insurance

**Life Insurance.**—The life insurance business was introduced into Canada by companies from the British Isles and the United States of America about the middle of the nineteenth century. By 1875 there were at least 26 companies, and possibly several more, competing for the available business in Canada, as against 41 active companies registered by the Dominion and a few provincial companies in 1942. Of the 41 active companies registered by the Dominion, 28 were Canadian, 3 British, and 10 foreign.

As a result of the adaptation of life insurance policies to the needs of the public, and of the growing wealth of the country, the increase in the amount of life insurance in force has been remarkable. In 1869 the total life insurance in force in Canada, by Dominion registered companies, was only \$35,680,000 as compared with approximately \$7,876,000,000 at the end of 1942. This latter figure was equal to \$684.47 per head of population. In addition, there was \$196,000,000 of fraternal insurance in force by Dominion licensees and \$187,000,000 of insurance in force by provincial licensees.



Thus the total life insurance in force in the Dominion at the end of 1942 was approximately \$8,259,000,000. The premium income from Canadian business of all Dominion registered companies (not including fraternal benefit societies) increased from \$90,000,000 in 1920 to \$221,000,000 in 1930, but decreased to \$216,000,000 in 1942.

**Fire Insurance.\***—Fire insurance in Canada began with the establishment of agencies by British fire insurance companies. These agencies were usually situated in the seaports and operated by local merchants. The oldest existing agency of a British company is that of the Phoenix Fire Office of London, now the Phoenix Assurance Co., Ltd., which opened at Montreal in 1804.

The Halifax Fire Insurance Co. is the first purely Canadian company of which any record is obtainable. Founded in 1809 as the Nova Scotia Fire Association, it was chartered in 1819 and operated in the Province of Nova Scotia until 1919, when it was granted a Dominion licence.

The report of the Superintendent of Insurance for the year ended Dec. 31, 1942, shows that at that date there were 263 fire insurance companies doing business in Canada under Dominion licences, of which 58 were Canadian, 70 were British, and 135 were foreign companies, whereas in 1875, the first year for which authentic records were collected by the Insurance Department, 27 companies operated in Canada—11 Canadian, 13 British, and 3 United States. The proportionate increase in the number of British and foreign companies from 59 to 78 p.c. of the total number is a very marked point of difference between fire and life insurance in Canada, the latter being carried on very largely by Canadian companies.

The enormous increase since 1869 (the earliest year for which statistics are available) in the fire insurance in force is due, no doubt, partly to the growth of the practice of insurance; but it is also important as an indication of the growth of the value of insurable property in the country, and thus throws light upon the expansion of the national wealth of Canada. By 1880, companies with Dominion licences had fire insurance totalling \$411,564,271; by 1900, the one-thousand-million-dollar mark had almost been reached, and by 1930, the total stood at \$9,672,997,000. At the end of 1942, besides \$12,565,212,694 of fire insurance in force in companies with Dominion licences, there was also \$1,528,390,541 in force in companies with provincial licences, or about \$14,084,689,487 in force with companies, associations, or underwriters licensed to transact business in Canada.

**Miscellaneous Insurance.**—Miscellaneous insurance now includes among other classes in Canada: accident (including personal accident, public liability and employers' liability); aircraft; automobile; boiler; credit; earthquake; explosion; falling aircraft; forgery; guarantee; hail; inland transportation; live stock; personal property; plate glass; real property; sickness; sprinkler leakage; theft; title; weather and windstorm. Whereas, in 1880, 18 companies were licensed for such insurance, in 1942 there were 267 companies, of which 59 were Canadian, 72 British and 136 foreign.

The total net premium income of Dominion-registered companies for 1942 was \$49,427,756 and the most important class of miscellaneous insurance, according to the amount of premiums received, was automobile insurance, which has greatly increased during the past twenty-one years although decreases were shown for a few years prior to 1935, there has been an increase each year from 1935 to 1941; in 1942 there was a decrease over 1941 in automobile premium income. As recently

\*1942 figures are from the Insurance Abstract. 1942.

The Victory Nickel Gets Its Colouring.—The gold colour is obtained by the process of acid-dipping followed by a wash in aluminum colanders. Below: The "Tombac" Five-Cent Piece Coined in January, 1943.—On the reverse side, the morse code, which reads clockwise from the bottom centre, symbolizes the slogan "We win when we work willingly".



*Courtesy, National Film Board and Royal Canadian Mint*

as 1910, the premium income of companies doing an automobile insurance business was only \$80,466; in 1916 it was \$909,503 and in 1942, \$20,292,516. The premium income of combined accident and sickness insurance came second with \$5,847,877. Personal property insurance was third in 1942 with \$3,412,987. The premium income of all accident and sickness insurance combined totalled \$15,991,544.



**Canadian Government Annuities.**—The Government Annuities Act authorizes the issue of Government annuities in order to encourage the people of Canada to provide, during the earning periods of their lives, for old age. A Canadian Government annuity is a yearly income of from \$10 to \$1,200, either payable for life, or guaranteed for 10, 15 or 20 years and payable for life thereafter. Annuities may be either deferred or immediate, and may be purchased individually or by associated groups operating under retirement plans.

From the inception of the Act until Mar. 31, 1943, the total number of individual annuity contracts and certificates under group contracts issued was 90,350. The net receipts for the entire period totalled \$212,150,686.

On Mar. 31, 1943, there were in effect 81,627 contracts and certificates. Annuity was payable under 26,361 of these and annuity was still deferred under 55,266. The total amount of annuity payable under the vested contracts was \$10,451,286 and the value of outstanding annuities, both immediate and deferred, was \$190,298,479, this being also the balance at credit of the Annuities Fund as of Mar. 31, 1943.

## Loan and Trust Companies

The principal function of loan companies is the lending of funds on first mortgages on real estate, the money thus made available for development purposes being secured mainly by the sale of debentures to the investing public and by savings department deposits. Of the loan companies under provincial charters, the majority operate largely in the more prosperous farming communities.

The number of loan and savings societies in operation and making returns to the Government at Confederation was 19, with an aggregate paid-up capital of \$2,110,403 and deposits of \$577,299. In 1942 there were 43 loan companies that reported, with a paid-up capital of \$36,013,844 (Dominion companies \$19,038,552 and provincial companies \$16,975,292).

The reserve funds of all real-estate-mortgage loan companies at the end of 1942 were \$22,914,797 (Dominion companies \$13,446,952 and provincial companies \$9,467,845); liabilities to the public \$123,007,266 (Dominion companies \$92,976,410 and provincial companies \$30,030,856); and liabilities to shareholders \$61,926,181 (Dominion companies \$33,736,964 and provincial companies \$28,189,217).

Trust companies act as executors, trustees, and administrators under wills or, by appointment, as trustees under marriage or other settlements, as agents or attorneys in the management of the estates of the living, as guardians of minors or incapable persons, as financial agents for municipalities and companies and, where so appointed, as authorized trustees in bankruptcy.

The aggregate total assets of the trust companies of Canada at the end of 1942 were \$2,961,450,303 as compared with \$805,000,000 in 1922 (the earliest year for which figures are available). The bulk of these assets (\$2,735,788,564 in 1942) was represented by estates, trusts and agency funds. The assets of Dominion companies in 1942 amounted to \$348,250,993 and of provincial companies to \$2,613,199,310.

## Small Loans Companies and Money-Lenders

The small loans companies, 3 in number and incorporated in recent years by the Parliament of Canada, make small loans of \$500 or less on the promissory notes of borrowers, additionally secured, in most cases, by endorsements or chattel mortgages. Such companies, at the end of 1942, had an aggregate paid-up capital of \$3,734,250; reserve funds, \$594,589; borrowed money, \$2,572,615; other liabilities, \$2,158,808; small loans made, \$16,797,124; small loans balances, \$8,485,589.

On Jan. 1, 1940, the Small Loans Act, 1939 (c. 23, 3 George VI) passed by the Parliament of Canada, came into force under which licensed money-lenders making personal loans of \$500 or less are limited to a rate of cost of loan of 2 p.c. per month on outstanding balances and unlicensed lenders to a rate of 12 p.c. per annum, including interest and charges of every description. As at Dec. 31, 1942, there were 69 licences issued under the Small Loans Act, 1939, of which 3 were issued to small loans companies and 66 to money-lenders. The 66 money-lenders made personal loans in 1942 of \$8,838,864 and at the end of that year had outstanding small loans balances of \$4,704,257.

## CHAPTER XVII

### Education

Canada's constitution assigns public education, except in the case of the native Indian population, to the jurisdiction of the Provincial Governments. A system of public elementary and secondary education, financed mainly by local school authorities (of which there are about 23,500), but assisted by provincial grants, has developed in each province. Since 1913 the Dominion Government has provided certain grants to the provinces for education—first, in aid of agricultural instruction; later, technical education and, since 1937, for the training of unemployed youth. Yet, in spite of provincial and Dominion assistance, more than 80 p.c. of the cost of operating the schools is met by local school authorities, the source of revenue being almost entirely by taxation on real estate.

There are some private schools in all provinces, i.e., schools that are not conducted by publicly elected or publicly appointed boards, and not financed out of public money, but their enrolment amounts to only about 4 p.c. of the total. In the realm of higher education, six provinces have each a provincially supported university and the remaining three have each one or more colleges supported by provincial funds, but in most of them there is a considerable number of students in private, endowed, or denominational colleges.

#### Summary Statistics of Education in Canada, 1941

NOTE.—Figures in even hundreds are approximate only.

Type of School or Course	Institutions	Pupils	Teachers	Expenditure
	No.	No.	No.	\$
<b>Provincially Controlled Schools—</b>				
Ordinary and technical day schools.....	32,800	2,082,487	76,350	129,000,000
Evening schools.....	431	93,944	2,525	
Correspondence courses.....	8	23,568	350	
Special schools.....	20	5,088	500	
Normal schools.....	81	6,468	882	
<b>Privately Controlled Schools—</b>				
Ordinary day schools.....	853	89,798	4,976	5,600,000
Business training schools.....	184	19,356	656	
<b>Dominion Indian Schools.....</b>	370	17,425	580	1,908,274
<b>Universities and Colleges—</b>				
Preparatory courses.....	60 <sup>1</sup>	19,885	1,369	21,000,000
Courses of university standard.....	155	48,835	5,198	
Other courses at university.....	10 <sup>1</sup>	40,674		
<b>Totals.....</b>	<b>35,000</b>	<b>2,447,528</b>	<b>93,000</b>	<b>156,500,000</b>

<sup>1</sup> Includes only affiliated schools that are not enumerated in "Courses of university standard".

#### The Schools in War-time

Schools that opened in Canada for the school year 1943-44 were somewhat depleted as to both staff and students but as compared with many other countries, most of them did open and were able to carry on without danger to the health and safety of the children.





Listening to the CBC  
School Broadcasts in  
the Class Room.

*Courtesy, Canadian  
Broadcasting  
Corporation*

Some, particularly high schools, opened a few weeks late in order that the older children might help with the harvest and related seasonal industries. Older pupils are fewer than in normal years—at ages 18 and over, not more than half as numerous. At all ages over 14 years there is a considerable depletion in numbers, alike among girls and boys. In 1942-43 the enrolment of these older children was 20 p.c. less than four years earlier. Opportunities for employment of urban children and the need for farm children to help at home seem to have been the main reasons.

In recent years there have been two important compulsory school-attendance Acts. An Act of 1941 in New Brunswick abolished "local option" in the matter of obligatory attendance and made it universal in the Province. An Act of 1943 in Quebec made school attendance compulsory in that Province for the first time.

Against the reduced school enrolment the great volume of technical teaching being done within the Armed Forces and under the War Emergency Training Program must be considered (see p. 148).

Teachers as well as pupils have left the schools in large numbers to join the Armed Forces or to enter other employment. This movement became so serious that an Order in Council was passed in June, 1943, "freezing" teachers in their profession. It provides that no person presently engaged as a teacher in a school, college or university which is not carried on for gain, can leave teaching except for active service in the Armed Forces or employment in agriculture unless by special permit from a Selective Service Officer.

Objection to this measure was taken by the Canadian Teachers' Federation, particularly on account of low salary levels prevailing in rural schools and the absence of any legal obligation on the part of school boards to pay the cost-of-living bonus that is general in industry. It was pointed out that average monthly salaries for the teachers of one-room schools vary in the different provinces from about \$40 to \$70, rates which make present-day factory workers' earnings particularly attractive.

Learning to Become  
a Skilled Workman  
in a Technical  
School.



*Courtesy, National  
Prime Board*

### Plans for Post-War Education

During 1943 a committee of the Canada and Newfoundland Education Association published a report on "educational needs in the Dominion of Canada", recommending goals to be striven for in the years immediately ahead. Raising the level of teachers' salaries was seen as the need requiring the greatest financial outlay and other expenditures for the equalization of rural and urban educational opportunity were seen as the second greatest. Large outlays for health services through the schools came third, and the establishment of special classes for exceptional children, fourth. Altogether, it was considered that present annual expenditures on schools should be doubled and that, in addition, substantial capital expenditures were required for new building and the replacement of unsatisfactory plant.

Important recommendations affecting the universities in particular were the establishment of scholarship systems and the establishment of 150 junior colleges at suitable locations throughout the country. The field of university education, as such, was not included in the survey.

In the matter of education beyond the usual ages of school leaving, the two major recommendations were: greatly extended public library service; and compulsory school attendance to the age of 16 and part-time attendance to the age of 18. It was considered, too, that the work of the Canadian Association for Adult Education should receive increased support.

Copies of the 80-page document may be obtained from the Secretary, Canada and Newfoundland Education Association, Ontario College of Education, Toronto.

### Education for the Armed Forces

With the establishment of a Directorate of Army Education in the spring of 1943, all three Armed Services became interested in the promotion of general education. An Education Section was established in the R.C.A.F. in 1942, and a Department of Naval Education in 1941. All three agencies draw upon the assistance of the Canadian Legion Educational Services, organized in the winter of 1939-40.

The typical Education Officer in the Services is a university graduate with teaching experience in secondary schools. Duties vary somewhat between the Services, but include in all cases the organization of discussion groups and some responsibility for making educational books available. Through the medium of Canadian Legion Educational Services it is now possible for the Education Officer to direct the men of his unit to correspondence courses at all levels from the most elementary to university graduation. Provincial Departments of Education and universities in all parts of the country have co-operated to make this possible.

By the end of 1943 something like 100,000 men had been discharged from the Armed Forces. Provision for them, and for those who will be demobilized later, to resume their education is being administered by the Rehabilitation Branch of the Department of Pensions and National Health. It is anticipated that the plan will result in a heavy post-war enrolment, especially in universities and technical schools.

### **The Universities**

University enrolment has been characterized by increases in Engineering and Applied Science, Medicine and Dentistry in which there has been acceleration of courses and governmental financial aid to students. Enrolment in Arts Colleges is reduced and their staffs have been depleted by loans to Government Departments for the duration of the War, but except at the post-graduate level approximately the usual range of work is being carried on. Their situation reflects the policy of the Government expressed in a published letter of the Prime Minister to the Canadian Social Science Research Council in 1943: "I wish to express on behalf of the Government our recognition of the importance to our future as a nation, and to the cause for which we are fighting, of the maintenance of the liberal tradition of education in the humanities".

Courses of training for the Armed Services have been conducted on many of the university campuses, and numerous university residences have been placed at their disposal.

### **Education by Radio**

One of the significant developments in the field of adult education during the past two or three years has been the increased organized use of radio as a medium. The National Farm Radio Forum, sponsored jointly by the Canadian Broadcasting Corporation, the Canadian Association for Adult Education and the Canadian Federation of Agriculture, is reported to have had something like 2,000 organized listening groups throughout the country during the winter of 1942-43. Study material is supplied to the groups in advance of the broadcasts. A series of broadcasts on the general theme of post-war reconstruction, in the present winter, has enlisted the co-operation of numerous national organizations.

Radio is coming into increased use, too, in the schools through the co-operation of the CBC and the Provincial Departments of Education. For the first time in the winter of 1942-43 there was a series of national school broadcasts. At the annual meeting of the Canada and Newfoundland Education Association in 1943 it was proposed that a National Advisory Council on School Broadcasting should be established.

### Public Libraries

The volume of public library reading is less than it was ten years ago, and has declined particularly in adult fiction during the war years. One reason for the war-time decline lies in the number of readers who, by joining the Armed Services, have gone out of reach of the libraries—to training centres, defence areas, overseas, etc. Moreover, there has been no general plan by means of which librarians could provide a compensating service to enlisted readers. Some library boards out of local resources have made special attempts to meet the library problem of training centres in or near their cities, but in the main the provision of reading material for service personnel has been left to voluntary agencies. Other reasons for the decline in public library reading lie in the increased facilities offered by bookstores and department stores in the larger cities where for a small fee the latest fiction is made available. The magazine and newspaper press, too, is steadily increasing the standard of its fiction and educational material, so that it would not be correct to conclude that reading is less popular or less widely indulged in than formerly.

The use of public libraries by children shows an increase. The newer school programs of study, placing less reliance on a few text books and recommending access to a wide selection of books, have much to do with this. Many libraries make provision for story hours or classes to be conducted on the library premises, while others have members of the library staff visit the schools.

Selective Service orders of the summer of 1943, concerning compulsory transfer of workers to more essential employment, are reported by some of the larger libraries to have made it extremely difficult for them to maintain service. Under normal circumstances, Canadian public libraries circulate fewer than half as many books per capita of the total population as do libraries in the United States and Britain. Under present circumstances the difference seems likely to become wider.

Pupils in an Ontario Secondary School Taking Training in Aerial Navigation.

*Courtesy, Toronto Star Newspaper Service*







His Majesty the King, with General MacNaughton and the Hon. Vincent Massey, High Commissioner for Canada, reviewing Troops and Nursing Sisters of one of the Canadian Corps in England.

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