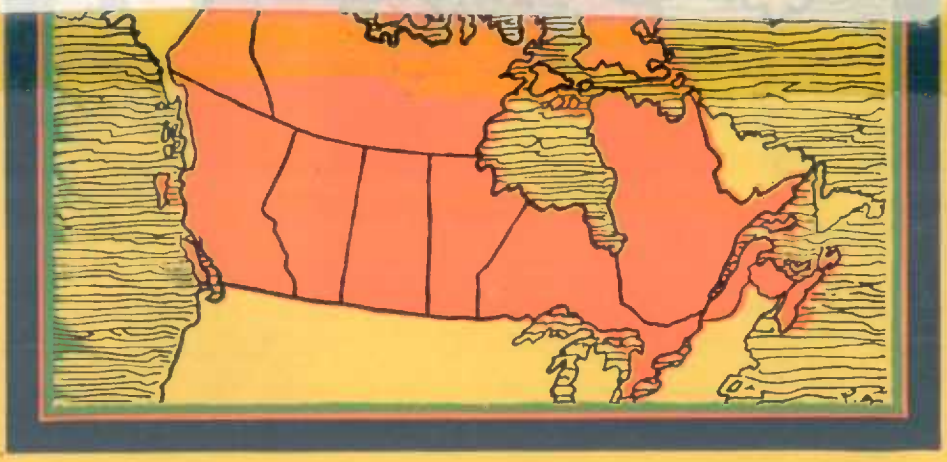


CANADA 1945

The Official Handbook of Present Conditions and Recent Progress

IN August 1943, Franklin Delano Roosevelt visited Ottawa. He was the first President of the United States to officially visit the Capital City of the Dominion while holding office, and is shown in the picture with the Governor General of Canada at Government House, Ottawa. Here he received the Honorary Degree of LL.D. from London University, England.

The Eighth Anglo-American War Conference, Quebec, and the Montreal UNRRA Conference

NEVER before in its history has Canada been the scene of two meetings of such deep significance to the whole world as those that took place in sequence at the cities of Quebec and Montreal during the early autumn of 1944.

The Conferences, superficially unrelated, were in essence deeply linked together—the purpose of the one centred on bringing about the destruction of the enemy in the Pacific; that of the other was to consider means of restoring the broken countries of Europe as they are liberated.

The oneness of the modern world and its problems, and the growing need for development of an international consciousness has been emphasized by the deep tragedy of two wars within the short space of a quarter of a century. It is a sad reflection that about one-third of the thirty-year period immediately passed has been occupied in a frenzy of fighting, slaughter, and the destruction of the work of centuries of upbuilding. The Conferences that took place in Canada in early September, 1944, are an omen that the coming peace will find ways and means of bettering co-operation between all peoples for the good of all people.

FORMER ANGLO-AMERICAN CONFERENCES

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
6. Quebec Conference - - - Aug. 10–24, 1943
7. Cairo Conference - - - Nov. 22–26, 1943

The
QUEBEC
CONFERENCE
1944

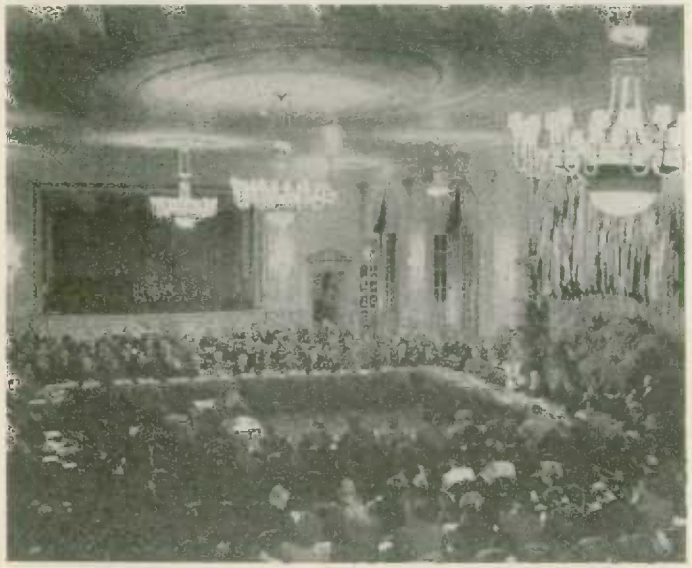
Prime Minister Winston Churchill and President Franklin D. Roosevelt Greet Each Other upon Arrival at Quebec.

Prime Minister Churchill and British Chiefs of Staff Meet the Canadian War Cabinet.

Prime Minister Churchill and President Roosevelt Gathered Together with the Combined Chiefs of Staff on the Terrace of the Citadel Quebec, at the end of the Conference.

The
UNRRA
CONFERENCE
1944

Prime Minister King Officially Welcomed the Representatives of Forty-Four Nations to the Conference at Montreal.



General Meeting of the Delegates

One of the Committee Meetings at Work

CANADA 1945

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

foreword

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. MacKinnon

Minister of Trade and Commerce.

OTTAWA, JANUARY 1, 1945

16769—1½

PREFATORY NOTE

This Handbook has been prepared and edited in the Year Book Branch 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 the Development of the Canadian Economy in 1944 precedes the chapter material. The special article following this review deals with The Iron-Ore Developments at Steep Rock and Their Importance to Canada. It has been specially written for the Handbook by H. C. Rikaby, A.I.M.E., Deputy Minister of Mines for Ontario, Toronto.

S. A. CUDMORE,
Dominion Statistician.

CONTENTS

THIRTEEN FACTS . . .

1. Canada declared war against Germany Sept. 10, 1939. She declared war against Japan on Pearl Harbour Day, Dec. 7, 1941.

2. Of Canada's 11,506,655 population (Census of 1941) over 1,000,000 have entered the Armed Forces, including over 45,000 women. The Armed Forces have taken about 38 p.c. of all Canadian males between the ages of 18 and 45. At the outbreak of war, Canadian Armed Forces totalled 10,200.

3. Of the 1,000,000 Canadians who have entered the Armed Forces, less than 7 p.c. have failed to volunteer for service anywhere in the world.

4. Canadian war industries have employed another 1,000,000 men and women, or about 10 p.c. of total population. Canada ranks fourth among the United Nations as a producer of weapons and war materials, production in 1943 totalling $2,738,000,000 against $310,000,000 in 1939-40.

5. Canada is one of the foremost providers of food for the United Nations. About 500,000 men and women have left Canadian farms for the Armed Forces and for war plants, but farm output has increased more than 40 p.c. Food shipped from Canada to Britain in 1943 was 215 p.c. of the 1939 total value; to Africa and Asia, 569 p.c.; to the United States, 259 p.c.

6. All Canadian war costs have been, and are being, met inside Canada, over 60 p.c. by taxes and the balance in war loans subscribed by Canadians; 97 p.c. of the funded debt is held in Canada. Canada has paid cash for every item from the United States since the War began in 1939.

7. Canada has taken no Lend-Lease or similar help. On the contrary, she has extended such help to other United Nations through her Mutual Aid legislation, which is the Canadian version of Lend-Lease. Mutual Aid given by Canada to other nations, plus earlier war-time contributions and financial assistance, amounted to over $3,400,000,000 at Mar. 31, 1944, and is now approaching $4,200,000,000. This is close to one-quarter of Canada's total war cost.

about Canada's War Effort

8. Latest Lend-Lease and Mutual Aid official reports were, respectively, for twelve months to Feb. 29, 1944, and for ten months to Mar. 31, 1944. These reports indicate that, in percentage of national incomes, Mutual Aid given by Canada was about 12·4 p.c. and Lend-Lease was about 6·8 p.c. On a per capita basis, Canadians were giving $7·93 a month in Mutual Aid while Lend-Lease was about $6·35 a month.

9. First Canadian Army, fighting in northwest Europe under General Crerar, includes a Canadian Corps of three divisions plus corps and army troops. Another Canadian Corps of two divisions and a tank brigade, plus corps and army troops, is fighting in Italy with the British Eighth Army. Canadians have also fought at Hong Kong, Dieppe, the Aleutians, Sicily, and in commando operations.

10. Air attacks on Europe are commonly described as British and American, but Canadians comprise one-quarter of all aircrew under R.A.F. command in Europe and the Mediterranean. The Royal Canadian Air Force has 42 squadrons overseas. For every Canadian in R.C.A.F. aircrew there are another 10 to 11 Canadians in R.A.F. aircrew.

11. The Royal Canadian Navy had 15 ships at the outbreak of war in 1939 and now has over 800—a 53-fold increase. Up to 1944, the R.C.N. did half of North Atlantic convoy protection and during the summer all of it.

12. Canada is now third of the United Nations in naval power and fourth in air power.

13. Canada is the world's foremost producer of nickel, asbestos, platinum, radium, and newsprint paper. She is second in aluminum, wood-pulp, and hydro-electric power. She is now second only to the United States in building cargo ships. She is third in producing copper, lead, and zinc. Since the War began she has increased her output of aluminum by over 500 p.c., pig iron and steel by 98 p.c., pulpwood by 33 p.c., hydro power by 23 p.c. and coal by 13 p.c.

Canada's War Effort and the Development of the Canadian Economy in 1944

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 fight Nazism and organize the Canadian economy for an "all-out" war effort, as well as subsequent events up to the end of 1943 are covered in earlier editions of this Handbook.

During 1944 the Allies have pushed the War inside the boundaries of Germany. Driving through Europe sometimes at top speed, sometimes little faster than inch by inch, Allied armies are advancing on the Reich from every direction. With Russia pressing from the east and invading Norway on the north, and other Allied forces attacking from Netherlands, Belgian and French soil, as well as hammering through Italy, Greece and Yugoslavia, the noose is being drawn more tightly around the enemy. Since the beginning of June, 1944, fifteen European capitals have been freed from Nazi domination.

As regards the Canadian Armed Forces, the spotlight has fallen on the work of the Canadian ground troops, especially the Canadian First Army who have been helping in the attack on the Western Wall. Their first major action was the capture of Carpiquet which preceded the bloody battle of Caen, pivotal point of Germany's defence system below the Seine. The unrelenting efforts of British and Canadian soldiers in holding the great mass of some of Hitler's best troops at Caen enabled the United States Forces to sweep through Normandy and Brittany (see p. 15).

The First Canadian Army went into battle in the drive from Caen to Falaise, one of the pivotal moves in the French campaign. This opened the way for the Allied advance to the Seine and Paris. In the Allied push through the Lowlands, the Canadian Army was placed on a left flank position and assigned the task of capturing the Channel ports and mopping up enemy pockets along the way. Rouen, Le Havre, Dieppe, Boulogne, Calais, Ostend, all fell before the offensive of the Canadians and units of other nations fighting under Canadian command. But, though the operations of the Army in France and Belgium have been prominently in the public eye, the Royal Canadian Navy and the Royal Canadian Air Force have added to their laurels in equally important, if less spectacular, ways. Details of these operations are given at pp. 13-14 and 15-16. The British Commonwealth Air

← The Peace Tower, Parliament Buildings, Ottawa.

Photo by E. M. Finn, National Film Board

Canadian Soldiers Landing in Normandy.—More than 100 R.C.N. ships and nearly 10,000 Canadian officers and men took part in D-Day operations. The work of the R.C.N. still goes on as men and supplies continue to pour into Europe.

R.C.N. Photo

Training Plan has been one of Canada's most outstanding contributions to the success of Allied air strength. The Plan is to come to an end in March, 1945, and will by then have graduated 224,296 trainees, of whom 163,797 are Canadians.

Canada has taken part in several conferences of world importance during 1944. In April the Canadian Prime Minister went to London to attend the first war-time conference of Commonwealth Prime Ministers. At that meeting Commonwealth affairs were discussed against a background of international world organization and post-war policy. While in London, Prime Minister King addressed a joint session of the two Houses of Parliament.

In September, Quebec was for the second time the scene of a meeting between Prime Minister Churchill and President Roosevelt. They and their combined Chiefs of Staff discussed phases of the war relating to the final overthrow of Germany and the campaign against Japan. Representing Canada as host at the Conference, Prime Minister King also attended the sessions. A special meeting of the War Committee of the Canadian Cabinet was held in Quebec during the Conference so that Mr. Churchill, his advisers, and the British and Canadian Chiefs of Staff could attend to discuss Canada's participation in the Pacific War.

A Canadian representation attended the July conference on world monetary policy which was held at Bretton Woods, New Hampshire. At this conference plans were drawn up for the stabilization of international currency and trade after the War.

Post-war civil aviation was the subject of two important conferences during the autumn. Officials of British Commonwealth Governments met at Montreal to discuss problems relating to establishment of air routes between British Commonwealth countries. Canadian representatives also attended the International Conference on Civil Aviation Problems at Chicago in November, at which Canada presented a draft international agreement which was in effect a compromise between British and United States aims.

During the autumn the United Kingdom, United States, Soviet Union and China sent delegations to Dumbarton Oaks, Washington, D.C., to discuss plans for an international organization for the maintenance of peace and security. Although Canada had no separate representation at the conference, the draft proposals will receive full study by Canada, and the Prime Minister has commended them "to the careful and earnest study of the people of Canada".

In September, 1944, the city of Montreal was the scene of the second session of the Council of the United Nations Relief and Rehabilitation Administration. The Canadian Minister Plenipotentiary at Washington, who headed the Canadian Delegation at the session and was also Chairman of the Committee on Policy, was elected to permanent chairmanship of the session. Of Canada's pledged contribution of $76,000,000, 90 p.c. will be in the form of a credit for foodstuffs and vital supplies to countries ravaged by the enemy. The form of a large proportion of this contribution has already been arranged, including a cash contribution of $7,700,000 (Canadian funds).

Canada is also giving help to the United Nations through its Mutual Aid Act which was passed in May, 1943. It provides for the distribution of Canadian war supplies, including war equipment, raw materials and foodstuffs, to the United Nations on the basis of strategic need. Each country receiving Canadian war supplies pays for as much as it can, and the remainder is delivered under Mutual Aid. Separate agreements have been negotiated by Canada with the United Kingdom, Australia, Soviet Russia, China, the Provisional Government of France and India. Included in the $800,000,000 appropriation for the fiscal year ending Mar. 31, 1945, is Canada's contribution to UNRRA. Mutual Aid expenditures in the year ended Mar. 31, 1944, exceeded $912,600,000.

Canada's expanding international stature is reflected in the growth of its diplomatic representation abroad. In November, 1943, it was decided to elevate to embassy rank the missions to the United States, Russia, China, and Brazil. During 1944 ambassadors have also been appointed to Chile, Mexico, and Peru. When the Government of Canada, along with the Governments of the United Kingdom and the United States, recognized officially the Government of General Charles de Gaulle in France, the Canadian Mission in Paris was given the status of an embassy. An ambassador has also been appointed to Belgium.

Canada has maintained the position of the United Nations' fourth largest producer of war supplies and is among the leading traders of the world; Canadian economy has been and still is geared to all-out effort. On the home front controls have been continued—controls aimed at maintaining an adequate flow and orderly distribution of essential civilian supplies while holding down consumer prices (see pp. 27-29). Every effort has been made to prevent inflation. From August, 1939, to October, 1944, the over-all increase in the cost of living was 17·7 p.c., but only 2 p.c. of this increase has taken place in the three years since November, 1941, when the general

price ceiling was adopted. Parts of the general stabilization picture have included rationing, heavier taxation, war savings, manpower and wage controls, subsidies, allocations and consumer credit regulations.

The increasing activity of the Armed Forces and expanding production of equipment and supplies vital to the United Nations have necessitated an increased program of Government spending. Two Victory Loans during 1944 have netted the Government more than $2,900,000,000.

What is considered to be one of the most advanced and comprehensive rehabilitation programs for men and women in the Armed Forces has been planned and is already being put into operation in Canada. Each of the Services has its personnel counsellors to advise on post-war training and positions available. An extensive scheme for guiding demobilized persons has been worked out, and every man and woman will have the benefit of expert advice before resuming civilian life. A general and extensive system of war service gratuities, rehabilitation grants, re-establishment grants of special living allowances while taking training or further schooling of some kind has also been planned for men and women of the Canadian Forces.

Virtually all the legislation dealt with in the 1944 session of Parliament concerned problems of reconstruction and rehabilitation in the post-war period. Acts were passed which seek to provide increased employment opportunities in the period after the War; to help business, industry, fishing and agriculture in the shift from a war-time to a peace-time economy; to provide additional measures of social welfare and improve the administration of those already on the Statute Books; to broaden the veterans' rehabilitation and re-establishment program; and finally to give an indication of Canada's willingness to make certain international commitments as a member of the United Nations.

Legislation was also passed for the setting up of three new Government Departments (see pp. 37-38).

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

H.M.C.S. *Uganda*. Commissioned as a ship of the Royal Canadian Navy at a Ceremony held in New York Harbour on Trafalgar Day, Oct. 22, 1944.—Originally commissioned in 1942, this 8,000-ton cruiser was transferred by the Royal Navy after gallant war services. A ship of the Mauritius class, she is 549 feet long, mounts 12 six-inch guns, 8 four-inch anti-aircraft guns, [illegible] smaller guns and [illegible] aircraft with one catapult.

R.C.N. Photo

Members of the Women's Royal Canadian Naval Service Decoding Secret Signals.—Through the hands of these "Wrens" pass secret signals affecting the Battle of the Atlantic and the operations of the Royal Canadian Navy.

A further step in the Canadian Navy's development was the manning for the Royal Navy of two escort carriers, the 9,000-ton H.M.S. *Nabob* and the 14,500-ton H.M.S. *Puncher*. The year saw the first group of officers of the Royal Canadian Naval Volunteer Reserve trained as pilots for service with the Royal Canadian Naval Air Branch.

The Royal Canadian Navy had in commission over 800 ships, of which more than 350 were classed as fighting ships. Its manpower had risen to over 85,000 officers and ratings and there were 5,200 women in the Women's Royal Canadian Naval Service.

Ships of Canada's Navy ranged far during 1944, seeing action in the Arctic, the North Atlantic, the Mediterranean and the Aegean Sea. Plans were well advanced for participation in the war in the Pacific with prospects that the Navy's strength would be increased by the addition of another medium cruiser and possibly swifter and more powerful aircraft carriers.

During 1944, the losses included: the Tribal class destroyer, *Athabaskan,* lost in a Channel action; the frigate *Valleyfield,* sunk on Atlantic convoy duty; two corvettes, the *Regina* and the *Alberni,* sunk on invasion convoy duty in the English Channel, and the corvette *Shawinigan,* lost in the North Atlantic with her entire complement missing or dead. Losses since the outbreak of war totalled 19 ships.

Casualties to Nov. 6, included 1,174 killed on active service; 204 other deaths, 226 missing, 87 prisoners of war and 363 wounded or injured.

The Army.—The year 1944 was one of tremendous achievement by Canadian arms. By the end of July every unit of the Canadian Army overseas was in action, in Italy or on the Western Front.

On D-Day, June 6, two days after Canadian troops in Italy had participated in the capture of Rome, thousands of Britain-based Canadian assault troops splashed ashore on the Normandy beaches in the forefront of the terrific Allied onslaught which opened the Western Front. On their heels came the main body of the Britain-based Canadian Army, and during the ensuing weeks Canadian soldiers by their tens of thousands, straining for action after four and one-half years of enforced waiting, streamed across the Channel. By July 26 every unit of the Canadian Army Overseas was in action.

H.M.C.S. *Assiniboine*, a "River Class" destroyer, laying a smoke screen during the bombardment of the French Coast.

R.C.N. Photo

The Navy.—Primarily concerned in the opening years of the War with the protection of North Atlantic shipping, the year 1944 saw the Royal Canadian Navy reach a stage in its expansion which enabled it not only to carry out its major purpose of escorting convoys on a greater scale than ever before, but also to assume the offensive and join in direct attacks on the enemy.

Canada's share in history's greatest sea-borne invasion—that of the Normandy Coast—was more than 100 ships and nearly 10,000 officers and men. Canadian mine-sweeping flotillas cleared mine fields off the coast of Normandy; Canadian infantry landing ships, large infantry landing craft and smaller assault landing craft carried invasion troops to the beaches; Canadian corvettes and destroyers helped guard the invasion convoys from attack.

Even before the invasion, powerful Canadian destroyers of the Tribal and Fleet classes harassed enemy shipping in the English Channel and European coastal waters in daring pre-invasion sweeps. On D-Day Canadian destroyers were present to shell enemy shore installations. Courageous and persistent attacks were carried out before and after D-Day on German coastal shipping and war vessels by Canadian-manned motor torpedo-boat flotillas.

During the summer months, the Royal Canadian Navy provided 100 p.c. of close escort for all North America-United Kingdom trade convoys and in addition provided warships which made up approximately 30 p.c. of all support force units in the North Atlantic. Canadian escort vessels escorted safely to the United Kingdom the largest convoy of the War, carrying more than 1,000,000 tons of cargo.

An important unit (the first of two cruisers) added to the Royal Canadian Navy in the autumn of 1944 was the cruiser, H.M.C.S. *Uganda*, of 8,000 tons, stated by naval authorities, at the time of her commissioning as a Canadian warship, to be among the world's most advanced and up-to-the-minute medium cruisers.

From the very beginning Canadian troops joined in some of the toughest, least spectacular yet most vital assignments of the campaign. Such an assignment occurred at Caen, where Canadians, posted with the British on the Allied left flank, successfully tied up, at heavy cost to themselves, the bulk of the German armour. This action permitted the United States forces on the right flank to break through the less strongly held German lines west of St. Lo, on July 25, in the spectacular cross-country dash which swept the enemy out of Normandy and spearheaded the swift advance that brought the Allies into Paris 30 days later.

Of the critical task of holding the German troops in the Caen area—the hinge of the Nazi defence system south of the Seine—General Eisenhower, Allied Supreme Conunander, admitted that the British and Canadians had faced the most formidable of the enemy's defences. Every foot won at Caen, he said, was as important as 10 miles won elsewhere.

During the August drive from Caen to Falaise, the First Canadian Army—officially announced on August 7 as the first completely separate army ever to represent Canada in the field—experienced its first battle action as a unit, when it smashed German control of the area, joined forces with the United States units driving north from Le Mans, and helped make possible the trapping and resounding defeat of the Nazi Seventh Army. In this action the three divisions of the Second Canadian Corps, made up of the Second Infantry Division, famed for its Dieppe raid of August, 1942, the Third Infantry Division and the Fourth Armoured Division, fought together for the first time.

Also fighting as part of the First Canadian Army, under the command of Lieut.-General H. D. G. Crerar, C.B., D.S.O., were a British infantry division, a Polish armoured division, the Princess Irene Brigade from the Netherlands, and a force of Belgians. Many of the Netherlands and Belgian troops were trained in Canada.

By late autumn, the First Canadian Army had battered its way across northern France, through Belgium and into the Netherlands. It had overrun the so-called "rocket coast" and put more than 300 flying-bomb sites out of action in France alone. It had captured the vital Channel ports of Le Havre, Ostend, Dieppe (where 3,350 Canadians were killed, wounded or captured in the famous raid of two years before), Boulogne and Calais. Since its first battle action in July, it had taken 73,000

Canadian Troops Marching Through Dieppe.—It was a proud day for the Canadians when the Germans were driven from Dieppe and their comrades who died there in the raid of 1942 were avenged.

Canadian Army Photo

A Canadian General Hospital under Canvas on the Western Front.—Canadian nursing sisters "on fatigue" carrying beds into the wards.

Canadian Army Photo

prisoners. With the capture of the Channel ports the First Canadian Army completed another of its important assignments, that of assuring the over-water supply lifeline, crucial to the success of the Allied winter campaign against Germany proper.

During October, the Canadian Army was engaged for the most part in mopping up operations along the coast. These included laying seige to Dunkirk, the only territory in the Canadian sector still in enemy hands, cleaning out pockets of enemy resistance and reducing isolated artillery strongpoints in the Scheldt estuary which were preventing the Allies' full use of the great port of Antwerp, captured intact by the British early in September.

In Italy, meantime, the battle-scarred First Canadian Corps continued to fight as part of the famed British Eighth Army which it had joined during the invasion of Sicily some sixteen months before. Made up of the Fifth Canadian Armoured and First Canadian Infantry Divisions and the First Canadian Armoured Brigade, it had been in the forefront of almost every important engagement in the long, bitterly contested advance up the Italian mainland.

In addition to the First Canadian Corps, other Canadians were fighting in Italy with the U.S. Fifth Army and as part of the Canadian-U.S. Special Service Force comprised of highly trained commando-paratroops, specialists in all phases of rough-and-tumble and scientific warfare.

On May 21, Canadian troops were in the headlines when they helped spearhead the final all-out assault which smashed a gap in the formidable Adolph Hitler Line, forced the Melfa River and two weeks later, on June 4, joined the U.S. troops of the Fifth Army in the capture of Rome. The fall of Arezzo to Canadian troops on July 16, followed by the occupation of Florence a month later, brought the Allied Armies two-thirds of the way to their goal.

During the latter part of August and beginning of September the Canadians in the Adriatic sector helped launch the great attack that smashed the Germans' famed Gothic Line, and plunged on to play a leading part in the capture of Rimini, the eastern hinge of the German defence system, where some of the bloodiest, bitterest, house-to-house fighting of the entire Italian campaign took place.

By the end of October the Canadians had forced their way across the historic Rubicon River, and early in November were stubbornly fighting their way mile by mile toward the Lombardy Plain. In seventeen months of almost continuous fighting they had pushed the enemy back nearly 700 miles.

Figures at October, 1944, showed the strength of the Canadian Army to be in excess of 455,000 men. Figures for the Canadian Women's Army Corps, which celebrated its third anniversary on Aug. 29, 1944, were given as being in excess of 15,000—an increase of 1,000 over the previous year.

The Air Force.—The British Commonwealth Air Training Plan, born Dec. 16, 1939, to train 20,864 airmen per annum, a figure later raised to 52,503 per annum, reached and outdistanced its objective. Air superiority over the enemy was assured early in the conflict and now this immense plan is moving towards its conclusion after training nearly 115,000 aircrew up to Sept. 1, 1944. The spring of 1945 will see the last of BCATP students, pilots, navigators, observers, bomb aimers, wireless operators, air gunners and flight engineers, completing their final training. Current rate of production of approximately 39,000 per annum will diminish until next spring when it will reach 21,000 per annum.

Canada's Department of National Defence for Air, assisted by a Supervisory Board at Ottawa comprising three Canadian Cabinet Ministers, and by representatives of the participating Governments, the Deputy Minister of National Defence for Air and the Chief of the Air Staff, make up the administering body of the Plan. They have ensured that the R.C.A.F. is in readiness to meet the trends of war as they can be determined and that a sufficient reserve of aircrew is available for any emergency. But in the progressive reduction policy affected in the Plan, it was necessary to release to the Canadian Army approximately 4,200 pre-aircrew recruits.

Canada's part in the BCATP, which was renewed in 1942 and is operative until Mar. 31, 1945, has involved an expenditure of $1,631,000,000 since its inception in 1939. Of this amount $442,500,000 remains recoverable from the United Kingdom. At the 1944 session, Parliament was asked for $387,937,507 to carry on training during 1944-45 compared with the previous year's $309,900,000. The appropriation for overseas war establishment for 1944-45 was $463,157,142, an increase of $58,000,000 over that for 1943-44.

At the peak of the BCATP the number of training units totalled 154 and had twice the capacity originally intended. The gradual diminution of the Plan has

Her Majesty Queen Elizabeth Inspecting the Women's Division of the R.C.A.F. Bomber Group in Britain.

R.C.A.F. Photo

Mobile Operations Room of a R.C.A.F. Typhoon Wing in France.—These headquarters were set up against a backdrop of heat-twisted girders, skeleton of a Luftwaffe hangar destroyed by Allied bombers. During the London blitz this airfield was a base for German bombers.

R.C.A.F. Photo

caused several of these to be closed. From a peace-time force of 4,500 officers and men, the R.C.A.F. has expanded to more than 200,000. Enlistments in the Women's Division alone totalled more than 16,500. There are more than 40 R.C.A.F. squadrons in operation and approximately eight times as many members of the R.C.A.F. are serving in R.A.F. units. The largest purely R.C.A.F. formation operating in the European theatre is the Canadian Bomber Group, equipped with 4-engined Lancaster and Halifax aircraft. In September, 1944, the R.C.A.F. Bomber Group dropped the heaviest load of bombs and made the greatest number of sorties of any Group in the British Isles.

In the gigantic invasion operation begun June 6, 1944, Canadian fighter-plane units formed part of the aerial umbrella that protected the invading forces. Heavy bombers of the Coastal Command manned by Canadians were assigned the task of preventing enemy U-boats and E-boats from entering the invasion convoy's outer ring. A tremendous air armada of Canadians battered enemy shore installations, communications centres and transport lines during the "softening up" action of the previous months. In the second week of invasion, closely following the invading forces, whole Canadian fighter squadrons of the tactical air force moved into France and with their new mobile airfields kept pace with the advancing Allies. In other parts of the globe—in North Africa, Malta, Sicily, over the beachheads of Anzio and Cassino in Italy, in the heat of Burma, Ceylon, India, in the cold of Kiska in the Aleutians—members of the R.C.A.F. have acquitted themselves honourably. For three years a steadily enlarging nuclear strength in the Far East has been growing against the day when the air battle in that theatre will become a major one.

With the progress of the War, the menace to Canada's coast lines has been minimized and this is reflected in the reduction of expenditure from $309,900,000 in 1943-44 to $238,905,351 in 1944-45. Operations over the North Atlantic, however,

are being maintained with Liberator bombers from R.C.A.F. East Coast, Iceland and Newfoundland stations, acting as a constant menace to enemy U-boats, providing the aerial umbrella over Allied convoys and reducing shipping losses. These operations have been carried out in conjunction with the Royal Canadian Navy.

Honours and Decorations Awarded to Members of the Canadian Forces and to Civilians.—Awards to Naval, Army and Air Force personnel and to civilians for the period from the outbreak of war to Dec. 31, 1944, are given in the tabulation below. The Naval awards include those to Royal Canadian Navy personnel on loan to the Royal Navy. Awards for efficiency (with the exception of the Canadian Efficiency Medal), long service, good conduct and mention in despatches and commendations are not shown, nor are foreign awards to Canadian servicemen.

Honours and Decorations Awarded to Members of the Canadian Forces and to Civilians from the Outbreak of War to Dec. 31, 1944

Honour or Decoration	Navy	Army	Air Force		Civil	Total
			R.C.A.F.	Canadians with R.A.F.[1]		
V.C.	–	5	1	–	–	6
G.C.	–	3	3	1	–	7
C.B.	4	17	11	3	–	35
C.M.G.	–	3	–	–	15	18
C.B.E.	10	55	14	2	21	102
D.S.O.	9	126	51	11	–	197
1st Bar to D.S.O.	–	5	4	–	–	9
2nd Bar to D.S.O.	–	1	–	–	–	1
O.B.E.	42	156	27	3	80	308
I.S.O.	–	–	–	–	10	10
M.B.E.	39	367	79	2	158	645
R.R.C.	–	19	–	–	–	19
D.S.C.	82	–	–	1	–	83
1st Bar to D.S.C.	11	–	–	–	–	11
2nd Bar to D.S.C.	2	–	–	–	–	2
M.C.	–	245	1	2	–	248
1st Bar to M.C.	–	5	–	–	–	5
2nd Bar to M.C.	–	1	–	–	–	1
D.F.C.	–	–	2,069	170	–	2,239
Bar to D.F.C.	–	–	97	21	–	118
A.F.C.	–	–	159	13	–	172
A.R.R.C.	3	39	8	–	–	50
MEDALS—						
Air Force	–	–	39	1	–	40
Albert	1	–	–	–	–	1
British Empire	67	163	104	1	33	368
Canadian Efficiency	–	–	3	–	–	3
1st Clasp to Canadian Efficiency	–	–	1	–	–	1
Conspicuous Gallantry	2	–	10	–	–	12
Distinguished Conduct	–	52	–	–	–	52
Bar to D.C.M.	–	1	–	–	–	1
Distinguished Flying	–	–	414	22	–	436
Bar to D.F.M.	–	–	–	1	–	1
Distinguished Service	79	–	–	–	–	79
Bar to Distinguished Service	2	–	–	–	–	2
George	7	5	17	1	2	32
Bar to George	2	–	–	–	–	2
King's Police and Fire Services	–	–	–	–	18	18
Military	–	463	1	–	–	464
Bar to M.M.	–	2	–	–	–	2
Naval General Service with Bar "Palestine"	6	–	–	–	–	6
Polar (silver)	–	–	–	–	8	8
Royal Humane Society	4	–	–	–	–	4

[1] Includes honours and awards to Canadians actually enlisted or appointed to commissions in the R.A.F.

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 manpower 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.

Financing Canada's War Effort.—Fortunately, so far as financial organization was 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. Financial developments during the war years up to 1943 are outlined in previous editions of this Handbook. They are brought up to date in the following paragraphs.

Financial Aspects of Canada's War Effort in 1944.—Canada's total expenditures, including those made to provide war supplies to others of the United Nations, totalled $5,322,253,505 in the fiscal year ended Mar. 31, 1944. However, other outlays had also to be made, which were not "expenditure" in the technical sense since they resulted in an increase in the assets or a decrease in the liabilities of the Dominion—for example, outlays that are recoverable from various Allied Governments. The result is that the total cash requirements were some $500,000,000 greater than the total of expenditures proper. Full information will not be available until the *Public Accounts* for 1943-44 are presented to Parliament, but an estimate of $5,841,300,000 was made in Parliament on June 26, 1944, when the Budget for 1944-45 was brought down. This budget forecast total expenditures of $5,152,000,000, including a further Mutual Aid Appropriation of $800,000,000, but the Minister of Finance made it clear that he expected cash requirements would, in fact, exceed $6,000,000,000; in a press release on Sept. 10, 1944, announcing the Seventh Victory Loan he repeated this figure and in support of it stated that it appeared that war expenditures would be approximately $500,000,000 greater than previously estimated.

No important changes in taxation were made, except the removal of the compulsory savings portion of the personal income tax after June 30, 1944. Total revenues were $2,765,017,713 in 1943-44 and were forecast in the Budget at $2,617,000,000 for 1944-45.

During 1944 two more Victory Loans were issued, each breaking all previous records—the Sixth Victory Loan in which 3,077,123 subscriptions totalling $1,405,013,350 were received in a campaign which took place between Apr. 24 and May 13, and the Seventh, in which 3,179,700 subscriptions amounting to $1,500,079,600 were obtained between Oct. 23 and Nov. 11. The figures for the Seventh Loan are not final, and do not include 20,115 conversion subscriptions yielding $144,719,700.

Some easing of the shortage in the U.S. dollar exchange position occurred during the year, in consequence of which the provision of the War Exchange Conservation Act prohibiting certain imports from the United States was lifted, and the restrictions on pleasure travel in that country were reduced also.

Department of Munitions and Supply.—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 program. 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.

From a small organization with only a handful of staff, the Department has grown to a commercial and industrial giant employing 4,500 within itself and giving employment to 100,000 in Crown Companies under its control and indirectly to 900,000 others. It owns plants, or plant extensions, in every large Canadian city and in many small communities from the Atlantic to the Pacific. As the largest business organization in the history of this country, it had made commitments up to the end of 1944 amounting to more than $10,255,000,000 on war production and construction or as much as the Dominion Government spent in all the years from Confederation up to and including 1932. At peak production, reached in the last quarter of 1943, it was making or buying $65,000,000 worth of munitions per week. A year later this figure had dropped to $55,000,000, but a large part of the drop in the dollar figures was accounted for by increased efficiencies in manufacturing methods with correspondingly lower costs.

The Department is unique. No similar body exists in any other country. Nowhere else is all the purchasing for the national and Allied Armed Forces carried

Ground Crew Carrying out a Routine Check.—Careful maintenance keeps the R.C.A.F. Nighthawk Squadron "Mosquitos" in peak flying condition.

R.C.A.F. Photo

out by one central organization. Nowhere else is there an absence of competition between the Army, Navy and Air Force for supplies, and nowhere else has the body which supplies the three Services the power to mobilize industry and resources to attain maximum production.

The Organization of the Industrial Effort through the Department of Munitions and Supply.—With the defeat of Germany, Canada must revamp much of her industry, grown to three times its pre-war size. The work of readjustment necessary to provide needed civilian articles and maintain employment will be an enormous task.

In this, the sixth year of war, Canada ranks fourth among the United Nations as a producer of munitions, third in Allied naval power, second in exports, and fourth in Allied air power. To make these achievements possible, the output of raw materials had to be increased greatly, and to-day Canada is the third largest Allied producer of timber, the fourth largest Allied producer of steel, and is at or near the top in the output of nickel, asbestos, platinum, radium, gold, aluminum, mercury, molybdenum, copper, zinc, lead, silver, arsenic and magnesium. To meet war needs great advances had to be planned in the production of finished products, many of which were of a type quite new to Canadian industry.

In the development of the wide range of new manufactures that the War has brought to Canada, the Department of Munitions and Supply has taken a prominent place. The first and most urgent need was for arming the fighting forces of Canada, of supplying them with the finest equipment that brains and skill could devise. Second, and no less urgent, was the need for helping Britain in the dark days of 1940, when that country stood as one of the last bulwarks of a free world. And third, there was the need for helping to arm the other United Nations.

The achievements have been great: 1940 was a year of plans and small beginnings, with the first trickle of war supplies from previously available and other hurriedly organized sources; 1941, one of construction, of conversion, of expansion, of greatly broadened plans, and of quickened output in response to the urgencies of the time; 1942, a year of rising production, of objectives reached and passed, and of restrictions on civilian industry; 1943 marked the attainment of peak production, of output so heavy that the national economy was subjected to serious stresses and strains; and 1944, which began with the tide still wavering between the ebb and flow and ended with the waters again on the rise, saw many shifts and changes in production, shifts from one device of war to another.

In volume the Canadian output has been overshadowed, naturally enough, by the United States, Russia, and the United Kingdom. But in timeliness and quality it has constituted a major factor in the Allied swing from desperate defence to victorious attack.

From Canadian shipyards have come more than 1,000 naval, cargo and specialized ships, plus many hundreds of smaller craft. Canadian aircraft plants have contributed nearly 15,000 'planes. Automotive and related plants have turned out more than 700,000 units of mechanical transport and more than 45,000 armoured fighting vehicles. From the small-arms factories have come about 1,425,000 machine guns and other small arms. From the gun shops, in a country that had never made a modern gun, have come more than 100,000 units, including Army and Navy guns, barrels, carriages, and mountings. From Canadian arsenals and shell-filling plants have come more than 110,000,000 rounds of heavy ammunition and bombs, and more than 4,200,000,000 rounds of small-arms ammunition. The chemicals and explosives industry

Exchanging the Power Plant on a Lockheed Bomber.—A "power egg" system has been developed which permits a complete change of power plant in 27½ minutes.

Courtesy, Monetary Times

has produced more than 2,000,000 tons. More than $450,000,000 worth of equipment has been made by the signals, instruments and communications industries. In addition, many millions of dollars worth of stores and furnishings for military establishments and millions of dollars worth of personal equipment for the service men and women have been produced.

To achieve this great flow of war machines and supplies, the Department has made commitments amounting to about $790,000,000 for new plants, extensions to plants, and certain other capital investment. New electric power installations brought the total up to an all-time peak of well over 10,000,000 h.p., an increase of about one-fifth of the installation in 1939. Steel production was expanded to 3,000,000 tons a year, which is almost double the 1939 output; aluminum production was expanded

nearly seven times; the aggregate production of refined copper, nickel, lead and zinc was increased by about one-fifth. The outputs of timber and coal were lifted to new peaks and in a new Government-owned plant 60,000,000 lb. of synthetic rubber were produced during the first year of operation, September, 1943, to September, 1944.

The departmental organization behind all this flow of power and raw materials has been brought to a focus in the Wartime Industries Control Board and its Controllers. Together they have formed a departmental team, and have taken all the necessary steps to increase the output of the materials needed and, by regulations and orders, diverted all scarce materials from non-essential uses.

Only 30 p.c. of the Canadian war production has been used by Canadian Forces at home and abroad. The remainder has gone to Britain, the United States, Russia, Australia, New Zealand, India, the Union of South Africa, China, France, and other United Nations. Much of it has been shipped 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:—

Canadian Government Travel Bureau.—Although all advertising and direct tourist promotional work has been discontinued because of the decrease in tourist traffic, 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, promulgated to ensure proper direction and control 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.

Voluntary War Relief Division.—The Voluntary War Relief Division is concerned with committees dealing with the relief of distressed civilian peoples in Allied countries and is the channel for purchase permits from Government Controllers. The Director co-operates with other Government Departments interested, the United Nations Relief and Rehabilitation Association and the Mutual Aid Board, with respect to relief activities in order to avoid duplication of effort in the purchase of bulk relief supplies.

Wartime Information Board.—The Wartime Information Board was established on Sept. 9, 1942, by Order in Council P.C. 8099, for the purpose of ensuring "an informed and intelligent understanding of the purposes and progress of the Canadian war effort and its relation to the common effort of the United Nations". It is essentially a co-ordinating organization and does not attempt to centralize the information activities of the Federal Government within Canada. War Departments such as Army, Navy, Air Force and Munitions and Supply issue their own information directly to Canadian distributing agencies, though WIB has a responsibility for distributing war-time information outside Canada. The Board consists of a Chairman and Vice-Chairman representing the public, and eight senior representatives of those Departments of Government chiefly concerned with war activities.

The Board's domestic information services are carried out in both the English and French languages and are of two principal types. The first consists of collecting, correlating and distributing interdepartmental information relating to the War and of interest to the general public; the second of collecting, correlating and distributing information on specific war-time subjects of interest to particular sections of the public. Distribution in both cases is directed towards persons and bodies in a position to pass on information to others and is built up on a request basis. Publications primarily designed for domestic distribution include: Religious Information ("Canadian Churches and the War"; "Nouvelles Catholiques"); Industrial Information

("Labour Facts"; "Wailnews"; "Wartime Clips"; "Graphic Sheets"); Consumer Information ("Consumer Facts"; "Features for Dailies"; "Home Front Bulletins"; "News Features"); General Information ("Post-war Planning"; "Radio Service").

The Board's external operations channel out from Ottawa through offices in New York, Washington, London, Canberra and Paris, and through Canadian Official representatives in Latin America, the British Commonwealth, the U.S.S.R., etc. This work is done in co-operation, on matters of policy, with the Department of External Affairs. It combines an attempt to inform the peoples of the countries with whom Canada maintains diplomatic relations of the elementary facts about Canada and her war effort, and an attempt to see that news about Canada is considered, before release, in the light of its probable impact on the peoples of other countries. Contact is maintained with the Wartime Information Board's U.S. offices by teletype; with other offices and legations by airmail and cable services.

The Reports Branch maintains a pool of basic information for use of the external and domestic branches, for press officers and for other Government Departments, and it prepares and issues certain regular information material including: "Canada at War" (distributed widely, particularly to schools and libraries in Canada and the United States), "Reference Papers" and "Facts and Figures Weekly" (with a more specialized distribution, particularly to home establishments of the Armed Services for educational purposes).

As part of the educational program of the Armed Services, a fortnightly study pamphlet entitled "Canadian Affairs" is issued, and in addition a series of photographic displays is circulated throughout Canada. A monthly periodical, "Canada Digest", composed of a selection of articles that have appeared in Canadian periodicals in the preceding month, is also published and distributed among the Armed Services abroad. This work is carried out under an editorial advisory committee composed of the Senior Educational Officers of the three Armed Services and the Wartime Information Board.

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.

The Board releases two monthly series to the theatres: "Canada Carries On", which runs in Canada, and "World in Action" which plays in Canada, the United States and Britain. It also produces many 16 mm. non-theatrical films for distribution to the Armed Services, rural circuits and industrial circuits in Canada, and through Trade Commissioners, Embassies and Legations throughout the world. To serve Canada a network of film distribution has been built up through the co-operation of volunteer projection services.

Since 1940, the National Film Board has produced almost 300 documentary films, scores of newsclips and trailers and a large number of newsreel stories. With headquarters at Ottawa, the Board maintains offices at Toronto, Montreal, Winnipeg, Vancouver, and abroad at London, Washington, New York, Chicago and Los Angeles.

Through its Graphics Division, it supplies regular photo service and mats to newspapers, magazines, rotogravures, house organs, etc.; plans, posters, booklets, cartoons, decorative illustrations for Government Departments; and maintains an active information section.

Experts from the Dominion Experimental Farm and the Royal Canadian Army Medical Corps Examining Vegetables Grown in "Hydroponic" Beds at Goose Bay, Labrador.—The soilless growth of plants has recently proved to be thoroughly practical. The production of fresh fruits and vegetables by soilless culture has been undertaken for the purpose of maintaining the health of troops in isolated northern areas.

R.C.A.F. Photo

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 price of foods, fuel and other necessaries of life, and to ensure an adequate supply and equitable distribution of such commodities". During the first two years of the War, the Board was mainly concerned with organizing supply and preventing the occurrence of avoidable shortages. Direct price fixing was very rarely necessary.

As the war program expanded, persistent shortages began to develop and, starting in April, 1941, the cost-of-living index rose sharply, largely as a result of increasing food prices. Against this background the Government decided upon a policy of overall price and wage ceilings, which came into effect on Dec. 1, 1941.

In general, the Board has jurisdiction over the supply of those goods required chiefly for civilian use, while the Department of Munitions and Supply has control over the materials and supplies that are of major importance to the war program. The Board works in close collaboration with other Government Departments, and the membership of the Board itself is comprised of senior officials of other Government Departments and agencies.

Problems arising in the administration of price control are outlined on pp. 188-191, while some of the Board's activities in the sphere of civilian supply are briefly discussed in this section. The Wartime Prices and Trade Board is charged with the duty of taking appropriate action to assure that the essential needs of the civilian population are met. Apart from its pricing actions, which are, of course, related to supply problems, the Board has found it necessary to take a variety of direct steps to protect essential civilian supplies.

It has been necessary, for example, for the Board to negotiate for supplies required from outside of Canada. Canada's requirements for a variety of commodities have had to be presented to the Combined Boards, which allocate United Nations supplies, and to Government agencies in the United States and the United Kingdom, and in many cases, such as textiles and hides, the Board has acted as the Canadian claimant agency. Some imports have had to be bulk purchased. In addition, many Canadian supplies, whether imported or domestically produced, have had to be allocated as between war and civilian requirements. For this purpose, a number of interdepartmental committees, on which the Board is represented, have been set up, such as the Food Requirements Committee, and close co-operation is maintained with the Departments of Munitions and Supply, Agriculture, and with National Selective Service through the Department of Labour. Finally, the most effective use of short supplies available for civilian purposes has frequently involved allocating materials among various users, issuing production directives where necessary, and controlling the distribution of more essential finished goods in short supply.

Simplification programs and informal measures of allocation were introduced on a considerable scale in 1942, while in the following two years allocation systems were further developed and the specific direction of production was introduced when needed. For example, since the latter half of 1943 shortages of various essential articles of clothing, resulting from the scarcity of labour and the restriction of supplies available from abroad, have been controlled by the Board. This has usually taken the form of "directives", setting a specific quota for each firm with regard to the garment concerned, though in some cases allocations of material have been sufficient. The directives have frequently been accompanied by assistance in obtaining materials and labour. Programs of this type were introduced for the production of winter underwear, work clothing, children's wear, worsted suitings, women's hosiery and other items.

Supplies of various metal household appliances, production of which had practically ceased, fell to an extremely low level toward the end of 1943. Production of a few articles—e.g., washing machines, irons, electric stoves—has been resumed on a very limited scale, production schedules being drawn up in collaboration with the Wartime Industries Control Board.

With the development of such direct methods, as well as the allocation of basic materials by the Wartime Industries Control Board and direction of labour by National Selective Service, the Board's orders restricting and prohibiting the manufacture of civilian end-products became less important. This fact, combined with some easing in the supply of a number of materials, made it possible during 1944 to remove or relax a substantial number of the orders simplifying, restricting or prohibiting the manufacture of civilian products, and thus to clear the way for the resumption of civilian production without prejudice to the war effort or the supply of essential civilian goods. While most of the relaxations were concerned with metal products, a number of restrictions were also removed in the apparel and paper products fields.

The Board's activities in the sphere of distribution control have been particularly important in the case of foods. Shortages developed, owing to decreased imports in some cases, and increased domestic and export demand in others, and in the course of 1942 and 1943 rationing was introduced for sugar, tea and coffee, butter, meat, preserves and honey. During 1944, food supplies improved in some fields, but shortages continued in others. Meat rationing was suspended on Mar. 1, 1944, and

Long-backed Hogs from Alberta.—These hogs are on their way to eastern slaughter houses to become pork, ham, bacon, leather, etc., each of which is playing a vital part in Canada's war effort.

Courtesy, National Film Board

improved shipping conditions led to the lifting of the tea and coffee ration on Sept. 19, 1944. On the other hand, the butter ration was slightly reduced during the year, owing to increasing requirements of fluid milk for domestic consumption and cheese for export to the United Kingdom. The shortage of dairy products also involved the introduction of a system of priority sales of evaporated milk, and restrictions on the sale of cream.

Department of Labour.—The development of war-time labour policy up to the latter part of 1943 is outlined in *Canada 1942*, pp. xxiii-xxiv, in *Canada 1943*, p. 25, and in *Canada 1944*, pp. 26-7. A general outline of present policy is given in the Labour Chapter at pp. 148-154 which brings the subject up to date.

Agricultural Food Board.—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.

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.

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.

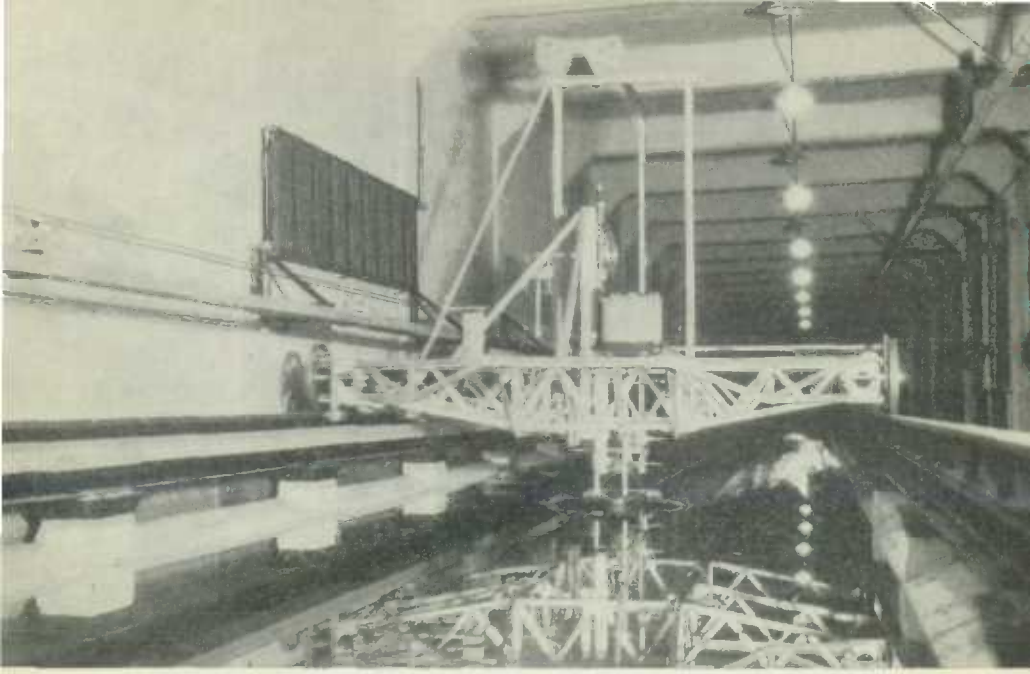
Co-operation with the Wartime Prices and Trade Board.—After the creation of the Wartime Prices and Trade Board, close liaison was established between the Board and the Bureau, the statistical staff being supplied by the Board but organized by the Bureau. Statistics on coal were collected and compiled for the Coal Administrator and later for the Coal Controller of the Department of Munitions and Supply. 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 and Other Departments.—The work of the International Payments Branch has been closely co-ordinated with other Government Departments to meet the increased official demands for balance of payments information with respect to both past record and future outlook. The complexity of the economic and financial organization of the Dominion during the War has created new requirements for statistical information with the necessity of frequent reviews of the balance of payments situation.

To make effective use of information produced by administrative controls, four officers of the staff of the International Payments Branch are working on the premises of the Foreign Exchange Control Board. Information produced from this and other official sources is co-ordinated for balance of payments purposes with statistics collected directly by the Dominion Bureau of Statistics.

National Research Council.—During the war years Canada has spent five times as much on research as in pre-war years or, roughly, $10,000,000 per annum. The President of the National Research Council has recommended that the war-time rate of expenditure should be used as a starting figure in the post-war period and that



Research in Mechanics and Engineering.—Testing aircraft floats in the testing basin of the National Research Council Laboratories. Models of high-speed boats, vessels and barges are also tested here.

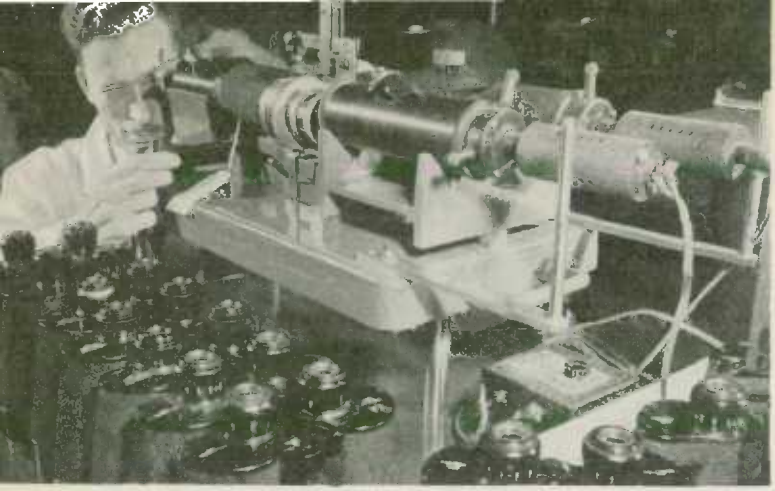
Courtesy, National Research Council

Canada should look forward to doubling that figure in five or ten years. This post-war program of expansion in research will include many new fields of investigation designed to develop the natural resources of the Dominion or to improve living conditions of the people, such as road research, housing and building research, transportation (air, rail, road and water), cold-weather and northern latitude problems, and the utilization of agricultural crops and the products of the forest. Research is recommendeed on the construction, heating and lighting, etc., of small homes, the development of cheap refrigeration units for farm homes, cold-storage locker systems for farms, and farm equipment including plumbing and farm power units.

It is recognized that the universities must remain the chief centres for the training of scientific personnel in special fields and should remain the chief centres for pure research. The chief concern of the Council's own laboratories is to carry on research on problems which may be expected to yield results of immediate practical application.

Plans are being made for the continued interchange of research workers between the National Research Council, universities, Government Departments and other research organizations in Canada. It is hoped also to expand the system of international liaison which has been developed to such a high extent during the War and which has enabled the scientists of Canada to take advantage of progress made in Great Britain, the United States and other countries, and in turn to make available to research workers in these countries the results of Canadian investigations.

The contribution of Canadian scientists in the development of new devices, methods and products has been widely recognized in such fields as: radio-location, aids to the Navy in mine and submarine detection, control of gunfire and other ballistic problems, new and more powerful explosives, emergency methods of food storage and transport under war conditions, development of special types of clothing.



Checking Binoculars for the Armed Forces on a "Collimator". — Exceptional care is taken to ensure perfection of these binoculars, upon which may depend the safety of a convoy or the success of an engagement.

Courtesy, National Film Board

and other equipment for Air Force, Army and Navy requirements. Problems relating to the physical well-being of the troops, have involved studies in nutrition, housing, sanitation, medical examination of recruits and treatment of the injured and sick.

Cold-weather problems have been given special attention to meet the requirements of the Armed Forces working in northern latitudes. Special subjects such as burns and the treatment of shock have been studied. Blood banks have necessitated research on methods of storage and preservation. Conferences on amputations have been held to bring work in this field into focus. Special medical committees have been created to deal with specific subjects.

On the civilian side, the National Research Council has been able to offer constructive aid in many directions. Glass-production methods have been evolved for the manufacture of needed telescope and other instrument lenses. Radiology has been applied to the inspection of castings, and teams of individual workers from industrial plants have been trained in its use. Paints, rubbers, textiles, and the processing of metals, including magnesium, for special purposes, have been investigated. Synthetic rubber research has been linked with similar work elsewhere and applied to industrial operations.

Other Agencies and Activities.—There are various other special agencies that are performing important economic functions, either of control or investigation. 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 in October, 1942, for the purpose of studying both domestic and external demands on Canada's food production and recommending appropriate policies of supplying Canada's foodstuffs to other nations.

In order to have an agency for prompt consultation among the various Departments and other agencies of Government on the matter of export and import trade policy, establishment of an External Trade Advisory Committee was announced on May 4, 1944. This Committee investigates and makes recommendations on matters relating to war-time export and import trade or trade in a transition period and concerning Canada's supplying of goods and services for relief and rehabilitation. In January, 1944, the Canadian Export Board was established to act as a Canadian Government export and procurement agent for civilian goods for certain countries, especially some of the British colonies, where emergency war-time trade control measures have prevented normal trade practice from being followed.

Description of Penicillin

→

Penicillin

RESEARCH began in 1929 when Prof. Alexander Fleming of St. Mary's Hospital in London, an outstanding worker in research on antiseptics, was investigating the growth of *staphylococci*—the cause of most pus-forming infections. A mould accidentally appeared on one of the cultures. A less skilled worker would have discarded it, but Fleming's acute observation saw that, in the neighbourhood of the mould, the *staphylococci* were disappearing. In other words the mould had the power to kill the bacteria of pus-forming infections. Further developments in the isolation of the active principal (penicillin) produced by the mould were carried out by other British scientists and eventually, by the efforts of Prof. Florey and Dr. Chain, attached to the Oxford School of Pathology, a penicillin salt was extracted which, in dilution of 1 to 500,000 showed anti-bacterial power. The immense strength of pure penicillin may be gauged by the fact that this salt contained only one percent pure penicillin. Clinical studies had startlingly successful results and penicillin became world-famous. In 1942, Prof. Florey placed at the disposal of American countries all the theoretical and practical knowledge he and his co-workers had accumulated; in 1943 he investigated in North Africa the use of penicillin in the treatment of war wounds; and in 1944 placed at the disposal of the Soviet the results of all his researches. Of itself, the British discovery of penicillin has contributed substantially to the Allied cause.

The drug is found to be particularly effective in the treatment of such diseases as acute osteomyelitis, meningitis, pneumonia, wound infection, gas gangrene, peritonitis, septicæmia, puerperal sepsis, and gonorrhœal infections including those cases which are resistant to the sulpha drug treatment. Included in the list are conditions to which the Armed Forces overseas are particularly subjected through wound infections of one kind or another, and which in former wars accounted for a high percentage of fatalities.

Canadian production is being developed for the Armed Forces at laboratories in Toronto and by two well-known pharmaceutical firms in Montreal. Limited but increasing quantities are now being released through the Office of the Controller of Chemicals for civilian use.

PENICILLIN

A British discovery—one of the greatest landmarks in the history of medicine.

Left Top: This material is actually a waste product from the corn industry which is mixed with milk sugar and later pumped into bottles. It is in this "medium" that the Penicillium notatum spores grow speedily into a mould.

Centre; Bottles containing the medium are submitted to a high temperature for half an hour for sterilization.

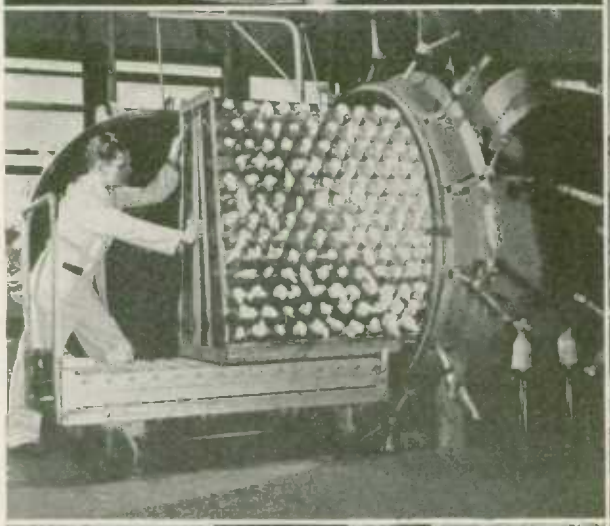
Bottom: Culture room where penicillin broths form in a ten-day growing process.

Right Top: A bottle of culture and the penicillin extract.

Centre: Finishing and standardizing the extract; the last chemical process before the penicillin is filtered for bottling.

Bottom: Vials of penicillin ready for use.

Courtesy, National Film Board



Since the Hyde Park Declaration of April, 1941, several joint committees have been set up to co-ordinate the war programs of the United States and Canada on the economic side. Their functions are connected with the acquisition and use of scarce basic materials, production of war supplies and equipment as well as war-time agricultural problems of both countries. To act as liaison between the various agencies, the Joint Economic Committees were set up in 1941 with an over-riding responsibility to investigate and report on joint war-time economic problems not being currently studied by other agencies, as well as on problems of post-war adjustment. The development of other agencies of co-ordination made the continued operation of these committees unnecessary, and they were dissolved in March, 1944.

Shipping policy is also under close review by the Government. 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.

An Advisory Committee on Merchant Shipping Policy was established late in 1943 to report on the merchant shipping policy and, in particular, the present manning of merchant ships, disposition of ships after the War, post-war size and composition of the Canadian merchant marine, and the type of permanent machinery required to implement the post-war shipping policy.

It is significant that many of the agencies now functioning have been established not only to deal with the war-time situation, but also to establish some machinery to deal with the problems that will arise after the War, especially in connection with the transition period between war and peace.

Questions of post-war traffic have come to the fore during the past year. The Interdepartmental Committee on Air Transport Policy worked on recommendations leading to a draft international air transport convention which was presented by Canada as a basis for bilateral air talks between the United Kingdom and the United States; also to the establishment of an Air Transport Board which was passed by Parliament during the 1944 session. This Board will function as a regulatory and advisory body, to regulate civil aviation and advise the Government in laying out Canadian-operated routes within Canada and overseas.

Government Action Directed Towards Post-War Reconstruction

Exploratory Work in Reconstruction and Social Welfare

As early as December, 1939, the Government set up a special Cabinet Committee on Demobilization and Re-establishment "to procure information respecting, and give full consideration to and report regarding, the problems which will arise from the demobilization and discharge from time to time of members of the Forces . . . and rehabilitation of such members into civil life". Thus, before the War was many months old, the economic problems associated with the waging of all-out warfare and the subsequent peace were anticipated so far as it was possible to foresee them. In February, 1941, the terms of reference of this Cabinet Committee were broadened to include all phases of reconstruction as they had been shown to be necessary with the development of the War. At still later dates the direction of all reconstruction studies was placed under the Prime Minister as President of the Privy Council.

Parliamentary and other committees set up to explore and advise the Government on matters of reconstruction and re-establishment are:—

(1) The Senate Committee of which the Chairman is Senator Norman P. Lambert.

(2) The House of Commons Committee, which has popularly come to be known as the 'Turgeon Committee' after its Chairman, J. G. Turgeon, Member for Cariboo, B.C.

(3) The following advisory committees reporting to the special Cabinet Committee or otherwise: (a) the Advisory Committee on Demobilization and Re-establishment; (b) the Advisory Committeee on Economic Policy; and (c) the Advisory Committee on Reconstruction.

The Senate Committee.—The Senate Committee on Economic Re-establishment and Social Security was established on Mar. 5, 1943, and has held meetings from time to time since that date. The Order of Appointments defines its functions as: to consider and report upon matters arising from post-war conditions, particularly those relating to problems of reconstruction and re-establishment and a national scheme of social and health insurance. The method of procedure is to hear and discuss reports from leading manufacturers, research workers, the chairmen of the various advisory committees established to study specific phases of reconstruction and other bodies.

The Senate Committee has worked closely with the House of Commons Committee and the work of both has served to focus public opinion upon the whole problem of post-war reconstruction.

Certain recommendations of the House of Commons Committee given below have resulted from joint sessions of both Committees.

The House of Commons Committee on Reconstruction and Re-establishment.—This Committee was originally established by a Resolution passed in the House of Commons on Mar. 24, 1942, "that a select committee of the House be appointed to study and report upon the general problems of reconstruction and re-establishment which may arise at the termination of the present war, and all questions pertaining thereto . . .". The House of Commons Committee has held meetings continuously from Mar. 24, 1942, to date and has presented reports each year to the House. Minutes of Proceedings and Evidence are published as House of Commons Sessional Papers and are available through the King's Printer. The procedure takes the form of statements before the Committee by leaders in industry and other witnesses called to report in their respective fields and to answer questions put by the Committee members regarding the subject matter of such statements. Most of the Provincial Governments have presented briefs to the Committee.

Recommendations.—The most important of the recommendations made at various times to the House are summarized as follows:—

(1) That creation of employment is the most immediate reconstruction problem of post-war Canada.

(2) That a Department under ministerial responsibility should be established to carry out the various tasks of reconstruction.

(3) That re-housing is an absolute post-war necessity. Authority should be taken by the Government to finance better homes for the people living under unhealthy slum conditions.

(4) That the Prairie Farm Rehabilitation Act, if applied to the whole of Canada, would greatly improve Canada's agricultural life and that the Act be amended accordingly.

Convalescent soldiers learning useful occupations while helping themselves along the road to health at the Rideau Health and Occupational Centre, near Ottawa.

Courtesy, Department of Veterans Affairs

(5) That every member of the Armed Forces and the Merchant Navy is entitled to assurance that Parliament and the Government will be prepared to do everything within their power to prevent any recurrence of mass unemployment.

(6) That preferences in Federal Government works projects and industries furnishing supplies be given to members of the Armed Forces and Merchant Navy and, wherever possible, be granted by the Employment Service.

(7) That specifically detailed improvements in transportation and communications should be carried out designed to build up the economic life of the Maritime Provinces.

(8) That Dominion-wide programs of road construction should be undertaken after the War to:—

(a) connect the highway systems of Canada with those of the United States.

(b) link up highways within Canada with a systematic design to encourage the proper utilization of the country's natural resources.

(c) promote the construction of a permanent all-season trans-Canada highway.

(9) That the question of markets, domestic and international, should receive immediate and constant study. Increased production through chemical research should be followed up. The relationship of agriculture to secondary industry must be changed and improved.

(10) That rural electrification as a means of improving the social and economic life of the farming population should be encouraged.

(11) That serious thought be given to the preservation of forests on the eastern slope of the Rocky Mountains in order to conserve the water resources of the Prairie Provinces, and that reforestation and afforestation be given serious study in co-operation with the Provincial Governments.

Special Advisory Committees.—*The Advisory Committee on Demobilization and Re-establishment.*—Under the Cabinet Committee on Demobilization and Re-establishment established in December, 1939, a General Advisory Committee on Demobilization and Re-establishment was set up under Order in Council P.C. 5421 of Aug. 10, 1940, composed of ranking civil servants who represented the Departments of Government directly or indirectly concerned. This Committee was among the earliest to be set up to investigate and study under the reconstruction machinery of the Cabinet Committee. The Chairman of the Canadian Pension Commission was appointed Chairman of this Committee and the Associate Deputy Minister of Pensions, Vice-Chairman. It was out of this Committee, as its field of effort developed, that the Advisory Committee on Reconstruction grew.

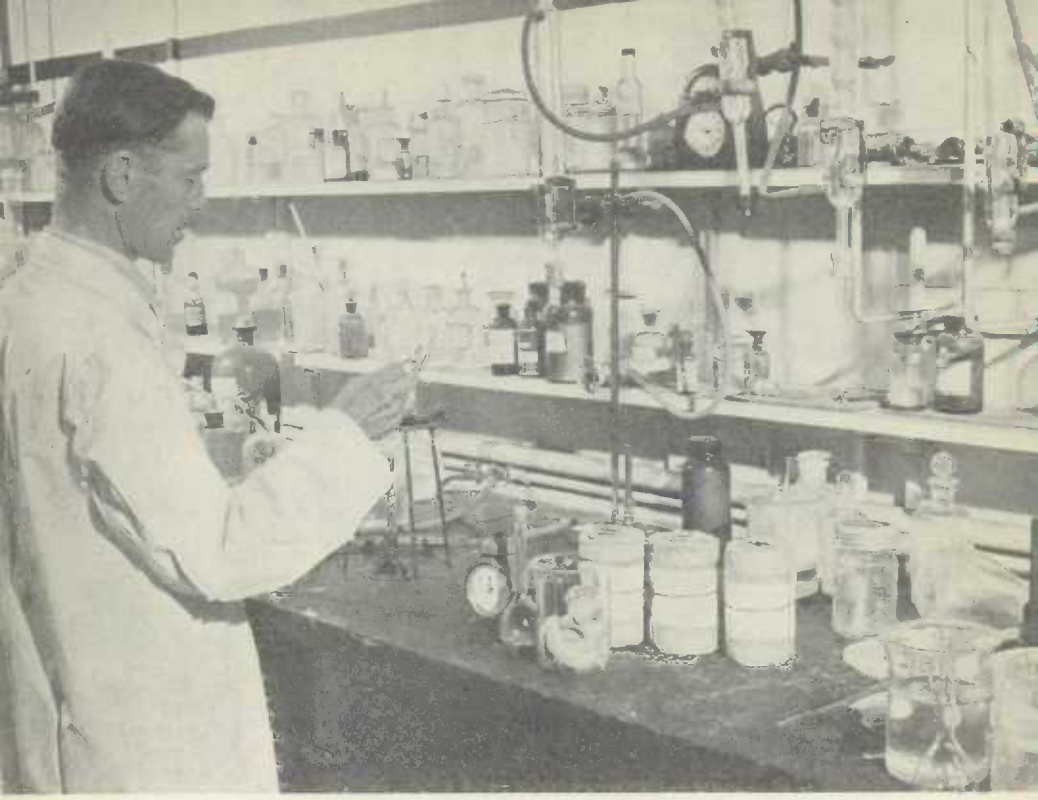
The terms of reference of this Committee were: to act as the agency among various Government Departments in matters of demobilization and rehabilitation and to bring before the Cabinet Committee recommendations for legislation in respect of these matters.

On Sept. 25, 1943, the Committee presented a report outlining its organization and the action taken by the Government as a result of its several recommendations. This report has not been printed but it was submitted in mimeograph form to the Minister of Pensions and National Health in his capacity as Convener of the Cabinet Committee.

The Advisory Committee on Economic Policy.—Functioning under the chairmanship of the Deputy Minister of Finance, this is essentially a committee of co-ordination. Its membership is composed of Deputy Ministers and its establishment and operation is in itself recognition of the principle that the development of post-war reconstruction policies and measures must be carried on in many different Departments and through many agencies of government with due provision for effective co-ordination. The Advisory Committee on Economic Policy is responsible directly to the Prime Minister and the relationship between this Committee and the Cabinet is, in fact, the *confidential* relationship existing between the Ministers of the Crown and expert administrative heads of the Permanent Civil Service. Because of this confidential nature of its duties, no printed reports are submitted.

The Committee was originally established on Sept. 14, 1939, a few days after the outbreak of the War, to investigate, report and advise on questions of economic and financial policy, and on problems arising out of Canadian participation in the War. As reconstruction problems became more pressing, the particular talent and experience of this Committee was directed to post-war reconstruction matters and its scope was widened to cover this work under P.C. 608 of Jan. 23, 1943.

The Advisory Committee on Reconstruction.—This Committee was created on the recommendation of the Cabinet Committee on Demobilization and Re-establishment following the enlargement of the latter's functions to include the general subject of post-war reconstruction. Its functions were to examine and discuss the general post-war problems and to make recommendations as to what Government facilities should be established to deal with these questions. It was first established under P.C. 6874 of Sept. 2, 1941.



Food Research being Carried on in One of the Laboratories of the Department of National Health and Welfare.

Courtesy, National Film Board

The Advisory Committee on Reconstruction wound up its work and made its report to the Prime Minister on Sept. 24, 1943. The functions of this Committee were transferred to the Advisory Committee on Economic Policy on Jan. 1, 1944, by P.C. 9946, Dec. 31, 1943.

Advisory Committee on Health.—In February, 1942, the Government set up the Advisory Committee on Health Insurance with instructions to formulate a Health Insurance Plan. The Committee reported in March, 1943, and accompanied the report with prepared drafts of suggested Dominion and provincial legislation.

The Department of National Health and Welfare

The establishment of the Department of National Health and Welfare was provided for under c. 22 of the Statutes of 1944, and the official announcement of the organization of the Department was made on Oct. 13, 1944. This Department will administer, on the health side, the functions of the Health Branch of the former Department of Pensions and National Health. It will organize the machinery for the administration of the Family Allowances Act and will continue the preparatory work directed to a nation-wide system of health insurance and a national scheme of contributory old age pensions. It will also, in time, assume certain other social welfare responsibilities which have hitherto been carried as the administrative function of other departments of the Federal Government.

Legislation in Regard to Social Welfare.—During the 1944 session of Parliament, the Family Allowances Act was passed and is to become effective July 1, 1945. This legislation is designed to equalize, in some measure, the social position of persons with families, compared with others without similar obligations.

On July 31, 1943, the National Fitness Act was passed, under which grants to provinces are approved for the improvement of the physical standards of Canadian youth through sports, athletics and other pursuits.

The Department of Reconstruction

The organization of the Department of Reconstruction (established under c. 18 of the Statutes of 1944) was also announced on Oct. 13, 1944. This is a temporary Department of Government and, according to the provisions of the Act, the duties of the Minister are "to prepare, formulate and co-ordinate plans and projects for reconstruction, and, with the authorization of the Governor in Council, provide for the carrying out thereof". It shall also be the duty of the Minister:—

"(a) to inform himself fully of the needs for new employment of the men and women in the armed forces and in industry and the opportunities that will be available to meet those needs as men and women are demobilized from the armed forces and as war production declines;

"(b) to co-ordinate the actions of other departments and agencies of the Government of Canada for the purpose of ensuring that the transition from a war-time to a peace-time economy shall be effected as quickly and as smoothly as possible;

"(c) to formulate plans for industrial development and conversion, public works and improvements, housing and community planning, research and the conservation and development of natural resources, and with the authorization of the Governor in Council, to provide for carrying out such plans;

"(d) to correlate information relating to plans for reconstruction."

In short, this Department will be a co-ordinating agency responsible for dealing with the internal economic problems involved in the re-employment of ex-service personnel and war workers, and the reconversion of industry.

The closest co-ordination between the war-time Department of Munitions and Supply and the new Department of Reconstruction is reflected in the appointment of the Minister of the former to the new portfolio.

The Department of Veterans Affairs.—The organization of the new Department of Veterans Affairs (established under c. 19 of the Statutes of 1944) was announced on Oct. 13, 1944, with the Hon. Ian Mackenzie, former Minister of Pensions and National Health, as the Minister.

This Department embodies all major activities of the Government which are of exclusive interest and benefit to veterans, and attached to it is the Canadian Pension Commission and the War Veterans' Allowance Board. It now includes the administration of the Veterans Land Act and the Veterans Insurance Act, formerly the responsibility of other departments, as well as the Post-Discharge Re-establishment Order and the Treatment and other regulations, formerly administered by the Department of Pensions and National Health, for the benefit of veterans of both the present war and the First World War.

The administration of that section of the War Service Grants Act called the Re-establishment Credit is handled by the new Department, which will authorize also all vocational training and higher education for discharged personnel, including tuition fees and maintenance grants.

The Development of the Canadian Economy in 1944

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

Production for war purposes reached a maximum in the year recently terminated. The Dominion in the previous five years had been working up to a record level of industrial production and further advance was made during the year, particularly in the production and export of food. The rate of expansion, however, was not so marked as in other years since the outbreak of hostilities, owing chiefly to scarcity of labour.

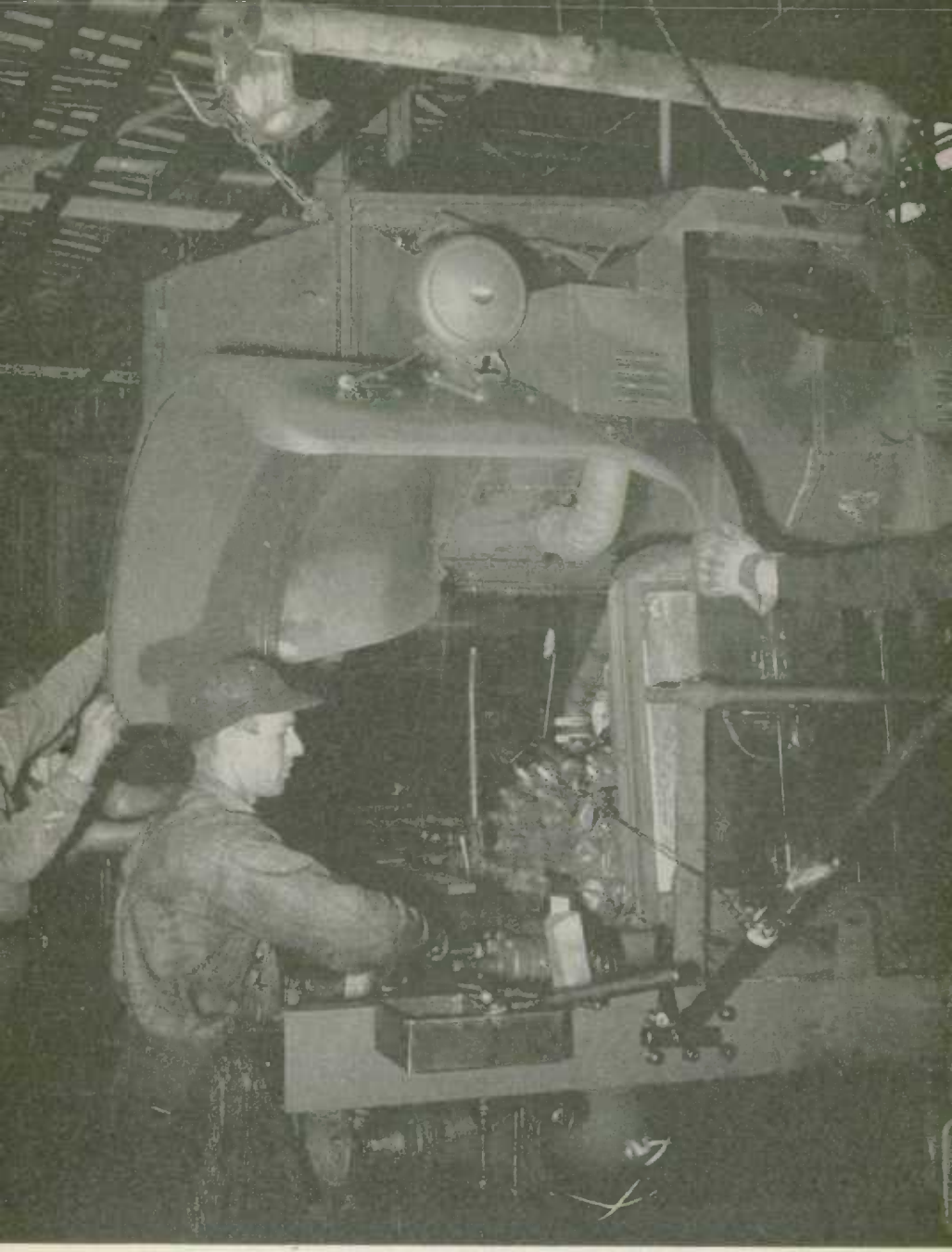
The most arresting fact regarding the current situation of the Canadian economy is the extent of war production: Canada's industry has played a very vital role in the war effort of the United Nations. The value of completed contracts, exclusive of food supplies and metals, placed through the Department of Munitions and Supply has exceeded $8,000,000,000, the value of manufactured products alone being more than $6,000,000,000.

The national income, the most comprehensive measure of the production of goods and services, rose to a new high figure in 1944, though the percentage increase over 1943 was of only moderate proportions. The gain in farm production contributed heavily toward the record income of the year.

The 700,000 farmers of Canada, assisted by generally favourable weather during the growing season, achieved a high level of production in 1944, despite the depletion of the labour force by enlistments and by migration to the cities. Field crops were generally much in excess of those of the preceding year, the wheat harvest having been about 450,000,000 bu. compared with 290,000,000 bu.

Marketings of live stock were also at high levels throughout the year, while the production of poultry and eggs attained record levels. As a result there was in 1944 an enormous export of food, while Canadians at home were among the best-fed populations of the world. Financially, the farmers of Canada obtained higher cash incomes than in any other period, enabling them to liquidate in large measure the mortgage indebtedness and other obligations contracted during the long depression. The world-wide demand for food in the coming year bids fair to absorb, at good prices, all the products which the farmers may be able to make available for the feeding of the Allied Nations.

The fisheries are also performing an important function by adding to the war-time food supply. During the pre-war period, Canada's domestic consumption of fish was small in relation to output. Between 60 p.c. and 70 p.c. of the annual catch was normally exported, of which the United States took about one-half and Britain one-quarter. The industry, therefore, must contend with the fact that after the War the



An Army Vehicle Receives Part of its Sturdy Body as it Moves Along the Assembly Line

Courtesy, National Film Board

greater part of its output will probably have to find markets in other countries. The record in augmenting the British food supply during the past five years, despite the inherent difficulties of operations, constitutes a brilliant chapter in the story of Canada's war effort. The output of canned salmon has averaged more than 1,375,000 cases in the past three years, going mostly to meet the needs of the United Nations. Shipment of canned salmon to Britain was several years ago as great as 80,000,000 lb. and latterly only a comparatively small part of the output has been retained for Canadian consumers.

Canada's role as the leading exporter of base metals has given the mining industry its opportunity of making a well-nigh indispensable contribution to the war effort. The value of exports of non-ferrous metals, minerals and derivatives, has risen 85 p.c. from the outbreak of war. The growth in the production of aluminum, derived mainly from bauxite ores obtained from British Guiana, was 985,000,000 lb. in 1943 against 164,000,000 in 1939. The expansion in metal production since the last peace-time year, despite the unfavourable labour position, reflects credit upon the mining industry, which responded nobly in the face of emergency.

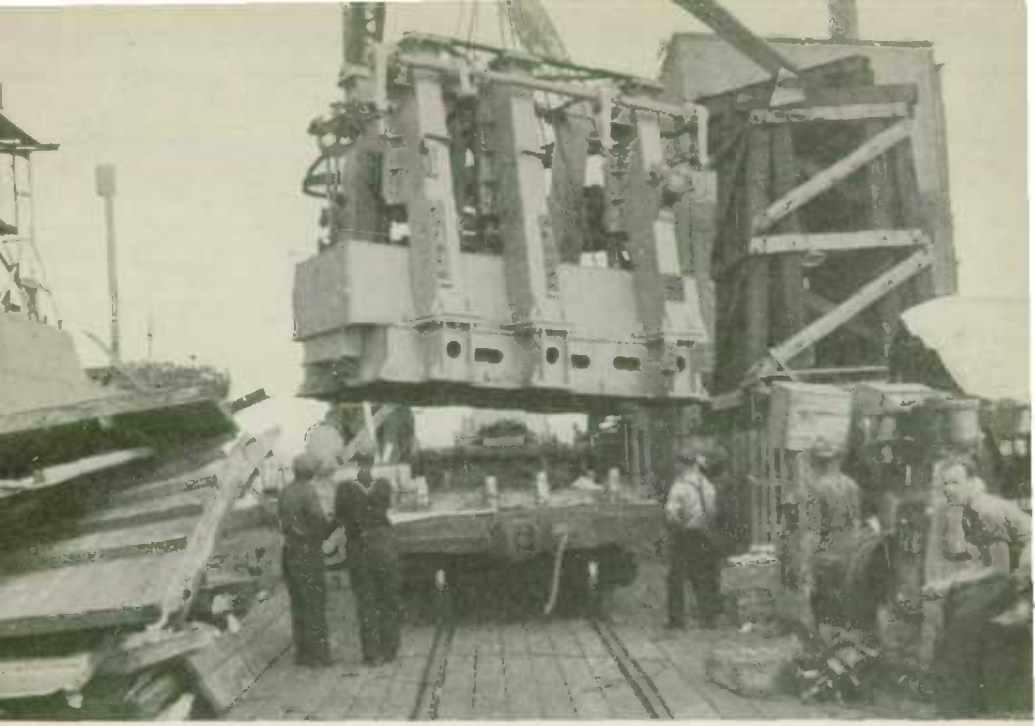
The forestry industries of Canada, based upon 1,200,000 sq. miles of forested areas, are of great importance to the national economy. Their basic activity is logging, which operated at considerably higher levels in 1944 than in the preceding year, as shown by an increase of 17 p.c. in employment afforded. A larger cut of saw-logs, pulpwood and other forest products was realized in response to increased and urgent demands. Newsprint production, estimated at about 3,000,000 tons, was slightly greater than in 1943. The exports of wood, wood products and paper in the first ten months, valued at $363,000,000, were about $47,000,000 greater than in the same period of the preceding year. Canadian newsprint mills, during recent years, have been the mainstay of a free press in more than 40 countries.

Canada's vast forest estate consists not merely in timber values, but represents as well the source of water power, locations for complementary agricultural communities, and resources of fish, game and natural beauty. Because of the co-operation between the chemist and the lumberman, the myriad uses of wood are now more fully realized.

Hydro-electric power is of supreme importance to the great industries of the St. Lawrence valley, a territory without a natural supply of coal. During the four years of war between the end of 1939 and the end of 1944 nearly 2,000,000 h.p. were added to hydro-electric installations, which were 10,283,000 h.p. at the close of 1944. The production of electric power in 1944 was about 40,000,000,000 kwh. and the consumption of firm power surpassed all previous experience.

The war-stimulated expansion of Canadian manufacturing production is so obvious that no extended exposition is needed. It is a story of industrial evolution having a vast potential effect upon the population destiny of the Dominion. Canadian industries continued in 1944 to keep production at a high level so that the fighting forces would have the needed material support. The magnitude of the transformation is indicated by the increase during 1943 over 1939 of 140 p.c. in the net value of production with a further advance in 1944. The number of employees increased 92 p.c. while the payroll rose 160 p.c.

In the most recent months the prospects for an early victory have brought about some decline in the numbers of employees in the groups of industries that had shown most rapid expansion during the War, namely, the iron and steel group, the non-ferrous metals and the chemicals. This decline has been accompanied by an



A Corvette Engine being Lowered to a Railway Car for Shipment to the Seaboard.

Courtesy, Canadian National Railways

approximately equivalent expansion in the non-war industries, particularly in food products, and the trend of the times is seen in the removal of restrictions on the use of certain metals and other materials in production for civilian consumption.

The operations of the construction industry, measured by records of employment, were at lower levels than in 1943, but the situation in regard to the placement of contracts was decidedly more favourable. Contracts awarded in the first ten months of 1944 were nearly 45 p.c. greater. The considerable new business placed during those ten months and the record of contemplated new construction indicates heavy operations upon the termination of the War and the removal of disabilities regarding men and materials.

The railways were called upon to handle more freight and passenger traffic during 1944 than in any other year. Passenger traffic, owing partly to the restrictions on gasoline, was about four times that of 1939 and the great increase in service was provided with very small increase in passenger equipment. The estimated tonnage of freight hauled was 122 p.c. greater than in 1939, and the ton-mileage of freight handled was about 167 p.c. greater. In other words, with little additional equipment, eight tons of freight were hauled one mile in 1944 for every three tons hauled one mile in 1939. The gain in gross revenue of the Canadian Pacific Railway from the first of the year to November 21, over the same period of 1943, was from $261,000,000 to $284,000,000, although revenues of the Canadian National Railways remained at approximately the same level in the first nine months of 1944 as in the same period of 1943. The street railways providing local transportation have also done a magnificent job for the war effort by providing increased service in the growing centres of war industry despite the lack of new equipment and of sufficient trained operators.

Although in the past five years the production of many lines of consumer goods has been restricted and the Canadian people have made a heavy contribution in the purchase of war bonds and taxation payments, an upward trend has been shown in distribution through retail outlets. The increase of about 70 p.c. since the last peace-time year is due mainly to an advance in the quantity of goods purchased, the upward movement in retail prices being of relatively small proportions.

Income payments to individuals have doubled since 1938, and even after the payment of direct taxes the income at the disposal of individuals has been greatly increased in the past six years. Personal savings, as indicated by bank deposits and the purchase of Dominion bonds, are obviously a large slice of the disposable income, but the residue has been sufficiently large to exert an inflationary strain.

The exports of Canadian products reached $2,861,000,000 in the first ten months exceeding by no less than $482,000,000 the figures of the same period of 1943. The advance consisted mainly in the outward flow of food for the feeding of the less-favoured nations. When the net exports of new non-monetary gold of over $100,000,000 are added, it is probable that the total shipments of Canadian products abroad will attain a level of $3,600,000,000 or about $12,000,000 per working day. Export trade is thus a potent stimulating force in the Dominion's economic life.

Manpower is by far the most important resource of the nation and the activity of the gainfully occupied provides the primary basis of the country's standard of living. The volume of employment was maintained in 1944 with minor readjustments toward consumer goods industries, the scarcity of labour having become acute in a number of essential activities. The index of employment in eight leading industries was practically maintained at 182·7 in the first ten months of 1944 against 183·0 in the same period of 1943.

The generally high level of productive and distributive activity throughout the Dominion was reflected in the increasing ordinary revenue of the Dominion, which for the first seven months of the current fiscal year amounted to $1,606,000,000 or an advance of $83,000,000 over the same period of the preceding year. Bank debits in the first ten months of 1944 were nearly 14 p.c. greater than in the same period of 1943. The money supply, consisting of coin and bank notes and deposits subject to cheque, rose from $2,722,000,000 in September, 1938, to $5,748,000,000 in October, 1944, an increase of 111 p.c. Total payments by cash and cheque recorded a gain of about 105 p.c. in the same comparison.

To sum up, economic progress in Canada was still in evidence during the year 1944. Though the scarcity of labour and materials placed a handicap on productive operations, the high levels of the preceding year were generally surpassed, resulting in a new maximum.

THE IRON-ORE DEVELOPMENTS AT STEEP ROCK AND THEIR IMPORTANCE TO CANADA

The arrival at Cleveland on Oct. 14, 1944, of the first shipment of 12,213 tons of Steep Rock ore aboard the steamer *Pontiac* marked an important milestone in the history of Canada's iron and steel industry. Steep Rock is the first big producer of high-grade hæmatite ore in Canada since the exhaustion of the Helen Mine, in the Michipicoten area of Ontario, in 1918.

Canada has never been a substantial producer of iron ore, although a large iron and steel industry has been built up on the basis of imported Newfoundland and United States ores. Iron is, in fact, so essential to the Canadian economy that, in addition to the large domestic production of iron and its products, total annual imports over the pre-war five-year period, 1935-39, averaged almost the same in value as the total annual output of Canadian gold in the same period, viz., $146,000,000 as against $148,000,000.

The word "gigantic" appropriately describes the engineering feat at Steep Rock that has opened up a large deposit of iron ore of the highest quality. Prior to the development, the three ore bodies that give such great value to the mine were buried beneath Steep Rock Lake, a body of water about fifteen miles long and ranging in depth from 40 to 265 feet. The bed of the lake consists of gravel and clay with a thickness of from 40 to 310 feet before bed rock is reached. Underground methods of developing the "A" ore body were attempted but proved difficult. At the same time the "B" ore body was delimited by diamond drilling. This deposit was situated in the shallowest part of the lake and could be made amenable to low-cost open-pit mining. The company decided to empty the lake, an operation involving the diversion of the whole drainage system in an area of 1,500 square miles. (See map at p. 49.)

It was necessary in order to carry out such an ambitious project to envisage the expenditure of nearly $15,000,000 without the definite assurance that, on completion of the pre-production development program, ore in commercial quantity and of the required quality would be found. Drilling had indicated the presence of the ore, but the fact remains that the governments and the financiers who backed the company admittedly took part in one of the greatest "gambles" in the history of mining.

The beginning of shipments of high-grade iron ore from Steep Rock Lake in September, 1944, is a very definite accomplishment in Canada's evolution in the field of iron and steel production. It opens wide the door to large-scale industrial development at the very dawn of the most promising era in the history of Canada.

Summary of Previous Iron-Ore Developments in Ontario.—A recapitulation of the history of iron mining in the Province of Ontario, which has produced more iron ore than any of the other Canadian provinces, shows that production of that important

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This article has been prepared, and illustrations supplied, specially for *Canada 1945* by H. C. Rickaby, A.I.M.E., Deputy Minister, Department of Mines for Ontario, Toronto.

raw material commenced early in the nineteenth century and was mainly centred in the eastern part of the Province, in Hastings County and the surrounding district. Operations for a time were sporadic and production at a profit uncertain, with the result that output of ore from Canadian sources had practically ceased by 1890.

In 1896 the Dominion and Provincial Governments inaugurated a system of bounties to encourage the manufacture of iron and steel from Canadian raw materials, with beneficial results. Blast furnaces were erected at a number of points in Ontario and Nova Scotia. As Canadian ores were either too low in iron or too high in impurities, efforts to encourage their use met with only moderate success. The Helen Mine, north of Sault Ste. Marie on Lake Superior, was an exception. During its life, this mine shipped close to 3,000,000 tons of high-grade hæmatite, which found a ready market.

With the exhaustion of the Helen ore in 1918 the Canadian blast furnaces obtained their ore almost entirely from the United States and Newfoundland. Bounties offered by the Ontario Government encouraged Algoma Ore Properties, subsidiary of the Algoma Steel Company of Canada, to work the reserves (estimated at 100,000,000 tons) of siderite or carbonate ore at the New Helen Mine in 1937, and to erect a sintering plant at Wawa in the Michipicoten area in 1938. Initial production of sintered ore from iron carbonates was begun in the summer of 1939. This project has been successful and its product is a desirable charge for the blast furnace. The insatiable demand of the War for steel and the depletion of deposits of high-grade ores in the Lake Superior mines stimulated the search in Canada for new sources of such ores. Some very interesting results were obtained in the District of Algoma, but the most promising and extensive new find has been the one located at the bottom of Steep Rock Lake and owned by Steep Rock Lake Iron Mines, Limited.

The Steep Rock Development.—The first mention of iron-ore deposits under the waters of Steep Rock Lake was made by two members of the Geological Survey of Canada. A map published in the 'nineties contained the following marginal note:

A Battery of Special Pumps in the Process of Dewatering Steep Rock Lake.

The "Hump" after Steep Rock Lake was partly dewatered.

"An iron-bearing horizon with hæmatite of good quality appears to be covered by the waters of Steep Rock Lake". Large fragments of "float" hæmatite were found on Float Ore Island in the southwest section of the central part of the Lake. Claims were staked in the vicinity of the Lake before the year 1900, and in 1902 two drills were set up at Mosher Point, overlooking what is now called the "B" ore body. It is said that these drills would have intersected ore had they been at a slightly different angle.

No further information was obtained until in 1937 Julian G. Cross, geologist of Port Arthur, undertook an intensive study of the problem and interested the late Joseph Errington in the search. A company known as the Steerola Exploration Company, Limited, was formed to explore the lake bottom by a series of diamond-drill holes put down through the ice. Mr. Cross was convinced that the evidence of high-grade float ore only 50 to 75 miles north of the Vermilion and Mesabi iron ranges in Minnesota was too definite to pass up without complete exploration with all the modern tools at the command of the mining engineer. Accordingly, during the winter of 1937-38, twelve diamond-drill holes were put down through the ice. Of these, seven struck hæmatite of good grade.

Work was speeded up the next winter by the assistance of geophysicists, who carried out a survey on the ice. This survey helped to determine the limits of three ore zones designated as "A", "B", and "C" (see map at p. 49).

The Amount and Quality of the Deposit.—From January, 1938, to July, 1943, 305 diamond-drill holes for a total footage of 102,997 feet (19 miles) were put down and, in addition, 74 holes were bored with churn drills for a total footage of 27,797 feet. The drilling disclosed an estimated 17,244,080 tons of proven ore and 14,336,006 tons of probable ore, or a total of 31,580,086 tons in the "A" and "B" ore zones.

Looking across to Mosher Point and the "B" Orebody.

Dried ore samples supplied by drilling operations indicated ore in the "A" and "B" zones averaging 61·12 p.c. iron, 0·031 p.c. phosphorus, 3·71 p.c. silica, and 0·038 p.c. sulphur. Only a few holes intersected the "C" ore body, but these indicated an ore of the same high quality.

One of the chief advantages of the Steep Rock Lake ore is its high content of "natural" iron (percentage of iron in the undried ore as shipped), averaging 56·25 p.c. as against 52 p.c. for ore shipped from the Lake Superior District. Its silica content of 3·40 p.c. is extremely low. This enables it to be used as a 'sweetener' for other ores carrying a high percentage of silica. For instance, furnace requirements call for a silica content of about 8 p.c., and operators in the Lake Superior district are finding it increasingly difficult to ship a product that meets this requirement. One ton of Steep Rock ore used as a 'sweetener' for two tons of Lake Superior ores carrying 10·3 p.c. silica would produce three tons of furnace feed ore averaging 8 p.c. silica.

Steep Rock ore is also adapted to open hearths because it is classed as "Old Range" ore, meaning that it is lump ore producing little 'minus 100-mesh' material. This fact led to experiments to determine its possibilities as open-hearth charge ore. After preliminary experiments at the Battelle Memorial Institute, a full-scale run in the open-hearth furnaces of the Republic Steel Corporation at Buffalo, in which 33,000 pounds of Steep Rock "float ore" in lumps was used, indicated that it was eminently suited for charge purposes.

The results of these tests, as presented in a report to shareholders of the Steep Rock Iron Mines, Limited, are as follows:—

"(1) The quality and ease of removal of the flush slag indicated rapid chemical reaction with consequent faster heat time and higher tonnage per unit of time.

"(2) The analysis of the flush slag indicated lower total iron losses than is normal when using 70 p.c. hot-metal heats. (Actually 71·75 p.c. was used.) This is consistent with the fact that this heat produced 89·15 p.c. ingot yield, compared with a normal of 88 p.c.

"(3) The time of steel-making was reduced from 10 hours, 17 minutes, which is the normal average of this furnace, to 8 hours, 35 minutes.

"(4) Normally, steel is made in the open hearth using 50 p.c. pig iron and 50 p.c. scrap metal, with the proper amount of limestone and hard ore. Because of the scarcity of scrap, the amount of pig iron has been raised until the ratio is now approximately 55 p.c. pig iron and 45 p.c. scrap. In the test run the ratio was raised to 71·76 p.c. pig iron to 28·24 p.c. scrap, with satisfactory results. Use of Steep Rock ore apparently permits use of much less scrap. Leading metallurgists have calculated that with 2,000,000 long tons of this Steep Rock ore available per annum, a saving of 9,000,000 long tons of scrap per year can be made."

In addition to its high qualities as open-hearth ore, the Steep Rock ore, owing to its low phosphorus content (673 samples showed 0·017 p.c.), is not only of Bessemer grade but well below the Bessemer limit (0·045 p.c.). This would make it possible to mix one ton of the Steep Rock ore with one or more tons of the usual non-Bessemer grade to produce two or more tons of Bessemer grade.

The Exploitation of the Deposit.—The problem of exploiting the ore deposits lying beneath billions of tons of water and overburden was then tackled. When a shaft was put down and a cross-cut driven underneath the lake, the impossibility of reaching the ore bodies because of uncontrollable water flow from above was revealed, and it was found that the Lake would have to be dewatered in order to reach the objective. This meant that the Seine River would have to be diverted around Steep Rock Lake because the Lake was part of the river system. The map (p. 49) indicates the original flow and the diverted water route. The existence of a power-generating plant at the head of the Lake complicated matters. The Steep Rock staff made a thorough study of the diversion and found it to be within economic range; they figured out that the cost of the project could be later paid back from mining operations.

The general diversion plan included the cutting off of the west arm of Steep Rock Lake by means of dams in the narrows from the central section of the "M" shaped lake, the stopping of the flow at the head of the Lake, and the rerouting of the water from Marmion Lake across Raft Lake into Finlayson Lake and thence, from the south end of this Lake, through a channel into the north end of the West Arm of Steep Rock Lake, from which point the waters return to the Seine River system.

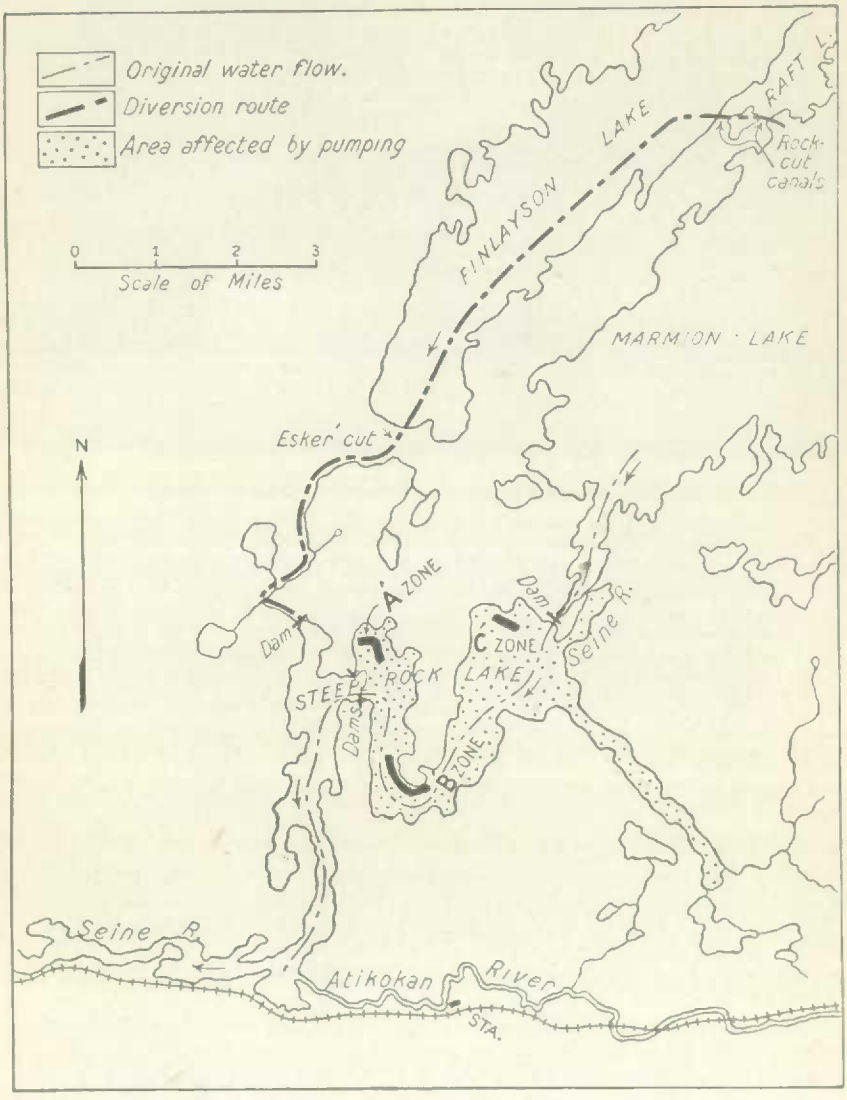
This immense project involved the following works:—

(1) Construction of a road 22 miles long to carry heavy trucks and equipment from Atikokan to Finlayson and Raft Lakes.

(2) The driving of a tunnel 10 feet by 12 feet for a distance of 1,200 feet under a ridge at the south end of Finlayson Lake. By this means Finlayson Lake, whose level had normally been 30 feet above that of Marmion Lake, could be lowered by about 60 feet. The tunnel also gave a controlled discharge from the Lake during lowering of the level.

(3) The cutting of a channel through the ridge mentioned in (2). This was done after the tunnel had lowered Finlayson Lake to the desired level. The work involved the removal of 1,200,000 cubic yards of gravel and 70,000 cubic yards of rock.

(4) Dewatering of Raft Lake, the volume of water being half a billion gallons.



(5) Excavation of cuts connecting Finlayson Lake with Raft Lake and Raft Lake with Marmion Lake. These cuts are 100 feet wide and have a total length of 4,000 feet.

(6) Construction of a concrete spillway across the bed of Raft Lake to control the flow of the diverted river, because Marmion Lake is still a reservoir.

The program was completed substantially on schedule and pumping operations began in anticipation of mining operations. The part of the Lake which had to be

"B" Orebody Pit showing Dredges, Monitors and Two Churn Drills at Work.

dewatered is twelve miles long and before pumping had a surface area of four square miles. Approximately 70,000 million gallons of water had to be pumped in order to lower the Lake sufficiently to permit mining.

When the Lake was at 80 feet below its normal level, it was separated into two parts by a hump; and at 100 feet below normal level there was about 4,000 square feet of lake bottom exposed around the "B" ore body. A haulage road was established, across the hump, from the uncovered ore zone across to the site of the crusher on the west shore.

Removal of the overburden in the open pit by the use of power shovels, monitors, and other stripping machines uncovered solid ore on Aug. 1, 1944.

In the meantime a spur line of railway was built from Atikokan to the property, a distance of 4½ miles, and two hundred and fifty ore cars were ordered by the Canadian National Railways to handle the ore from the mine to Port Arthur. Until completion of the loading docks at Port Arthur, however, all ore must be hauled through Fort Frances to Duluth.

Estimated Production and Costs.—The Company expected to ship a considerable tonnage of ore to the first of December, and it is planned to increase shipments to 1,000,000 tons during the shipping season of 1945, further increasing the tonnage over a period of two or three years to 2,000,000 long tons annually.

Estimated costs of production furnished by the Company's consulting engineers indicate that a long ton of the ore can be delivered at the lower lake ports for $3·239 Canadian currency, exclusive of interest, amortization, and Dominion taxes. As the present prices of comparable United States ores are slightly in excess of $6 per ton Canadian funds, a profitable operation is indicated.

Arrangements for the financing of this project, involving the raising of a large amount of capital without losing control of the project, took considerable time. Finally sufficient interest in the project was aroused and financing, sufficient to carry the development program to completion, was arranged.

The Canadian, United States, and Ontario Governments, as well as private interests, participated directly or indirectly in the financing details. A loan of $5,000,000 was advanced by the Reconstruction Finance Corporation of Washington, D.C., and $2,250,000 was secured through the sale of bonds to private investors. Commitments by the Canadian Government, covering transportation and ore-loading facilities, and by the Ontario Government, through the Hydro-Electric Power Commission, approximate $5,000,000. Expenditures estimated at $1,000,000 for the exploration of the deposit prior to 1943 would seem to be reasonable.

Summary.—Summarizing Steep Rock's history, it was Cross who became convinced that the float boulders demanded real attention and it was he who kindled the enthusiasm of Errington. The latter called in Dr. Brant. Utilizing geophysical methods and diamond drilling, the company made a mass attack on the problem. It was the driving force of Errington and Cross that collected the 116 claims comprising 7,000 acres, including all of Steep Rock Lake and much of the adjacent country, that were eventually incorporated in the Steep Rock Iron Mines, Ltd. Roberts and Bartley through their studies indicated the source of the ore, noted the possibilities of dewatering the lake, and pointed out the possibilities of early open-pit mining followed by underground workings, having established the fact that the tightness of the rock formations would eliminate water seepage into the deep workings. The problems concerned with the removal of the water itself and the general production and development plans were handled by Canadian consulting engineers.

Officers of the Company pushed the development work through to completion, arranged for the money, and enlisted the aid of the Dominion and Provincial Governments.

Loading Bins for Railway Cars at Steep Rock Lake.—The crusher house is shown below to the right.

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-fourth 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, 10,889,000 (1943); Australia, 7,226,437 (1943); New Zealand, 1,642,100 (1943); all India, 388,998,000 (1941 census).

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 population of United States grew 35 p.c. decade by decade until 1860, but with this exception there has been no recorded example of more rapid 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 latest figure published in 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, 1944.

Population of Canada, Census Years 1891–1941, With Density, 1941

Province or Territory	Land Area in Sq. Miles	Population						Persons per Sq. Mile 1941
		1891	1901	1911	1921	1931	1941	
P.E.I.	2,184	109,078	103,259	93,728	88,615	88,038	95,047	43·52
N.S.	20,743	450,396	459,574	492,338	523,837	512,846	577,962	27·86
N.B.	27,473	321,263	331,120	351,889	387,876	408,219	457,401	16·65
Que.	523,860	1,488,535	1,648,898	2,005,776[1]	2,360,510[2]	2,874,662	3,331,882	6·36
Ont.	363,282	2,114,321	2,182,947	2,527,292[1]	2,933,662	3,431,683	3,787,655	10·43
Man.	219,723	152,506	255,211	461,394[1]	610,118	700,139	729,744	3·32
Sask.	237,975	–	91,279	492,432	757,510	921,785	895,992	3·77
Alta.	248,800	–	73,022	374,295[3]	588,454	731,605	796,169	3·20
B.C.	359,279	98,173	178,657	392,480	524,582	694,263	817,861	2·28
Yukon	205,346	–	27,219	8,512	4,157	4,230	4,914	0·02
N.W.T.[4]	1,258,217	98,967	20,129	6,507[1,3]	8,143	9,316	12,028	0·01
Canada	**3,466,882**	**4,833,239**	**5,371,315**	**7,206,643**	**8,787,949[2]**	**10,376,786**	**11,506,655**	**3·32**

[1] Corrected as a result of the Boundaries Extension Acts, 1912. [2] 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. [3] Corrected by transfer of population of Fort Smith (368) to the Northwest Territories. [4] 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.

Winnipeg, the Gateway to the Canadian West.—The intersection of Portage Avenue and Main Street is the heart of the city's business district. The Legislative Buildings may be seen on the extreme left.

Courtesy, Manitoba Travel and Publicity Bureau

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. Of all the provinces, Quebec showed the largest urban percentage, followed by Ontario; Prince Edward Island had the largest percentage of rural population. During the past decade, the continual growth of manufacturing and industrialization has accounted for the movement of population to urban centres.

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	–
Canada	**4,804,728**	**5,572,058**	**5,254,239**	**6,252,416**	**449,511**	**680,358**

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.

Populations of Cities and Towns having over 20,000 Inhabitants, 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	20,541	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
†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

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.

The most substantial increases in the proportion of females were in Yukon from 332 females per 1,000 in 1931 to 358 in 1941, and in British Columbia from 445 females in 1931 to 468 in 1941. Other provinces showing appreciable increases were Alberta, Saskatchewan and Manitoba.

Percentage Distribution of Population by Sex and Age Groups, by Provinces, 1941

Age Group	Prince Edward Island		Nova Scotia		New Brunswick		Quebec		Ontario		Manitoba	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Under 10 years	10·2	9·9	10·0	9·7	10·8	10·6	10·6	10·4	8·0	7·8	8·6	8·3
10–19 years	10·0	9·6	9·8	9·5	10·6	10·4	10·7	10·7	8·9	8·6	9·7	9·6
20–29 "	8·9	7·7	9·3	8·8	9·0	8·2	8·7	9·0	8·6	8·4	9·2	9·1
30–39 "	6·4	5·3	6·8	6·0	6·4	5·9	7·0	6·9	7·5	7·1	7·0	6·7
40–49 "	5·3	5·0	5·2	5·0	5·0	4·8	5·3	5·1	6·5	6·2	5·9	5·5
50–59 "	4·4	4·2	4·3	4·1	4·1	3·8	3·9	3·7	5·4	5·1	5·9	4·6
60–69 "	3·5	3·3	3·3	3·0	3·1	2·8	2·5	2·4	3·5	3·5	3·6	2·7
70 or over.	3·1	3·2	2·5	2·7	2·2	2·3	1·5	1·6	2·3	2·6	1·9	1·7
All Ages.	**51·8**	**48·2**	**51·2**	**48·8**	**51·2**	**48·8**	**50·2**	**49·8**	**50·7**	**49·3**	**51·8**	**48·2**

Age Group	Saskatchewan		Alberta		British Columbia		Yukon		Northwest Territories		Canada	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Under 10 years	9·8	9·5	9·6	9·3	7·1	6·9	8·7	8·9	13·4	12·7	9·2	9·0
10–19 years	10·8	10·5	9·9	9·7	7·9	7·7	6·3	5·9	9·5	9·2	9·8	9·6
20–29 "	9·1	8·5	8·9	8·5	8·6	8·7	11·0	7·4	10·1	7·4	8·8	8·6
30–39 "	6·7	5·9	7·5	6·3	7·7	6·7	11·9	5·0	9·5	6·0	7·2	6·7
40–49 "	5·8	4·8	6·4	5·0	6·6	5·7	6·8	3·2	6·1	4·1	5·9	5·5
50–59 "	6·0	4·0	6·2	4·1	7·5	5·4	6·4	2·6	4·1	2·5	5·1	4·4
60–69 "	3·5	2·2	3·5	2·3	5·2	3·6	7·3	1·9	2·3	1·6	3·3	2·9
70 or over.	1·6	1·3	1·6	1·2	2·6	2·1	5·8	0·9	0·7	0·8	2·0	2·0
All Ages.	**53·3**	**46·7**	**53·6**	**46·4**	**53·2**	**46·8**	**64·2**	**35·8**	**55·7**	**44·3**	**51·3**	**48·7**

Conjugal Condition.—In Canada as a whole there are more married males than married females because of the excess of married male immigrants. Other striking statistics of conjugal condition are the great preponderance of widows compared to widowers and the large and increasing numbers of divorced or legally separated, but the reasons for these figures are more apparent.

The number of persons divorced and legally separated per 1,000 population varies widely between the provinces. British Columbia leads with 4·0 for the divorced and 11·1 for the legally separated; Quebec and Prince Edward Island are at the lower end of the scale with 0·3 and 5·0, respectively, for the former and 0·4 and 4·0, respectively, for the latter. Between these extremes, Ontario shows rates of 1·4 and 8·5, respectively; Alberta, 1·9 and 7·2; Saskatchewan and New Brunswick, 0·9 and 5·2; Nova Scotia, 0·9 and 6·7; and Manitoba, 1·5 and 6·9.

A view of the fertile valley of the lower Restigouche River, which here separates the Provinces of Quebec and New Brunswick.

Courtesy, Department of Mines and Resources

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

Province or Territory	Single	Married	Widowed	Divorced	Legally Separated	Total[1]
	MALES					
Prince Edward Island	29,828	17,625	1,549	22	202	49,228
Nova Scotia	173,506	111,132	9,359	247	1,770	296,044
New Brunswick	140,952	85,093	6,695	197	1,137	234,097
Quebec	1,027,162	591,533	46,386	500	7,270	1,672,982
Ontario	993,265	851,096	60,210	2,291	14,105	1,921,201
Manitoba	209,939	155,157	10,268	473	2,218	378,079
Saskatchewan	283,297	179,996	11,383	468	2,351	477,563
Alberta	243,666	168,469	10,594	801	2,891	426,458
British Columbia	215,205	200,027	13,979	1,547	4,213	435,031
Yukon	2,029	957	116	17	34	3,153
Northwest Territories	3,978	2,443	204	6	10	6,700
Canada	**3,322,827**	**2,363,528**	**170,743**	**6,569**	**36,201**	**5,900,536**
	FEMALES					
Prince Edward Island	24,748	17,473	3,401	19	178	45,819
Nova Scotia	148,474	109,513	21,544	268	2,115	281,918
New Brunswick	123,540	84,275	14,040	192	1,256	223,304
Quebec	981,890	581,569	85,425	646	9,353	1,658,900
Ontario	876,215	826,525	142,731	2,865	18,039	1,866,454
Manitoba	176,458	151,105	20,625	654	2,818	351,665
Saskatchewan	221,557	175,112	18,965	381	2,414	418,429
Alberta	186,215	161,953	17,963	717	2,850	369,711
British Columbia	165,064	181,932	29,235	1,718	4,878	382,830
Yukon	833	810	88	3	27	1,761
Northwest Territories	2,747	2,211	361	Nil	8	5,328
Canada	**2,907,741**	**2,292,478**	**354,378**	**7,463**	**43,936**	**5,606,119**

[1] Includes persons with conjugal condition not stated.

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.

Origins of the People, Census Years 1901-41

Origin	1901	1911	1921	1931	1941
British Isles Races—					
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
Totals, British Isles Races	3,063,195	3,999,081	4,868,738	5,381,071	5,715,904
French	1,649,371	2,061,719	2,452,743	2,927,990	3,483,038
Austrian	10,947 [1]	44,036	107,671	48,630	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
Hungarian	1,549 [2]	11,648 [2]	13,181	40,582	54,598
Indian and Eskimo	127,941	105,611	113,724	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
Jewish	16,131	76,199	126,196	156,726	170,241
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 [3]	5,883 [3]	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 [4]	244,603 [4]
Ukrainian	5,682	75,432	106,721	225,113	305,929
Yugoslavic	–	–	3,906	16,174	21,214
Various	7,000	31,381	28,796	27,476	67,357
Unspecified	31,539	16,932	21,249	8,898	5,275
Grand Totals	**5,371,315**	**7,206,643**	**8,787,949**	**10,376,786**	**11,506,655**

[1] Includes Bohemian, Bukovinian and Slavic. [2] Includes Lithuanian and Moravian. [3] Includes Bulgarian. [4] 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.

Population of the Eight Leading Origins in Canada, by Provinces, 1941

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

[1] Includes Yukon and the Northwest Territories. [2] Includes 37,439 Danish, 21,050 Icelandic, 100,718 Norwegian and 85,396 Swedish.

Val d'Or, Que.—This is typical of the communities that spring up around northern Ontario and Quebec mines.

Courtesy, Canadian National Railways

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. The effects of the large immigration at the beginning of the century are indicated by the drop in the percentage of Canadian born between 1901 and 1911 and the increases in the percentages of other British born and foreign born.

Birthplaces of the Population, Census Years 1901-41

Year	Canadian Born		Other British Born[1]		Foreign Born				Total Population
					United States Born		Other		
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	
1901	4,671,815	86·98	421,051	7·84	127,899	2·38	150,550	2·80	5,371,315
1911	5,619,682	77·98	834,229	11·58	303,680	4·21	449,052	6.23	7,206,643
1921	6,832,224	77·75	1,065,448	12·12	374,022	4·26	516,255	5·87	8,787,949
1931	8,069,261	77·76	1,184,830	11·42	344,574	3·32	778,121	7·50	10,376,786
1941	9,487,808	82·46	1,003,769	8·72	312,473	2·72	701,660	6·10	11,506,655[2]

[1] Includes some hundreds of persons born at sea. [2] Includes "birthplace not stated".

In 1941, about 95 p.c. of the population of the Maritime Provinces was born in Canada, Quebec had 93 p.c. Canadian born, Ontario 81 p.c., the Prairie Provinces 71 p.c. and British Columbia 63 p.c.

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[1]	4,986,552[2]
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[3]	829,147[3]
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[4]	15,630	88,507	169,832	102,389	139,629

[1] Includes 186,654 Greek Catholics. [2] Includes 185,657 Greek Catholics. [3] These are the "continuing Presbyterians" who did not join with the Methodists and Congregationalists to form the United Church of Canada in the 'twenties. [4] 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, 1941

Province	Roman Catholic[1]	United Church of Canada	Anglican	Presbyterian	Baptist	Lutheran	Jewish	Greek Orthodox
P.E.I.	42,743	24,005	5,739	14,724	5,443	45	18	10
N.S.	188,944	124,301	103,393	47,415	89,272	9,104	2,167	347
N.B.	220,454	63,268	55,155	15,382	88,766	870	1,196	85
Que.	2,894,621	100,196	162,056	56,086	12,303	7,081	65,683	12,040
Ont.	882,369	1,073,425	815,413	433,708	192,915	104,111	69,217	28,383
Man.	203,259	194,001	125,076	43,073	13,267	48,213	18,715	20,777
Sask.	243,734	230,495	117,674	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**

[1] Includes Greek Catholics.

Citizenship.—The basic legal definition of Canadian citizenship is to be found in the Immigration Act, which defines a Canadian citizen as a person included in one of three categories: (1) a person born in Canada, who has not subsequently become a citizen of a foreign State; (2) any British subject who has been domiciled for five years in Canada; (3) any subject of a foreign power who has become naturalized and has not subsequently become an alien or lost Canadian domicile (R.S.C. 1927, c. 93; 21-22 Geo. V, c. 39).

At the present time any alien, regardless of his nationality, may apply for naturalization, but according to Section 4, Part II, of the Imperial Naturalization Act, Jan. 1, 1915, the granting of a certificate of naturalization to the applicant is left entirely to the Minister, who may give or withhold the certificate as he thinks most conducive to the public good. Since Jan. 15, 1932, female British subjects, marrying aliens, retain British nationality, unless they, by their marriage, acquire their husbands' nationalities; and the wives of aliens no longer become British subjects automatically through their husbands' naturalization. They must apply to the Secretary of State.

Citizenship of Non-British and Non-French Racial Origins in Canada, 1931 and 1941

Racial Origin	1931			1941		
	British Subjects by Birth or Naturalization	Aliens	Total	British Subjects by Birth or Naturalization	Aliens	Total
Austrian	37,332	11,307	48,639	33,821	3,890	37,711
Belgian	19,295	8,290	27,585	25,851	3,853	29,704
Czech and Slovak	13,560	16,841	30,401	31,977	10,935	42,912
Finnish	21,967	21,918	43,885	30,001	11,674	41,675
German	408,128	65,416	473,544	439,677	24,949	464,626
Hungarian	17,581	23,001	40,582	44,133	10,453	54,586
Italian	80,829	17,344	98,173	104,880	7,735	112,615
Jewish	129,353	27,373	156,726	158,821	11,400	170,221
Netherlands	133,581	15,381	148,962	205,232	7,611	212,843
Polish	96,759	48,744	145,503	146,624	20,848	167,472
Roumanian	21,112	7,944	29,056	22,269	2,418	24,687
Russian	65,358	22,790	88,148	73,168	10,453	83,621
Scandinavian	176,452	51,597	228,049	221,658	22,895	244,553
Ukrainian	182,098	43,015	225,113	277,832	28,069	305,901
Other European	22,666	18,220	40,886	41,221	9,248	50,469
Chinese	7,481	39,038	46,519	8,746	25,878	34,624
Japanese	15,588	7,754	23,342	17,171	3,978	21,149
Other Asiatics	13,086	1,601	14,687	15,533	754	16,287

Relative Growth of Males and Females in Gainful Occupations, 1921-41.—The percentage of the male population at working ages, i.e., 14 years or over, in gainful occupations has been declining since the 1921 Census, while for females the percentage has been on the increase. If males on Active Service at the census date are excluded from the total gainfully occupied males, the percentage that gainfully occupied males bears to the total male population, 14 years or over, is thus reduced from 83·8 p.c. to 76·7 p.c.

Numbers and Percentages of the Population in Gainful Occupations, Classified According to Sex, Census Years 1921-41

(Exclusive of Yukon and the Northwest Territories)

Census Year	Gainfully Occupied Population			Percentages of Total Population			Percentages of Population 14 Years or Over		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1921	3,164,348	2,675,290	489,058	36·1	59·2	11·5	53·3	86·6	17·2
1931	3,921,833	3,256,531	665,302	37·8	60·7	13·3	53·8	85·4	19·1
1941 (incl. Active Service)	4,510,535	3,676,563[1]	833,972	39·3	62·4	14·9	53·0	83·8	20·2
1941 (not incl. Active Service)	4,195,951	3,363,111	832,840	36·5	57·1	14·9	49·3	76·7	20·2

[1] Includes 63,518 males on Active Service not gainfully occupied prior to enlistment.

Gainfully Occupied in 1941.—Almost one-third of the gainfully occupied males in Canada were engaged in agricultural operations in 1941, although the proportion in this occupation has been decreasing steadily since the beginning of the century. The proportion in manufacturing industries, on the other hand, has been increasing. Females were employed in appreciable numbers in clerical occupations and in manu-

Indian Chiefs Congratulate Young Braves at a Canadian Army Camp.—Though they are in the Army, Indians of the Six Nations are still subject to patriarchal supervision of their tribal leaders.

Courtesy, Star Newspaper Service

facturing in every province, but by far the largest numbers were found in the service occupations. Considerable proportions were employed in such professional occupations as teaching and nursing, and in such personal service occupations as domestic service, housekeeping and as waitresses.

Numbers and Percentages of the Gainfully Occupied Males and Females, 14 Years of Age or Over, by Occupation Groups, 1941

(Exclusive of Yukon and the Northwest Territories)

Occupation Group	Males			Females	
	Number				
	Including Active Service[1]	Not Including Active Service	P.C.[2]	Number	P.C.
Agriculture	1,104,579	1,064,847	31·7	18,969	2·3
Fishing, trapping and logging	138,460	131,374	3·9	326	[3]
Mining, quarrying	77,909	71,861	2·1	25	[3]
Manufacturing	615,284	573,574	17·1	129,588	15·6
Construction	215,333	202,509	6·0	339	[3]
Transportation	278,402	254,591	7·6	14,065	1·7
Trade	292,910	273,059	8·1	82,020	9·8
Finance, insurance	33,104	30,576	0·9	816	0·1
Service	339,307	316,313	9·4	418,111	50·2
Clerical	204,666	182,823	5·4	155,208	18·6
Labourers[4]	273,925	251,889	7·5	11,655	1·4
Not stated	39,166	9,695	0·3	1,718	0·2
All Occupations	**3,613,045**	**3,363,111**	**100·0**	**832,840**	**100·0**

[1] Includes only males on Active Service with a gainful occupation prior to enlistment. [2] Based on column 2. There is very little difference in the percentage distribution of males by occupation groups with Active Service included. [3] Less than 0·05 p.c. [4] This group does not include agricultural, fishing, logging, or mining labourers.

Aboriginal Races

According to 1941 Census figures, the aboriginal population amounts in all to little more than 1 p.c. of the total population.

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 and the Indians located thereon are under the supervision of the local agents of the Branch. The activities of the Branch, on behalf of the Indians, include the control of Indian education, the care of health, the development of agriculture and other pursuits among them, the administration of their funds and legal transactions, and the general supervision of their welfare.

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 as Indians who become enfranchised lose the special protection of the Indian Act.

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.—Ths Eskimos of Canada are found principally north of the tree-line on the northern fringe of the mainland and around the coasts of many of the islands in the Arctic Archipelago and in Hudson Bay. Most of the Eskimos are essentially coastal dwellers, obtaining much of their food and clothing from the mammals of the sea. However, there are bands of Eskimos living in the interior of Keewatin District, on the west side of Hudson Bay, who are inland people, and who subsist chiefly on caribou.

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. Since that time the Northwest Territories Administration has estimated the Eskimos of Quebec at 1,965 which raises the total for Canada to 7,392.

Immigration

Total immigrants into Canada during the fiscal year ended in 1944 numbered 9,040 as compared with 7,445 in 1943 and 8,865 in 1942.

English, Scottish, Irish, and Welsh from overseas numbered 4,278 as compared with 2,418 and 2,182 in 1943 and 1942, respectively; immigrants from the United States totalled 4,441 in 1944 as compared with 4,827 and 6,311, respectively, for the two previous years; from other countries the number was 321 as compared with 200 and 372.

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 1943-44 was 2,202 as compared with 3,253 in 1942-43.

Although tourists entering Canada are not immigrants, their admission calls for an immigration examination at the International Boundary and at ocean ports. In 1943-44 the number of entries in this class totalled 16,381,000 made up of 10,507,000 tourists, etc., 5,872,000 residents returning and 2,000 Canadians returning after residence in the United States, as mentioned in the preceding paragraph; in 1942-43 the total entries, in round figures, numbered 15,141,000 divided into 10,727,000 tourists, etc., 4,410,000 returning residents and 3,000 returned Canadians.

Vital Statistics

Canada has had a national system of vital statistics since 1926, organized by the Dominion Bureau of Statistics in collaboration with the Registration Officials of the provinces.

National Vital Statistics Index.—At a Dominion-Provincial Conference on Vital Statistics in September, 1944, it was decided that the Dominion and the Provinces would collaborate in the creation of a National Vital Statistics Index for Canada. This index would be used collectively by the several governments in the verification of births, stillbirths, deaths and marriages. Modern mechanical methods such as microfilm and punch-card equipment will be synchronized. The former will permit the rapid transmission of photographic copies of the events registered in the provincial vital statistics offices to the Dominion Bureau of Statistics. In setting up the National Index and for the analysis of the statistical facts, mechanical tabulation processes will be applied to the material on a uniform basis at the Bureau.

Births, Deaths and Marriages in Canada

Province	Births			Deaths			Marriages		
	1943[1]		1926	1943[1]		1926	1943[1]		1926
	No.	Rate per M	Rate per M	No.	Rate per M	Rate per M	No.	Rate per M	Rate per M
Prince Edward Island	2,170	23·8	20·1	912	10·0	10·3	653	7·2	5·3
Nova Scotia	15,355	25·3	21·3	6,459	10·6	12·4	6,105	10·1	5·6
New Brunswick	13,084	28·3	26·1	4,912	10·6	12·6	3,985	8·6	7·4
Quebec	98,744	28·6	31·6	35,069	10·1	14·3	33,856	9·8	6·8
Ontario	80,752	20·6	21·4	40,970	10·5	11·3	36,106	9·2	7·5
Manitoba	16,412	22·6	22·9	7,007	9·7	8·3	6,901	9·5	7·1
Saskatchewan	18,504	22·0	25·2	6,654	7·9	7·4	6,172	7·3	6·7
Alberta	19,241	24·3	23·8	6,509	8·2	8·5	7,768	9·8	7·4
British Columbia	18,773	20·9	16·6	10,002	11·1	9·0	9,384	10·4	7·3
Canada[2]	**283,035**	**24·0**	**24·7**	**118,494**	**10·0**	**11·4**	**110,930**	**9·4**	**7·1**

[1] Preliminary figures. [2] 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; in 1942 to 272,313; and in 1943 to 283,035, the highest ever recorded in Canada. Because of the growing population, the rate per 1,000 births showed a steady drop from 1926 to 1937 of from 24·7 to 20·2, but in 1940 the rate stood at 21·5; in 1941 at 22·2; in 1942 at 23·4; and in 1943 at 24·0.

The influence of war on Canadian births is reflected in the sharp increases in both rates and numbers for the years 1940 to 1943, the rate for 1943 being the highest recorded since 1928.

Deaths.—The ten leading causes of death accounted for well over 77 p.c. of the total deaths in Canada in 1943 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 1943, the increase in that period being from 80·7 to 119·7 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. Pneumonia, which was in third place in 1926 with a rate of 89·3, dropped in 1943 to seventh place with a rate of 53·6.

Maternal Mortality.—The average rate for the five-year period 1926-30 was 5·7 per 1,000 living births. Since that time there has been a marked improvement in the rate which decreased to 4·0 in 1940 and reached the low figure of 2·8 in 1943.

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 and 1943.

Infant Deaths and Death Rates in Canada

Province	Infants under One Year					Rates per 1,000 Live Births				
	1926	1940	1941	1942	1943[1]	1926	1940	1941	1942	1943[1]
Prince Edward Island	123	137	163	106	97	70	65	80	50	45
Nova Scotia	882	802	908	884	897	80	62	65	58	58
New Brunswick	1,095	934	936	978	886	106	80	76	77	68
Quebec	11,666	5,856	6,770	6,657	6,642	142	70	76	70	67
Ontario	5,302	2,959	3,294	3,139	3,383	78	43	46	40	42
Manitoba	1,122	756	788	807	909	77	51	53	51	55
Saskatchewan	1,681	979	946	788	872	81	51	51	43	47
Alberta	1,233	834	879	696	802	85	48	51	38	42
British Columbia	588	526	552	596	709	58	38	37	35	38
Canada[2]	**23,692**	**13,783**	**15,236**	**14,651**	**15,197**	**102**	**56**	**60**	**54**	**54**

[1] Preliminary figures. [2] Exclusive of Yukon and the Northwest Territories.

Natural Increase.—The birth rate declined from 23·9 in 1930 to 20·2 in 1937, but since 1938 has increased steadily to a rate of 24·0 in 1943. The death rate declined at a somewhat lower rate (a slight increase in 1937, 1941 and 1943) with the result that the rate of natural increase was declining between 1930 and 1937. Since 1938 there has been an increase in this rate. The rate for 1940 was 11·7 per 1,000; for 1941, 12·2; for 1942, 13·7; and for 1943, 14·0.

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, 1942, and 1943 of 103,658, 123,318, 121,842, 127,372 and 110,930, respectively. The 1942 marriage rate of 10·9 per 1,000 population was the highest Canadian marriage rate on record, the rate for 1943 being slightly lower at 9·4.

Veterans' Hospitals

THE pictures on the top fold are reproductions of architects' drawings of two of the largest hospitals to be constructed for the Department of Veterans Affairs. The upper picture shows the Currie Hospital at Montreal, which has a designed bed capacity of 500. The lower picture shows the Veterans' Memorial Hospital at Sunnybrook, Toronto, which has a designed capacity of 1,450 beds and is estimated to cost $10,000,000. At the time of the establishment of the Department of Veterans Affairs in October, 1944, Prime Minister King stated that the highest possible priorities for both labour and material had been given to the construction of hospitals for servicemen and that the construction of such buildings was being pushed with all possible speed.

Left Top: The Solarium in Hycroft Annex, Shaughnessy Camp Hill Hospital, Halifax. *Centre:* The Occupational Therapy Section at Ste. Anne de Bellevue, Montreal. *Bottom:* The Sun Room in the Veterans' Pavilion at the Ottawa Civc Hospital.

Right Top: Admitting First Patients to Hycroft Annex, Shaughnessy Camp Hill Hospital, Halifax. *Centre:* The Grounds at Shaughnessy Camp Hill Hospital. *Bottom:* The Limbfitting Shop.

MONTREAL

New Hospitals for Veterans, now under Construction at Montreal and Toronto

The Minister of Labour stated publicly, in September, 1944, that first priority in regard to labour was to be given to the construction of Veterans' Hospitals

Courtesy, Department of Veterans Affairs

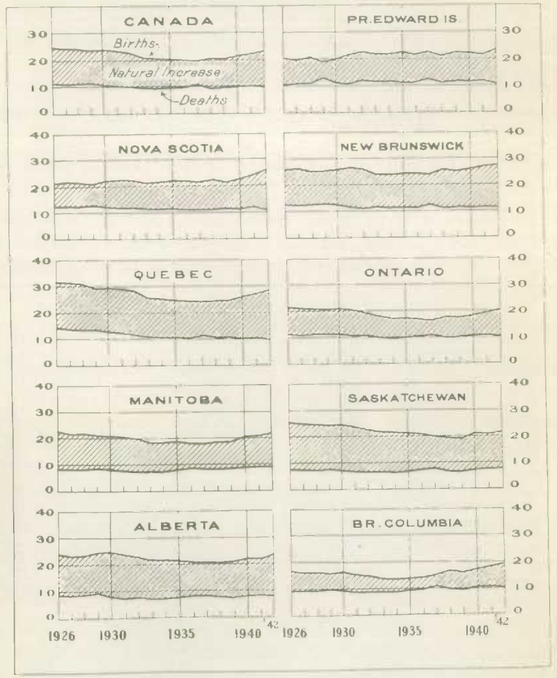
TORONTO

GRAPHIC RECORD OF VITAL STATISTICS IN CANADA

1926 - 42

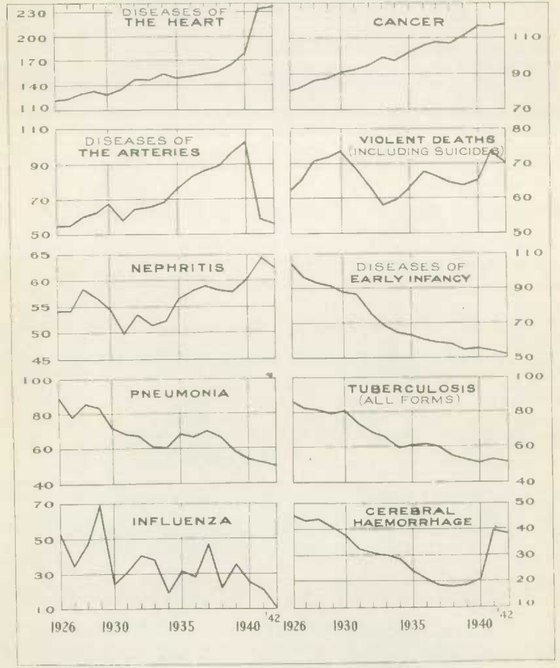
BIRTH RATES, DEATH RATES AND RATES OF NATURAL INCREASE

Rates per 1,000 Population



TEN LEADING CAUSES OF DEATH

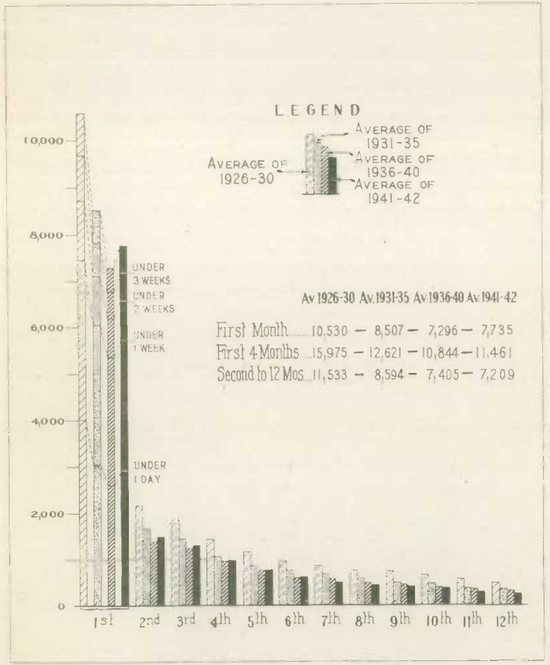
Rates per 100,000 Population



INFANT MORTALITY

FIVE-YEAR AVERAGES

Deaths at each age period

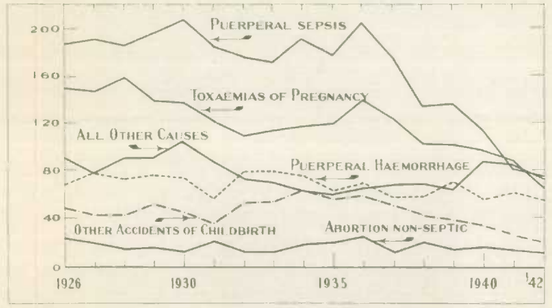


	Av 1926-30	Av 1931-35	Av 1936-40	Av 1941-42
First Month	10,530	8,507	7,296	7,735
First 4 Months	15,975	12,621	10,844	11,461
Second to 12 Mos.	11,533	8,594	7,405	7,209

MATERNAL MORTALITY

GROUP CAUSES OF DEATH

Rates per 100,000 Live Births



PERCENTAGE DISTRIBUTION BY AGE GROUPS

	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	'42
40 YRS. AND OVER	13.4	13.4	12.3	13.4	12.5	13.4	12.9	12.2	13.3	10.6	12.7	13.1	13.7	13.3	11.9	10.0	12.6
35-39	22.5	22.2	21.8	21.6	19.5	21.8	21.2	20.3	21.3	21.5	20.0	20.2	23.0	19.4	20.6	20.4	19.1
30-34	21.5	21.5	21.7	20.4	21.1	22.1	22.6	23.0	21.3	21.1	21.8	22.2	22.4	22.1	23.7	22.5	22.4
25-29	19.4	21.3	19.5	21.0	22.4	20.9	20.7	23.1	20.2	23.9	22.1	22.8	22.3	22.2	22.8	24.1	23.8
20-24	18.8	17.1	18.9	17.4	18.0	15.9	17.1	17.3	18.1	18.5	18.7	16.5	13.8	16.3	16.1	17.8	16.5
UNDER 20 YRS.	4.4	4.5	5.8	5.9	6.5	5.8	5.6	4.0	5.7	4.3	4.8	5.2	4.6	6.5	5.0	5.2	5.6

%

CHAPTER II

National Income—Survey of Production

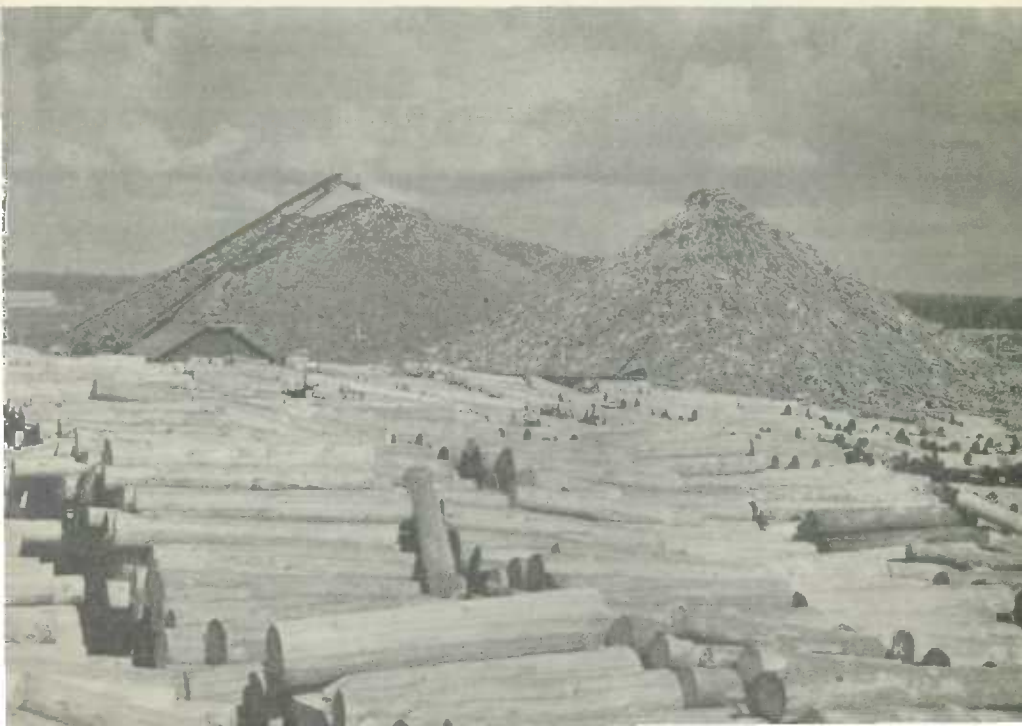
National Income

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 reached a high level of nearly $4,600,000,000 in 1920, due largely to inflated prices, and fell off by nearly 24 p.c. during the following year. The recovery was practically continuous until 1929 when a maximum of $5,273,000,000 was recorded. At the low point of the depression, experienced in 1933, the standing was only 52 p.c. of the total for 1929. The temporary setback of 1938 interrupted the subsequent advance, which has been markedly accelerated during the war years. The standing in 1942 was about $8,000,000,000 compared with $6,400,000,000 in the preceding year. An increase of at least $680,000,000 is estimated for 1943.

The income of the Canadian people may be defined briefly as the net value of the goods produced and services rendered. The actual computation is made somewhat as follows: from the gross value 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. The same result may be achieved by adding together the total payments to individuals in Canada and the savings of Canadian enterprise. By 'savings' is meant that portion of the year's

Huge Piles of Pulpwood Ready for the Paper-Mill.

Courtesy, New Brunswick Government Information Bureau



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 savings or as a value of goods and services produced. A third approach considers national income as the sum of consumption and investment. People receive incomes for producing goods, and use these incomes to satisfy their wants, by purchasing food, clothing, automobiles, education and the like. If to this consumption is added the unconsumed portion of current output—that is 'investment'—the national income is 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. Capital gains or losses, charity, gifts, relief payments, and other forms of income which do not result from current production are excluded either explicitly or implicitly through the operation of the 'savings' account.

The estimates of national income classified by industrial sources 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 government, service, finance and transportation 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., accounted for 14·6 p.c. of total income payments.

Survey of Production

In this chapter only those industries generally considered to have a *direct* connection with production are considered, the coverage being limited to agriculture, fishing, mining, forestry, trapping, power production, manufactures, construction, and custom and repair. However, production in the economic sense includes much more than the contribution of these industries. Transportation, trade, banking 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

Grain Binder Cutting Wheat on a Western Farm.

Courtesy, Massey-Harris Co. Ltd.

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 is gross production.

The net output of the nine main branches of production rose 33 p.c., or $1,500 million, over the preceding year. Such production was nearly double that of 1939 when the level was not greatly affected by war demand. The expansion of the manufacturing industries was the most important factor in the three-year period since general production was, of course, directed mainly to munitions of war.

A further advance in the past two years is indicated by the trend of production and prices. The index of the physical volume of business recorded a gain of nearly 17 p.c. in 1943 over the preceding year. An increase of 4·5 p.c. was shown in the index of wholesale prices. The further advances in the averages of the business and price indexes for the first eight months of 1944 over the same period of the preceding year, amounting to 3·1 p.c. and 3·7 p.c., respectively, suggest that the upward trend in the net value of production was continued in the year recently ended. The index of employment was also slightly higher in the first eight months of 1944 than in the same period of the preceding year.

Net production in agriculture during 1942, constituting nearly 58 p.c. of the aggregate for the six branches of the primary group, rose nearly 78 p.c. over 1941. The bumper grain crop and the heavy output of animal products to meet increased overseas demand were the main elements in this expansion. Mining, second in importance among the primary industries, increased 3 p.c. Activities, especially in gold mining, were retarded by the scarcity of manpower and the difficulty of obtaining mining machinery and equipment. The net output of the electric power and forestry industries showed increases of 9 p.c. and 2 p.c., respectively. An increase of 25 p.c. was shown in the output of the fisheries industry, while the gain from the activities of trappers was no less than 57 p.c. New historical records were established during 1942 in both industries.

Two of the three groups engaged in secondary production showed outstanding expansion in 1942 over the preceding year. The aggregate net production of manufactures, construction, and custom and repair rose about one-quarter in this comparison. Aside from agriculture, manufacturing was the main factor in Canadian

production during 1942, showing a gain of 27 p.c. over 1941. The totals for manufacturing include some industrial enterprises also listed under "primary industries" but, to avoid duplication, the value of output in the latter is deducted in the grand total of production for Canada. The value of output in the construction industry increased by 15·3 p.c., and custom and repair posted an advance of 3 p.c. above 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 was second in importance in this respect, but the gainfully occupied was only somewhat more than 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 engaged in agriculture during the same period, has brought manufactures to the leading position. The commodity-producing industries engaged 55 p.c. of the manpower in 1942, while the commodity-handling and -facilitating divisions found employment for 17·8 p.c. and 27·2 p.c., respectively.

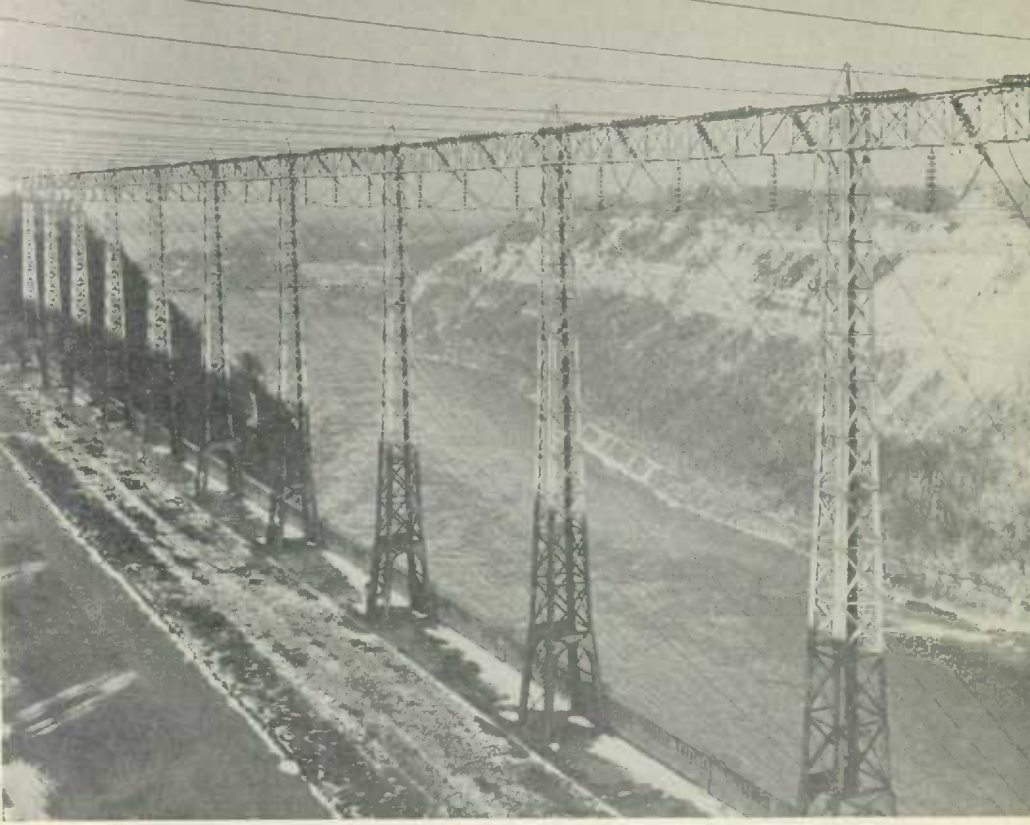
Value of Production in Canada, by Industries, 1941 and 1942

Industry	1941		1942	
	Gross	Net	Gross	Net
	$	$	$	$
Agriculture	1,431,770,000	951,025,000	2,136,529,000	1,691,540,000
Forestry	711,004,556	421,419,139	763,988,245	429,079,260
Fisheries	82,522,675	51,769,638	103,118,177	64,821,702
Trapping	15,138,040	15,138,040	23,801,213	23,801,213
Mining	866,293,332	497,904,632	946,021,397	514,109,951
Electric power	186,080,354	183,146,426	203,835,365	200,345,240
Totals, Primary Production	3,292,808,957	2,120,402,875	4,177,293,397	2,923,697,366
Construction	639,750,624	269,561,885	635,649,570	310,917,190
Custom and repair	199,377,000	135,287,000	205,364,000	139,349,000
Manufactures	6,076,308,124	2,605,119,788	7,553,794,972	3,309,973,758
Totals, Secondary Production	6,915,435,748	3,009,968,673	8,394,808,542	3,760,239,948
Grand Totals[1]	**9,250,795,729**	**4,720,073,033**	**11,501,593,442**	**6,258,464,613**

[1] 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 1941. The position of Ontario and Quebec as the principal producers was not quite so predominant as in the preceding year, with Ontario's share in the Dominion's total output receding to 40·4 p.c. as compared with 44·2 p.c. in 1941. Quebec's contribution also declined somewhat, standing at 26·6 p.c. British Columbia retained third position with 8 p.c.

A definite percentage improvement is evident in the Prairie Provinces especially Saskatchewan and Alberta. Saskatchewan, as the fourth ranking contributor, accounted for 7·9 p.c. of the total production and Alberta 7·0 p.c.



Transmission Towers at the Queenston Power Plant, Niagara Falls, Ont.—Due to the expansion of power resources and the co-operation of all power-users in observing the necessary restrictions of war-time control, Canada passed through the peak of all power demands at the turn of the year 1943-44 without serious shortage or inconvenience.

Courtesy, National Film Board

Small relative change was noted in the contribution of the Maritime Provinces. Two provinces showed slightly lower proportions with 2·8 p.c. for Nova Scotia and 2·0 p.c. for New Brunswick, while the share of Prince Edward Island increased slightly to 0·3 p.c.

Value of Production in Canada, by Provinces, 1941 and 1942

Province	1941		1942	
	Gross	Net	Gross	Net
	$	$	$	$
Prince Edward Island	28,010,446	13,200,776	36,611,034	21,404,746
Nova Scotia	265,262,337	136,855,941	317,004,819	175,667,076
New Brunswick	205,698,123	103,968,110	228,822,689	128,162,880
Quebec	2,596,572,315	1,279,353,703	3,198,620,365	1,665,325,431
Ontario	4,245,649,428	2,087,958,441	5,005,454,849	2,529,183,058
Manitoba	414,912,902	205,348,561	515,521,633	295,240,285
Saskatchewan	355,149,603	228,318,037	666,522,078	494,011,113
Alberta	443,175,858	276,898,177	658,072,397	439,812,709
British Columbia[1]	696,364,717	388,171,287	874,963,578	509,657,315
Canada	**9,250,795,729**	**4,720,073,033**	**11,501,593,442**	**6,258,464,613**

[1] Includes Yukon and the Northwest Territories.

CHAPTER III

Agriculture

Review of Canadian Agriculture in the Fifth Year of War

In 1944 Canadian agriculture added a fifth year to its imposing record of war-time food production. Although the 1943 over-all output from farms was generally considered to be nearing the maximum possible with limited supplies of manpower and machinery, some lines of production soared to even higher levels in 1944. Larger crops of grain were harvested and slaughterings of live stock, particularly hogs, established new records. As a result, most of the production objectives set up for Canadian farmers at the Dominion-Provincial Conference in December, 1943, have been attained or exceeded.

In meeting war-time demands for farm products, Canadian farmers have received various types of government assistance. Such bodies as the Agricultural Supplies Board, the Agricultural Food Board, the Meat Board, the Dairy Products Board, and the Special Products Board were already in operation prior to 1944 and have continued to function (see Introduction). In the international food field, the Combined Food Board and the Joint Agricultural Committee of Canada and the United States play an important role. One of the most important developments in Canadian Agriculture in 1944 was the establishment of an Agricultural Prices Support Board. This body will administer an Act for the support of the prices of agricultural products during the transition from war to peace, and will allow farmers to adjust their production programs to a peace-time basis without the fear of rapidly collapsing markets. Until the War does end, large export contracts at firm prices, various forms of governmental price supports, subsidies and bonuses provide assurance of continuing stable farm income.

The great improvement in the meat supply position commencing in the autumn and winter of 1943-44 enabled the Government to suspend meat rationing in Canada, effective Mar. 1, 1944, thus bringing to an end restrictions that had been imposed commencing May 27, 1943. The supply position with respect to butter, however, was not sufficiently improved to allow this commodity to be withdrawn from rationing.

In 1944, manpower continued to present one of the most difficult problems in agriculture and the allied food-processing industries. Although the over-all farm labour problem has been acute, the National Selective Service program to obtain seasonal labour for farms, particularly at harvest time, has been exceedingly useful. Farmers have also benefited from an improvement in the supply situation with respect to farm machinery, fertilizers and certain other types of essential supplies. Unable to obtain additional hired help, farmers have turned to machinery to fill the gap, and to further increase output per man.

During war-time, Canada has greatly expanded production and exports of such perishable commodities as meat and eggs. As a result there has developed a shortage of cold-storage space. A Cold Storage Administrator was appointed during the summer of 1944 to assist the Cold Storage Sub-Committee of the Agricultural Supplies Board in meeting this problem. The most economical use of existing space and the securing of sufficient handling labour have been the main methods employed to overcome this difficulty.

Cattle Round-up in the Ranching Country of the Western Foothills.

Courtesy, National Film Board

During the first four years of war, successive yearly bacon agreements were entered into between the Canadian and United Kingdom Governments. In 1943 the contract was for a record 675,000,000 lb. and was filled. A new agreement was then consummated for a two-year period, calling for minimum total shipments of 900,000,000 lb. in 1944 and 1945. The tentative goal of 500,000,000 lb. for delivery in 1944 will be far exceeded, as purchases reached this figure by Aug. 1, 1944. Slaughterings of hogs reached unprecedented levels during the first half of 1944, and inspected slaughterings for 1944 as a whole are expected to total 9,000,000 head, which is more than double any pre-war year. With prices of hogs at comparatively high levels, farm cash income from hogs in 1944 established a new record. In January, 1944, payment of new Dominion Government premiums of $3 on Grade A carcasses and $2 on Grade B 1 carcasses commenced.

In June, 1943, the Meat Board replaced the former Bacon Board. The new Board was empowered to export other meats, as well as pork products. A beef agreement with the United Kingdom running to the end of 1945 was arranged, and the first shipments commenced in November and December, 1943. Rate of delivery rapidly increased during the first half of 1944 and by Sept. 15, 1944, export purchases totalled about 70,000,000 lb., or the equivalent of 160,000 cattle. For 1944 it is estimated that beef shipments will total at least 100,000,000 lb. A small quantity of lamb was exported early in 1944, and towards the end of September, 1944, restrictions were removed on the export of live sheep and lambs to the United States. Other products exported by the Meat Board in substantial quantities in 1944 included canned pork, lard, frozen offals and hog casings.

Total milk production in 1944, despite drought conditions in Eastern Canada during the late summer, was almost equal to the record production in 1943. Fluid

milk sales showed an increase in all parts of Canada over 1943 sales, while production of creamery butter declined approximately 5 p.c. in 1944 below 1943 levels. Cheddar cheese output, however, increased somewhat over the previous years. The contract with the United Kingdom which ends on Mar. 31, 1945, calls for shipments of 125,000,000 lb. The domestic demand for creamery butter increased, and with the decline of production it became necessary from time to time during the year to postpone the valid dates of certain ration coupons which had the effect of reducing the consumption.

The Agricultural Food Board continued to direct the payment of producer subsidies for creamery butter, fluid milk, cheese and concentrated milk products during 1944-45. At the same time, the stabilization program initiated in 1943, and which was designed to control diversion of milk, was continued in 1944, and prospects for 1945 indicate that these controls will be maintained. The Wartime Prices and Trade Board issued several directives during 1944 with a view to reducing the amount of butterfat sold on the fluid milk market in the form of cream and special milks. Prospects for production during 1945 appear favourable with producers in most areas making every effort to maintain their milking herds.

Poultry production again forged ahead in 1944. Whereas domestic consumption in 1943 had increased more rapidly than production and exports had declined slightly, in 1944 deliveries of eggs to the Special Products Board were made at an unprecedented rate. In the period from Jan. 1 to July 31, 1944, total inspections of shell eggs for delivery to the Board were double those of any previous year. As in the previous two years, eggs were broken and dried, and the product exported overseas in the form of egg powder. Along with increased output of eggs, production of dressed poultry also reached high levels, with considerable quantities released for export.

The most noticeable trend in crop production in Canada in 1944 was the increased acreage sown to wheat in the Prairie Provinces. The 1944 western wheat crop, estimated at slightly over 23,000,000 acres, was 6,400,000 acres greater than in 1943, and was accompanied by a smaller acreage sown to barley, oats and flaxseed. During the 1943-44 crop year ended July 31, Canadian surplus stocks of wheat and coarse grains were substantially reduced, although still remaining at more than prewar levels. Increased export demand and larger domestic requirements for live-stock feeding were primary factors in the rapid rate of disappearance. Up to the fifth year of war, the accent in agricultural production tended to fall on live stock and live-stock products rather than on cereal grains. In the light of this fact, and of the very large stocks of wheat already in store and on farms in Canada, acreage payments were made during the years 1941, 1942 and 1943 to farmers in the Prairie Provinces who diverted land from wheat-growing into summerfallow, or into coarse grains or grass required for live-stock feeding, or into flaxseed needed for oil. As a result, wheat acreage declined to the comparatively low point of 16,800,000 acres by 1943. In 1944, however, following improved export demand and better prices for wheat, a definite tendency was evidenced to resume the larger production of wheat in Western Canada, mainly at the expense of coarse grains and flaxseed, and to cut down somewhat on the rather intensive hog-production program in certain parts of the West. The initial price for wheat, it may be added, was raised from 90 cents per bu. for No. 1 Northern, in store at Fort William, to $1·25 per bu. in the autumn of 1943.

Oilseed crop production in Canada in 1944 showed a substantial reduction. Although acreage for soybeans, sunflowers and rape seed was maintained or

increased, the flaxseed area was reduced to about 1,300,000 acres, compared with 2,900,000 in 1943. This will still allow domestic crushers to operate at capacity, but will substantially reduce oilseed exports. The over-all position with respect to fats has improved somewhat with heavier production of lard and edible tallow, and during 1944 Canada exported some 30,000,000 lb. of lard to the United Kingdom and Russia.

In the crop year 1943-44 a record volume of western wheat and feed grains was moved into the eastern provinces and British Columbia under the Dominion Freight Assistance Policy. The poor crop harvested in many sections of Eastern Canada in 1943 and the high levels of live-stock production created an emergency which would have been serious had not the large surplus grain stocks existed in grain elevators and on western farms. In 1944 the eastern harvest was much improved over the previous year, and it is expected that requirements for western grain will be considerably reduced in 1944-45. Despite reduced carryovers of grain in Canada, the over-all feed position for the 1944-45 crop year appears to be somewhat brighter than in 1943-44.

In keeping with war-time policy of stabilization of consumer prices for canned vegetables and jams, subsidies have been authorized for producers of certain raw fruits and vegetables going into such products. In 1942 the Wartime Prices and Trade Board arranged subsidies to growers of tomatoes, corn, peas, and green and wax beans for processing at the following respective rates per ton: $1, $2, $7·50 and $5. The same four vegetables continued to be subsidized under arrangements of the Department of Agriculture in 1943 and 1944. The rates of subsidy were increased in 1943 and the following rates were paid: corn $4, peas $10, and beans $7·50 per ton in both 1943 and 1944; tomatoes $3 per ton in 1943 and $6 in 1944. The current subsidies represent approximately the following proportions of the gross return to the grower: tomatoes 30 p.c., corn 27 p.c., peas 22 p.c., and beans 10-12 p.c.

Subsidies on berries for jam were instituted in 1943 at 3 cents a pound for the main types of berries, except that strawberries processed in British Columbia were supported at 6 cents a pound. The policy was renewed in 1944 at the same rates but on a slightly broader basis in that the pure grade of jam was not barred from subsidy benefit as it had been in 1943. In 1943 and 1944 the Wartime Prices and Trade Board paid considerable subsidies on such tree fruits as peaches, pears and plums for processing. This policy was necessitated by the fact that ceiling prices for fresh sale of these fruits came only in 1943 at levels considerably above those of the 1941 base period, although ceiling prices of canned fruits and jams remained at the levels of that year.

Onions Grown for Seed in the Okanagan Valley, B.C.

Courtesy, Family Herald and Weekly Star

Another claimant for surplus Canadian food production has appeared in the form of the United Nations Relief and Rehabilitation Administration. While Canada's main contribution probably will be wheat, other food products such as canned meat, lard and concentrated milk products may also be supplied.

Canadian farm cash income, which has improved steadily during the war years as a result of the combination of higher prices and greater output, recorded a further advance in 1944. For the first six months, farm cash income was 30 p.c. higher than in the same period of 1943, and it is expected that the total for twelve months will be well above the high level reached in 1943.

Agricultural Statistics

Net Farm Income

Net farm income (gross income including Government payments less operating expenses and depreciation charges) amounted to $974,000,000 in 1943. This was $180,000,000 below the high of $1,154,000,000 reached in 1942 but substantially above the 1940 estimate of $534,000,000. Higher prices together with a pronounced expansion of live-stock production and high grain yields accounted for this remarkable increase in farm income between 1940 and 1942.

Net farm income has been defined as the net income accruing to farm operators and their families from their own farming operations. It does not include farm operators' receipts from non-farm sources.

Cash income from the sale of farm products increased consistently from 1940 to 1943, but much of the increase that occurred between 1942 and 1943 represented

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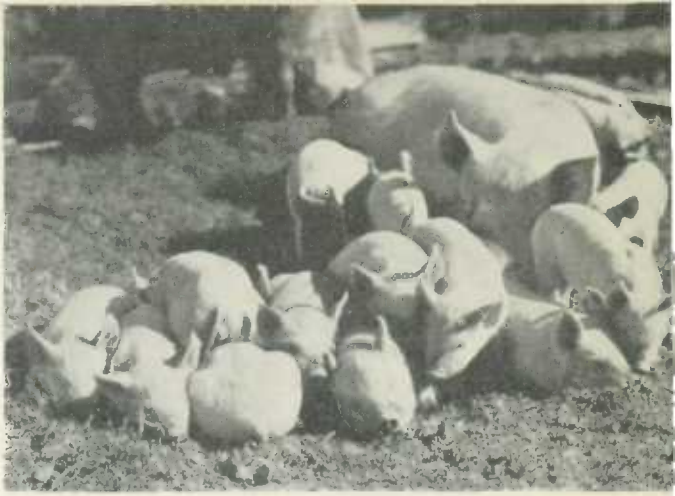
Harvest Time in the Canadian West.

Courtesy, Canadian National Railways



This Fine Litter of Pigs Shows the Results of Good Breeding.

Courtesy, Family Herald and Weekly Star

receipts from sales of the 1942 crop. For the net income calculations these sales are credited back to the 1942 crop by taking into account changes in inventory of livestock numbers and grain stocks on farms. The decline in net income in 1943 as compared with 1942 is attributable to lower per acre yields of grain in 1943.

Farm operating expenses and depreciation charges increased much less rapidly than gross income during this period. This resulted in an even higher relative increase in net income. Operating expenses and depreciation charges increased by 22 p.c. between 1940 and 1943 while net income, including Government payments, increased by 82 p.c. The items of operating expenses exhibiting the largest increases were feed, net rent, machinery repairs, fertilizer, tractor fuel and wages.

Income in kind consumed by persons on farms increased by 27 p.c. during the period. Increased consumption of meat, milk and eggs, together with rising prices for these foods, accounted for this increase.

Direct Government payments to farmers have been included in the year in which they were earned. These payments increased from $7,800,000 in 1940 to $76,000,000 in 1941 and then declined to $26,000,000 in both 1942 and 1943.

In the eastern provinces net income made a steady gain between 1940 and 1943. The relative increase was highest in Prince Edward Island, but the absolute increase was greatest in Ontario, where it advanced from $148,000,000 to $293,000,000. Saskatchewan and Alberta attained their highest levels of net income in 1942 as a result of bumper crops; in 1943 these levels declined to $163,000,000 and $129,000,000, respectively, compared with $107,000,000 and $93,000,000 for the two provinces in 1940. In Manitoba the high income level reached in 1942 was maintained in 1943. This level of $102,000,000 is more than twice as high as the net income of 1940.

Net Farm Income in Canada, 1940–43

Item	1940	1941	1942	1943
	$ '000	$ '000	$ '000	$ '000
Cash income	765,845	914,039	1,114,894	1,397,270
Income in kind	190,103	199,852	225,318	240,878
Value of changes in inventory	+75,140	−38,884	+389,099	−75,688
Gross income	1,031,088	1,075,007	1,729,311	1,562,460
Operating expenses and depreciation charges	504,501	518,808	601,203	614,700
Net income excluding direct Government payments	526,587	556,199	1,128,108	947,760
Government payments	7,814	76,323	26,205	26,334
Net income including Government payments	534,401	632,522	1,154,313	974,094

Cash Income from the Sale of Farm Products

Annual estimates of cash income from the sale of farm products represent the gross returns from all products sold off farms valued at the prices received by farmers. Subsidies and other payments made by the Dominion and Provincial Governments in recent years to encourage production have not been included in the cash receipts except where the subsidies have become part of the price to producers. Cash farm income has increased materially during the past few years and estimates for the first six months of 1944 indicate that the total for that year will show a further rise over 1943. Increased production together with higher farm prices have been responsible for the increase.

Cash Income from the Sale of Farm Products, by Provinces, 1940-43

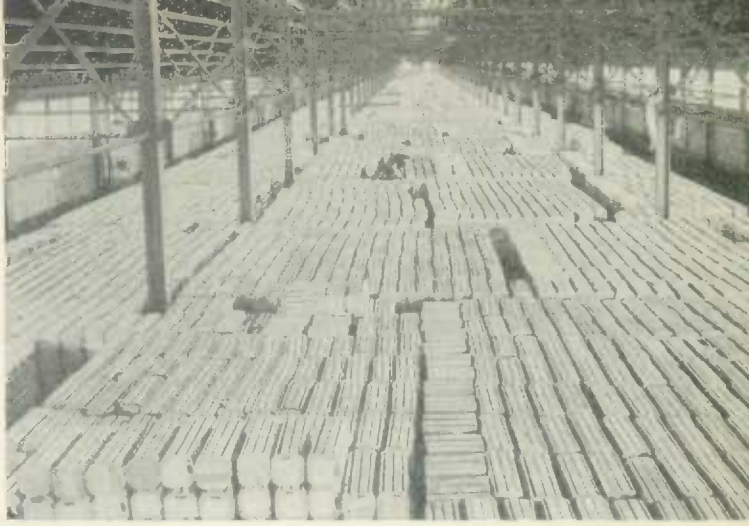
Province	1940	1941	1942	1943
	$ '000	$ '000	$ '000	$ '000
Prince Edward Island	7,237	8,551	12,703	15,917
Nova Scotia	17,170	20,063	25,960	30,548
New Brunswick	15,523	19,448	27,303	34,453
Quebec	120,681	144,879	176,908	200,032
Ontario	233,415	286,487	355,107	389,853
Manitoba	64,978	81,648	101,220	136,145
Saskatchewan	150,854	161,955	195,467	311,437
Alberta	127,192	154,408	175,556	223,077
British Columbia	28,795	36,600	44,670	55,808
Totals	**765,845**	**914,039**	**1,114,894**	**1,397,270**

Farm Labour

The shortage of farm labour has been the most important limiting factor governing agricultural production during the war years. Many farmers' sons have entered the Armed Forces and competition from war industries has made it most difficult for farmers to secure hired help and wage rates have increased appreciably. Every effort has been made to secure seasonal assistance from school boys and girls and others who were available for only short periods. The farmers themselves and their families, however, have carried the bulk of the burden and every credit must be given to these men and women for the very important contribution they have made to the national war effort.

A Flax-Lifter.—This machine for the lifting of dew-retted flax is a Canadian development.

Courtesy, Department of Agriculture



Certified Seed Potatoes at an Eastern Canadian Port Awaiting Shipment to South America.

Courtesy Department of Agriculture

Food Consumption

Studies made of the supplies of food available for civilian consumption in Canada during the pre-war years, 1935-39 and during subsequent war years indicate that, although certain commodities such as sugar and butter have been in short supply, there has been a gradual increase in the total supplies available. The demand for food has increased sharply as a result of the higher incomes of a large percentage of the consuming public. Export demand has also increased sharply. However, the over-all increase in agricultural production has been sufficient to meet both these requirements. Details of available supplies by commodities on a per capita basis have been published in special reports of the Agricultural Branch and in the Quarterly Bulletin of Agricultural Statistics.

Trade in and Consumption of Agricultural Products

Exports of agricultural products, valued at farm prices, represented in 1942 21·6 p.c. of the total value of agricultural production. Imports in 1942 represented 3·9 p.c., and nearly 70 p.c. of production was utilized in Canada. The substantial carryover of wheat from the 1942 crop largely accounted for the disappearance not equalling 100 p.c. of production. The percentage entering into export trade has remained relatively constant since 1937 despite very substantial increases in the actual quantities and values of commodities exported, the general expansion in agricultural production having kept pace with the expanding exports. In comparison with 1941, the percentage of the 1942 production exported declined from 26·4 to 21·6 p.c. This was due mainly to the very large wheat crop harvested in the latter year. The ratio of imports to domestic production has never been high and for most commodities is of minor importance. The percentage of production utilized in Canada ranged from 69·6 p.c. to 83·2 p.c. over the period 1935 to 1942.

Imports of agricultural products into Canada are important only in the case of a few items. Imports of flaxseed, which formerly represented a large percentage of Canadian consumption, have been sharply reduced in recent years and Canada has become a net exporter of this product. Corn remains important as an import item but imports were low in 1941-42 and 1942-43. Imports of dried and split peas have been significant in certain years. Among the fruits, Canada imports large quantities

Strip Farming, Monarch District, Alberta.—Strip farming is the basis of soil drift-control and is now widely practised in Western Canada. This district around Monarch was a pioneer in this method of farming.

Courtesy, Family Herald and Weekly Star

of apricots, plums and prunes and grapes. In addition there are substantial imports of citrus fruits, bananas and pineapples which are not produced in Canada. Imports of tobacco, which were formerly large, have been reduced to a small percentage of Canadian production.

The domestic market consumes the major portion of almost all Canadian farm products. Wheat is the principal exception, but in recent years the export market has become more important for oats, barley, rye, flaxseed and hogs. For those items where imports are in excess of exports, domestic disappearance represents more than 100 p.c. of production. Taking all items as a whole the percentage which domestic disappearance represents of total agricultural production has remained steady.

Exports, Imports and Domestic Disappearance of Agricultural Products Expressed as Percentages of Production, 1935-42

Year	Exports	Imports	Domestic Disappearance[1]
	p.c.	p.c.	p.c.
1935	33·60	4·13	78·61
1936	40·97	6·32	79·30
1937	26·33	8·32	83·25
1938	22·55	4·81	74·26
1939	21·95	4·32	69·28
1940	23·26	5·48	71·75
1941	26·44	5·50	82·42
1942	21·64	3·88	69·65

[1] Domestic disappearance plus exports minus imports does not equal 100 p.c. of production because of the influence of year-to-year changes in stocks.

Field Crops

Acreage.—Canada's seeded wheat acreage in 1944 increased by 6,400,000 acres above the exceptionally low acreage of 16,800,000 acres planted to wheat in 1943. During the present war, Canada's need has been for greater production of coarse grains and oilseeds to feed her growing live-stock population and to fill the gap left by the stoppage of vegetable oil imports from the Far East. In 1943, under the economic incentives supplied by the acreage bonus of $2 per acre on land removed from wheat and sown to coarse grains, flax or grass, together with a floor price for oats and barley, farmers shifted from wheat and seeded the smallest acreage since 1917.

Early in 1944 the picture of relative prices for grains which confronted the farmer had changed in several important respects. In the first place, the acreage premiums for acres shifted away from wheat had been discontinued. Secondly, the man filling his drill this spring was guaranteed a minimum price of $1·25 per bu. for No. 1 Northern wheat at Fort William, as compared with a minimum price of 90 cents the preceding spring. At the same time, the floor and ceiling prices for oats and barley had not altered, although a portion of the equalization fees* on these two grains were now being paid at the time of delivery. Thus, despite a wheat goal of 17,500,000 acres which had been established because of adequate reserves and plugged storage facilities, Canada's wheat acreage bounced back to a more "normal" level.

Grain Production.—The average wheat yield of 18·7 bu. per acre obtained in 1944, while not of the record proportions of the 25·8 bu. average yield of 1942, is still well above the 1921-40 average of 14·9 bu. per acre. This good yield on an expanded acreage has given Canada a large crop of 435,535,000 bu. Some indication of the exceptionally high wheat production obtaining in this country during the war years is apparent from the fact that the present crop ranks fourth in volume among the six war-time crops harvested.

Wheat is gaining popularity as a live-stock feed as feeders become increasingly aware of the high feeding value of wheat. This practice has been encouraged by allowing a drawback of 25 cents per bu. on wheat purchased for feed and by placing a limitation upon farmers' deliveries to the Wheat Board. It is estimated that about 92,500,000 bu. were fed during the crop year 1943-44 as compared with 45,000,000 in 1939-40. In large areas of the drier parts of Western Canada, wheat will yield a higher feed return per acre than will coarse grains and, where these conditions prevail, it is sound economy to grow wheat for feed rather than oats and barley.

Conditions were exceptionally favourable for the growing of coarse grains during the summer of 1944. Oat production was up to 500,000,000 bu. from 482,000,000 in 1943, although the area planted to oats was reduced in the later year. Barley production decreased as a result of land being shifted back to wheat. The 1944 goals for oats and barley were placed at 16,400,000 and 8,500,000 acres which compare with seeded acreages of 14,300,000 and 7,300,000 acres, respectively. The acreage seeded to flaxseed in 1944 declined to 1,300,000 acres as compared with 2,900,000 in 1943

*On Apr. 6, 1943, a policy of paying farmers an "equalization fee" on marketings of oats and barley was implemented. These payments were designed to pass back to the primary producer on a pro-rata basis the differential returns received from coarse grains exported to the higher priced United States market. These fees are collected from exporters at the time export permits are authorized. On Sept. 17, 1943, advance payments of 10 cents per bu. on oats and 15 cents per bu. on barley, at the time of delivery, were authorized.

and a goal of 2,800,000 acres for 1944. This contraction took place in the face of a price increase to $2·75 per bu. for No. 1 C.W. flaxseed at Fort William, as compared with $2·25 the preceding year. Farmers apparently considereed that the net returns from flax were not comparable to those available from other crops.

Field Crops of Canada, 1943 and 1944

Crop	Final Estimate 1943 Crops			3rd Estimate 1944 Crops		
	Area	Production	Gross Farm Value	Area	Production	Gross Farm Value
	acres	bu.	$	acres	bu.	$
Fall wheat	601,000	13,222,000	14,412,000	668,000	20,908,000	22,790,000
Spring wheat	16,248,700	271,238,000	274,099,000	23,284,200	413,627,000	437,262,000
All wheat	16,849,700	284,460,000	288,511,000	22,616,200	435,535,000	460,052,000
Oats	15,406,900	482,022,000	255,045,000	14,315,000	499,643,000	263,887,000
Barley	8,396,800	215,562,000	141,988,000	7,290,700	194,712,000	129,054,000
Fall rye	351,300	4,468,000	4,255,000	417,850	5,628,000	4,774,000
Spring rye	224,800	2,675,000	2,600,000	230,100	2,898,000	2,423,000
All rye	576,100	7,143,000	6,855,000	647,950	8,526,000	7,197,000
Peas, dry	102,200	1,562,000	3,581,000	83,600	1,269,000	3,265,000
Beans, dry	85,200	1,407,000	3,280,000	99,500	1,432,000	3,762,000
Buckwheat	285,900	6,243,000	5,035,000	256,000	5,553,000	4,416,000
Mixed grains	1,463,200	35,656,000	22,611,000	1,518,100	57,431,000	34,300,000
Flaxseed	2,947,800	17,911,000	38,508,000	1,323,100	9,668,000	23,498,000
Corn, shelled	230,000	7,775,000	6,733,000	270,000	11,700,000	11,557,000
		cwt.			cwt.	
Potatoes	532,700	43,541,000	77,784,000	534,900	49,409,000	70,550,000
Turnips, etc.	162,600	35,690,000	23,315,000	147,200	31,852,000	19,623,000
		tons			tons	
Hay and clover	9,815,600	17,238,000	190,357,000	10,119,700	15,102,000	183,640,000
Alfalfa	1,544,000	3,891,000	41,811,000	1,580,200	3,783,000	42,895,000
Fodder corn	474,800	4,097,000	17,068,000	474,000	4,398,000	17,500,000
Grain hay	779,500	1,259,000	7,003,000	732,500	1,325,000	7,905,000
Sugar beets	52,500	471,700	4,914,000	55,900	564,200	4,957,000

A Typical Farming Country Scene in Eastern Canada.

Courtesy, New Brunswick Government Information Bureau

Uppermill Royal, a Shorthorn Bull Bred at Uppermill, Tarves, Aberdeenshire, Scotland.—This bull was recently purchased for 4,000 guineas ($18,900) by Ontario citizens interested in the improvement of live stock. He is now in service at the Ontario Agricultural College, Guelph.

Courtesy, Ontario Agricultural College

Production, Imports and Exports of Wheat for Canada, 1930-44

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[1]	Exports of Wheat and Flour[1]
	'000 bu.	bu.	bu.
1930	420,672	244,221	258,693,887
1931	321,325	216,328	207,029,555
1932	443,061	173,014	264,304,327
1933	281,892	413,165	194,779,875
1934	275,849	896,674	165,751,305
1935	281,935	291,510	254,424,775
1936	219,218	403,396	195,223,653
1937	180,210	6,138,819	92,957,047
1938	360,010	1,891,177	160,034,183
1939	520,623	444,368	192,674,368
1940	540,190	122,036	231,206,246
1941	314,825	29,103	225,828,434
1942	556,684	3,022	214,700,902
1943	293,660[2]	432,931	343,755,320
1944	447,656[2]	[3]	[3]

[1] Imports and exports are for the years beginning Aug. 1, 1930 to 1943. [2] Subject to revision. [3] Not available at time of going to press.

Live Stock

During the war years much emphasis has centred on the production of live stock and live-stock products. Prices of these products tended to rise earlier in the War than those for grain products, and even before definite governmental encouragement was given in the form of subsidies and bonuses the trend of production had turned upward. Live-stock numbers require periods of varying length to record increases—hog production is much more easily stepped up than that of cattle. Hogs increased rapidly and commercial marketings in 1944 will be almost three times those of 1938. The greatest increase occurred in the Prairie Provinces where ample feed supplies were available. Production in Eastern Canada has been encouraged by the policy of providing free freight for feed grains moved from Western Canada. During the first few years of increasing cattle numbers, marketings are reduced as calves and young stock are held back for breeding and feeding to heavier weights. A new

high record of 10,346,000 head of cattle was reported on farms at June 1, 1944. Sheep numbers have also been expanded considerably during the war period as a result of higher prices for both wool and mutton and lamb. Numbers of horses on farms have shown very little change throughout the war period.

Numbers of Principal Species of Live Stock on Farms in Canada, June 1, 1939-44

Year	Horses	Cattle	Hogs	Sheep
	'000	'000	'000	'000
1939	2,761	8,374	4,364	2,911
1940	2,780	8,380	6,002	2,887
1941	2,789	8,517	6,081	2,840
1942	2,816	8,945	7,125	3,197
1943	2,775	9,665	8,148	3,459
1944	2,735	10,346	7,741	3,726

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.

The Dominion-Provincial Conference to consider objectives for Canadian agriculture in 1944, set the area required for tobacco planting at 86,700 acres. The growers responded with an estimated total of 89,060 acres, of which 73,830 were planted to the flue-cured type. The estimated production of flue-cured tobacco is 83,323,500 lb., with other types making up a total of 102,104,750 lb.

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 30,478,655 lb. in 1939 to 47,205,299 lb. in 1942 and 52,579,227 lb. in 1943. The increase is due to the greatly increased consumption of cigarettes in Canada, supplemented by the tremendous volume of ships' stores and exports to the Armed Forces abroad.

Sugar Beets.—Despite the war-time demands for sugar, it has not been possible to expand the acreage and production of sugar beets in Canada. This crop has a high labour requirement per acre and, as a consequence, has been adversely affected

Shorthorn Cows in an Ontario Pasture.—Beef production continues to hold an important place in the agricultural economy of every province in Canada.

Courtesy, Canadian Shorthorn Association

by the acute shortage of farm labour. The total acreage in 1944 for the four producing provinces, Quebec, Ontario, Manitoba and Alberta, was 58,350 acres, an increase of 5,850 acres over the low acreage of 1943 but was still considerably below the 82,270 acres planted in 1940. Yields per acre were higher in 1944 in all provinces and the tonnage produced increased from 473,000 to 608,000. The output of refined beetroot sugar from the 1943 crop amounted to 129,268,010 lb. In 1944 a new sugar-beet refinery was opened at St. Hilaire, Que.

Maple Products.—Weather conditions in general were more favourable to an increased flow of sap in 1944 than during the 1943 season and total production expressed as syrup amounted to 3,090,400 gal., an increase of 34 p.c. over the 1943 crop of 2,299,800 gal. There was a continuation of the trend to increase the amount of syrup at the expense of the sugar crop which has been apparent since the outbreak of war. In the five-year period, 1935-39, the maple syrup crop averaged approximately 80 p.c. of the total output expressed as syrup. In 1940 the percentage of syrup increased to 89 p.c. of the total and remained at this level until the 1944 season, when the proportion of syrup rose to a new high of 93 p.c.

As was the case in 1943, a considerable volume of syrup passed directly from the producer to the consumer. In Quebec, however, with the larger crop, the maple-syrup processors were able to obtain more adequate supplies than in 1943.

Honey.—Production of honey in 1943 estimated at 39,492,100 lb. was the heaviest on record and exceeded the ten-year, 1932-43, average of 33,462,000 lb. by 18 p.c. The average production per colony was 88 lb. or 22 lb. greater than it was in 1942. The number of beekeepers increased sharply from 28,430 in 1942 to 34,250 in 1943,

although the number of producing colonies did not increase proportionately. Beeswax production at 592,400 lb. also showed a substantial increase in 1943 over the 420,700 lb. produced in 1942. The gross value of the 1943 crop, including honey and beeswax, was estimated at $6,371,200 or 58·1 p.c. over the value of the 1942 crop estimated at $4,029,000.

Honey production in 1944 was somewhat disappointing after the very favourable prospects early in the season. According to a preliminary estimate of the crop, production will be 36,215,800 lb. or 8 p.c. smaller than the very large crop of 39,492,100 lb. produced in 1943. With the exception of Ontario, there was an increase in the number of producing colonies in all provinces, but this was not sufficient to offset the poorer average yields per colony. Light honey in 1944 made up 91 p.c. of the total crop, while in 1943 only 87 p.c. of the crop graded light.

Fibre Flax.—Under the stimulus of the war-time demands for this commodity, there has been considerable expansion in acreage and production over 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, but declined to 35,297 acres in 1943. The value of flax products, which include flax fibre, seed and tow, increased from $1,249,000 in 1939 to $4,687,000 in 1942 and declined to $3,047,128 in 1943.

Hops.—Hop production in Canada is confined to the provinces of British Columbia, Ontario and Quebec. British Columbia production is the most important; in that province in 1943, 1,500 acres were grown, producing a crop of 1,500,000 lb. with a value of slightly over $1,000,000. In the same year 335 acres and 160 acres were grown in Ontario and Quebec, respectively.

Oil-Bearing Crops.—Flax is the principal oil-seed crop produced in Canada but production of soybean, sunflower seed and rapeseed has been stressed in recent years in order to meet deficiencies formerly covered by importations from abroad and not now obtainable in sufficient volume.

Production of *flaxseed* was at its peak in Canada just prior to the First Great War when the West was being opened up and flax made an excellent crop for new breaking. Over 2,000,000 acres were seeded to flax in 1912, but in 1938 only 210,000 acres were planted to this crop. The first real increase came in 1941 when close to 1,000,000 acres were seeded and in 1942 a further increase of 500,000 acres took place. A new high was established in 1943 when 2,948,000 acres went into flaxseed. In 1944, however, the acreage declined sharply, 1,323,100 acres being planted. First estimates of yield per acre were somewhat higher than those secured in 1943 and a crop of approximately 10,000,000 bu. is indicated.

Crushing capacity for flax and other oil-seed crops has been steadily increasing during the past three years. The bulk of this capacity is located in Eastern Canada, but there are important sections of the industry in Manitoba, Alberta and British

Harvesting a Sugar-Beet Seed Crop in British Columbia.

Courtesy, Family Herald and Weekly Star

Columbia. The commercial disposition of the western Canadian flaxseed crop during the crop year 1942-43 covered almost 9,500,000 bu. distributed as follows: domestic crushers and others, 4,236,572 bu.; exported, 5,201,933 bu.; total, 9,438,505 bu.

Most of the linseed oil produced from flaxseed goes into the paint, linoleum and kindred trades including printers' ink, etc., but only limited amounts have been used for the manufacture of edible oils. It is believed that at the present time the use of linseed oil for edible oils is unlikely.

Soybean production in Canada is not by any means new, but it is only since the War began that acreage has been expanded sufficiently to make possible a commercial crop of importance. Production has been centred chiefly in southern Ontario.

The crop was smaller during 1943-44 than it was in 1942-43 despite an increase in acreage seeded in 1943. Preliminary estimates of acreage seeded in 1943 showed a total area of 50,400 acres devoted to this crop, 47,000 acres being located in Ontario. The total quantity of soybean inspected by the Board of Grain Commissioners in the eastern division between Aug. 1, 1943, and Feb. 7, 1944, was 89,795 bu. Additional quantities not included in the inspection returns brought the total receipts for the crop year up to approximately 102,000 bu. Only one car was inspected in the western division; this was from Manitoba where the production of soybean was estimated at 20,000 bu. from 2,500 acres.

The largest share of the deliveries appears to have gone to commercial interests engaged in the manufacture of soya flour and other soya products, including salted soya beans which are substituting for salted peanuts. Statistics covering the 1942 soybean crop in Ontario show that a total of approximately 370,000 bu. of beans reached commercial channels and about 320,000 bu. of this went to crushers.

As in the case of soybean, the commercial marketings of *sunflower seed* do not reflect the estimated production in 1943. This crop was produced in commercial quantities in Manitoba and Saskatchewan in 1943 with approximately 14,000 acres

planted in these two provinces; a small acreage was planted also in Alberta. A preliminary estimate of production indicated a total crop of 17,900,000 lb. In face of this estimated output, less than 4,000,000 lb. of sunflower seed have been marketed by producers in the three Prairie Provinces. The Canadian Wheat Board was authorized to purchase the crop and to pay à price of 5 cents per lb. at shipping points.

The acreage seeded to *rapeseed* in Canada in 1943 was 4,051 acres and most of this was located in Manitoba and Saskatchewan. The early estimates of yield in Manitoba were very high but have since been reduced and the total crop is now placed at 2,822,900 lb. The marketings by farmers have totalled less than 600,000 lb. Purchases have been made by the Canadian Wheat Board at a fixed price of 6 cents per lb. for rapeseed in reasonably clean condition with a moisture content determined by the Board, and delivered f.o.b. at shipping points named by the Board.

Forage Seed Crops.—The preliminary estimate of hay and pasture seeds for the 1944 season sets the crop at 50,887,000 lb. This is some 2·1 p.c. below the 1943 level of production when the crop was estimated at 51,982,000 lb. The value of the 1943 crop amounted to $6,888,300 as compared with the 1942 crop valuation of $3,505,900. No exports of alsike, red clover, alfalfa and mixtures of alsike and white clover seed may now be made direct by Canadian shippers. Such shipments must be made through the Seed Export Office established in 1943 at Lindsay, Ont. The profits accruing from the sale of this seed is distributed to the growers on the basis of participation certificates issued at the time of delivery. No such strict control applies to the other hay and pasture seeds. Exporters, however, must obtain export permits on all such shipments from the Seed Controller's Office. These permits are only issued when the quantities available are in excess of domestic requirements.

Dairying

During the past two years the dairy industry of Canada has successfully met the challenge imposed by war-time conditions in producing increased quantities of dairy products for use at home and abroad. Despite acute labour shortages, the production of milk on farms has been maintained at a high level, and while 1942-43 exports of cheese and concentrated milk products were considerably above those of the pre-war period, domestic supplies of fluid milk, butter and other products far surpassed the quantities provided for home consumption in previous years.

Since the commencement of the War, the Government of Canada has given tangible encouragement to dairying as a part of its policy to increase food supplies. The payment of transportation charges on feed grain moved from Western Canada to the eastern provinces has been of considerable assistance; while the payment of bonuses and subsidies to farmers and manufacturers enhanced the values of dairy products sold off farms and has established a price structure comparable to that of the early 'twenties.

Milk Production.—In 1943 farmers produced 17,517,000,000 lb. of milk, which represented an increase of nearly 29,000,000 lb. over 1942 and 1,370,000,000 lb. over 1939. Up to the end of August, 1944, milk production had increased nearly 60,000,000 lb. over the January-August production of 1943. On the basis of information at present available (October), the 1944 estimate has been placed at 17,575,000,000 lb.

Ayrshires in Pasture in Ontario.—The Ayrshire is a good milch cow and is a popular dairy breed in Canada.

Department of Agriculture

Fluid milk sales, which include cream on a milk basis, have been moving up to higher levels since the beginning of the War. The 1943 estimate, 3,706,513,000 lb., represented an increase of 9·4 p.c. over 1942. The 1944 estimate is 3,800,000,000 lb.

Fluid milk, which has been subsidized at different times since late December, 1941, is now (the beginning of 1945) subject to a producer subsidy of 55 cents per hundred in a number of markets during the period October to April and 35 cents from May to September. There is also a consumer subsidy of 2 cents per quart. Commencing Sept. 1, 1944, monthly cream sales were limited to a quota on the basis of sales made by distributors in the month of June. Cheese milk and milk for concentrated milk products (including that used for skim milk powder) is subsidized at 30 cents a hundred and the butter-fat subsidy on cream used in creamery butter manufacture continues at 10 cents per lb. of butterfat.

Butter Production.—The production of creamery butter in 1943 reached an all-time high of 312,309,928 lb., an increase of nearly 28,000,000 lb. over 1942. This, of course, was a direct result of the subsidized price arrangement which gave farmers an average of 43·2 cents per lb. butterfat as compared with 37·4 cents in 1942. During the first nine months of 1944 production fell 5·5 p.c. as compared with the same period of 1943. On the basis of this decline, the 1944 production has been estimated at 295,000,000 lb., representing a reduction of 17,000,000 lb. from the 1942 figure.

While the butter-fat subsidy tended to increase the creamery output, it had the opposite effect on dairy butter, which was not subsidized. In 1943 the dairy make fell to approximately 55,000,000 lb., 23,000,000 lb. below 1942. However, in

1944 the situation appears to have become a little more stabilized, the reduction up to the end of August being less than 2 p.c. The total for the year is expected to drop to approximately 54,000,000 lb. For creamery butter, the supply position at Oct. 1, 1944, was much weaker than a year previously. However, due to a sizeable export movement of butter to the United Kingdom in October, 1943, this difference in stock holdings does not represent the actual position, although it is apparent that supplies for the winter of 1944-45 are still considerably below those of a year ago.

Cheese Production.—Cheese has been a subsidized product since 1941. Under the price arrangement of Oct. 1, 1943, which is still applicable, the basic price of No. 1 cheese was placed at 20 cents f.o.b. factory. The quality bonus paid by the Dominion Government gave producers an average of about 1½ cents per lb. over and above the basic price, and in Ontario, where the Government continued to pay a bonus of 2 cents per lb. on all cheese manufactured, the total price was approximately 23½ cents per lb. at the factory. The Quebec Government paid a similar bonus from July 1, 1941, to Dec. 1, 1942, and again from July 1, 1943, to Nov. 1, 1944.

The subsidy paid to cheese manufacturers had a marked effect on production during 1944. During the first eight months of the year, the cheddar cheese make increased nearly 13 p.c.; and even with a slight decline in September, the output for the nine-month period was 10 p.c. above that of the same period a year ago. The estimate for 1944, provisionally placed at 175,000,000 lb., is, with the exception of 1942, the highest since 1925. Factory cheese made from whole milk (other than cheddar) showed a slight increase from 1942, the estimated output being 1,722,647 lb. as against 1,216,142 lb. in 1942. Farm-made cheese has been reduced somewhat in recent years and in 1943 only 760,500 lb. were produced; the 1944 make is estimated at 700,000 lb.

Income.—During the past few years, farmers have increased substantially 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; by 1942 this figure had risen to approximately $227,161,000, representing 20·4 p.c. of the total farm income. With the increase in the subsidies paid in 1943, the sales income from dairy products advanced to $248,900,000, but with the rise in value of other farm products, it represented only 17·8 p.c. of the total farm income. In the first six months of 1944, sales income from dairying reached $128,237,000 as compared with $110,263,000 in the same period of 1943.

Marketing and Consumption.—During 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 24,000,000 lb., or 15 p.c. of the total, were shipped out of the Dominion. The following year there was a pronounced decline and since then the surplus available for export has reached a negligible quantity. During 1943 shipments were stepped up to approximately 9,500,000 lb., 7,000,000 of which went to the United Kingdom to help maintain the butter ration at the normal rate of 2 oz. a week.

Cheddar cheese, on the other hand, is one of Canada's principal export commodities. During the entire period 1933-42, exports were 67 p.c. of the total production. In 1939 Canadian cheese exports amounted to 90,000,000 lb. or 72 p.c. of the amount produced; by 1943 they had moved up to 130,000,000 lb. representing 80 p.c. of the total make. The cheese delivery contract with the United Kingdom for 1943-44 was raised to 150,000,000 lb. from 125,000,000 lb. for 1942-43, but the 1944-45 contract was reduced to the latter figure.

The domestic disappearance of butter on a per capita basis amounted to 28·55 lb. in 1943 as compared with 33·14 lb. in 1942. The demand for butter, which had shown a normal increase during the early part of 1942, increased considerably during the autumn. This movement was checked with the introduction of rationing on Dec. 16, 1942, at one-half pound per person per week. During 1943, and more particularly during 1944, the rationing was temporarily reduced by periodically setting back the validity date on certain ration coupons. These attempts to augment supplies for the following winter did not produce the saving that might have been expected because an increase in the consumption demand of people led to the redemption of a larger proportion of the available coupons. From January to August, 1944, consumption amounted to 192,000,000 lb. which was 20,000,000 lb. more than in 1943.

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 and to 4·47 lb. in 1943. The consumption of milk during the past two years has also greatly increased, in fact to a degree that threatens to produce a shortage for other purposes. In 1943, fluid sales and milk consumed in farm homes amounted to 5,421,000,000 lb., or 31 p.c. of the total production. From January to August, 1944, the total reached 3,735,000,000 lb. as compared with 3,553,000,000 lb. in the same period of

Delivery of Milk at a Cheese Factory.—The demands for milk by cheese-makers offer to be as great in the present year if the contract is to be met as they were in 1943-44 when shipments were below contract by 22·7 p.c. The 1943-44 contract called for 150,000,000 lb. and 116,200,000 lb. were shipped to England; the 1944-45 contract calls for 125,000,000 lb.

National Film Board

the preceding year. After allowing for wastage, the estimated consumption of milk (including cream on a milk basis) represented a per capita consumption of 0·96 pint in 1943 as against 0·91 pint in 1942 and 0·86 pint in 1941.

Dairy Production of Canada, 1942 and 1943

Economic Area	Year	Milk		Milk Products			
		Total Milk Production	Fluid Sales	Butter		Cheddar Cheese	Evaporated Milk
				Creamery	Dairy		
		'000 lb.	'000 lb.	lb.	lb.	lb.	lb.
Maritime Provinces	1942	1,092,549	194,025	15,165	12,900	2,936	2,094
	1943	1,093,089	220,127	18,996	8,346	1,752	1,239
Quebec and Ontario	1942	10,630,902	2,428,739	154,135	25,100	192,903	141,399
	1943	10,554,311	2,624,022	168,087	15,590	153,538	140,899
Prairie Provinces	1942	5,197,193	522,769	109,934	38,700	9,496	11,850
	1943	5,294,662	593,355	120,356	29,828	6,336	9,646
British Columbia	1942	567,722	242,412	5,357	1,825	880	28,119
	1943	574,856	269,009	4,871	1,643	718	26,371
Totals	**1942**	**17,488,366**	**3,387,945**	**284,591**	**78,525**	**206,215**	**183,471**
	1943	**17,516,918**	**3,706,513**	**312,310**	**55,407**	**162,344**	**178,155**

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 also made an important contribution to war-time food requirements in the production of poultry meat. In 1943 the consumption of meats showed an increase over that of 1942 and farmers found a ready sale for all available supplies.

Poultry Meat and Farm Egg Production in Canada, by Economic Areas, 1941-43

Economic Area	Year	Poultry Meat Production			Egg Production		
		Total	Marketed	Farm-Home Consumed	Total[1]	Marketed	Farm-Home Consumed
		'000 lb.	'000 lb.	'000 lb.	'000 doz.	'000 doz.	'000 doz.
Maritime Provinces	1941	10,042	8,859	1,183	13,295	8,283	4,575
	1942	12,330	10,219	2,111	16,251	9,986	5,741
	1943	13,616	11,279	2,337	19,227	11,825	6,761
Quebec and Ontario	1941	103,273	84,542	18,731	116,611	69,281	43,598
	1942	111,337	86,665	24,672	129,559	93,832	31,491
	1943	118,027	91,819	26,208	143,875	104,571	34,453
Prairie Provinces	1941	97,751	80,844	16,907	93,403	58,939	31,218
	1942	125,365	98,530	26,835	112,067	72,620	35,519
	1943	120,500	93,724	26,776	127,884	82,970	40,306
British Columbia	1941	8,941	7,714	1,227	20,848	17,846	2,335
	1942	9,618	7,750	1,868	22,376	18,841	2,797
	1943	11,289	9,087	2,202	24,041	20,219	3,005
Totals	**1941**	**220,007**	**181,959**	**38,048**	**244,157**	**154,349**	**81,726**
	1942	**258,650**	**203,164**	**55,486**	**280,253**	**195,279**	**75,548**
	1943	**263,432**	**205,909**	**57,523**	**315,027**	**219,585**	**84,525**

[1] Includes eggs for hatching.

Poultry Improvement.—The Experimental Farm at Ottawa is experimenting with protein levels in the rations of poultry. The picture shows increased utilization of pasture by birds on feed deficient in protein.

Department of Agriculture

The population of hens and chickens at June 1, 1944, was estimated at approximately 86,792,000. Turkeys numbered approximately 3,306,000, geese 658,000 and ducks 839,000. As compared with 1943, these figures represented an increase of approximately 16 p.c. in the number of hens and chickens and 16 p.c., 5 p.c., and 23 p.c., respectively, in the numbers of turkeys, geese and ducks. During the year 1943, the production of farm eggs amounted to approximately 315,000,000 doz., and is estimated at 355,000,000 doz. for 1944. Over the past few years there has been a considerable increase in the egg production per hen. The gross farm value of poultry meat in 1943 was $66,610,000, and the gross value of production of farm eggs was estimated at $100,306,000. The domestic disappearance of poultry meat was approximately 23 lb. per capita.

Fruits and Vegetables

Fruits.—The 1944 season was marked by the unusually large crops of fruit produced in British Columbia. Record crops of all tree fruits were harvested. While yields in the other producing provinces were not of record proportions, the total volume of fruit was somewhat higher than in 1943. The total apple crop produced in 1944, currently estimated at 16,487,400 bu., was substantially larger than the 12,892,200 bu. harvested in 1943. The increase in 1944 was due to the favourable conditions in Nova Scotia, Ontario and British Columbia where crops of 5,406,000 bu., 2,411,400 bu. and 7,500,000 bu., respectively, were harvested as compared with 4,846,200 bu., 2,371,800 bu. and 4,433,200 bu. in 1943. While the crops grown in New Brunswick and Quebec were larger than average, production was slightly below that of 1943.

The trend toward enlargement of prune plantings in both Ontario and British Columbia during the past number of years is now beginning to be felt in the markets in both Eastern and Western Canada where increasing quantities of this type of plum are appearing year after year.

Fruit Breeding.—New varieties of apples, pears, plums, cherries, strawberries, raspberries, currants and gooseberries are being developed with emphasis on hardiness and disease resistance. In tree-fruit breeding crosses are made on pot-grown trees in the greenhouse during late winter or early spring.

Department of Agriculture

Strawberry production in 1944 again followed the downward trend that has been apparent since 1939. Undoubtedly the decrease in acreage in British Columbia, brought about by the removal of the Japanese from the coastal area, has affected the total output, but the increasing labour shortage in other provinces has also been a factor and growers generally have tended to reduce the acreage.

Values of Fruits Produced in Canada, 1940-43 with Five-Year Averages 1935-39

Fruit	Five-Year Average 1935–39	1940	1941	1942	1943
	$	$	$	$	$
Apples	10,978,000	8,779,000	9,472,000	14,390,000	16,569,000
Pears	701,000	800,000	1,137,000	1,429,000	1,462,000
Plums and prunes	318,000	338,000	822,000	737,000	1,134,000
Peaches	1,473,000	1,919,000	2,808,000	3,550,000	2,079,000
Apricots	104,000	148,000	154,000	227,000	102,000
Cherries	556,000	598,000	1,413,000	1,587,000	1,545,000
Totals, Tree Fruits	14,130,000	12,582,000	15,806,000	21,920,000	22,891,000
Strawberries	2,104,000	2,044,000	2,211,000	2,057,000	3,337,000
Raspberries	953,000	1,214,000	1,156,000	1,664,000	2,709,000
Grapes	793,000	1,038,000	1,252,000	1,862,000	1,747,000
Loganberries	100,000	100,000	112,000	153,000	157,000
Totals, Small Fruits	3,950,000	4,396,000	4,731,000	5,736,000	7,950,000
Totals, All Fruits	**18,080,000**	**16,978,000**	**20,537,000**	**27,656,000**	**30,841,000**

Vegetables.—Vegetable growing, although one of the minor branches of agriculture, is nevertheless essential, as vegetables supply many of the elements necessary to maintain the national health. With the outbreak of war some of the sources of citrus fruits were cut off and other supplies were greatly reduced. In an effort to make up the deficiencies, particularly of vitamin C, which citrus fruits supply, more and more emphasis has been put on increasing Canada's production of vegetables. One step in the program to ensure the increase was to bonus the growers for the production of four major processing crops, namely peas, beans, corn and tomatoes.

According to a survey made in June, 1944, there was an over-all increase of approximately 27 p.c. in the area planted in 1944 over that of the previous season. Included in the total area is the acreage of the processing crops. In June of 1944 the area under contract with the processors was 123,600 acres compared with the 1943 contracted acreage of 106,000 acres, an increase of 16·6 p.c.

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.

Apple Picking Time in a Maritime Orchard.

Courtesy, New Brunswick Government Information Bureau

CHAPTER IV

Forest Resources

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.

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.

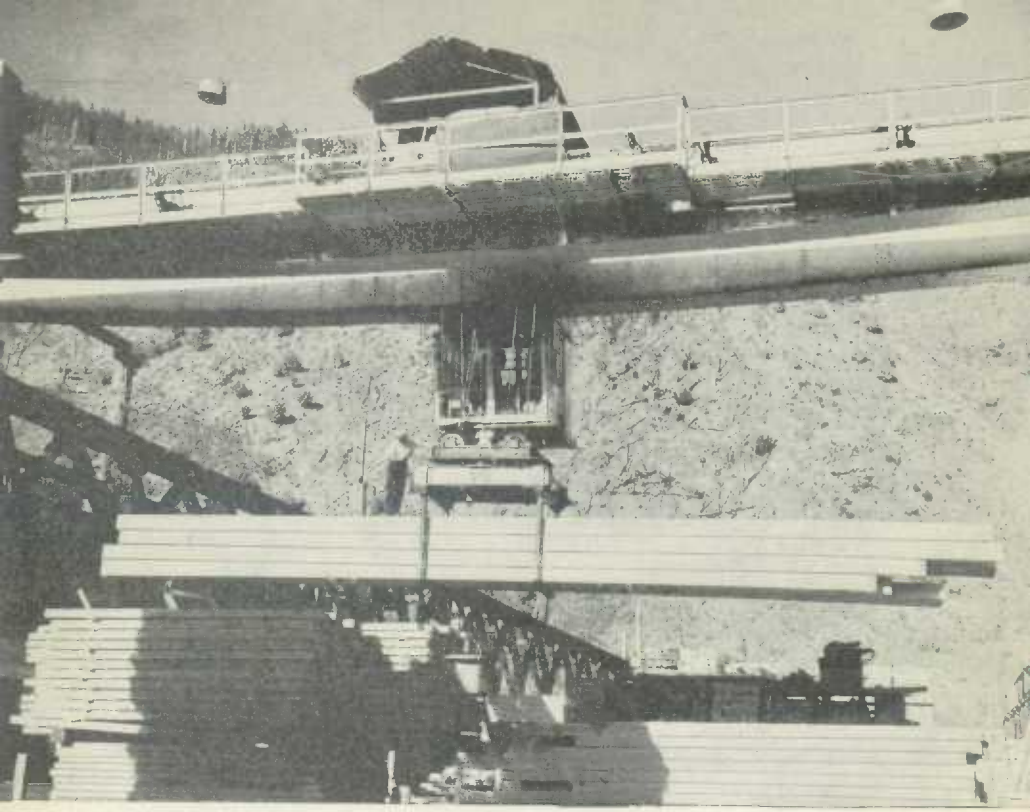
If the forests are not to be impaired, the volumes of wood removed each year to serve useful purposes and the volumes burned or destroyed by pests must be replaced by annual growth. The relationship between the normal pre-war rate of depletion and the rate effective under war conditions in 1941 and 1942 is illustrated in the following statement.

FOREST DEPLETION

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

	Ten-Year Average 1930-39 (Pre-War)	*1941*	*1942*
Cut for use	2,519	3,354	3,249
Destroyed by fire	404	1,045	162
Destroyed by insects and tree diseases	700	700	700
Totals	3,623	5,099	4,111

Most of the depletion takes place on the accessible portions of the forests and replacement on these areas requires an average annual growth of about 14 cu. ft. per acre. It seems probable that, under pre-war conditions, growth was equal to



Modern Method of Stacking and Loading Lumber.

Courtesy, Canadian National Railways

depletion, so far as total volume of trees of all species was concerned, but it is questionable whether the much higher rate of depletion experienced during the war years could be maintained indefinitely under present methods of forest management.

While war continues the demands on Canada's forests will inevitably remain at a high level. Although production of newsprint has been somewhat curtailed it continues to be an important commodity in our export trade and the demand for other papers and for wood-pulps is strong both at home and abroad. Wood has been proved, under war conditions, to be the most versatile of materials and is constantly being substituted for other materials that are in short supply. Tremendous new possibilities for use of inferior grades of wood, which now have limited or no use for industrial purposes, have been opened up by the development of the chemical process known as the transmutation of wood, a process that converts soft, non-uniform, inflammable and readily deteriorating wood into ebony-hard, homogeneous, fire-resistant and long-durable material.

The post-war outlook for Canada's lumber industry has been materially improved by the conclusion of an agreement between the British Ministry of Supply and Canadian lumber producers and exporters, whereby the latter have undertaken to ship to Britain in the first two years after the War as much lumber as is permitted by the Timber Controller, who has set the maximum annual figure at 1,200,000,000 bd. ft., or about 25 p.c. of the country's total output.

Silvicultural Research—Reforestation in Ontario. *Left:* A young stand of red pine newly thinned. *Centre:* The same stand one year later showing additional growth. *Right:* A plantation of more mature red pine after thinning and pruning, and freed from undergrowth.

Dominion Forest Service

War-time Controls.—After the outbreak of war, the demands made on the lumber industry became increasingly heavy. By the spring of 1940 Canada had become almost the sole source of supply available to the United Kingdom; wood was the chief building material used for the construction programs for naval, military and air-force establishments and for munitions factories in Canada; exports of lumber to non-sterling countries had to be kept up as a source of urgently needed foreign exchange; and, in addition, sufficient lumber had to be found to meet the needs of essential civil business. In order to ensure 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 Order in Council in June, 1940. The Control is divided into three major divisions:—

Lumber.—The Timber Control is responsible for the distribution of Canadian lumber production. This includes obtaining requirements for the Canadian war program and essential civilian purposes; for supplying the United Kingdom and the British Dominions with as great a volume as is possible and making available to the United States an equitable volume of production for the war program of that country.

Pulpwood.—The Timber Control is responsible for pulpwood production and distribution, which involves not only domestic needs but also the quantity that moves to the United States.

Fuelwood.—The Timber Control is responsible for the production and equitable distribution of fuelwood. This involves stimulating production, arranging for transportation where necessary, and the stock-piling of reserves for emergency use.

In addition, as Timber Administrator for the Wartime Prices and Trade Board, the responsibility for price control of lumber, pulpwood and fuelwood are assumed by the Control.

During 1942 all business in wood-pulps and papers was placed under the control of administrators of the Wartime Prices and Trade Board, the first Newsprint Administrator being appointed in December, 1941. The Timber Controller in his relation to pulpwood production and the Newsprint Administrator in his control of wood-pulps and papers therefore work in close co-operation.

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, 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.

It has been estimated that operations in the woods in Canada in 1942 involved the investment of over $248,000,000, gave employment during the logging season amounting to 33,785,000 man days, and distributed over $156,000,000 in wages and salaries.

Values of the Products of Woods Operations, by Products, 1938-42

Products	1938	1939	1940	1941	1942
	$	$	$	$	$
Logs and bolts	52,759,660	55,685,197	71,817,471	86,514,625	92,807,611
Pulpwood	53,761,999	58,302,668	74,347,132	88,193,045	103,619,151
Firewood	32,740,566	33,058,240	33,297,756	26,662,296	27,264,486
Hewn railway ties	2,222,509	2,048,186	1,788,001	1,547,780	878,830
Poles	2,824,512	2,940,361	2,691,107	2,467,336	2,663,603
Round mining timber	1,297,993	1,461,507	5,707,677	2,458,435	2,169,268
Fence posts	978,679	1,111,883	999,934	964,568	1,291,393
Wood for distillation	298,110	289,230	518,204	588,747	745,408
Fence rails	264,480	267,437	270,320	262,521	341,607
Miscellaneous products	1,117,349	2,582,689	3,130,273	3,503,736	2,500,534
Totals	**148,265,857**	**157,747,398**	**194,567,875**	**213,163,089**	**234,371,891**

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-leaved 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 1942 amounted to 4,935,145 M ft. valued at $149,854,527. Shingles numbered 3,720,482 M squares at $13,191,084, sawn ties 4,883,408 at $3,314,626, and lath 181,994 M at $737,874. The gross value of production for the industry as a whole showed an increase of 18 p.c. over the total for 1941.

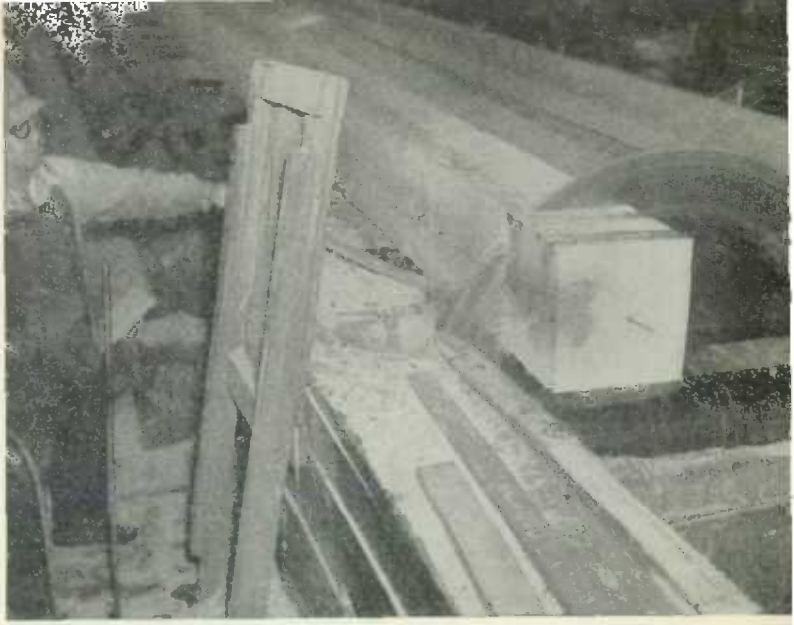
Production of Sawn Lumber and All Sawmill Products, 1942

Province or Territory	Sawn Lumber Production		Total Sawmill Products
	M ft. b.m.	$	$
Prince Edward Island	5,732	135,064	184,379
Nova Scotia	253,525	6,854,883	7,604,655
New Brunswick	328,927	10,707,419	14,289,646
Quebec	1,010,510	31,752,397	40,425,028
Ontario	625,433	22,460,700	28,345,474
Manitoba	82,243	2,286,034	2,493,695
Saskatchewan	125,657	3,065,148	3,323,373
Alberta	198,898	4,821,022	5,527,455
British Columbia	2,303,552	67,741,700	90,695,092
Yukon	668	30,160	30,280
Totals	**4,935,145**	**149,854,527**	**192,919,077**

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. From the early 'twenties until 1941, the pulp and paper industry headed the lists in net value of production and in wage and salary distribution, replacing the sawmills in both cases. Since 1942, some of the war industries have surpassed it in these respects. In these comparisons only the manufacturing stages of the pulp and paper industry are considered, no allowance being made for capital invested, employment furnished, payroll, or production of operations in the woods.

The volume of pulp and paper produced in 1943 was lower than the previous year, chiefly because of decreases in the production of mechanical pulp and newsprint paper following control restrictions on power and labour. However, because of substantial increases in the price of pulp, paper and paperboard, the gross value of the products of this industry rose to a new high.



Sawing a Large Douglas Fir Log in a British Columbia Sawmill.

Courtesy, Canadian National Railways

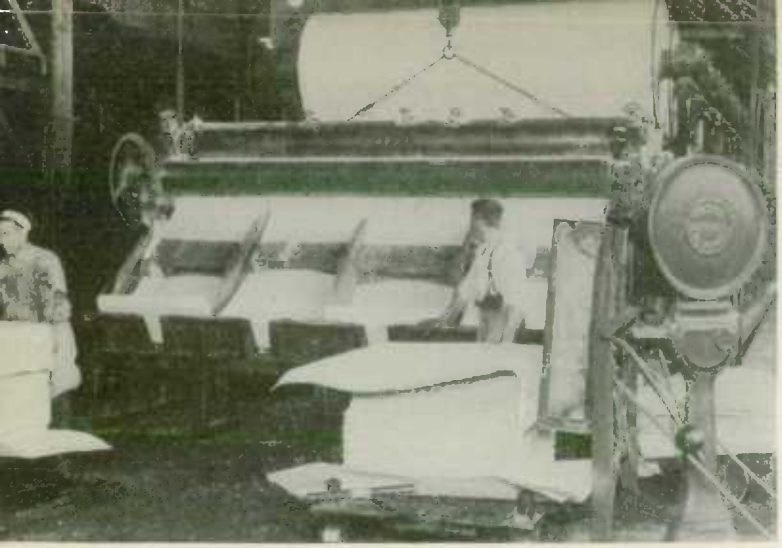
Considering only the manufacturing aspect of the industry, or the manufacture of woodpulp and paper, the gross value of production in 1943 was 2·7 p.c. over the previous record of 1942 and an increase of 41·6 p.c. over 1929. Figures from 1930 are:—

	Gross Production	*Net Production*		*Gross Production*	*Net Production*
1930	$215,674,246	$107,959,927	1937	$226,244,711	$106,002,017
1931	174,733,954	88,166,297	1938	183,897,503	89,034,186
1932	135,648,729	67,121,459	1939	208,152,295	103,123,660
1933	123,415,492	57,289,643	1940	298,034,843	158,230,575
1934	152,647,756	77,696,593	1941	334,726,175	174,852,041
1935	159,325,546	79,199,741	1942	336,697,277	164,500,420
1936	183,632,995	86,406,163	1943	345,653,470	165,485,944

There are three classes of mills in the industry. These, in 1943, comprised 28 making pulp only, 50 combined pulp and paper mills, and 28 making paper only. In 1943 the 78 mills making pulp produced 5,272,830 tons valued at $194,434,202, representing a decrease of 6 p.c. in quantity but an increase of 1·2 p.c. in value over 1942. About 68 p.c. by quantity was made in combined mills and used by them in papermaking and about 32 p.c. was made for sale in Canada and for export.

The Present Situation as Regards Newsprint.—The record of the Canadian newsprint industry cannot be reckoned in terms of newsprint tonnage alone. Since newsprint mills were the largest peace-time users of electricity, they have had to effect curtailment in various localities. Industry resources in shipping, manpower, wood and other materials have also been diverted to war necessities and newsprint mills were called on to help produce emergency pulps; so that newsprint production capacity was accordingly reduced.

However, the normal pre-war supply has not only been maintained but has been surpassed by 225,758 tons a year. The pre-war average has been surpassed in each of the five war years, including 1944 as at present estimated. For United States consumers, Canadian mills have more than filled the gap caused by loss of Scandinavian tonnage. Canadian mills have also supplied over 80 p.c. of quotas for South American countries and, with help from Newfoundland, have provided all the imports for Britain, Australia, New Zealand, Africa and India.



Splitting and cutting end of a drying machine in a chemical pulp mill. The pulp sheets are piled on trucks for weighing and baling.

Courtesy, Canadian National Railways

Due to shortage of shipping space, particularly in 1942 and 1943, Canadian deliveries of supplies to Britain, Australia and other overseas consumers were severely curtailed, and because of these overseas curtailments United States consumers have had an increased share of Canadian supply, rising from a pre-war average of 76 p.c. to a peak of 88 p.c. in 1942 and a war-time average of over 81 p.c.

The present estimate of Canadian tonnage for United States consumers in 1944 is the lowest of the war years to date, due to improvement in supply to Britain and Australia, but it is still about 115,000 tons or 5 p.c. better than the pre-war average. In 1944 North American consumption will be reduced, but United States and Canadian consumers, in relation to those in other countries, will still be in a highly favourable supply position.

Newsprint made up 77 p.c. of the total production of Canada's 78 paper mills in 1943; 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, 1935-43

Year	Newsprint Paper		Total Paper	
	Quantity	Value	Quantity	Value
	tons	$	tons	$
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	147,074,409	4,231,767	230,269,512
1943	3,046,442	154,290,163	3,966,344	235,362,958

Monthly figures of Canadian newsprint production for 1944 are:—

	Tons		*Tons*		*Tons*
January	242,658	May	262,467	September	244,209
February	240,005	June	246,864	October	258,301
March	252,092	July	244,406	November	256,762
April	236,353	August	262,695	December	244,970

CHAPTER V

Fur Production

The value of the fur trade to Canada cannot be measured on a dollars-and-cents basis. Like gold, spices and other highly desired products, furs were an important incentive to the voyages of exploration from Great Britain and Continental Europe in the early days of the Western Hemisphere.

In modern times there have been great changes in the fur trade. The railway first revolutionized conditions throughout the country, then more recently the advent of the motor-vehicle has influenced the extension of highways to the borders of settlement, and beyond. Boats ply the lakes and rivers, and the aeroplane is requisitioned for the transportation of furs from the more inaccessible districts. The advance of lumbering, mining and agricultural settlement, together with improved methods of capture, have driven fur-bearing animals farther and farther afield, and caused serious reduction in their numbers. To guard against further depletion and to ensure the prosperity of Canada's great wild-life heritage, the Dominion and Provincial Governments have adopted, in co-operation, a strong policy of conservation.

Numbers and Values of Pelts Taken, Years Ended June 30, 1930-43

Year Ended June 30	Pelts		P.C. of Value Sold from Fur Farms	Year Ended June 30	Pelts		P.C. of Value Sold from Fur Farms
	Number	Value			Number	Value	
		$				$	
1930	3,798,444	12,158,376	19	1937	6,237,640	17,526,365	40
1931	4,060,356	11,803,217	26	1938	4,745,927	13,196,354	43
1932	4,449,289	10,189,481	30	1939	6,492,222	14,286,937	40
1933	4,503,558	10,305,154	30	1940	9,620,695	16,668,348	31
1934	6,076,197	12,349,328	30	1941	7,257,337	21,123,161	26
1935	4,926,413	12,843,341	31	1942	19,561,024	24,859,869	19
1936	4,596,713	15,464,883	40	1943	7,418,971	28,505,033	25

Numbers and Values of Pelts Taken, by Provinces, Years Ended June 30, 1941-43

Province or Territory	Pelts			Values		
	1941	1942	1943[1]	1941	1942	1943[1]
	No.	No.	No.	$	$	$
Prince Edward Island	32,486	32,427	31,280	804,083	735,189	760,385
Nova Scotia	94,113	101,731	112,235	476,310	532,059	920,515
New Brunswick	83,232	78,910	70,167	982,551	834,671	864,489
Quebec	348,977	601,211	541,788	2,476,556	3,894,630	4,562,354
Ontario	1,051,412	1,024,195	1,048,178	3,901,012	3,965,003	5,806,743
Manitoba	869,057	844,631	878,989	2,763,976	2,596,436	3,242,655
Saskatchewan	1,026,656	3,813,447	1,174,164	2,324,479	2,245,275	2,440,942
Alberta	2,601,424	11,713,686	2,446,665	2,806,074	5,162,636	4,542,818
British Columbia	631,480	838,750	677,168	1,913,667	1,655,137	1,860,990
Northwest Territories	447,547	445,336	385,440	2,301,054	2,840,701	3,165,107
Yukon	70,953	66,700	52,897	373,399	398,132	338,035
Canada	7,257,337	19,561,024	7,418,971	21,123,161	24,859,869	28,505,033

[1] Preliminary figures.

A Trapper's Cabin and Cache in the Northwest Territories.

Courtesy, Department of Mines and Resources

During the war years, the value of Canadian raw fur production has shown substantial increases; the value of pelts sold from fur farms and those taken by trappers during the year ended June 30, 1943, reached a new record at $28,505,033. This was an increase of 15 p.c. over the 1942 figure, which was, in turn, an increase of 18 p.c. over the 1941 total. Approximately 76 p.c. of the 1943 value represented furs taken by trappers in the wild.

Generally higher prices were responsible for the increased valuation in 1943. Pelts of mink contributed the largest amount to the total value with a valuation of $5,848,242, muskrat ran a close second at $5,671,910 and silver fox third at $4,663,079. Beaver pelts, with a valuation of $3,026,652, were another important source of revenue for trappers and fur farmers. Silver fox rose in price from an average of $22·96 in 1942 to $24·84 in 1943, red fox from $8·81 to $12·50 and white fox from $25·74 to $28·37; muskrat rose from $2·06 to $2·74; beaver from $22·55 to $29·96; and squirrel from 31 cents to 34 cents.

The large increase in the total number of pelts taken in 1942 over 1941 was mainly accounted for by increases in the numbers of squirrel and rabbit pelts which were in great demand for linings for clothing for the Armed Forces. In 1943 the numbers of these pelts taken dropped to slightly over the 1941 level, rabbit from 9,012,329 in 1942 to 1,080,285 in 1943 and squirrel from 5,761,433 to 2,227,161, and this accounted for the major portion of the decline in the total number of pelts taken from 19,561,024 in 1942 to 7,418,971 in 1943.

Fur Farming.—Although the fox was the first important commercial fur bearer to be raised in captivity, many other kinds of fur-bearing wild animals are now being raised—mink, raccoon, skunk, marten, fisher and rabbit. Mink farms are the most numerous of the miscellaneous class, raccoon farms coming next. From 1920 to 1939 fur farming in Canada expanded rapidly and during that period there was a marked change in the type of furs that were most acceptable to the market. Black fox were popular twenty-five years ago. A few years later the highest prices were being paid for quarter- and half-silvers and during recent years the full-silver and and new-type have been setting the upper price limit. The development of the new-type fox and mink has proven to be an incentive to the fur-farming industry. New-type fox such as platinum, platinum-silver, pearl-platinum and white-marked are meeting a ready market as are the new-type mink including silver-sable, platinum-

silver blue, snow-white and a number of other colour phases. In 1939 the Dominion Government introduced the grading of furs under the Department of Agriculture. One of the main objectives in grading is to secure uniformity, so that furs may be bought by grade without the necessity of buyers from foreign countries personally examining the pelts.

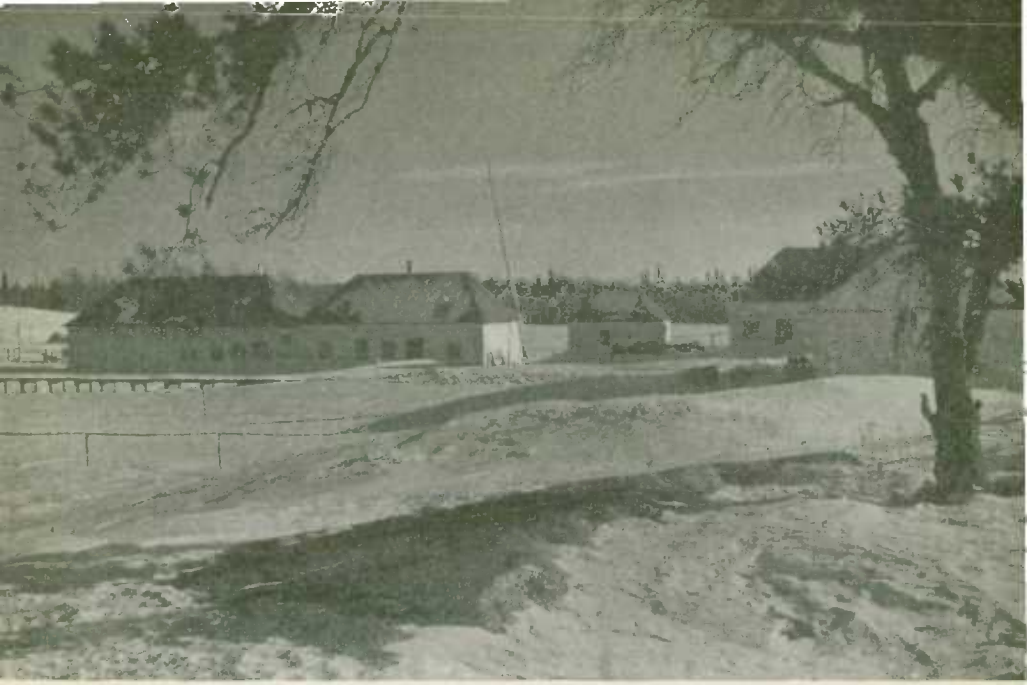
Statistics of Fur Farming.—The number of fur farms in operation in Canada in 1942 was 7,835 compared with 8,440 in the preceding year and it is expected that there will be a further decrease in 1943 due to the effects of the War. With the smaller number of farms in 1942, the value of fur-farm property decreased to $13,912,835, 8 p.c. lower than in the preceding year. Quebec stood first among the provinces in value of fur-farm property with 21·7 p.c. of the total. The other provinces ranked as follows: Ont., 19·2 p.c.; Alta., 16·1 p.c.; Man., 13·4 p.c.; P.E.I., 9·3 p.c.; Sask., 6·8 p.c.; N.B., 5·5 p.c.; B.C., 5·1 p.c.; N.S., 2·8 p.c.; and Yukon, 0·1 p.c.

The total revenue of the fur-farming industry in 1942 was $7,155,999, 94 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 $3,821,518, or 57 p.c. of the total pelt sales, and mink for $2,793,573, or 41 p.c. The average value of silver-fox pelts was $21·94 compared with $22·81 in 1941, and of mink pelts $7·98 compared with $10·62. Live silver fox sold numbered 3,438 and were valued at $151,418; mink numbered 6,102 valued at $109,356; and new-type fox, including platinum, white-face, silver-blue, etc., numbered 975 valued at $146,490. Compared with 1941, the total value of pelts sold showed an increase of $1,939,614, while the value of live animals sold decreased by $365,954.

The value of the animals on the farms at the end of 1942 was $6,753,855, of which 65 p.c. was of silver and new-type fox and 30 p.c. of mink. The 95,149 silver

The Trapper, a Full-Blooded Cree Indian, Returns to the Post with his Catch.

Courtesy, Hudson's Bay Company



Norway House, Outpost of the Hudson's Bay Company.—This post, the building of which commenced about 1830, was once the great distributing centre of the North. Indian trappers still operate from Norway House and their furs are shipped to Winnipeg by air, far above the old dog-team trails.

Courtesy, Hudson's Bay Company

and new-type fox on the farms was a decrease from the preceding year of 2,905, and the 104,686 mink a decrease of 48,761. The total number of fur-bearing animals on farms was 204,480 compared with 256,928 in 1941.

From information received direct from the fur farmers, it is estimated that 106,700 standard silver fox, 32,400 new-type fox and 229,000 mink will be pelted in the season 1944-45.

Trade in Furs.—Before the outbreak of war, a large proportion of the total production of Canadian furs found their way to the London market where they were prepared and manufactured and returned to Canada in the form of the finished product. Under the circumstances brought about by the War, Canada's trade in furs is now carried on mainly with the United States.

Exports and Imports of Raw and Dressed Furs, Calendar Years 1936-43

Year	Exports[1]			Imports		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$	$	$	$	$	$
1936	9,603,161	7,265,603	17,666,213	1,094,131	4,272,302	7,000,917
1937	10,722,537	5,728,014	17,515,460	1,676,407	4,293,135	8,169,840
1938	8,794,834	4,478,818	14,096,503	1,135,686	3,148,940	5,650,624
1939	7,054,745	6,772,641	14,568,986	1,018,417	4,455,938	7,133,052
1940	3,306,271	12,187,096	16,176,075	920,528	6,813,080	8,885,540
1941	430,428	14,883,751	16,159,033	1,970,910	4,112,345	9,120,337
1942	156,586	16,869,153	17,976,615	945,360	3,306,214	6,448,861
1943	66,844	25,086,912	26,448,522	496,578	4,923,632	8,613,879

[1] Canadian produce only.

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 salmon, herring, cod, lobster, whitefish, halibut, sardines, haddock, pilchard and pickerel. The total quantity of fish of all kinds taken by Canadian fishermen in 1942 was 11,233,710 cwt., for which fishermen received, at the point of landing, a total of $41,734,723 compared with a catch of 11,095,611 cwt. with a landed value of $34,377,866 in 1941.

Fisheries Production, by Provinces, 1914, 1942 and 1943

Province or Territory	Values of Production			Percentages of Total Values		
	1914	1942	1943[1]	1914	1942	1943[1]
	$	$	$	p.c.	p.c.	p.c.
Prince Edward Island	1,261,666	1,639,539	2,860,946	4·1	2·2	3·3
Nova Scotia	7,730,191	15,297,482	21,726,784	24·7	20·4	25·4
New Brunswick	4,940,083	7,132,420	11,817,461	15·8	9·4	13·8
Quebec	1,924,430	4,194,092	5,008,806	6·2	5·6	5·8
Ontario	2,755,291	4,135,205	5,292,268	8·8	5·5	6·2
Manitoba	849,422	3,577,616	4,564,551	2·7	4·8	5·3
Saskatchewan	132,017	585,782	1,154,544	0·4	0·8	1·4
Alberta	86,720	492,182	795,000	0·3	0·6	0·9
British Columbia	11,515,086	38,059,559	32,477,964	36·8	50·7	37·9
Yukon	69,725	3,056	2,495	0·2	–	–
Totals	**31,264,631**	**75,116,933**	**85,700,819**	**100·0**	**100·0**	**100·0**

[1] Preliminary.

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 with her cod fishery. The herring fisheries (on both the Atlantic and Pacific Coasts) are of rising importance and second only to salmon in value of output. Canned herring is the chief product, but herring meal and oil are also produced. On the Atlantic Coast, the cod, lobster and sardine fisheries are of importance, while among the inland fishes, whitefish occupies first place.

The statistics in the following table are based upon the averages of the three latest pre-war years and of the three first complete years of hostilities.

Fish Culture.—*Top:* Newly hatched fish are placed in these rearing ponds until they are large enough to be distributed in streams and lakes. Each rearing pond holds about 50,000 young fish. *Bottom:* Stripping male salmon of milt to fertilize eggs previously stripped from female salmon, prior to placing them in hatching troughs.

Courtesy, Department of Fisheries

Averages of Production and Values Marketed by Principal Kinds of Fish, 1937-39 and 1940-42

Kind of Fish	Averages 1937-39		Averages 1940-42	
	Quantity Caught	Value Marketed	Quantity Caught	Value Marketed
	cwt.	$	cwt.	$
Salmon	1,664,230	13,590,685	1,680,962	19,524,211
Herring	2,985,237	2,941,470	3,697,095	7,963,487
Cod	1,620,385	3,236,507	1,944,137	7,480,473
Lobsters	313,000	4,069,658	275,421	4,013,628
Whitefish	164,179	1,753,526	171,300	2,492,302
Halibut	165,952	1,835,115	139,826	2,246,936
Sardines bbl.	220,339	1,740,151	329,573	2,291,269
Haddock	389,189	1,338,456	301,800	1,529,455
Pilchards	702,436	623,440	1,031,328	1,476,959
Pickerel	130,780	980,896	120,048	1,235,050

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 $62,632,045, and the number of persons finding part-time or full-time employment was 77,084.

Output and Demand, 1944.—Preliminary, unrevised reports as to the results of sea-fishing operations in the first eight months of 1944 showed a decrease in landings, as compared with landings in the corresponding period of 1943. It may be mentioned, however, that a great deal of credit is due to the fishing industry for maintaining war-time production so well under adverse conditions, including the sharp reduction in working force as a result of enlistments, etc.

In 1944, as in the earlier war years, the urgent needs of the United Nations for Canadian fishery products as well as domestic requirements had to be met. This year, moreover, the United Nations Relief and Rehabilitation Administration is looking to Canada for large quantities of certain classes of fish products. Allocations to be made to that Administration by the Dominion under the Combined Food Board will, it is expected, cover approximately 20,000,000 lb. of canned fish, including 2,000,000 lb. of canned mackerel (production of canned mackerel has shown a sharp increase in Canada during the past year or two), 7,250,000 lb. of canned herring, and between 9,000,000 and 10,000,000 lb. of canned flake fish (cod, haddock, hake, and cusk or combinations of these fish). Canadians are perhaps more familiar with canned flake fish under the name "chicken haddie".

Although part of the canned herring pack has been earmarked for UNRRA use, much the larger share, about 51,000,000 lb., of the 1944 output will be made available to the United Kingdom. Similarly, most of the British Columbia canned salmon is being placed at the disposal of the United Kingdom. The year's pack, like that of 1943, will not be up to the average of recent years in size but official estimates put it at about 57,600,000 lb. and of this total more than 41,000,000 lb. have been earmarked for the British authorities. Allocations to the domestic civilian market (12,000,000 lb.), the Armed Services in Canada, and the Red Cross will take up virtually all of the remaining canned salmon. Supplies made available to the Red Cross are for distribution to Canadians in prisoner-of-war camps overseas. All told, the year's canned fish allocations for domestic and war purposes—including canned salmon, herring, flake fish, etc., but excluding canned lobster and other shellfish—represent about 140,000,000 lb. finished product weight.

Headquarters of a Modern Industrial Codfishing Plant, Paspebiac, Gaspe, Que.

Courtesy, Department of Mines and Resources

Under a distribution schedule set up by the Combined Food Board, and accepted by Canada, the Dominion is also supplying to a number of countries 35,000,000 lb., dry weight, from its 1944 production of dried salt fish. Under the same schedule dried fish is likewise being supplied by the other producers—Newfoundland, Greenland, Iceland, and St. Pierre. Over half of the Canadian dried salt fish, or 18,730,000 lb., has been allocated to the United States, including United States territories. Another 7,250,000 lb. have been earmarked for British areas in the Caribbean, slightly more than 3,000,000 lb. for the United Kingdom, 2,500,000 lb. for Cuba, 1,000,000 lb. for Greece, and a like amount for Brazil. The remainder of the 35,000,000 lb. has been apportioned among the Dominican Republic, Panama, Haiti, Surinam and the Netherlands West Indies, Mexico, Costa Rica, and Guatemala.

Pickled fish totalling 30,000,000 lb. and 5,400,000 lb. of herring bloaters from 1944 output have been allocated to the British West Indies (mainly Jamaica), British Guiana, the continental United States, Puerto Rico, Haiti, and Surinam and the Netherlands West Indies. The distribution plan, adjusted to meet the needs of the several consuming countries, was adopted by the Dominion's Food Requirements Committee, on a recommendation made by the Department of Fisheries.

A Skeena River Fishing Fleet at Prince Rupert, B.C.

Courtesy, Canadian National Railways

CHAPTER VII

Mines and Minerals

Mining is one of Canada's most important industries and the annual output includes a wide range of mineral products. In normal times gold mining is an important branch of the industry from point of value and the number employed, but during the war years labour restrictions have reduced the output of gold and greater emphasis has been placed on the production of the important base metals, industrial minerals, coal and oil.

Metallics.—Gold is mined in Nova Scotia, Quebec, Ontario, Manitoba, Saskatchewan, British Columbia, Yukon and the Northwest Territories. The value of gold production in Canada in 1944 was $111,090,749. Of this amount, Ontario mines yielded $65,621,595; Quebec, $28,518,644; British Columbia, $7,369,786; Manitoba and Saskatchewan combined, $7,618,957; and Yukon and the Northwest Territories, $1,734,232. Practically all the production from the Yukon district was of placer origin.

The principal gold-mining districts in Ontario are Porcupine, Kirkland Lake, Larder Lake, Patricia and Little Long Lac. The Larder Lake Camp has been rejuvenated in recent years and the old Kerr Addison Mine has developed into a very important property.

In Quebec, gold production comes from various mines near the western boundary in the vicinity of Noranda to Louvicourt township on the east. British Columbia production is principally from the Bridge River area, Portland Canal, the Cariboo and Similkameen.

There is only one gold-quartz mine at present producing in Manitoba, and a large part of the present production from that province and from Saskatchewan originates in the copper-gold ores of the Flin Flon Mine. During 1944 considerable activity was carried on in the Yellowknife district of the Northwest Territories. A shortage of labour, however, closed down most of the producing mines, but as a result of intensive diamond drilling and prospecting, this camp has now every indication of becoming Canada's newest producing gold field in the immediate post-war period. There is no doubt that when the labour situation improves the gold-mining industry in Canada will again constitute an important factor in opening up the hinterland and in the creation of a market for materials and goods produced in the factories of the more settled parts of the Dominion.

During war years the base-metal production of the country attained a status of all-time importance. The nickel and copper production from the Sudbury district has been developed to the utmost. As Canada produces 90 p.c. of the world's supply of nickel and, because of its great use in armaments, the nickel industry of the country has played an important part in making possible the successes of the United Nations. In addition to the copper originating in the nickel ores, this metal is also produced in large quantities by the Noranda Mines in Quebec, the Sherritt-Gordon Mines in Manitoba, the Flin Flon in Manitoba and Saskatchewan, and the Britannia and Copper Mountain properties in British Columbia.

Lead production comes in large measure from the ores of the Sullivan Mine in British Columbia; these ores are treated at Trail by the Consolidated Mining and Smelting Company, Limited; lead ores are also exported from Canada and refined abroad.

Crushing and Loading Sulphur at Trail, B.C. — Sulphur is a vital component of gunpowder, rubber, paper, and also of sulphuric acid which is basic in the production of a wide range of chemicals and explosives.

Courtesy, National Film Board

The principal zinc producers are: the Hudson Bay Mining and Smelting Company, operating on the Manitoba-Saskatchewan boundary; New Calumet Mines at Calumet Island in the Ottawa River; the Consolidated Mining and Smelting Company Limited at Trail, B.C.; and Normetal and Golden Manitou in Quebec. One of the most interesting developments to take place during the past year was the bringing into production of a non-ferrous sulphide deposit in the Eastern Townships of Quebec. This orebody was discovered by very careful geological and geophysical prospecting. The ore is rather complex, but a means of mineral separation has been worked out and concentrates containing lead, zinc, copper and some precious metals are now being exported. The mill began operations in July, 1944.

Another important mining operation was brought to fruition in the autumn of 1944 when Steep Rock Iron Mines Limited began shipping a high-grade lump iron-ore from their property near Atikoken in northwestern Ontario. The successful development of this deposit necessitated the draining of Steep Rock Lake and the diversion of the Seine River which entailed tremendous construction and pumping operations. (See pp. 44-51.)

At the beginning of the War, Canada found herself deficient in many of the strategic metals necessary for the manufacture of certain alloys, such as tungsten, molybdenum and chromium. Developments were carried on at several Canadian properties producing these metals, but costs were high and as the situation eased production was discontinued. Mercury was also in short supply and a large mine was opened up with success at Pinchi Lake in northern British Columbia. At the beginning of 1944 the mercury situation for the United Nations was eased and production was reduced.

The production of magnesium at Haley's Station, near Renfrew, Ontario, is another development occasioned by the War. The process of extracting the magnesium from dolomite rock was worked out in the National Research Laboratories, Ottawa, and this plant has been in continuous operation since August, 1942.

The great expansion in the development of hydro-power resources recently completed in the Saguenay District of Quebec has provided the aluminum industry with a greatly increased supply of electric energy. This was largely reflected in an all-time high output of aluminum in 1943 and establishes the Dominion as one of the world's largest producers of the metal.

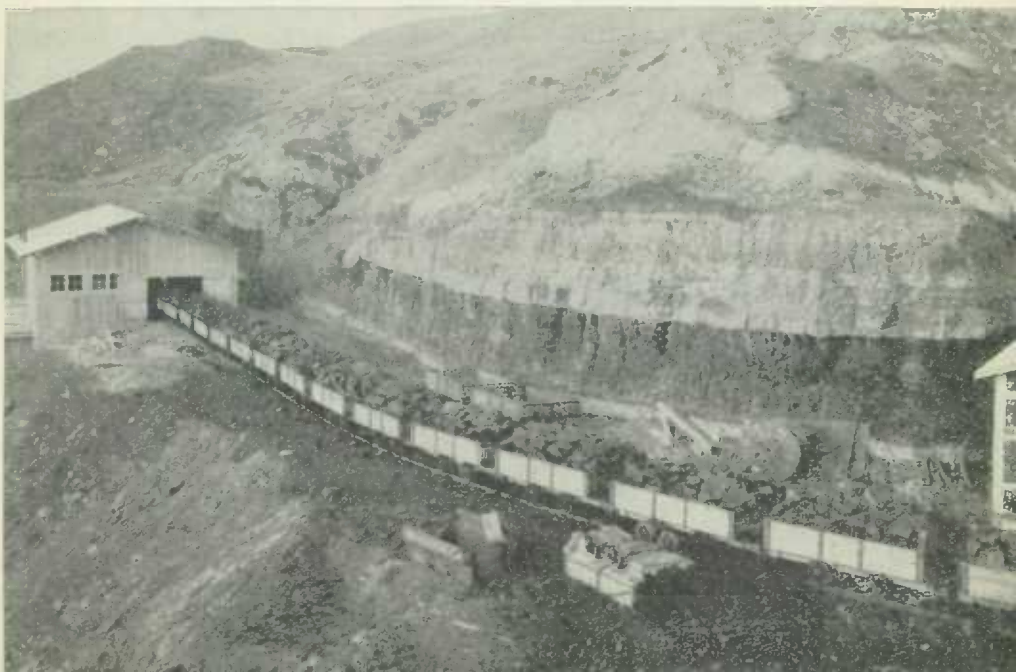
Fuels.—The fuel situation in Canada has always demanded the serious consideration of the authorities. The country is in a somewhat anomalous position in that large deposits of coal are located in the eastern and western provinces, but no coal is mined in Ontario and Quebec, where the greater number of Canadian manufacturing industries are located and denser populations exist. For that reason, coal must be brought into these central provinces, chiefly from the United States. Supplies of anthracite coal, formerly brought in from Great Britain in substantial amounts, have been practically cut off because of the difficulties in ocean shipping during the War. Production of coal in Canada totalled 17,859,057 tons in 1943 and 17,118,008 tons in 1944. Of the total output in 1944, 5,808,792 tons came from mines in Nova Scotia, 7,437,781 tons in Alberta, 2,134,248 tons in British Columbia, 1,390,155 tons in Saskatchewan, and 347,032 tons in New Brunswick.

Natural gas consumption in Canada was slightly greater in 1943 as compared with 1942 and for the first seven months of 1944 the consumption exceeded that of the same period in 1943. The Province of Alberta produces about 81·4 p.c. of the total for Canada. Ontario is the second largest producer and small quantities are also produced in New Brunswick and Saskatchewan.

Crude petroleum production in Canada from the Turner Valley in Alberta showed a decrease during the first seven months of 1944 as compared with the same period in 1943, but new wells drilled in 1943 in the Fort Norman area of the Northwest Territories have afforded an important and increased supply of petroleum products for transportation and other purposes to the remote and growing population of northwestern Canada. Crude oil from these wells is also transported by pipeline to a refinery at Whitehorse, Yukon. This latter development was also a direct result of the War. Some crude petroleum is produced in Ontario and, in minor quantities, in New Brunswick.

Coal Mining by the Open-Cut Method in Alberta.—The seams are near the surface and are easily 'stripped' or worked. The exposed seam is seen behind the line of trucks.

Courtesy, Canadian National Railways



Two Basic but Widely Different Resources—Oil and Wheat—in the North Turner Valley.

Courtesy, Department of Mines and Resources

Non-Metallics.—Not only in metals and fuels has Canada played an important part in the war effort, but the asbestos mines, located in the Eastern Townships of Quebec, are among the most important in the world and have been running at high speed. Among other non-metallic minerals of importance are mica, feldspar, gypsum, salt, pyrites, sodium sulphate, sulphur, graphite, brucite and magnesitic dolomite. A barite property, opened up in Nova Scotia about three years ago, has continued to expand, and has found markets in the oil-producing countries bordering on the Caribbean Sea, where it is used in oil drilling operations.

The total value of mineral production in Canada in 1944 is considerably less than in the previous year because of a reduction in the output of gold and because of a shortage of labour in the production of other minerals. With the coming of peace there is no doubt that Canada's mining industry will serve as a source of direct employment, and indirectly will furnish work to many industries from which the mines must purchase supplies.

Mineral Production of Canada, 1943 and 1944

Item		1943		1944[1]	
		Quantity	Value	Quantity	Value
			$		$
METALLICS					
Antimony	lb.	1,114,166	189,408	1,937,900	280,996
Arsenic (As_2O_3)	"	3,153,538	254,009	2,543,000	170,360
Bismuth	"	407,597	562,484	123,800	154,750
Cadmium	"	786,611	904,602	547,944	602,738
Chromite	ton	29,595	919,878	27,720	761,229
Cobalt	lb.	175,961	191,407	38,452	37,990
Copper	"	575,190,132	67,170,601	547,943,586	65,357,050
Gold	fine oz.	3,651,301	140,575,088	2,885,474	111,090,749
Iron ore	ton	641,294	2,032,240	549,922	1,910,716
Lead	lb.	444,060,769	16,670,041	301,073,919	13,548,327
Magnesium	"	7,153,974	2,074,652	10,659,335	2,597,921
Manganese ore	ton	48	985	Nil	–
Mercury	lb.	1,690,240	4,559,200	735,856	1,333,516
Molybdenite concentrates	"	784,715	549,515	2,062,700	821,750
Nickel	"	288,018,615	71,675,322	275,213,106	69,279,061
Palladium, rhodium, iridium, etc.	fine oz.	126,004	5,233,068	45,100	2,314,252
Platinum	"	219,713	8,458,951	155,700	5,994,450
Selenium	lb.	374,013	654,523	345,000	621,000
Silver	fine oz.	17,343,569	7,849,111	13,586,502	5,842,196

[1] Preliminary estimate.

Mineral Production of Canada, 1943 and 1944—concluded

Item		1943		1944[1]	
		Quantity	Value	Quantity	Value
			$		$
Tellurium	lb.	8,600	15,050	56,900	99,575
Thallium	"	Nil	–	128	1,690
Tin	"	776,937	450,623	516,600	299,628
Titanium ore	ton	69,437	308,290	33,963	84,154
Tungsten concentrates	lb.	1,508,621	1,083,538	63,152	6,000
Zinc	"	610,754,354	24,430,174	561,072,538	24,126,119
TOTALS, METALLICS		–	356,812,760	–	307,336,217
NON-METALLICS					
FUELS					
Coal	ton	17,859,057	62,877,549	17,118,008	71,214,303
Natural gas	M cu. ft.	44,198,005	11,813,629	45,956,800	11,905,600
Peat	ton	782	7,000	624	5,242
Petroleum	bbl.	9,601,934	15,708,702	10,071,100	16,250,300
TOTALS, FUELS		–	90,406,880	–	99,375,445
OTHER NON-METALLICS					
Asbestos	ton	467,196	23,169,505	372,973	18,172,302
Barite	"	24,474	279,253	111,387	1,052,045
Corundum	"	Nil	–	160	16,000
Diatomite	"	98	3,331	87	2,590
Feldspar	"	23,858	237,771	20,494	204,807
Fluorspar	"	11,210	318,424	6,336	129,120
Graphite	"	1,903	197,431	1,565	178,821
Grindstones (incl. pulpstones)	"	164	6,225	225	9,675
Gypsum	"	446,848	1,381,468	510,224	1,383,082
Iron oxides (ochre)	"	8,401	135,893	10,335	172,223
Magnesitic dolomite and brucite		[2]	1,260,056	[2]	1,125,433
Mica	lb.	8,050,692	553,856	6,087,627	788,166
Mineral waters	gal.	139,611	67,541	139,000	65,700
Nepheline syenite		[2]	292,010	[2]	279,701
Peat moss	ton	64,360	1,461,422	63,149	1,554,606
Phosphate	"	1,451	18,385	389	5,819
Quartz	"	1,776,749	1,608,448	1,637,876	1,756,690
Salt	"	687,686	4,379,378	716,875	3,921,050
Silica brick	M	4,165	295,505	3,750	297,031
Soapstone[3]		14,204	135,469	[2]	186,261
Sodium carbonate	ton	468	5,148	44	484
Sodium sulphate	"	107,121	1,025,151	98,188	1,004,054
Sulphur	"	257,515	1,753,425	248,465	1,745,430
Talc	"	11,959	131,216	14,000	150,000
Volcanic dust	"	50	257	Nil	–
TOTALS, OTHER NON-METALLICS		–	38,716,568	–	34,201,090
CLAY PRODUCTS AND OTHER STRUCTURAL MATERIALS					
Clay products, brick, tile, sewer pipe, etc.		[2]	6,608,193	[2]	6,915,475
Cement	bbl.	7,302,289	11,599,033	7,182,462	11,517,035
Lime	ton	907,768	6,832,992	893,120	6,760,262
Sand and gravel	"	25,744,469	9,005,857	24,921,950	9,375,388
Stone	"	7,222,950	7,964,179	6,360,775	6,779,551
TOTALS, CLAY PRODUCTS, ETC.		–	42,010,254	–	41,347,711
Grand Totals		–	**527,946,462**	–	**482,260,463**

[1] Preliminary estimate. [2] Not available. [3] Includes some talc.

Mineral Production of Canada, by Provinces, 1942-44

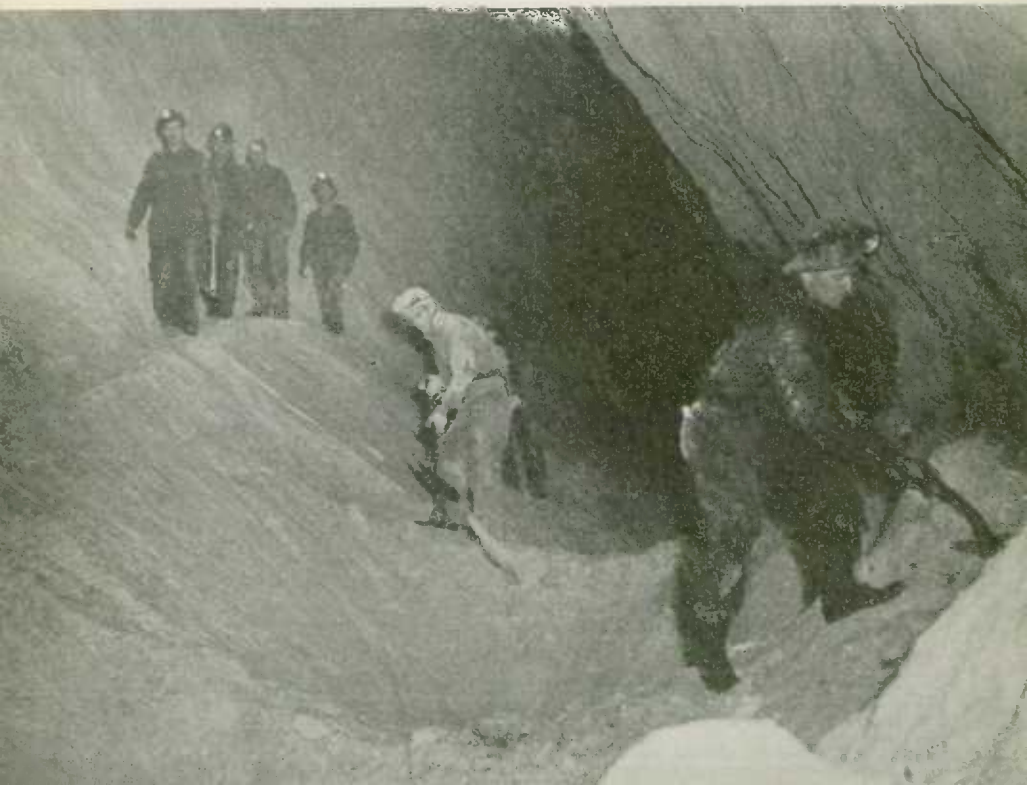
Province or Territory	1942		1943		1944[1]	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
	$		$		$	
Nova Scotia	32,783,165	5·8	29,979,837	5·7	35,313,438	7·3
New Brunswick	3,609,158	0·6	3,676,834	0·7	3,428,966	0·7
Quebec	104,300,010	18·4	101,610,678	19·2	87,416,810	18·1
Ontario	259,114,946	45·7	231,603,170	43·9	209,349,689	43·4
Manitoba	14,345,016	2·5	13,412,266	2·5	13,728,126	2·9
Saskatchewan	20,578,749	3·6	26,735,981	5·1	22,224,032	4·6
Alberta	47,359,831	8·4	48,179,495	9·1	51,376,959	10·7
British Columbia	77,247,932	13·7	68,442,386	13·0	56,355,308	11·7
Yukon	3,453,568	0·6	2,679,093	0·5	954,850	0·2
Northwest Territories	3,976,267	0·7	1,625,819	0·3	2,112,285	0·4
Canada	**566,768,672**	**100·0**	**527,946,462**	**100·0**	**482,260,463**	**100·0**

[1] Preliminary estimate.

The reduction in 1944 was principally in the metals group, which showed a decrease of 14 p.c. from the 1943 total. On the other hand, the fuels group increased 10 p.c., mainly accounted for by the increased price for coal. Many of the industrial minerals showed increases over 1943, but such increases were not large enough to offset the drop in asbestos. Structural materials showed little over-all change.

Malagash Salt Mine, N.S.—This deposit is more than 100 miles long and 400 feet wide and is the largest salt mine in the Northern Hemisphere. Salt deposits are fortunately very plentiful in Canada. It is an important raw material for the chemical industry apart from its use as a condiment.

National Film Board



CHAPTER VIII

Water Powers

Canada has a wealth of water-power resources favourably distributed throughout the country in relation to other natural resources, to centres of population and to transportation facilities. Since the turn of the present century, water-power development has had a profound effect upon the national economy. This development, increasing from a total of 173,000 h.p. in 1900 to more than 10,283,000 h.p. in 1944, has been the mainspring of the great industrial expansion of the past four decades and has brought to the greater part of the population the amenities of electric lighting and other electric services. In the past five years of war, water power has been fundamental to Canada's vast war production program. Aluminum production alone, which has increased sixfold since 1939, has taken latterly one-quarter of all electric energy generated in the Dominion and power has performed a vital role in virtually every phase of the war effort. In the post-war period, Canada's resources of developed and undeveloped water power will be of strategic assistance in meeting the problems of reconstruction and rehabilitation.

Available and Developed Water Power, by Provinces, Jan. 1, 1945

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	5,848,022
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	864,024
Yukon and Northwest Territories	294,000	731,000	19,719
Canada	**25,439,400**	**39,511,700**	**10,283,213**

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 power provides for an installation of more than 51,350,000 h.p. That is, the present development represents only 20 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 almost 57 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

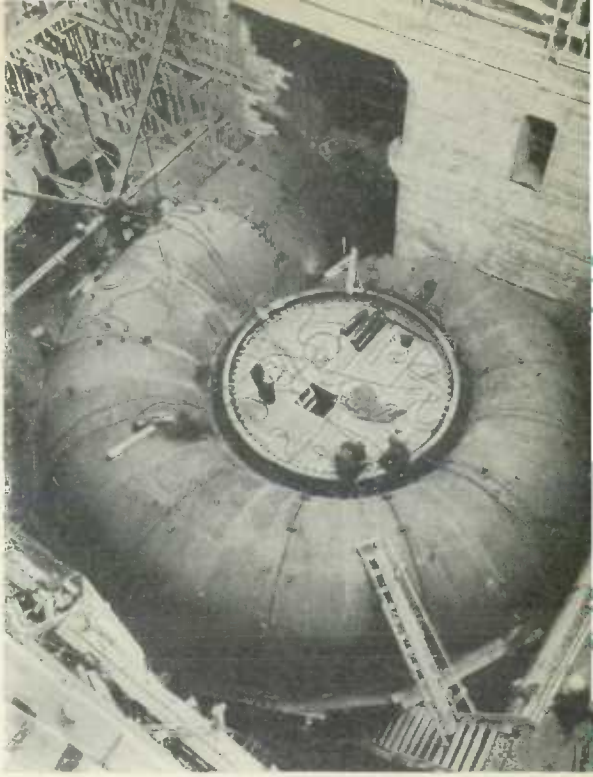
69 p.c. of the total hydraulic installation of the Province and serves more than 900 municipalities. A notable feature of electric distribution by the Commission is the operation of more than 20,000 miles of rural lines, serving some 131,000 consumers. Of the Prairie Provinces, Manitoba has the greatest power resources and the greatest power development: 70 p.c. of the total hydraulic development of the three provinces is 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 in hydraulic development is exceeded in Quebec and Ontario only. The water powers of Yukon and the Northwest Territories, while considerable, are so remote from markets as to limit their present commercial development to local mining uses.

Hydro-Electric Construction during 1944.—New hydro-electric installations during 1944 totalled 68,700 h.p. This is a very small increase when compared with the average of 481,000 h.p. for the previous four years and indicates that the insistent demand for more and more power for war production has passed its peak and the transition period from war to peace is already being experienced although hostilities have not yet ceased.

The outstanding development of the year was the completion, in the Province of British Columbia, of the Brilliant development on the Kootenay River by the West Kootenay Power and Light Company (Consolidated Mining and Smelting Company). Two turbines of 34,000 h.p. each were installed and placed in operation; provision was made for the installation of two similar units later. This is the

An Unharnessed Power Site at Calumet Falls, Que.—Canada still has many such virgin sites, especially in the more northern areas. Over half the available resources and three-quarters of the developed water power are within the Provinces of Ontario and Quebec.

Department of Mines and Resources



Installing a Spiral Casing for One of the Eight 100,000-h.p. Hydraulic Turbines at Shipshaw Power Plant.—This 115-ton casing is 49 feet 6 inches in diameter.

Courtesy, Canadian Central Electric Company

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 will result in the complete utilization of the power possibilities of the river.

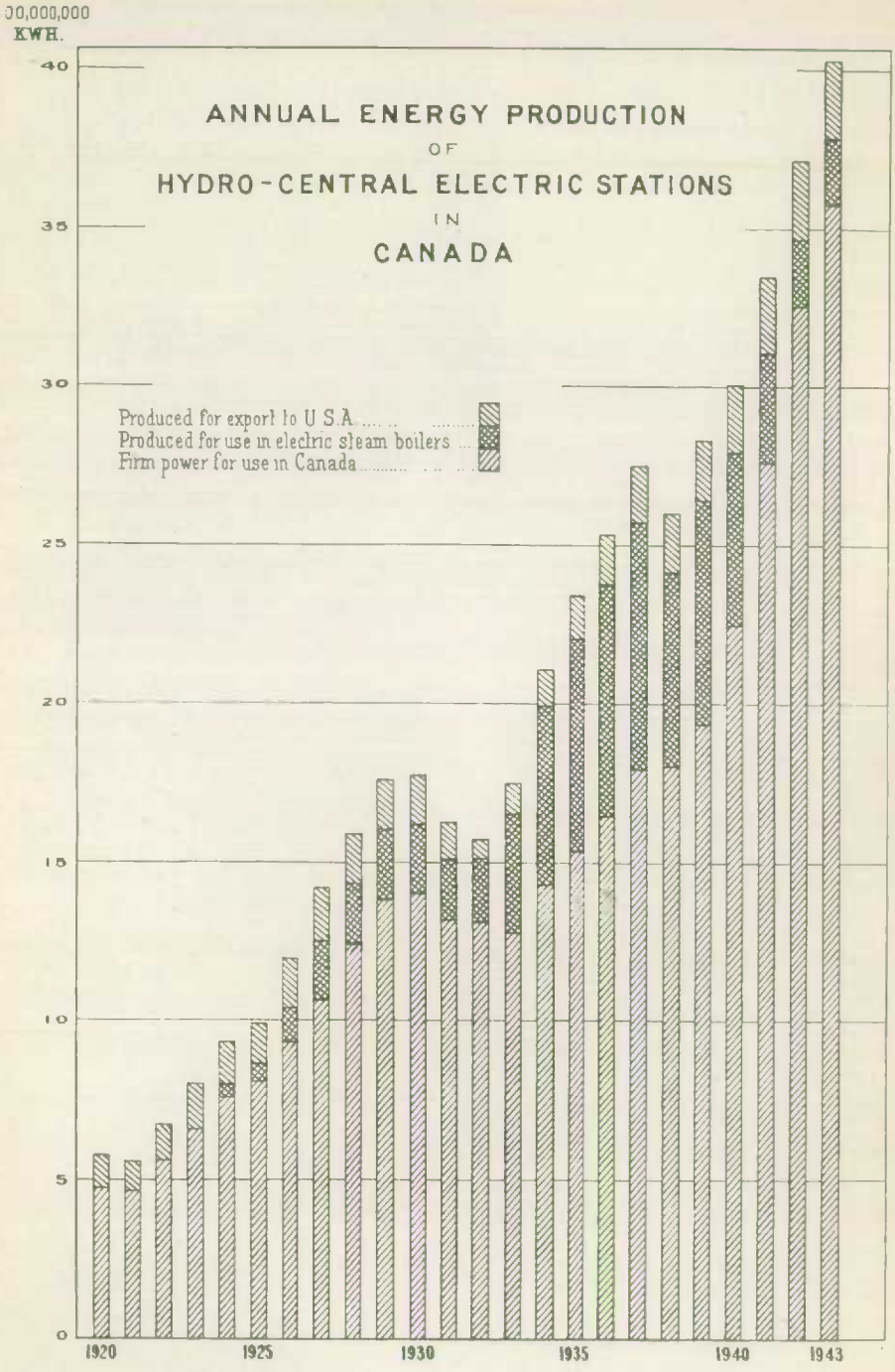
The Hydro-Electric Power Commission of Ontario undertook the extension of its Alexander Landing Station on the Nipigon River, involving the addition of a 19,000-h.p. unit. This work, which is expected to be completed about June, 1945, will bring the total capacity of this Station to 73,000 h.p. In conjunction with the 75,000-h.p. station at Cameron Falls on the same river, a total of 148,000 h.p. will be available for the needs of the Commission's Thunder Bay System which serves the cities of Port Arthur and Fort William, the Geraldton gold-mining field and the newly established iron-mining operations at Steep Rock Lake.

The Pembroke Electric Light Company, which serves the town of Pembroke, Ontario, with power from a power station on the Black River, in the Province of Quebec, replaced two turbines of 900 h.p. each with a single turbine of 2,500 h.p. capacity.

Central Electric Stations

Over 90 p.c. of all developed water power in Canada is developed by central electric stations and, although there are 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.

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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KWH.
40
35
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25
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ANNUAL ENERGY PRODUCTION
OF
HYDRO-CENTRAL ELECTRIC STATIONS
IN
CANADA
Produced for export to U.S.A.
Produced for use in electric steam boilers
Firm power for use in Canada
1920
1925
1930
1935
1940
1943

Electronics in Industry

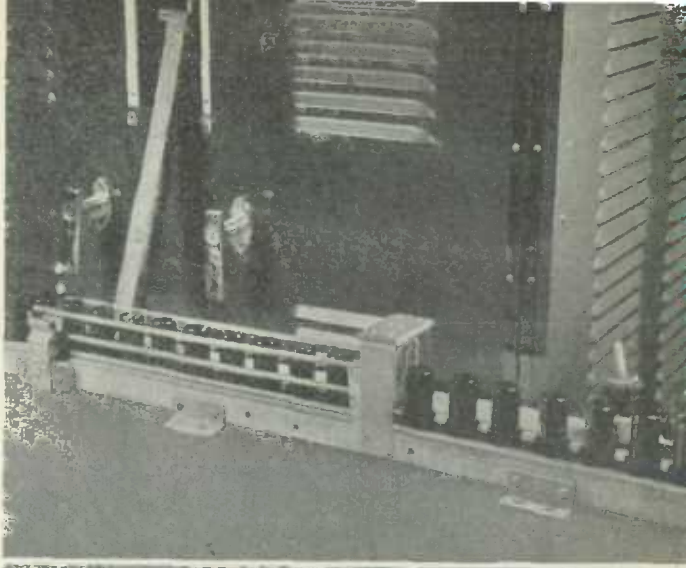
During the past few years electronic devices, many of them still secret, have changed the entire nature of warfare. Some of them are already being applied to industry with results little short of amazing. The three operations illustrated on this page are typical of many that will carry far-reaching benefits to mankind in the post-war world.

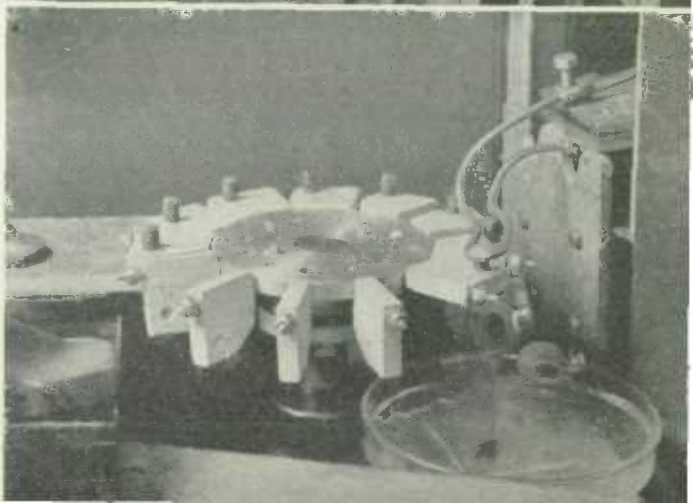
Top: Normally the oven-baking of paint on metal surfaces is a time-consuming process and many operations are involved. By the electronic method the metal tubes or other surfaces are passed through a long coil carrying the electronic power. Heat is thus induced in the shells and baking of the paint is reduced from about one hour to as short a time as 15 seconds.

Centre: Lids being soldered on small oil containers to provide a solid oil-tight unit, thus what was formerly a manual operation is now speeded up so that 2,500 units per hour are delivered. The cans on the conveyor belt are passed between two inductors from a radio-frequency generator and soldering is thus automatically accomplished.

Bottom: A piece of war equipment required a set screw with its slotted end hardened to permit of repeated removal with a screw-driver without damage. The problem was solved as shown. The small turntable conveys the set screw through the hair-pin shaped coil carrying radio-frequency currents. This heats the slotted end of the set screw to the required temperature. The set screw then automatically drops into the water-quenching bath: 2,700 set screws can be hardened per hour.

Courtesy, RCA Victor Company Limited, Montreal





there was an almost continuous succession of increases each average month as shown in the table below. The daily rate of production reached a peak in November, 1943, and from that point has shown an almost continuous decline until, in August, 1944, it had dropped 8·4 p.c.

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. The electro-chemical and electro-metallurgical industries showed large and rapid increases in consumption of electric power whereas the pulp and paper industry showed decreases mainly through transfer from electric to coal boilers. 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 1942 was 82·0 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 78·4 p.c. in 1942. In 1942, 84 p.c. of these electric motors in manufacturing industries and 85 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, 1927-44

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	3,299,998	64,807	3,364,805
1935	1,917,958	32,410	1,950,368	1944[1]	3,298,065	80,127	3,378,192

[1] Eight-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 1942 amounted to $1,747,891,798, which was larger than for any manufacturing industry; revenues amounted to $203,835,365 and 1,803,708 domestic customers were served, representing approximately 60 p.c. of all families in Canada, both urban and rural.

Electric energy is exported from Canada only under licence and an export tax of 0·03 cents per kwh. is levied. Exports have shown a steady increase over the past decade and amounted to 2,585,311,000 kwh. in 1944.

CHAPTER IX

Manufactures

The chief forward movement in Canadian manufactures has been the result of three great influences: first, the opening up of the West, at the beginning of the present century 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.

The achievement of the manufacturing industries of Canada in producing the huge quantities of equipment and supplies needed for war purposes, in addition to supplying the greatly expanded demands of the civilian population, is best illustrated by a comparison of their 1943 operations with those for 1939. In this period the number of employees increased by 92 p.c., with an increase of 160 p.c. in the salaries and wages paid, while the gross value of production was 140 p.c. higher: the physical volume of production was nearly doubled.

Following the chart on p. 123, a short review is given of some of the groups of industries that have felt the increased demands occasioned by the War.

Wings for Mosquito Bombers.—These wings are made almost entirely of plywood and their construction calls for great skill and accuracy.

Courtesy, Massey-Harris Co. Ltd.

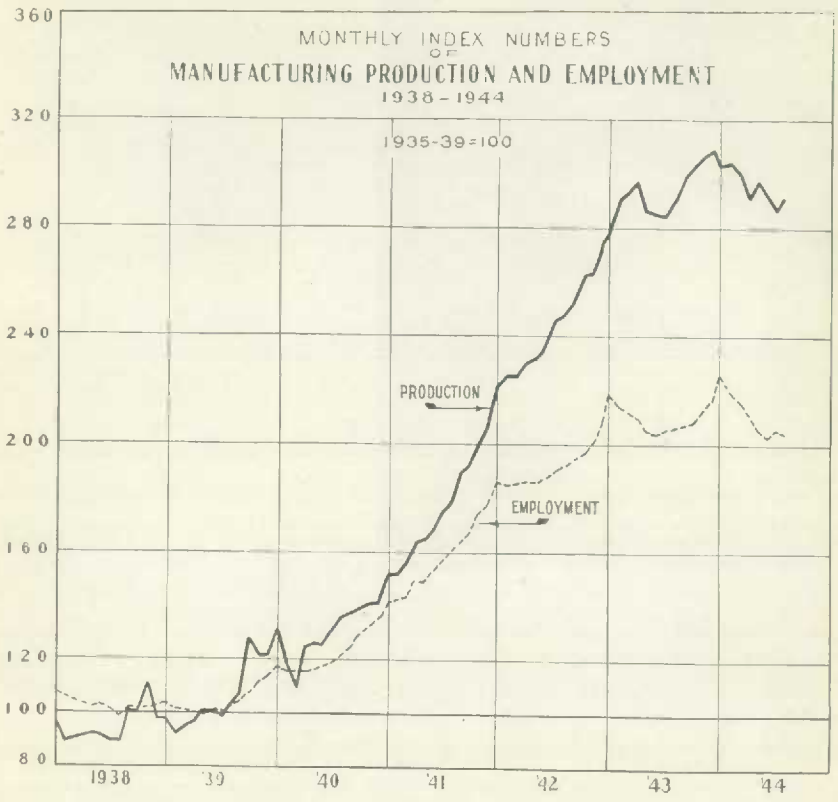
Summary of Statistics of Manufactures, 1870-1943

Year	Establishments	Capital	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products
	No.	$	No.	$	$	$	$
1870	31,259	77,964,020	187,942	40,851,009	124,907,846	96,709,927	221,617,773
1880	39,723	165,302,623	254,935	59,429,002	179,918,593	129,757,475	309,676,068
1890	45,964	353,213,000	369,595	100,415,350	250,759,292	219,088,594	469,847,886
1900[2]	14,650	446,016,487	339,173	113,249,350	266,527,858	214,525,517	481,053,375
1910[2]	19,218	1,247,583,609	515,203	241,008,416	601,509,018	564,466,621	1,165,975,639
1920[2]	22,157	2,914,518,693	591,753	711,080,430	2,083,579,571	1,609,168,808	3,692,748,379
1929	23,216	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
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	24,302	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
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	4,529,173,314
1941	26,293	4,905,503,966	961,178	1,264,862,643	3,296,547,019	2,605,119,788	6,076,308,129
1942	27,862	5,488,785,545	1,152,091	1,682,804,842	4,037,102,725	3,309,973,758	7,553,794,972
1943	[4]	[4]	1,262,000[5]	1,918,589,000[5]	4,486,144,000[5]	3,678,083,000[5]	8,393,163,000[5]

DETAILS BY PROVINCES AND PURPOSE GROUPS, 1942

P.E.I.	243	3,367,368	1,261	842,061	4,789,315	1,973,540	6,855,344
N.S.	1,332	152,668,789	31,318	41,273,942	85,193,680	63,615,890	155,931,264
N.B.	867	105,056,835	22,182	26,546,806	64,891,227	53,920,484	123,839,475
Que.	9,342	1,883,353,668	399,017	536,329,170	1,193,445,432	1,059,873,943	2,333,303,012
Ont.	10,711	2,632,519,471	542,958	840,783,705	2,056,746,983	1,671,130,414	3,817,396,404
Man.	1,287	175,902,477	37,519	51,605,139	159,248,309	94,856,679	259,554,350
Sask.	966	45,013,677	9,801	12,543,065	84,208,201	33,933,836	120,256,733
Alta.	1,115	101,401,133	18,397	23,992,613	117,617,500	57,479,536	178,103,011
B.C.	1,990	388,649,300	89,570	148,782,063	270,823,072	272,926,065	558,137,606
Yukon & N.W.T.	9	852,827	68	106,278	139,006	263,471	417,773
Totals	**27,862**	**5,488,785,545**	**1,152,091**	**1,682,804,842**	**4,037,102,725**	**3,309,973,758**	**7,553,794,972**
Producers materials	8,769	2,289,297,436	347,559	516,634,897	1,273,159,717	1,072,404,201	2,477,577,100
Food	8,492	567,240,164	119,749	143,710,556	931,767,514	336,867,503	1,287,339,635
Industrial equipment	2,584	978,137,068	195,006	311,065,219	616,802,683	670,817,677	1,315,623,021
Vehicles and vessels	400	564,753,604	168,473	306,339,734	505,568,046	486,988,416	1,003,563,576
Clothing	2,575	243,759,650	124,316	134,956,209	281,402,163	213,498,877	497,675,551
Drink and tobacco	676	235,092,943	28,998	38,848,227	94,538,408	138,301,723	236,292,352
Books and stationery	2,538	155,721,790	45,235	67,403,322	68,438,815	119,634,523	190,289,162
House furnishings and equipment	878	124,276,791	36,995	48,351,601	81,952,482	87,268,431	171,793,189
Personal utilities	711	67,082,124	18,203	23,393,832	49,485,895	47,868,954	98,406,172
Miscellaneous	239	263,423,975	67,557	92,101,245	133,987,002	136,323,453	275,235,214

[1] 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. [2] Includes all establishments employing five hands or over. [3] From 1920 to 1943 the figures include all establishments irrespective of the number of employees, but exclude construction, and custom and repair work. [4] Not available. [5] Estimated.



Food Industries.—Leading food industries, with gross value of production in 1942, were as follows: slaughtering and meat packing $369,047,175; butter and cheese $210,148,057; flour and feed mills $159,463,671; bread and other bakery products $104,089,254; biscuits and confectionery $76,869,436; fruit and vegetable preparations $73,569,273; miscellaneous foods $71,364,374; fish curing and packing $59,477,038; sugar $45,969,711; prepared stock and poultry feeds $26,751,325; and condensed milk $25,950,941. 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 increased by 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, while 7 of the largest plants had an average production of about $19,000,000. During the war years this industry has been called upon to supply ever increasing quantities of products to Great Britain.

Dairy Products.—Manufacturing statistics of dairy production are given in the chapter on Agriculture at pp. 86-90.

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

Cheese on the Ripening Room Shelves.

National Film Board

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. The canning of many products, formerly with large packs, has been prohibited and the packs of others strictly curtailed. In spite of unavoidable restrictions and other difficulties under which the canning industries have had to carry on, the volume of production in 1942 advanced 28 p.c. over the pre-war high mark attained in 1939.

Principal Foods Canned in Canada, 1939 (Last Pre-War Year) Compared with 1942

Product		1939		1942	
		Quantity	Value	Quantity	Value
			$		$
Fish	lb.	108,893,332	15,478,961	198,339,168	31,943,416
Fruits	"	116,500,115	7,769,005	60,733,000	6,057,333
Vegetables	"	251,432,000	14,526,671	329,100,000	22,690,913
Meats	"	7,887,228	1,743,227	25,451,219	6,933,336
Soups	"	96,660,000	9,259,222	81,735,000	8,850,693
Other foods	"	-	9,113,941	-	12,204,122
Concentrated milk	cwt.	1,660,425	11,575,971	2,644,000	24,487,982
Totals		-	**69,466,998**	-	**113,167,795**

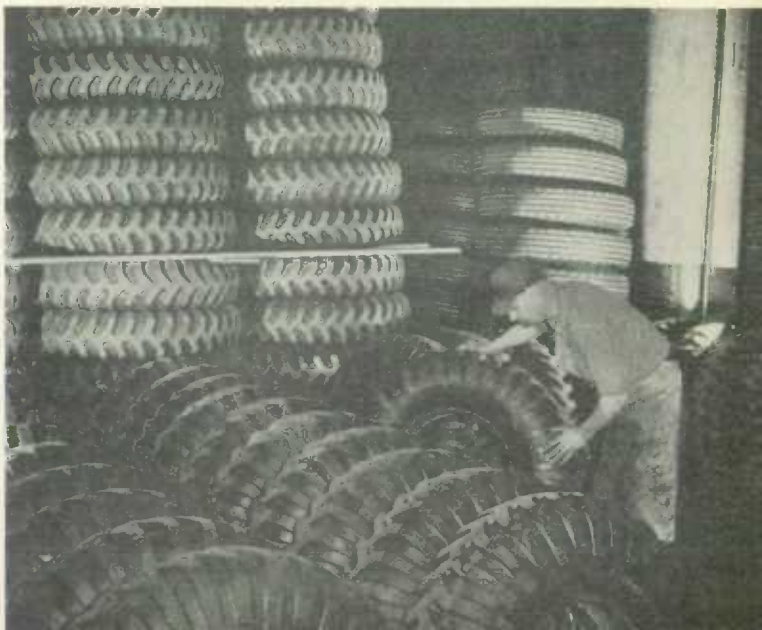
Flour Milling.—The flour-milling industry has a tremendous capacity to produce whatever flour may be needed under present war conditions. The present maximum daily capacity of the mills is 88,081 bbl. per day of 24 hours, or an annual capacity of over 32,000,000 bbl. The output of wheat flour during the 1943-44 crop year amounted to 24,288,877 bbl., an increase of 31 p.c. over the previous ten-year average.

Textile Industries.—The need for clothing and equipment for Canada's rapidly expanding Navy, Army and Air Force placed a heavy burden upon the textile industries. These industries are, to a high degree, centralized in the Provinces of Quebec and Ontario. In 1942 the gross value of production was $793,304,750, an increase of 102 p.c. over 1939, employment was given to 165,478 persons, and $185,731,313 was paid out in salaries and wages. Of all females employed in the manufacturing industries, 32 p.c. were in the textile group, compared with 43 p.c. in 1939.

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. Men's factory clothing led the group in 1942 with a gross value of production amounting to $149,563,457; this was an increase of 111 p.c. over 1939. Cotton yarn and cloth came a close second with a gross production of $141,899,520, an increase of 102 p.c. Other leading industries, in order named, were: women's factory clothing, hosiery and knitted goods, woollen cloth, and silk and artificial silk, which showed increases of 95 p.c., 39 p.c., 155 p.c., and 89 p.c., respectively. A new development in the textile field is the use of artificial silk yarns in the production of tire cord and tire fabrics.

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. 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



Synthetic Rubber Tires Awaiting Shipment to the Armed Forces.—Hundreds of these tires are now rolling off the production lines.

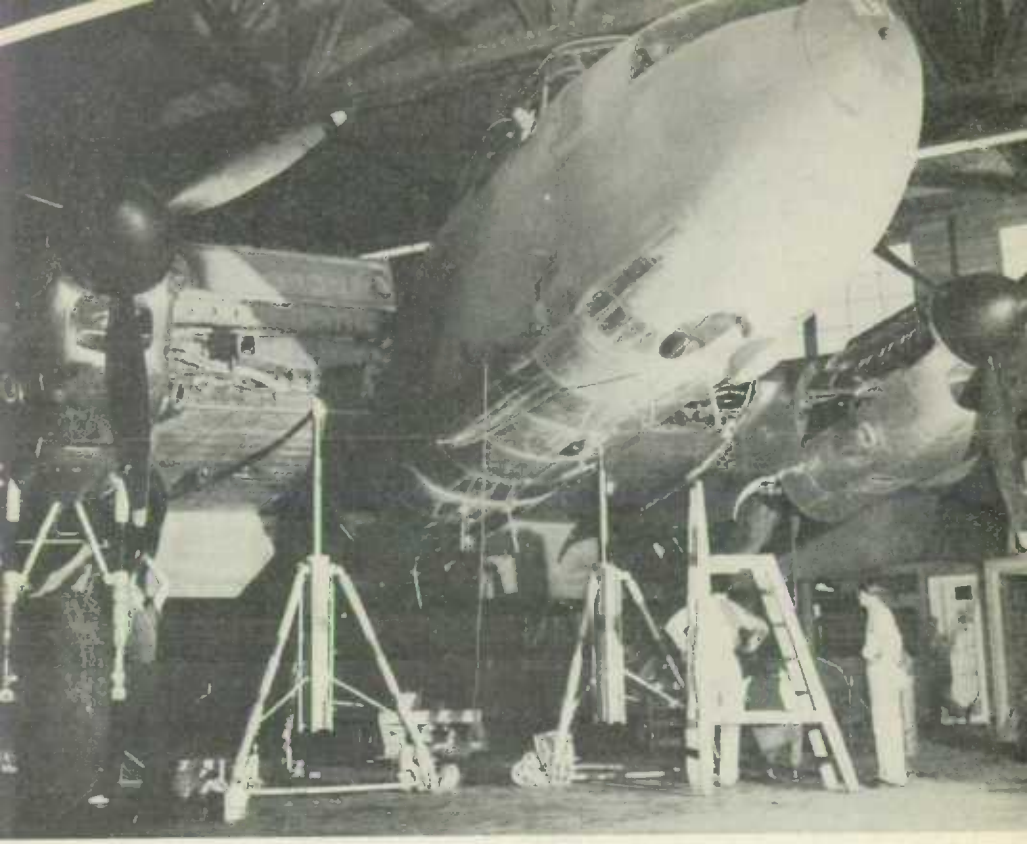
National Film Board

A Part of the Chemistry Laboratory at a Canadian University.—Here a new process has been developed for the manufacture of R.D.X., the world's most powerful military explosive.

National Film Board

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 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. Fifty separate projects involving expenditures of $160,000,000 have been undertaken, some being only extensions and others entirely new works, some for explosives, some for shell-filling, some for grenades, fuse powders, and pyrotechnics, but about half for special chemicals required in the over-all program. Only 9 of these projects are privately owned, the remainder being owned by the people of Canada. 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 $54,000,000 in 1941, to $136,000,000 in 1942, and $151,000,000 in 1943, according to figures released by the Wartime Information Board. Over 50,000 workers were employed in these plants.

With war production at such high levels, it is not surprising to note an increase of 51 p.c. in the value of production for the chemicals and allied products group of industries in 1943 as compared with 1942. Output in the former year totalled



Overhauling a Lancaster Bomber at Dorval, Que.

Courtesy, Canadian National Railways

$761,000,000 as against $502,000,000 in the latter. The bulk of the increase was, of course, in special chemicals and explosives, but most other lines showed substantial gains also. There was a decline of 4 p.c. in the coal-tar distillation industry.

Altogether there were 920 establishments in operation in 1943, representing an investment of $560,000,000 and giving employment to a monthly average of 106,000 workers during the year. These firms paid out $144,000,000 for salaries and wages, $363,000,000 for materials for processing and $17,000,000 for fuel and electricity. The increase in capital compared with 1942 was 19 p.c.; in employment, 14 p.c.; and in salaries and wages, 8 p.c.

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.

The prosperity of most of the cities and towns in eastern Canada is intimately connected with their manufacturing industries; in the west the cities are more largely distributing centres, though manufactures are increasing there also.

Principal Statistics of Fifteen Leading Industries, 1942

Industry	Establishments	Capital	Employees	Salaries and Wages	Cost of Materials	Gross Value of Products
	No.	$	No.	$	$	$
Non-ferrous metal smelting and refining	16	356,052,965	21,162	37,340,556	285,987,513	447,617,199
Slaughtering and meat packing	148	96,787,894	17,397	26,695,879	310,446,760	369,047,175
Pulp and paper	105	655,598,196	38,007	69,656,393	135,970,437	337,390,484
Automobiles	6	143,442,197	24,403	52,281,941	239,544,621	324,772,681
Miscellaneous chemical products	194	250,666,479	61,900	88,185,249	120,541,882	251,665,872
Shipbuilding	79	125,048,259	50,132	92,188,814	73,325,151	242,138,127
Primary iron and steel	61	205,804,671	33,245	60,874,818	110,551,516	232,105,755
Butter and cheese	2,378	69,084,129	19,465	22,186,532	159,940,961	210,148,057
Electrical apparatus and supplies	225	143,178,182	39,676	61,799,069	92,799,017	208,872,781
Sawmills	5,277	112,119,272	47,765	49,562,069	98,774,251	192,919,077
Automobile supplies	101	76,029,153	21,010	37,011,834	112,061,012	184,499,499
Iron and steel products, miscellaneous	168	172,190,553	34,848	60,792,877	70,135,177	164,298,541
Brass and copper products	149	66,282,716	17,454	29,269,030	85,452,694	164,291,350
Petroleum products	52	84,162,248	5,920	11,507,252	121,924,256	163,716,515
Flour and feed mills	1,171	62,586,759	6,720	8,776,553	126,374,719	159,463,671
Totals, Fifteen Leading Industries						
1942	**10,130**	**2,619,033,673**	**442,104**	**708,128,866**	**2,143,829,967**	**3,652,946,787**
1941	**9,285**	**2,243,304,628**	**335,816**	**490,465,000**	**1,741,074,785**	**2,891,048,111**
Grand Totals, All Industries						
1942	**27,862**	**5,488,785,545**	**1,152,091**	**1,682,804,842**	**4,037,102,725**	**7,553,794,972**
1941	**26,293**	**4,905,503,966**	**961,178**	**1,264,862,643**	**3,296,547,019**	**6,076,308,124**
Percentages of Fifteen Leading Industries to all Industries, 1942	36·3	47·7	38·4	42·1	53·1	48·4

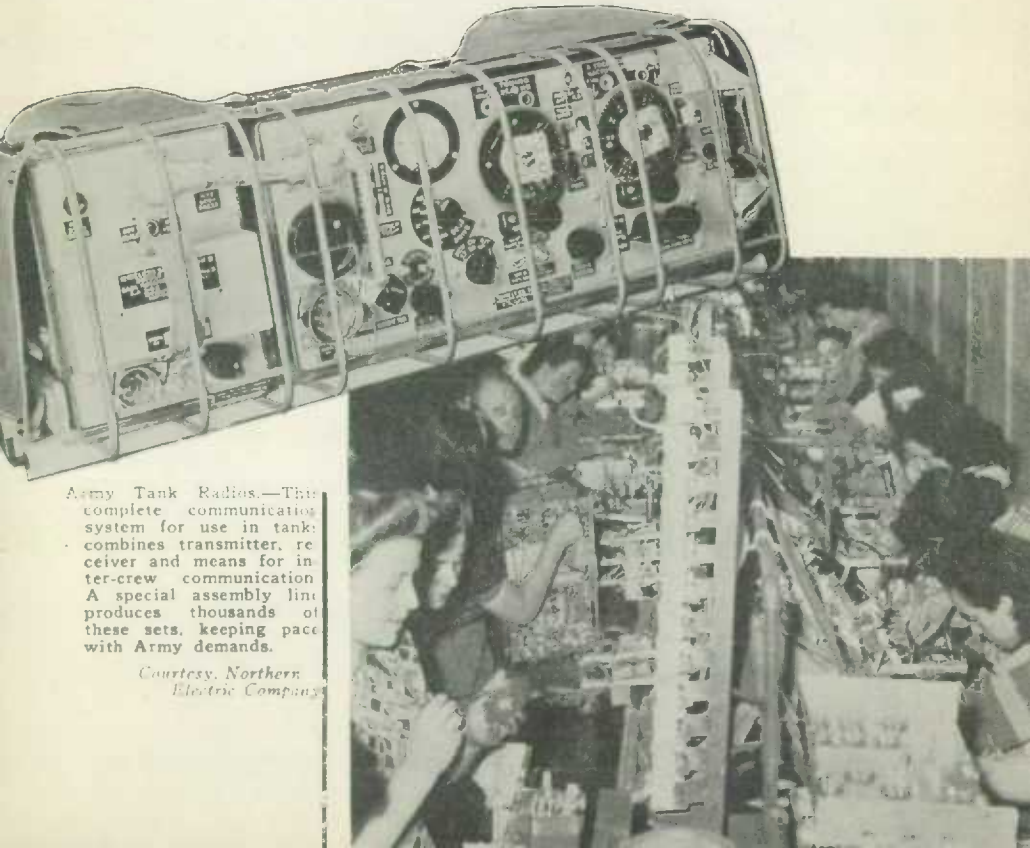
Cities and Towns with a Manufacturing Production of Over Twenty-Five Million Dollars in 1942

NOTE.—Statistics cannot be published for Arvida, Magog and Noranda, Quebec; Coniston, Copper Cliff, Oshawa, Port Colborne and Sudbury, Ontario; and Trail, British Columbia, since there are fewer than three concerns operating in these places.

Cities and Towns	Establishments	Capital	Employees	Salaries and Wages	Cost of Materials	Gross Value of Products
	No.	$	No.	$	$	$
Montreal, Que.	3,007	629,809,985	169,987	240,888,491	541,625,660	976,767,738
Toronto, Ont.	3,211	635,981,329	151,639	228,875,152	451,198,158	886,256,494
Windsor, Ont.	233	206,556,146	47,057	76,276,589	240,384,518	383,323,348
Hamilton, Ont.	482	273,212,977	50,744	85,111,817	166,078,144	347,752,196
Vancouver, B.C.	897	136,336,017	37,858	60,779,827	116,153,100	223,295,187
Winnipeg, Man.	692	113,297,399	27,768	38,191,886	88,897,218	156,332,353
Montreal East, Que.	11	41,272,359	2,981	4,914,287	66,625,403	91,066,697
St. Catharines, Ont.	95	45,905,049	10,800	18,572,948	52,785,849	89,542,709
New Toronto, Ont.	25	49,089,638	5,770	11,518,234	49,786,025	85,850,936
Kitchener, Ont.	154	44,464,199	11,950	16,611,411	46,706,114	84,878,828
Quebec, Que.	321	102,429,456	22,730	25,244,525	32,685,722	83,637,926
Welland, Ont.	54	54,095,003	9,803	16,628,147	40,336,393	80,304,156
London, Ont.	237	47,948,184	12,827	18,186,906	36,720,614	79,763,343
Edmonton, Alta.	194	26,051,547	6,221	8,739,710	51,641,504	68,714,458
North Vancouver, B.C.	24	20,118,670	11,424	21,992,408	18,953,919	64,417,423
Peterborough, Ont.	82	60,669,698	9,012	14,215,468	38,686,722	63,050,687
Calgary, Alta.	210	44,088,643	5,911	8,725,591	37,014,899	60,916,956
Brantford, Ont.	118	43,093,897	12,139	17,530,778	26,136,562	59,062,769
Sarnia, Ont.	44	22,304,998	4,280	7,546,384	36,905,951	58,503,317

Cities and Towns with a Manufacturing Production of Over Twenty-Five Million Dollars in 1942—concluded

Cities and Towns	Establishments	Capital	Employees	Salaries and Wages	Cost of Materials	Gross Value of Products
	No.	$	No.	$	$	$
St. Boniface, Man.	47	14,054,744	2,967	4,355,730	41,660,973	56,026,136
Niagara Falls, Ont.	66	45,130,600	7,863	13,079,782	27,930,158	54,729,911
Shawinigan Falls, Que.	40	67,196,869	5,757	8,604,518	18,363,469	52,441,920
Sault Ste. Marie, Ont.	48	57,405,589	5,156	9,555,877	16,279,902	47,647,080
Ottawa, Ont.	208	39,852,382	10,687	15,775,003	19,749,297	47,165,226
Lachine, Que.	33	39,300,871	6,022	13,232,146	17,630,511	46,137,523
Three Rivers, Que.	66	62,503,676	7,016	9,971,250	19,049,134	44,653,278
Fort William, Ont.	45	33,110,112	6,849	10,721,418	14,121,841	42,208,054
Sherbrooke, Que.	85	27,998,514	8,159	9,740,089	19,209,636	42,051,512
Leaside, Ont.	40	23,505,201	5,484	8,655,493	15,161,673	36,180,669
Sydney, N.S.	42	54,203,775	6,370	9,997,902	20,046,696	33,894,857
Saint John, N.B.	121	20,555,857	4,702	5,773,229	21,246,668	33,365,934
Kingston, Ont.	52	30,754,969	5,761	8,417,226	15,160,621	33,337,664
Halifax, N.S.	113	24,427,955	6,593	9,969,731	13,465,599	32,931,486
New Westminster, B.C.	89	18,215,509	4,779	7,138,298	18,072,901	32,690,186
Guelph, Ont.	87	16,962,638	5,609	7,630,275	16,780,099	32,680,095
Regina, Sask.	104	14,942,348	3,040	4,862,054	19,218,399	30,130,935
Cornwall, Ont.	46	32,511,137	5,343	7,144,254	10,781,817	28,403,101
St. Laurent, Que.	18	11,891,188	7,713	12,535,377	9,040,179	28,380,654
Moose Jaw, Sask.	43	7,205,998	1,318	1,877,071	20,542,708	26,984,304
Galt, Ont.	74	18,066,451	6,130	8,495,969	10,452,416	26,433,968
Chatham, Ont.	57	22,703,120	2,614	3,889,646	17,412,702	25,852,633



Army Tank Radios.—This complete communication system for use in tanks combines transmitter, receiver and means for inter-crew communication. A special assembly line produces thousands of these sets, keeping pace with Army demands.

Courtesy, Northern Electric Company

Rebuilding a TCA "Lodestar" Used in Across-Canada Service.

Courtesy, Canadian National Railways

Conditions During the Years 1939-44

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

The index indicates the gradual but steady increase in employment that took place from Jan. 1, 1939 (when the index registered very little more than for the basic year 1926), to the outbreak of war in September, and the increasing tempo of movement through 1940, 1941 and 1942. The rate of increase began to taper off after 1942, although its highest point (231·3) was reached on Oct. 1, 1943. Since then there has been quite an appreciable decline in industrial employment.

Monthly Indexes of Employment in Manufactures, 1939-44

(1926 = 100)

Month	1939	1940	1941	1942	1943	1944	Month	1939	1940	1941	1942	1943	1941
Jan. 1	104·3	118·2	142·5	187·1	219·6	226·4	July 1	111·3	130·3	172·4	209·5	226·5	225·8
Feb. 1	106·0	120·5	147·4	191·2	222·1	227·3	Aug. 1	112·8	134·4	176·8	212·4	227·7	225·0
Mar. 1	107·0	122·6	150·8	195·7	223·4	226·5	Sept. 1	115·3	138·4	181·4	215·6	229·9	226·2
Apr. 1	107·1	123·4	158·2	199·4	224·1	225·5	Oct. 1	119·7	143·8	184·9	218·3	231·3	223·7
May 1	108·4	125·7	162·3	202·3	222·9	223·2	Nov. 1	122·1	144·6	187·5	218·6	230·8	221·3
June 1	111·4	129·2	168·0	205·9	224·1	223·1	Dec. 1	122·2	144·7	188·1	221·7	230·1	220·1

CHAPTER X

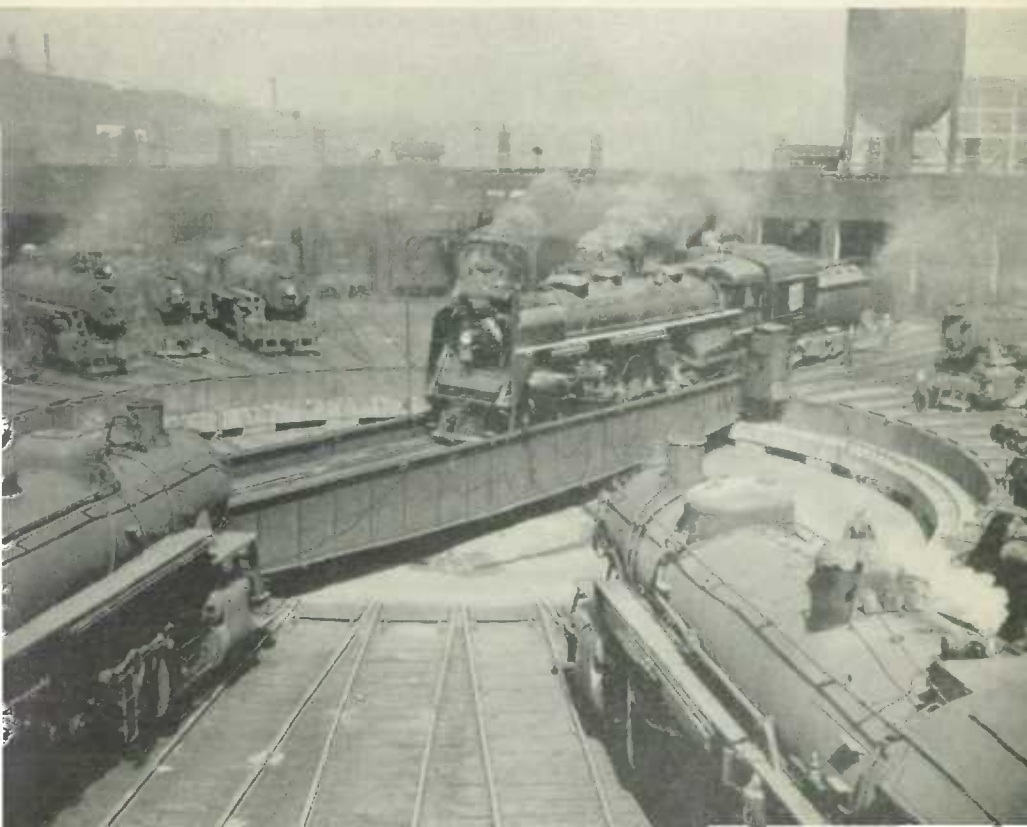
Transportation—Communications

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, 1943, was as follows: Dominion, 22,588 miles; provincial, 922 miles; municipal, 92 miles; total 23,602 miles. Incorporated companies operated 18,743 miles.

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. The Transport Controller exercises control of goods, including civilian and defence materials, moving between points in Canada, and to the various ports for export, and also supervises the movement of civilian passengers and military, naval and air force personnel.

Servicing Locomotives in a Round House.—In these locomotive service stations, situated at strategic points, engines are cleaned, lubricated, fueled and watered before each run.

Courtesy, Canadian National Railways



Railway Traffic Control. — All train movements in railway terminals are controlled by dispatchers from a central control room. The switches are thrown from this control room and the progress of each train recorded on a chart.

Courtesy Canadian National Railways

Railway Statistics, by Months, 1942-44

Month	Railway Gross Operating Revenues			Total Revenue Freight Loadings		
	1942	1943	1944	1942	1943	1944
	$ '000	$ '000	$ '000	tons '000	tons '000	tons '000
January	45,422	50,679	59,119	6,845	6,517	8,103
February	44,044	53,025	59,630	6,571	7,110	8,011
March	50,858	62,811	67,123	7,287	8,305	8,880
April	50,597	65,338	63,536	7,391	8,097	8,335
May	53,036	64,366	66,599	7,722	8,121	9,316
June	55,247	66,682	67,010	7,924	8,486	9,268
July	57,529	69,727	69,026	8,090	8,583	8,682
August	58,881	69,815	68,900	7,777	8,995	9,289
September	58,590	66,620	68,253	7,692	8,941	9,298
October	61,281	66,914	68,258	8,749	9,262	9,561
November	56,926	67,364	66,294	8,248	9,420	9,553[1]
December	63,593	68,318	–	7,567	8,481	7,767[1]

[1] Preliminary estimate.

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 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 1944 increased by 125 p.c. over the same period in 1939, but because of longer hauls the ton miles increased by 173 p.c. Passengers carried increased by 181 p.c., and here also the longer journeys

Canada's Steam Railways

Passenger service on Canadian railways has been maintained at a high standard of efficiency, despite the greatly increased traffic during the war years.

An Up-to-Date Sleeping Car.

A Standard Dining Car.

A Café Car, developed to speed up dining-car service on crowded trains. This car is capable of seating 40 passengers at one time.

Courtesy, Canadian National Railways

increased the passenger miles by 291 p.c. At the same time the amount of coal used by the railways has almost doubled and the use of other supplies, of course, has shown 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 31 p.c.

The Canadian Government, through the Department of Transport, has, since 1939, placed orders for sufficient rolling-stock and equipment to meet possible shortages. Many locomotives of the newest type and design, and 12,753 freight and passenger cars have been acquired on the Department's orders and delivered to the Railways on a hire-purchase basis. In addition, outdated equipment has been rehabilitated and placed in service and luxury-type equipment has been remodelled to meet existing war requirements.

The development of special units of equipment has been necessary, including commissary kitchen cars for feeding troops in movement on trains; special dining cars equipped with long tables to accommodate 54 at one sitting; and café cars, capable of seating 40 passengers at one time. In addition, hospitals cars now carry wounded soldiers over the railway lines from the seaboard to various bases in Canada. These cars are equipped with every known medical accessory for the welfare and care of the casualties.

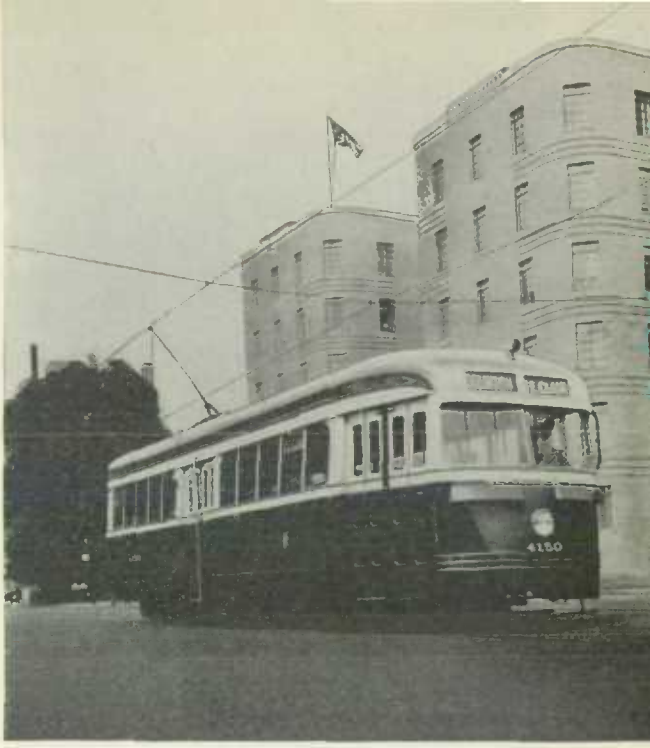
Canadian railways are doing much more than looking after the transportation of passengers and freight, the carrying of messages, and the operation of hotels, etc. They have assisted industries in locating and establishing new plants; they are building guns, gun carriages, tanks, ships and secret devices 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, and many are operating as troop transports in the war zones in Europe and in the Pacific.

Electric Railways.—Electric railways continue to be replaced by motor-buses except in the larger cities, and trackless buses have been inaugurated in 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 1943 over 1939 by 145,000,000 or 70 p.c.; in Toronto by 129,000,000 or 81 p.c.; in Halifax by 222 p.c.; in Ottawa by 149 p.c.; in Winnipeg by 78 p.c.; in Edmonton by 104 p.c.; and in Calgary by 109 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 and working hours staggered in an effort to improve traffic conditions.

Roads and Highways.—Construction of roads suitable for motor traffic has been one of the principal items of provincial expenditure during the past twenty-five years. The Dominion Government has built roads in National Parks and has



A Modern Streamlined Street Car in Service in the Larger Canadian Cities.—These quiet smooth-riding trolleys in many ways simulate a motor-vehicle. The 220 h.p. motor and triple brakes are operated by foot pedals and the car is able to pick up speed at more than four miles per hour per second. Efficient ventilation and electrical heating assure a comfortable temperature in all seasons.

Courtesy, Toronto Transportation Commission

grants and 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 1943 was 124,906 miles of surfaced roads, and 427,697 miles of earth roads. Of the surfaced roads, 108,354 miles were gravel or crushed stone; 13,989 bituminous surfaces; 2,525 portland cement concrete.

The expenditures for 1943 amounted to $65,094,997, including $22,842,064 for construction of roads, $2,036,697 for construction of bridges, $34,603,578 for maintenance of roads, $3,192,601 for maintenance of bridges, $20,380 for footpaths and sidewalks, and the remainder for administration and general expenses.

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 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 rigid restrictions in the use of rubber and gasoline for any but vital war needs.

Provincial revenue from motor-vehicles for 1943 totalled $86,842,351, including: $28,075,392 from motor-vehicle registrations, drivers' permits, etc., and $57,215,332 from gasoline tax of which $11,611,601 was paid by the Dominion Government to offset reduced taxes. During 1943 there were 1,409 persons killed in motor-vehicle accidents, which was an increase of 23 over 1942 but a decrease of 443 from the peak of 1,852 reached in 1941.

Motor Vehicles Registered in Canada, 1936-43

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada[1]
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
1943...	8,032	59,194	40,205	222,676	691,615	93,494	133,839	127,559	134,691	1,511,845

[1] Includes Yukon.

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.

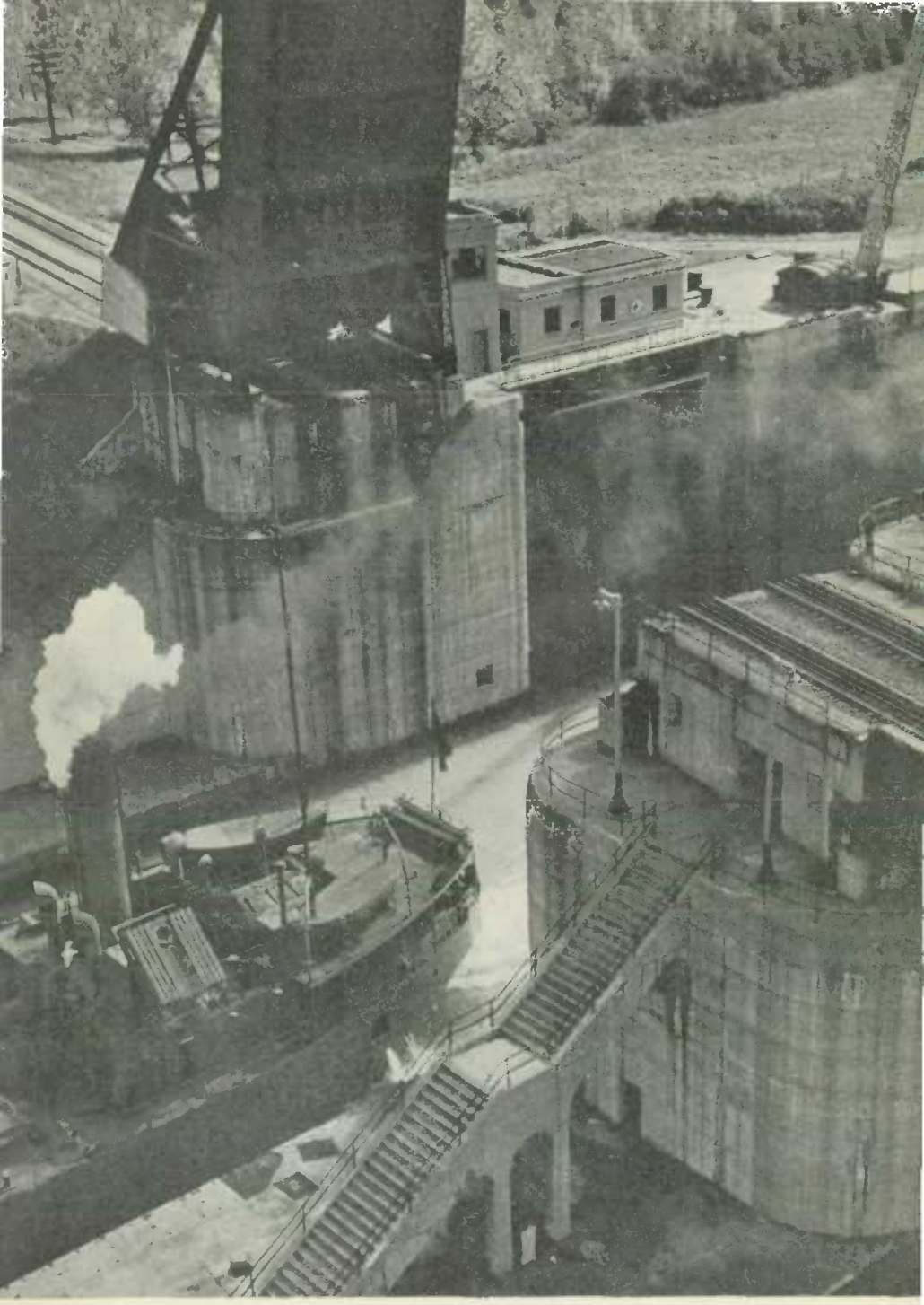
Vessels Entered at Canadian Ports, 1936-43

Fiscal Year	Foreign Service[1]		Coasting Service		Totals	
	No.	Tons Register	No.	Tons Register	No.	Tons Register
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[2]	26,203	31,452,400	77,592	48,111,082	103,795	79,563,482
1942[2]	24,066	25,640,763	73,366	43,990,764	97,432	69,631,527
1943[2]	22,901	26,345,562	65,066	40,300,778	87,967	66,646,340

[1] Sea-going and inland international. [2] Calendar year.

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.

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 120,200,814 tons in 1942 and 115,851,098 tons in 1943.



The Welland Canal.—A railway bridge spanning the Welland Canal is lifted to allow passage of a lake freighter on its way from Lake Ontario to Lake Erie.

National Film Board

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 have been engaged in the Great Lakes traffic for several years, bringing cargoes from European ports.

Canadian Scheduled Air Transport Services.—*Government Air Policy.*—In a statement in the House of Commons on Apr. 2, 1943, the Prime Minister made it clear that, in the international field, Canadian support would be given to any reasonable proposal for international control in the interests of peace in the post-war years. In the domestic field he stated 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". He stated that secondary services would be left to private enterprise, but made it clear that no competition would be permitted either between a private company and a publicly owned company, or between two private companies.

On Mar. 17, 1944, the Minister of Munitions and Supply, who is the responsible minister for air, further elaborated Government policy by stating that the railways would be required to divest themselves from the control of airways within one year after the end of hostilities in Europe. He further stated that the establishment of new air routes would be deferred until the men returning from overseas were able to participate in forming them.

The Aeronautics Act was amended during the latest Session by making provision for the establishment of an Air Transport Board to advise the Minister on questions of general policy in connection with air transport, to investigate and recommend the establishing of new air routes and to license all commercial air transport services. At the same time the Transport Act was amended by repealing those sections dealing with the control of aviation, thereby taking from the hands of the Board of Transport Commissioners the licensing powers previously held with regard to civil aviation.

Trans-Canada Air Lines in 1944.—The year 1944 was, for Trans-Canada Air Lines, another period of close participation in the nation's war effort. Schedule revisions aimed to secure more intensive use of the company's available fleet of aircraft. This was particularly true in the Maritimes, where a re-routing of an existing Montreal-Halifax flight permitted a stop at Blissville, N.B., and a measure of service to the cities of Saint John and Fredericton. At the same time, direct operations were commenced between Halifax and Sydney, N.S. In October, a third trans-continental flight was inaugurated between Montreal and Vancouver. In the first eight months of the year T.C.A. aircraft flew 6,734,694 miles, an increase of 965,255 miles over the corresponding period in 1943; carried 2,507,693 lb. of mail, an increase of 143,689 lb.; an express load of 594,588 lb., an increase of 106,925 lb.; and 107,006 revenue passengers, an increase of 15,290.

The Canadian Government Trans-Atlantic Air Service, operated by the Company for the quick movement of mail to and from the Canadian Armed Forces over-

A T.C.A. 'Plane Arrives at Vancouver Airport.

Courtesy, Canadian National Railways

seas, increased its scope in 1944. At the end of August a three round-flight weekly schedule was being maintained between Canada and the United Kingdom. Five converted Lancaster aircraft were available to the service. Individual mail loads of as much as three tons were being moved with regularity, as well as a considerable quantity of priority freight and some official passengers.

Other direct war activity included a continuance of maintenance work for the British Overseas Airways Corporation return ferry service across the Atlantic, and the overhaul of engines, propeller-assemblies, instruments and accessories at Winnipeg, for the R.C.A.F., for British Overseas Airways and for training schools operating under the British Commonwealth Air Training Plan.

Present routes total 5,296 miles, made up as follows: St. John's, Newfoundland, to Victoria, B.C., 3,931 miles; Halifax to Moncton, 120 miles; Halifax to Sydney, 201 miles; Halifax to Blissville, 172 miles; Toronto to New York, 365 miles; Toronto to Windsor, 206 miles; Lethbridge to Edmonton, 301 miles.

With a high percentage of the male employees of the Company in the Armed Forces, Trans-Canada Air Lines continued in 1944 to feel the pinch of the manpower shortage. However, the beginnings of an ultimate program of rehabilitation was begun in 1944 with the employment of a number of returned servicemen, particularly flight personnel who had completed tours of operations overseas with the R.C.A.F. In addition, many women (34 p.c. of the entire staff) are now serving with the Company.

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 few years. Canadian Pacific Air Lines now controls the operation of Canadian Airways Limited, Arrow Airways 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 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. In 1943 miles flown totalled over 6,600,000, 73,000 passengers were carried, and approximately 12,000,000 lb. of freight, express and mail. At the end of 1943 Canadian Pacific Air Lines had 9,200 employees. 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, Blissville, Summerside, Charlottetown and New Glasgow; 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.

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 378,931 miles of telegraph wire in Canada, 5,419 miles outside of Canada, and 32,805 nautical miles of submarine cable between Canada and other countries. Multiple circuits normally produce 689,621 miles of channels for telegraphic use. During 1943 a total of 16,469,564 telegrams and 3,047,403 cablegrams, excluding messages between foreign countries, were handled over these wires.

Telephones.—There were 3,192 telephone systems in Canada in 1942, operating 6,014,596 miles of wire and 1,627,775 telephones. The estimated number of conversations during the year was 2,998,874,000 or 1,842 per telephone. Over half of the telephones are dial telephones and are operated by automatic switchboards, the increase in dial telephones during 1942 being 68,992 as against a decrease of 3,363 telephones connected with manually operated switchboards.

Wiring Key Shelves and 'Arranging the Multiple' in the Largest Long-Distance Telephone Centre in Canada.—This picture provides a glimpse of the intricate and detailed work necessary to keep the telephone system working smoothly.

National Film Board

National Broadcasting.—In addition to the Canadian Broadcasting Corporation, there were 97 private commercial broadcasting stations operating in Canada in 1944. The CBC, however, operates under the Canadian Broadcasting Act which gives it regulatory powers over all broadcasting stations and its networks give 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. Audiences 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 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.—In the earlier part of 1944, the CBC organized a second national network to give additional coverage and to provide a choice of programs for Canadian listeners. Hitherto the single national network had been known simply as the National Network; now, this became the CBC Trans-Canada Network, while the new network, which to date (September 1944) does not operate a full broadcasting day (evenings only), was called the CBC Dominion Network. The Trans-Canada Network consists of 10 CBC owned and operated stations (four 50,000-watt stations and six others) and about 20 privately owned stations affiliated to it. The Dominion Network has a basic minimum of some 29 stations.

In addition, the CBC has pioneered in the development of low-powered repeater stations which operate automatically with the network in remote areas of the Dominion. These are located at Sioux Lookout, Ont., at Edmundston, N.B., and in British Columbia at Kimberley, Fernie, Cranbrook, North Bend, Creston, Revelstoke, Quesnel, Williams Lake, Prince George and Nakina. An international shortwave station at Sackville, N.B., has been constructed and will be operated by the CBC in conjunction with the Dominion Department of External Affairs. It will relay CBC programs and carry specially designed programs to various foreign countries. Two 50,000-watt transmitters and an elaborate directional antenna system will provide world-wide reception.

Programs.—During the fiscal year ended Mar. 31, 1944, the CBC's total program production amounted to 15,966·4 hours or 52,721 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. The operation of the second network will likely bring about new changes in the program structure during 1945.

CBC and the War.—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 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,

The CBC Records the Progress of the Canadian Armed Forces at the Fighting Fronts.—*Above:* One of the recording vans of a CBC Mobile Unit drawn up alongside a destroyed German tank. CBC correspondents discuss the possibilities of a broadcast. *Below:* A CBC correspondent records a despatch from an active part of the Italian front.

Courtesy, Canadian Broadcasting Corporation

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, in war zones where there are Canadian troops.

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

Broadcasting the National Farm Radio Forum.—In the background the operator can be seen adjusting the volume level of the program to the network lines.

Courtesy, Canadian Broadcasting Corporation

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 CBC shortwave listening-posts at Ottawa, Dartmouth, N.S., and Hornby, Ont., and are 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 $73,004,399 in 1943-44. In the latter year, money orders to the amount of $256,630,949 payable in Canada and $5,666,382 payable in other countries were issued, together with postal notes to the value of $25,593,818.

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 3,900 miles—is proving an invaluable asset, and air-mail volume continues to increase, over 326,907 lb. being carried during the last month of the fiscal year 1943-44. 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:—

Year Ended Mar. 31—	*Miles Flown*	*Mail Carried*
	No.	*lb.*
1939	3,711,987	1,822,399
1940	5,769,257	2,351,172
1941	8,330,121	2,842,367
1942	10,021,579	3,541,625
1943	10,799,670	5,373,021
1944	12,799,218	7,220,554

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 1943-44 despatched overseas the record volume of over 30,552,000 lb. of parcels, 715,100 lb. of letters and 1,133,545 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.

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. In 1944 both services were extended for civilian overseas use and the Airgraph fee reduced to 5 cents.

Special arrangements are also in effect for communication with prisoners of war interned abroad, and the Canadian Army Priority Casualty Postcard was introduced to enable a soldier entering hospital to send a personal message by air to his family, and to have his mail short-circuited to his hospital. Since December, 1943, flying fortresses have carried mail to the Armed Forces to speed up mail delivery to the United Kingdom, Italy and North Africa.

Later, in 1944, to further speed cigarette deliveries overseas, huge reserves of cigarettes were established in Italy and the United Kingdom. As orders are received, addressed labels are prepared and flown overseas by the Post Office; at the reserve depot the orders are quickly filled and the packages of cigarettes delivered.

Loading Mail for Overseas on a Lancaster Bomber.—A "Lancaster" carries 6,000 lb. of air mail.

Courtesy, Canadian National Railways

CHAPTER XI

Labour—Employment and Unemployment—Pensions

Labour Legislation in Canada

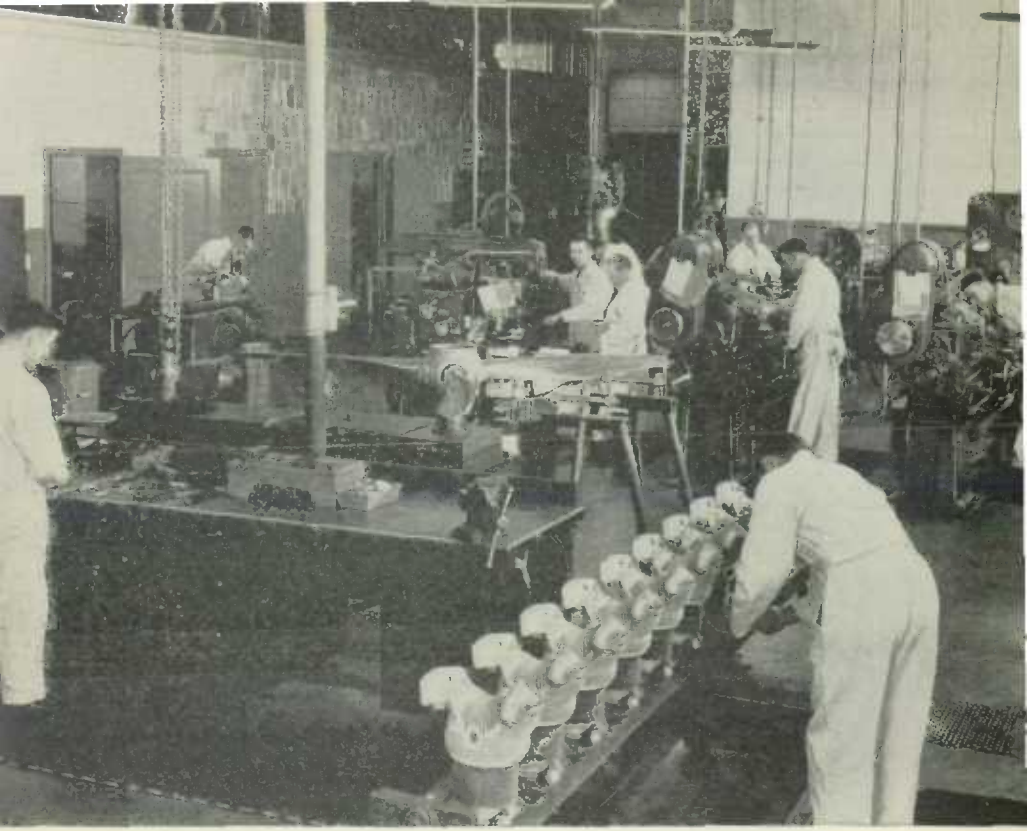
The Dominion and Provincial Fields.—In Canada most labour laws have been enacted by the provinces as they relate to civil rights or to local works and undertakings, subjects which, with the exception of certain specified works, railways, shipping, telegraphs and other works extending beyond the boundary 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. 158-160).

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, Manitoba 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 and Prince Edward Island, administer most provincial labour laws, but in the four western provinces



Machining Aeroplane Parts in a Modern Shop.

Courtesy, Canadian National Railways

the Workmen's Compensation Boards are independent. In Alberta the Department of Trade and Industry, through the Board of Industrial Relations, deals with wages and hours legislation and with factory inspection. 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. More recently, provision was made for compulsory collective bargaining and arbitration of disputes arising out of a collective agreement.

A comprehensive National Selective Service Program has been put into effect and is designed to secure the most effective distribution of manpower both within industry and between industry and the Armed Forces (see p. 159). Skilled workers for these categories are trained under a War Emergency Training Program (see p. 161). A comprehensive wages control policy is in effect (see below) and is supplemented by control of salaries. Persons discharged from the Armed Forces must be reinstated 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.

The Report of the National War Labour Board, covering its inquiry into industrial relations and wage conditions, was made public in January, 1944, and included recommendations for a code of labour relations administered by a National Wartime Labour Relations Board, and for a simplification and amendment of the Wartime Wages Control Order.

In February, 1944, after the provinces had been consulted, an Order in Council (P.C. 1003) was issued embodying the Wartime Labour Relations Regulations under which the Government extended its jurisdiction over employer-employee relations which are normally within the provincial field, to the extent considered necessary to cover adequately employers and employees in industries essential to the efficient prosecution of the War. Other industries are not included but may be brought within the scope of the Regulations by provincial legislation.

The Regulations are administered by a Wartime Labour Relations Board consisting of a chairman and not more than eight other members. Provision is made for an agreement between the Dominion and any province to set up suitable provincial administrative agencies to deal with local matters, but the National Board is responsible for the formulation of general policy and for ensuring the necessary uniformity in the application of the Regulations. Agreements have been made with all provinces, except Alberta and Prince Edward Island, for the setting up of provincial agencies to administer the Regulations.

Wages and Hours of Work

This policy is part of the Government's general anti-inflationary program. It was first introduced in 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. An Order of July, 1942, stabilized rates at the level in effect on Nov. 15, 1941, and made provision for a cost-of-living bonus adjusted to changes in the cost-of-living index. Rates that were unduly low could be raised. A National War Labour Board and nine Regional War Labour Boards administered the Order.

The Wartime Wages Control Order was revised in December, 1943, and further amendments were made early in 1944. The principal changes provide for establishment of wage rates incorporating the cost-of-living bonus, and empower the National War Labour Board to authorize or direct an increase in wage rates only where necessary to remedy a gross injustice or inequality. Increases may be granted, however, in cases where, and to the extent that, any cost-of-living bonuses and wage increases granted since August, 1939, have not yielded the employees as much as the full standard cost-of-living bonus, and also to maintain the relationship between wage rates of employees in international railway service outside Canada, where it has been the custom to fix rates in Canada in relation to those outside. A further change in the Order enables provincial minimum wage authorities to fix minimum rates pursuant to provincial regulations as high as 35 cents an hour.

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 manu-

Bulletin Boards in an Industrial Plant.—Stimulation of employee interest in recreational facilities and co-operative opportunities is being found increasingly beneficial to employees and employers alike.

Courtesy, Canadian National Railways

facturing, shipbuilding and aircraft industries, and 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.

Index Numbers of Rates of Wages for Various Classes of Labour, 1933-43

(1935-39=100)

NOTE.—Rates include cost-of-living bonus.

Year	Building	Metal	Printing	Electric Railways	Steam Railways	Coal Mining	Common Factory Labour	Miscellaneous Factory	Logging and Sawmilling	Metal Mining	Steamships	Laundries	Telephones	General Average
1933.....	95·6	93·3	98·1	96·3	92·4	95·5	88·4	87·9	66·0	91·1	89·3	98·6	90·6	89·6
1934.....	93·7	92·7	97·7	96·2	89·3	96·1	89·8	90·3	74·9	93·4	88·6	97·7	96·6	90·5
1935.....	96·7	93·6	98·2	96·8	94·6	97·8	92·0	92·2	82·3	95·2	89·2	98·2	95·9	93·1
1936.....	97·3	93·8	98·6	97·8	94·6	97·9	94·5	94·4	90·5	97·6	90·6	98·7	96·7	94·8
1937.....	100·1	103·4	99·9	100·4	100·8	98·4	102·8	101·9	104·6	101·9	101·2	100·0	101·6	101·8
1938.....	102·5	104·4	101·5	102·1	105·0	102·9	105·0	105·2	112·0	102·4	109·0	101·4	102·8	104·9
1939.....	103·3	104·7	101·9	102·7	105·0	102·9	105·9	106·0	110·5	102·8	110·0	101·7	103·1	105·7
1940	105·7	109·3	103·6	105·6	105·0	104·0	109·5	110·6	114·2	103·5	115·5	103·1	104·1	109·4
1941.....	111·7	119·0	108·6	113·7	117·7	116·6	122·4	122·5	125·6	113·2	126·9	110·2	114·5	120·3
1942.....	118·4	125·9	113·8	122·6	119·8	122·0	132·0	133·2	139·4	121·0	142·6	121·6	120·5	129·6
1943.....	128·8	132·8	116·0	133·5	131·5[1]	128·5	149·0	142·4	152·9	125·3	147·0	131·2	127·3	139·5

[1] Including a 6-cents per hour increase under National War Labour Board, awarded in 1944, retroactive to September, 1943.

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, 1943, there were 664,533 trade union members reported to the Department of Labour, an increase of 86,153 over 1942. The 1943 membership exceeded that for 1919, a peak year by 286,486. The number of branches of unions and of local unions was 3,735, a gain of 309 during the year. The international unions showed an increase of 46,419 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 1943, a paid-up membership of 190,778. The Canadian Congress of Labour reported in 1943 a membership of approximately 200,000 and the Confederation of Catholic Workers of Canada a membership of 53,384.

Industrial Disputes

For the first nine months (January to September) of 1944, the preliminary figures showed a total of 160 strikes and lockouts, involving 70,234 workers and causing a time loss of 478,989 man-working days. During 1943, there were 322 strikes and lockouts, involving 159,774 workers with a time-loss of 859,643 days. The lowest time loss since the record was commenced in 1901 was in 1930 when 91,797 days were lost in 67 disputes involving 13,768 workers. The highest occurred in 1919 when 336 disputes involved 148,915 workers and caused a loss of 3,400,942 man days.

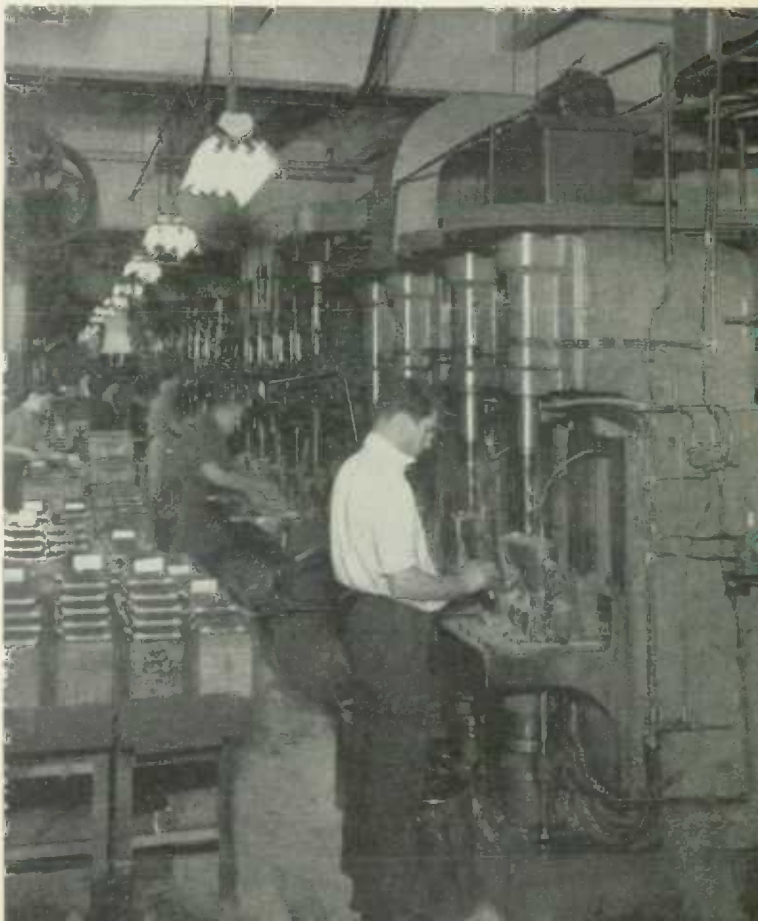
Industrial Disputes Investigation Act.—This Act, passed in 1907, provides that when there is a dispute that threatens to cause a stoppage of work, the Minister of Labour, on the application of either party or of the municipality concerned, or on his own motion, may refer the matter to a tripartite Board 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 or essential to the life of the community 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.

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 and a half years of war, from Sept. 1, 1939, to Mar. 20, 1944, 504 applications were received and 182 boards established. This increase took



Canada's immense production of war goods is attributable in no small measure to the energy and enterprise of individual workers. This bank of drill presses in an anti-aircraft shell department is operated by a minimum of staff, each man tending several machines at once.

Courtesy, Massey-Harris Co. Ltd.

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 p. 150). The operation of the Act has been suspended for the period that the Wartime Labour Relations Regulations are in effect, except as to matters pending when the Regulations came into force on Mar. 20, 1944.

Employment and Unemployment

Employment in Canada in 1944

From early in 1939 the trend of employment in most industrial groups in the Dominion was upward, the rare interruptions in the generally buoyant movement being almost entirely due to seasonal fluctuations, whose influence during the War has, on the whole, been decidedly less than is the case under peace-time conditions. The peak of industrial activity was reached in the latter months of 1943; that the acceleration in the rate of expansion did not continue in 1944 was due in part to depletion in the available reserves of labour. The advances which were indicated in the latter year were accordingly on a much more moderate scale than in earlier phases of the War; only in the first quarter of 1944 was the index of employment higher than in the same period of 1943, although activity continued at an exceptionally high level in comparison with any preceding year. In the months Jan. 1-Oct. 1 (the period for which data are available at the time of writing), the index of employment, based on the 1926 average as 100, averaged 182·6 as compared with 183·0 in 1943, when, as already indicated, industrial employment reached an all-time maximum.

Employment generally in the first few months of 1944 showed continuous curtailment; beginning with June 1, however, there were seasonal increases during the next four months, although the gains were below-average in size, according to the experience of pre-war years, being also very decidedly smaller than those indicated in the same part of earlier years of the War. The trend at Oct. 1 was unfavourable, the curtailment being contra-seasonal. The index of employment each month from May 1 was lower than had been the case at the same date in 1943. Nevertheless, activity generally continued greater than in any previous year of the record.

Although the general index number of employment during the first ten months of 1944 averaged slightly lower than in 1943, the index of payrolls was maintained at a level a few points higher. However, in the early autumn the payroll curves for the two years tended to converge, partly because of diminishing amounts of overtime work, and also partly as a result of certain changes in the program of munitions production.

On the average, the establishments furnishing current statistics of employment and payrolls to the Dominion Bureau of Statistics during the first ten months of 1944 numbered 14,636; their working forces averaged 1,845,405. These persons received an average of $58,591,100 in weekly salaries and wages in the same period, while the pay envelope of the typical person in recorded employment contained an average of $31·76. In the same months of 1943, the average weekly earnings per employee had been $30·61.

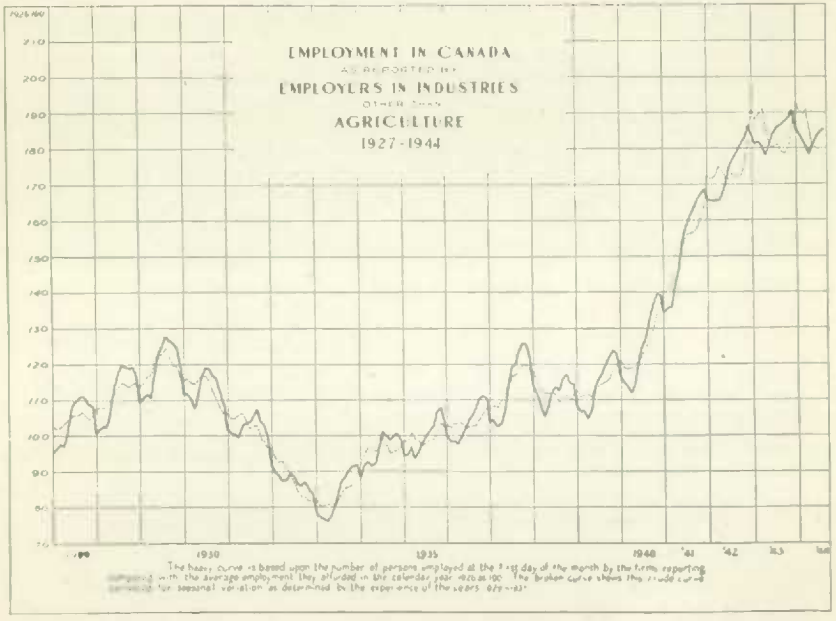
Employment in manufacturing during the War has shown unprecedented activity. From Sept. 1, 1939, the movement was almost continuously upward until the latter part of 1943; the rise in the curve in that year was much less spectacular than in any

earlier year since the outbreak of hostilities, due to some extent to shortages of labour and materials. Certain changes and modifications in the war production program also contributed to the result. The average index for the first ten months of 1944 showed no general change from that recorded for the same period of 1943.

Activity in factories turning out heavy manufactured goods has, for obvious reasons, been particularly great during the last five years. When war was declared, workers in this class constituted some 40 p.c. of the total persons reported in manufacturing, a proportion which had advanced to 57·4 p.c. at Oct. 1, 1943, when employment in the production of durable goods reached its all-time maximum. From that date to Oct. 1, 1944, the index declined by 8·6 p.c.

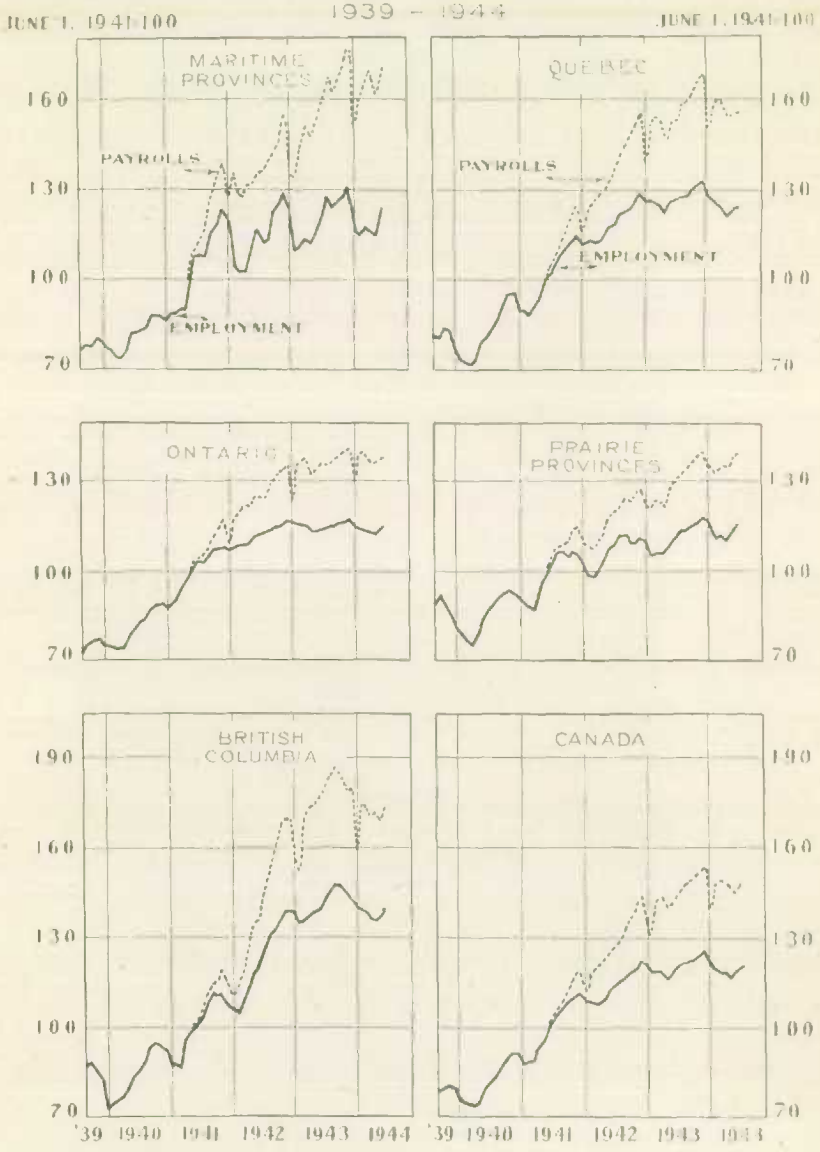
The marked increases in manufacturing generally during the War have been accompanied by relatively larger gains in the payrolls disbursed. Thus, from June 1, 1941 (when the current record of payrolls was instituted), the index of weekly salaries and wages rose almost without interruption to Dec. 1, 1943, when the advance amounted to 74 p.c.; the increase in the index of employment was 37 p.c. There was a minor falling off in both indexes as the year 1944 progressed.

Among the non-manufacturing industries, logging, transportation and communications reported considerably greater activity in the first ten months of 1944 than in the same months of 1943; in the case of the first two, employment was also in greater volume than in any earlier year. In mining and construction, the situation was not so favourable, mainly as a result of continued shortages of labour and materials. Employment in services and trade reached higher levels during 1944 than in any previous year.

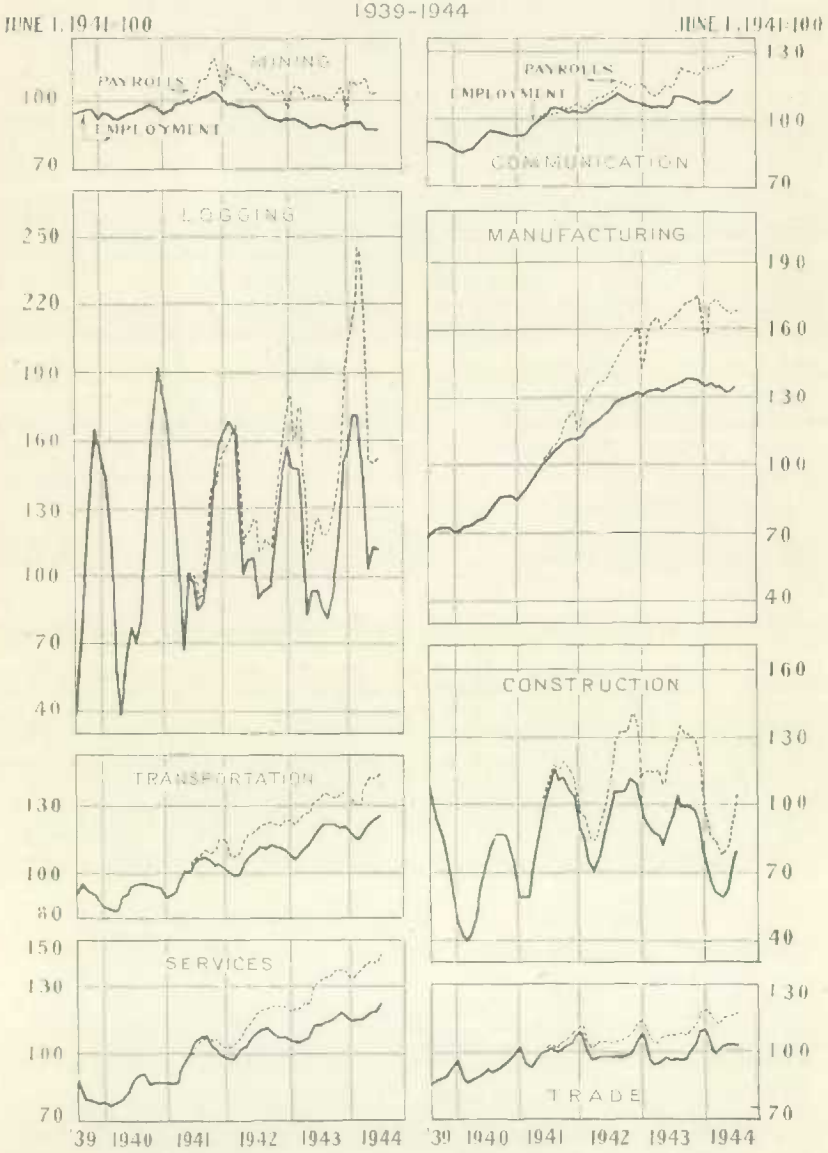


INDEX NUMBERS OF EMPLOYMENT AND PAYROLLS BY ECONOMIC AREAS

1939 – 1944



INDEX NUMBERS OF EMPLOYMENT AND PAYROLLS BY INDUSTRIES 1939-1944



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. 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 Sept. 30, 1944, the number of registered employers with insured employees was 138,728 and the number of insured persons registered was 2,746,760.

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.

WEEKLY RATES OF CONTRIBUTION AND BENEFIT UNDER THE UNEMPLOYMENT INSURANCE ACT

Class	Earnings in a Week	Weekly Contributions[1]		Denomination of Stamp[2]	Weekly Benefit[3]	
		By Employee	By Employer		Single Person	Person With One or More Dependants
		$	$	$	$	$
0	Less than 90 cents daily (or under 16 years of age)	[4]	0·27	0·27	[4]	[4]
1	$ 5·40 to $ 7·49	0·12	0·21	0·33	4·08	4·80
2	$ 7·50 to $ 9·59	0·15	0·25	0·40	5·10	6·00
3	$ 9·60 to $11·99	0·18	0·25	0·43	6·12	7·20
4	$12·00 to $14·99	0·21	0·25	0·46	7·14	8·40
5	$15·00 to $19·99	0·24	0·27	0·51	8·16	9·60
6	$20·00 to $25·99	0·30	0·27	0·57	10·20	12·00
7	$26·00 or more	0·36	0·27	0·63	12·24	14·40

[1] The daily rate of contribution in respect of each class is one-sixth of the weekly rates. [2] Unemployment insurance stamps combine both employer and employee contributions. [3] Rates calculated on assumption that person is in the same class for two years. Daily or weekly benefit for an insured person without dependants is 34 times his average daily or weekly contributions, and 40 times the average employee contribution for married persons mainly or wholly maintaining one or more dependants. [4] Workers in this class make no contributions and are not eligible for benefit. They may, however, accumulate benefit rights on the basis of employer contributions.

From July 1, 1941, to Sept. 30, 1944, $232,809,346 was deposited in the Unemployment Insurance Fund. This amount includes employee, employer and Government contributions, and interest. Employer and employee contributions to the fund were $186,539,387. In the same period, the Dominion Government contributed $37,307,877 to the fund.

The first date on which claimants could qualify for benefit was Jan. 27, 1942. From that date to Sept. 30, 1944, the amount paid in insurance benefit was $3,898,173. In this period there were 116,183 claims received at Insurance Offices for adjudication, 93,512 of which were allowed, 21,905 were not allowed and 766 were pending. In the same period the number of appeals made by claimants to the Courts of Referees and the number of cases referred to such Courts of Referees was 2,754, of which 2,442 were heard, 83 were pending on Sept. 30, 1944, and 229 were withdrawn. The Courts of Referees allowed 707 claims and disallowed 1,735.

The Unemployment Insurance Advisory Committee, established under the Act, 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.

Up to the present time, certain age and marital classes of men have been "designated", that is to say, have been legally required to comply with Mobilization Regulations and to undertake military service if they are medically fit. These classes may be described as follows:—

(1) Every man who was born in any of the years 1913 to 1926 inclusive. Men born in the year 1926 are not required to produce evidence of compliance unless they have reached the age of 18 years and 6 months.

(2) Every man who was born in any of the years 1906 to 1912 inclusive, and who:
- (*a*) on July 15, 1940, was a widower without child or children; or
- (*b*) on July 15, 1940, was a judicially separated man, with or without child or children; or
- (*c*) on July 15, 1940, was an unmarried man; or
- (*d*) on July 15, 1940, was a divorcee, with or without child or children; or
- (*e*) since July 15, 1940, became divorced, whether or not he has a child or children; or
- (*f*) since the 15th day of July, 1940, has been judicially separated, whether or not he has a child or children; or
- (*g*) since the 15th day of July, 1940, became a widower without child or children.

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 some 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. Any person who has attained his 16th birthday cannot leave Canada with the intention of seeking or entering into employment outside Canada except pursuant to a Labour Exit Permit issued to him by a Selective Service Officer. 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. 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 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 and treaty Indians have also rendered valuable assistance to agriculture. Prisoners of war, Japanese and persons postponed from military training as conscientious objectors have, under specific regulations governing their employment, been used in agriculture and other essential work.

Employment and Selective Service Offices.—In the first eight months of 1944, Employment and Selective Service Offices received 1,647,554 applications for employment, were notified of 1,866,143 vacancies and effected 1,155,062 placements. During the same period of 1943, 1,867,932 applications for work, 2,120,868 vacancies and 1,331,482 placements were reported.

Canadian Vocational Training

Due to the changing aspects and enlarged responsibilities of the Training Branch of the Department of Labour it was considered advisable to group its various pro-

Women Loading an Express Shipment into a Railway Car.—During the war years it has been necessary for women to take over even the heavier jobs ordinarily carried on by men.

Courtesy, National Film Board

grams under one title that would more clearly identify its work, and the title "Canadian Vocational Training" was adopted. The War Emergency Training Program as well as the Youth Training Agreement and, more latterly, the responsibility for rehabilitation training will be identified with this name. Similarly, on Jan. 1, 1944, authority was given to the Minister of Labour to enter into 10-year agreements with the provinces in respect to apprentice training with those provinces that had or would enact apprenticeship legislation. British Columbia, Ontario and Nova Scotia already had Apprenticeship Acts, but since Jan. 1 all provinces except Quebec have passed Apprenticeship Acts and entered into agreements with the Dominion for enlarged activities in this field. The Dominion contribution for the fiscal year 1944-45 is set at $250,000 to be matched by the provinces and for the next nine years the Dominion may contribute to a total of $1,000,000 per annum, which amount is also to be matched by the provinces where such agreements exist.

War Emergency Training has continued during 1944 as provided for in the Vocational Training Co-ordination Act of 1942, but with considerably reduced activity. From Jan. 1 to Aug. 31, 1944, the total enrolments of industrial workers were only 18,115 as compared with 41,368 for the same period in 1943. Training was divided under three main divisions:

(*a*) Full-time pre-employment classes lasting from two weeks to six months. The total enrolments in this division were 4,655, including about 1,430 women. Of the total, 3,926 trainees were placed in employment.

(*b*) Part-time training, mostly of a technical nature, for persons already employed in industry, to facilitate and upgrade their promotion. Enrolment was approximately 4,013 including 762 women.

(*c*) **Training in plant schools in industrial establishments.** As of Aug. 31, 1944, 145 such plant schools had been officially approved and the total enrolments numbered 9,447 of which 4,702 were women. After the training periods these persons were transferred to regular production.

In addition, courses in Supervisory or Foremanship Training were continued under the titles of Job Instructor Training, Job Relations Training (2 series) and Job Methods Training. This type of training has greatly increased in industry and during 1944 has been taken up by an increasing number of Governmental Departments with good results. The total enrolment since the inception of this type of training in 1942 to Aug. 31, 1944, has been 59,863. It is quite evident that it will continue to serve a growing demand in the post-war period.

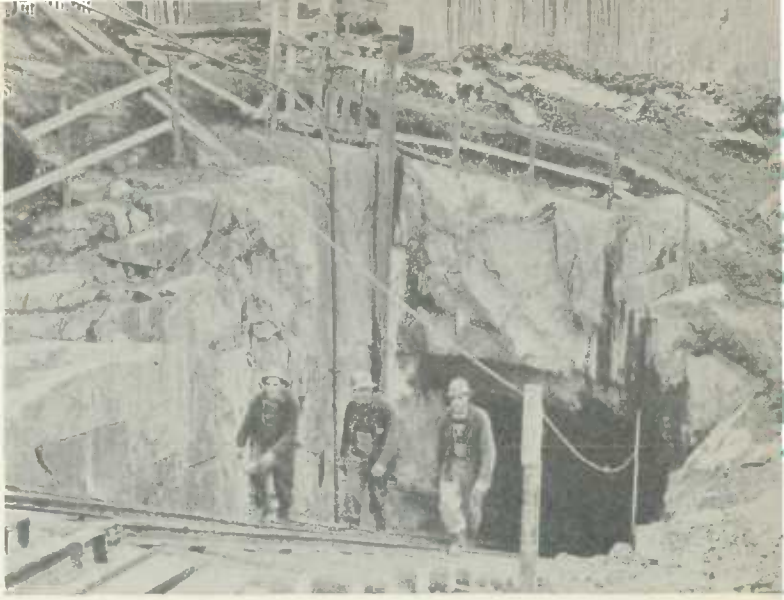
Rehabilitation Training, i.e., training for discharged members of the Armed Forces to put them on an independent earning basis, has been provided for 4,300 persons. This training, provided in co-operation with the Department of Pensions and National Health who select the trainees and approve the type of training to be given, is carried on in regular vocational schools, special Canadian Vocational Training centres or privately owned schools, but by far the greatest percentage, so far, has been done in industrial and commercial establishments.

Trades Training for members of the Armed Forces has continued, with the men being selected by their respective Services. With the curtailment of trades training requirements, this work was greatly reduced during 1944. From Jan. 1 to Aug. 31, 1944, training was provided for 8,889 from the R.C.A.F., 8,324 from the Army and 2,351 from the Navy.

Youth Training for persons between 16 and 30 years of age has continued, but on a much smaller scale than in previous years. The program consisted mainly of special courses for rural young people and financial assistance to university

Young Farm Workers Gathering Potatoes.—To provide relief for the acute labour shortage, agricultural authorities are recruiting boys and girls for work on the farms.

Courtesy, National Film Board



The Mouth of the 1,200 ft. Tunnel Built at the South End of Finlayson Lake to Divert the Course of the Seine River.—For a description of the engineering project of which this forms a link, see special article on the Iron Ore Developments at Steel Rock Lake at pp. 44-51.

Courtesy, Department of Mines for Ontario

students, other than first year. Those in medicine, dentistry, engineering or science, as well as nurses in training in hospitals, whose services might be needed in a professional technical capacity in connection with the War, were assisted on recommendation of provincial and university committees. Physical education is now the responsibility of Department of National Health and Welfare under the Physical Fitness Act (see p. 38).

Unemployment in Trade Unions

Statistics are tabulated by the Department of Labour from reports furnished by the trade unions showing the unemployment existing among their members. At the close of June, 1944, reports were recorded from a total of 2,206 labour organizations in which the combined membership was 415,707 persons, of whom, 1,147, or a percentage of 0·3 were listed as unemployed. The percentage of those without work for the corresponding month in the year 1943 was 0·6 and in 1942 was 2·5.

The unemployment percentage at that date was the same as that for September and October, 1943, and indicated an employment level higher than at any other time in the record. The highest percentage of unemployment in these records was for December, 1932, and January, 1933, when the figure was 25·5.

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 Blind Persons, 1928-44

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 Blind Persons	
	Pensioners	Dominion Government Contributions[1]	Pensioners	Dominion Government Contribution[1]
	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	14,952,459	–	–
1936	108,415	16,764,484	–	–
1937	146,524	21,149,352	–	–
1938	175,673	28,524,587	1,946[2]	128,418[2]
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
1944	181,384	32,195,592	6,374	1,244,030
Government Contributions from Inception of Act	–	**299,252,417**	–	**6,234,210**

[1] 50 p.c. of net cost of payments to Oct. 31, 1931, and 75 p.c. thereafter. [2] First year for complete statistics, see headnote.

Old Age Pensions and Pensions for Blind Persons, by Provinces, as at Mar. 31, 1944

Province or Territory	Old Age Pensions		Pensions for Blind Persons	
	Pensioners	Average Monthly Pension	Pensioners	Average Monthly Pension
	No.	$	No.	$
Prince Edward Island	1,888	18·53	111	22·41
Nova Scotia	13,838	18·06	633	21·21
New Brunswick	11,843	17·69	710	23·28
Quebec	47,153	22·54	2,250	24·37
Ontario	56,156	23·09	1,449	24·19
Manitoba	12,188	23·41	339	24·22
Saskatchewan	12,755	23·00	317	24·54
Alberta	11,071	22·82	242	24·15
British Columbia	14,481	23·55	323	24·19
Northwest Territories	11	24·55	Nil	–
Totals	**181,384**	–	**6,374**	–

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.

To Aug. 31, 1944, 21,911 loans made under the Dominion Housing Act and Part I of the National Housing Act, and actually proceeded with, amounted to $87,727,180. These loans provided a total of 26,515 family units. In the 1944-45 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 $4,000.

The National Housing Act, 1944.—The National Housing Act, 1944, which was passed by Parliament on Aug. 11, 1944, is divided into six parts and will be administered by the National Housing Administration, Department of Finance.

Part I of this Act is similar to Part I of the National Housing Act, 1938, but has been modified and expanded in certain important details.

Loans are still made by the Government and approved lending institutions jointly to the prospective home owner or to a builder. Under the new Act, the minimum loan has in all cases been made 50 p.c. of the lending value. The maximum loan has been increased so that it is now 95 p.c. of the first $2,000 of lending value, plus 85 p.c. of the next $2,000, plus 70 p.c. of any lending value in excess of $4,000. The interest rate has been lowered from 5 p.c. to 4½ p.c., calculated semi-annually. The term of the loan is, in ordinary cases, twenty years; however, under certain circumstances it may exceed twenty years but must not be in excess of thirty.

The loans are repayable in monthly instalments of principal and interest. In addition the borrower each month pays one-twelfth of the estimated annual taxes and the lending company then pays the taxes as they become due.

The new Act provides $100,000,000 for loans to home owners and for paying losses in respect of these loans and those made under the Dominion Housing Act, 1935, and the National Housing Act, 1938.

Part II provides for two types of loans: (1) Loans for ordinary rental housing projects which are made generally upon the same conditions as loans under Part I of the Act. The differences are that the maximum loan is 80 p.c. of the lending value

and that in properly planned and zoned areas the maximum term of the loan is twenty-five years. (2) Loans to limited dividend housing corporations for low-rental housing projects to ensure that people of low income are adequately housed.

A loan to a limited dividend housing corporation is made directly by the Dominion Government and may be for 90 p.c. of the lending value of the project at an interest rate of 3 p.c. per annum.

The amount appropriated for loans and guarantees under this Part is $50,000,000.

Part III of the Act is designed to extend the provisions of Part I to rural areas. By this Part the Minister is authorized to pay a lending company up to $20, together with travelling expenses, for making loans in rural or remote areas.

In contrast to the monthly payments required from other borrowers under Part I, a farmer's mortgage may provide for periodic payments which will coincide with the times at which he receives his income.

If the farmer already has a mortgage upon his farm with an approved lending institution, this mortgage may be consolidated with one to be made under the Act to assist in the construction of a house upon the farm. The Government's advance and share in any subsequent loss is limited to the joint loan.

Part IV provides for loans by banks or approved instalment credit agencies for home improvement and home extension loans. Loans bear interest at 5 p.c. per annum. A home improvement loan must not exceed $2,000 on a single-family dwelling or $2,000 plus $1,000 for each additional family housing unit in a multiple family dwelling. A home extension loan must not exceed $3,000 for the first family housing unit created in the house and $1,000 for each additional family housing unit. These loans are from a maximum term of three to five years. The total amount of loans which may be guaranteed is $100,000,000 and the Government's guarantee is 5 p.c. of the total amount of loans made by a bank or approved credit agency.

Part V provides for research into housing construction and materials and for a survey of housing conditions in Canada and also for assistance by the Dominion in community planning.

Part VI permits the establishment of a plan of reducing term insurance to pay a loan in the event of the death of the borrower.

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 Oct. 31, 1944, 59 loans providing 114 units and amounting to $112,725 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.

Prefabricated Houses

The housing emergency has resulted in a renewed interest in prefabrication. In Canada, however, with its generally severe winters and extremes of climate, prefabricated dwellings of the types popular in certain other countries have not been greatly favoured for year-round dwellings except as a temporary expedient for meeting a war emergency. The illustrations show successive steps in the building of a four-room frame bungalow. This particular house, aside from the foundation, was built in a single working day in order to illustrate the speed with which the work could be done.

Top: Laying floor panels, consisting of joists and sub-flooring on a concrete block foundation.

Centre: Walls, consisting of 2" thick interlocking grooved wall planks, are completed with doors and windows installed and roof panels are being set on prefabricated roof trusses. The roof is subsequently shingled in the conventional manner.

Bottom: The house, complete with lawn and window boxes.

Courtesy, National Film Board

The average estimated cost per unit in each building is not to exceed $1,500, save for units having two or more bedrooms where the estimated cost may be $2,000. 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 Oct. 31, 1944, the plan had been brought into force at Ottawa, Vancouver, Victoria, Toronto, Montreal, Quebec, Hamilton, St. Catharines, Brantford, London, Sarnia, Windsor, Edmonton, Calgary, Winnipeg, Fernie, Moncton, Kingston, Trenton, Brockville, and Gananoque, and municipalities contiguous to each of these cities. It is expected that other cities will be added.

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 into 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.

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 for war purposes may be divided into the following groups:—

(1) Department of National Defence (Air): (*a*) Additional accommodation, training facilities and alterations at various air training schools under the British Commonwealth Air Training Command; (*b*) Additional accommodation, training facilities and alterations under the Home War Establishment for Air.

(2) Department of National Defence (Army): Additional accommodation, training facilities and alterations to various military training centres, plus the conversion of existing training centres into casualty retraining centres. Also the construction of hospitals and the conversion of certain types of buildings into hospitals.

(3) Department of National Defence (Navy): Construction of naval projects including harbour installations.

(4) Department of Munitions and Supply: Alterations and additions to existing industrial plants and repairs to wharves and docks on the East Coast.

(5) Wartime Housing Limited: Provision of necessary housing incidental to industrial expansion for war purposes.

Construction contracts for the groups (1) to (4), handled by the Department of Munitions and Supply, numbered 1,180 for the calendar year 1943 and amounted to $96,296,462. From January to Oct. 15, 1944, 555 contracts were awarded, totalling $27,322,707; the estimate for the remainder of the year is 200 contracts totalling $5,000,000.

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, 1943, amounted to $59,852,495. It is estimated that Wartime Housing expenditures in 1944 will amount to approximately $11,000,000.

General Statistics of Construction

Statistics of the construction industry show that in 1943 there were decreases in the value of work performed and in the number of persons employed. By the end of 1941 Canada had passed the peak of her war construction and since that time the value of construction as a whole has declined by about 11 p.c. From 1941 to 1943, industrial construction (including factories, warehouses, mine buildings, etc.) declined by 21 p.c. and residential construction by 27 p.c.

Of the 1943 total value of work performed, 74 p.c. was represented by entirely new construction; the remainder was for alterations, repairs, maintenance, etc. Building construction accounted for 53 p.c. and engineering contracts for 36 p.c.

Building Permits.—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 $89,504,905 for the first eleven months of 1944, as compared with $55,949,687 for the same period of 1943. The population of the 58 centres mentioned constituted about 36 p.c. of the total population; for Jan. 1 to Nov. 1, 1944, their building authorizations amounted to 30·7 p.c. of the total value of the construction contracts awarded for the same period throughout Canada.

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. 169 and are therefore summarized here. For steam railways expenditures for these purposes in 1943 amounted to $278,275,622 as against $219,276,767 in 1942

Modern Construction Makes Great Demands on Timber Resources for the Building of Frames and Forms.—This illustration shows the erection of a framework of timbers to guide the diamond drilling of the rock cut east of Raft Lake, Steep Rock Lake development.

Courtesy, Department of Mines and Resources

and $194,000,000 in 1929. For electric railways the total for 1942 was $8,995,478 as against $7,532,510 in 1941 (1943 figures were not available at time of going to press). Expenditures on new lines amounted to 71,383 and additions and betterments showed a credit of $8,890,247 (exclusive of equipment) in 1943 compared with $6,418,260 in 1942.

Statistics of the Construction Industry, 1943, with Totals for 1936-42

Year, Province and 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**
Totals, 1942	**175,267**	**262,043,471**	**324,732,380**	**635,649,570**
Province, 1943				
Prince Edward Island	425	609,109	983,147	1,645,660
Nova Scotia	16,149	18,448,090	19,904,253	40,667,401
New Brunswick	3,918	5,377,254	6,091,968	12,006,608
Quebec	47,848	74,778,204	80,087,983	159,875,335
Ontario	51,998	83,626,855	104,661,068	216,715,281
Manitoba	5,192	8,352,729	10,136,198	20,190,673
Saskatchewan	3,162	4,578,703	4,362,414	11,128,058
Alberta	6,543	10,621,864	10,880,034	25,142,003
British Columbia and Yukon	20,065	40,443,227	41,781,319	85,055,532
Totals, 1943	**155,300**	**246,836,035**	**278,888,384**	**572,426,551**
Group, 1943				
Contractors, builders, etc.	121,482	214,501,738	262,419,986	510,998,908
Municipalities	9,894	12,794,321	5,749,742	19,946,581
Harbour Commissions	629	825,695	261,610	1,139,984
Provincial Govt. Depts.	20,754	15,198,774	8,300,419	34,109,733
Dominion Govt. Depts.	2,541	3,515,507	2,156,627	6,231,345

Values of Construction, by Types, 1943 as Compared with 1942

Type of Construction	1943	1942	Increase or Decrease
	$	$	$
Residential	63,684,367	76,346,090	−12,661,723
Institutional	13,148,233	14,246,025	− 1,097,792
Commercial	26,439,561	30,638,095	− 4,198,534
Industrial (includes factories, warehouses, mine buildings, etc.)	140,396,554	159,346,630	−18,950,076
Other (includes armouries, barracks, hangars, etc.)	58,216,173	71,197,840	−12,981,667
Totals, Building Construction	301,884,888	351,774,680	−49,889,792
Streets, highways, etc.	66,582,959	59,619,536	+ 6,963,423
Bridges, watermains, sewers, dams, reservoirs, etc.	30,256,377	34,044,730	− 3,788,353
Electric stations and transmission lines	30,843,814	60,697,808	−29,853,994
Docks, wharves, piers, etc.	10,282,332	10,099,471	+ 182,861
Other engineering (includes landing fields, parks, canals, dredging, pile driving, etc.)	65,562,348	52,817,517	+12,744,831
Totals, Engineering	203,527,830	217,279,062	−13,751,232
Totals, Building Trades	67,013,833	66,595,828	+ 418,005
Grand Totals	**572,426,551**	**635,649,570**	**−63,223,019**

CHAPTER XIII

External Trade

The War has altered the structure of world trade, and Canada, being a leading trading nation, has been immediately affected. The value of both imports and exports has increased rapidly each year since 1939 and in 1943 Canada's total trade, excluding gold, reached a record value of over $4,736,000,000. Imports valued at $1,735,000,000 exceeded those of 1942 by over $90,000,000 and the 1939 value by almost $1,000,000,000, while domestic exports at $2,971,000,000 were over $607,000,000 greater than in 1942 and more than $2,000,000,000 higher than in 1939. The excess of total exports over imports in 1943 reached a new high level at $1,266,000,000 compared with $741,000,000 in 1942 and $185,000,000 in 1939.

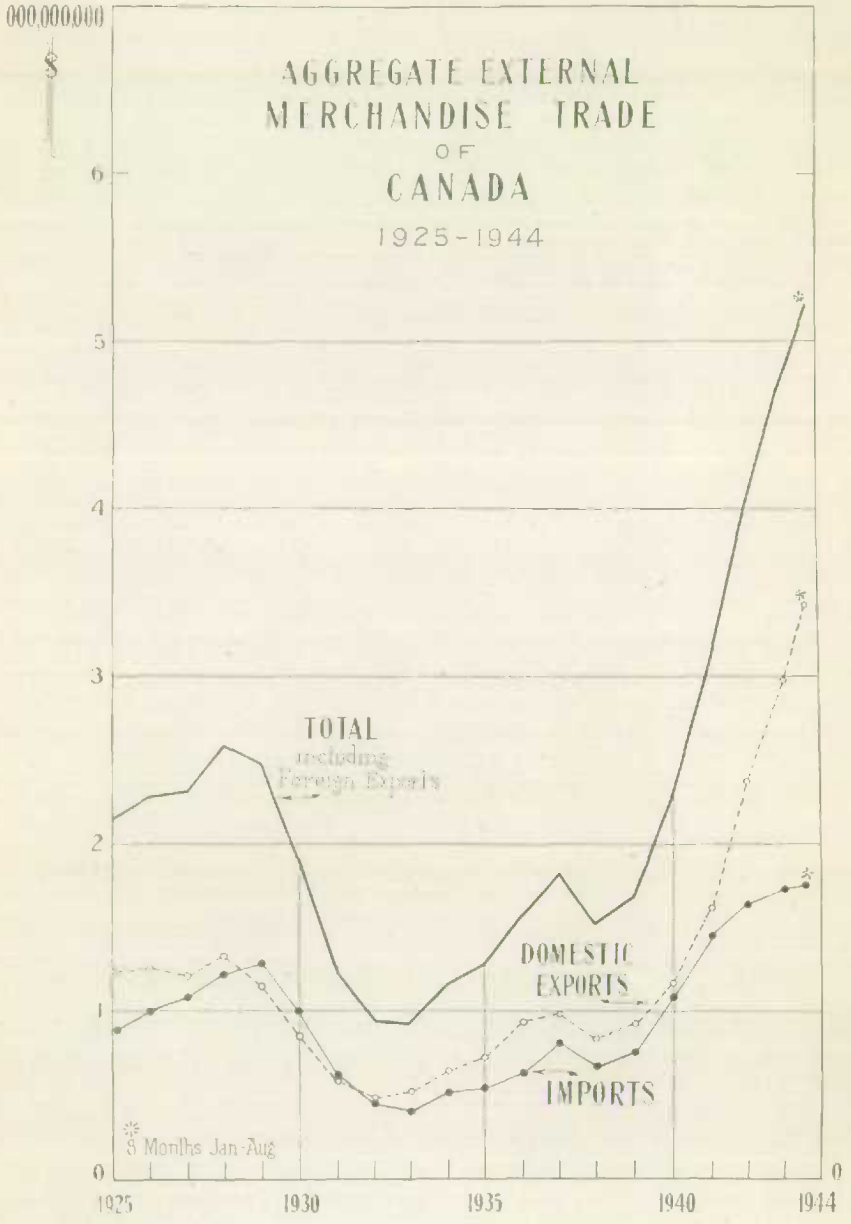
Available statistics for the first eight months of 1944 would indicate that imports are only slightly greater than in 1943, while exports have again shown a phenomenal increase, being over $400,000,000 higher than during the comparable period of 1943.

Year	*Imports*	*Domestic Exports*	*Foreign Exports*	*Total Trade*
		(Millions of Dollars)		
1938	677·5	837·6	11·1	1,526·2
1939	751·1	924·9	11·0	1,687·0
1940	1,081·9	1,179·0	14·3	2,275·2
1941	1,448·8	1,621·0	19·5	3,089·3
1942	1,644·2	2,363·8	21·7	4,029·7
1943	1,735·1	2,971·5	29·9	4,736·5
1944[1] (eight months)	1,170·3	2,282·0	27·7	3,480·0

[1] Preliminary.

Imports.—During 1943 few significant changes have occurred either in the source or character of imports. The trend has been only slightly upward as indicated by the increase of $90,000,000 over 1942 or only 5·5 p.c. The demand for imports is closely related to the war production program. Imports of machinery, machine tools, dies and other factory equipment have been an important element in the increases during the earlier years of the War. But, as munitions production has expanded, imports of materials, fuel and components have grown rapidly and represent a major part of the increases in 1942 and 1943. The comparative stability of imports during the past two years has continued into 1944, the value for the first eight months amounting to $1,170,000,000 as compared with $1,140,000,000 during the same period of 1943.

The table on p. 173 outlines the imports under main commodity groups since the beginning of the War. Agricultural and vegetable products were higher, mainly due to increased imports of fresh fruits and vegetables. In the fibre and textile group, substantial increases were shown in cotton (both raw and in fabrics), raw wool and woollen piece goods as well as in flax and other vegetable fibres. The iron group reflects the demand for factory equipment and raw materials and components for munitions and military vehicles. Large increases were recorded in imports of iron ore and semi-manufactured products such as ingots, billets, castings, forgings, bars, rods, sheets, plates and structural forms. Expansion of plant equipment is reflected in the increased volume of machinery and tools of all kinds, particularly metal-working, while increasing production of military vehicles is indicated by the high level of imports of engines, automobile parts and bearings. Under the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AGGREGATE EXTERNAL
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CANADA
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6
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EXPORTS
IMPORTS
* 8 Months Jan-Aug
1925
1930
1935
1940
1944

non-ferrous metal group, the largest increases were recorded by bauxite ore for aluminum, and radio, wireless and other electrical apparatus. Coal and crude petroleum recorded the largest increases in the non-metallic mineral group. Under miscellaneous commodities, a large proportion consists of imports of aircraft, war materials under special Orders in Council for war contracts and for the account of Allied Governments, and articles for the Armed Forces of the British Government.

Imports by Main Groups, 1939-43

(Millions of Dollars)

Group	1939	1940	1941	1942	1943
Agricultural and vegetable products	127·8	157·3	171·8	147·7	176·4
Animals and products	32·8	35·4	34·9	34·9	36·6
Fibres and textiles	100·9	147·3	161·1	189·1	195·3
Wood and paper	33·7	38·1	36·7	38·2	40·3
Iron and its products	183·2	298·9	431·6	377·8	420·2
Non-ferrous metals	42·1	71·1	94·8	82·4	115·5
Non-metallic minerals	132·8	161·2	190·0	221·3	250·9
Chemicals and allied products	43·7	51·8	65·4	66·8	70·6
Miscellaneous commodities	54·1	120·8	262·5	486·0	429·3
Totals	**751·1**	**1,081·9**	**1,448·8**	**1,644·2**	**1,735·1**

Exports.—The phenomenal expansion of Canadian exports during 1942 continued unabated in 1943. The value of domestic exports was $607,000,000 greater than in 1942, and the first eight months of 1944 (latest figures available) recorded a further increase of $400,000,000 over the same period of 1943. The high level of exports

Rows of these freight sheds at every sea port in Canada contain an enormous array of products brought in at great risk and in face of the hazards of war from other countries for distribution to Canadian consumers. Bags of coffee beans from Brazil are in the foreground.

Courtesy National Film Board

is a clear indication of the volume of war materials supplied to the Armed Forces of the United Nations, supplemented by heavy shipments of foodstuffs and essential civilian goods. In the month of May, 1944, immediately preceding the invasion of France, domestic exports reached the all-time high value of $368,000,000. Relaxation of censorship regulations permits the publication of trade by commodities and the following table summarizes the main items of foods, munitions, war materials and essential goods that have played such an important part in the growth of exports.

Domestic Exports of Foods, Munitions and War Materials, 1939-43
(Millions of Dollars)

Item	1939	1940	1941	1942	1943
Barley	7·9	1·1	2·0	5·1	32·4
Oats	4·1	6·2	3·3	6·8	42·3
Wheat	109·0	119·5	161·9	121·8	234·5
Flour	16·4	26·4	44·8	45·8	66·3
Fish, canned	9·3	9·8	16·4	20·0	21·0
Bacon	32·7	58·8	77·5	100·6	116·1
Cheese	12·2	15·7	13·6	26·9	26·8
Milk, processed	3·3	4·3	7·2	6·8	5·2
Eggs, fresh and powdered	0·3	2·8	4·2	9·8	15·1
Planks and boards	48·8	67·7	74·2	80·1	74·2
Pulpwood	11·9	12·5	15·9	20·3	18·6
Wood-pulp	31·0	60·9	85·9	95·3	100·0
Newsprint	115·7	151·4	154·4	141·1	144·7
Pigs, ingots, blooms and billets	5·2	12·9	21·8	20·5	22·7
Motor-vehicles and parts (includes trucks, carriers, tanks, etc.)	25·9	65·6	153·7	328·3	502·6
Guns	[1]	2·7	13·0	73·7	143·9
Aluminum	26·4	34·3	77·2	117·3	129·3
Copper	53·2	52·7	43·3	35·1	30·8
Lead	9·9	9·5	13·5	15·7	9·6
Nickel	57·9	61·2	67·7	68·4	68·3
Zinc	9·9	12·0	12·3	15·1	16·5
Radio and wireless apparatus	0·1	0·1	0·7	21·9	36·2
Asbestos	15·8	15·8	19·6	22·1	22·5
Abrasives	4·6	7·7	11·1	15·0	17·6
Explosives	0·6	2·8	20·2	24·3	17·3
Fertilizers	9·2	8·6	10·3	10·0	18·1
Ships	0·5	0·1	2·0	106·8	88·9
Aircraft and parts	0·4	6·0	20·2	27·0	44·7
Canadian Army and Navy stores	[1]	2·5	40·3	55·1	48·6
Cartridges and shells	0·8	12·5	41·9	300·4	353·9
Totals, Domestic Exports	**924·9**	**1,179·0**	**1,621·0**	**2,363·8**	**2,971·5**

[1] Less than $50,000

Trade by Countries.—Of Canada's total imports in 1943 of $1,735,000,000, the United States supplied $1,424,000,000 or 82·1 p.c., while the United Kingdom supplied $135,000,000 or 7·8 p.c. Thus, the two countries accounted for almost 90 p.c. of all imports. The proportion in 1939 was 15·2 p.c. from the United Kingdom and 66·1 p.c. from the United States.

Of total domestic exports in 1943 of $2,971,000,000, the United States took $1,149,000,000 or 38·7 p.c. and the United Kingdom took $1,033,000,000 or 34·8 p.c., the two together taking 73·5 p.c. of all exports. Thus, almost 80 p.c. of Canada's foreign commerce was with these two countries.

Imports from Empire countries other than United Kingdom dropped from $113,000,000 in 1942 to $104,000,000 in 1943, while those from foreign countries other than United States increased to $73,000,000 in 1943 from $66,000,000 in 1942.

Armoured vehicles, which form a large part of Canada's exports, awaiting shipment at an Ontario freight yard.

Courtesy, Canadian National Railways

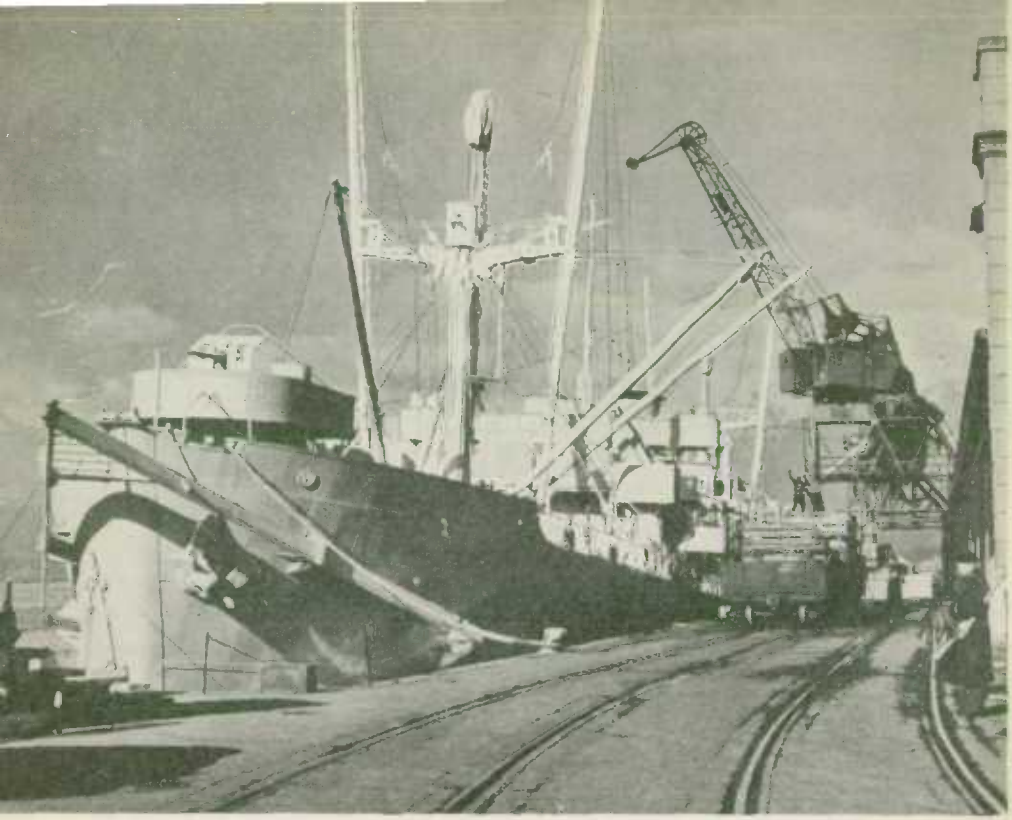
Exports to other Empire countries amounted to $369,000,000 in 1943 compared with $412,000,000 in 1942 whereas exports to other foreign countries increased from $324,000,000 in 1942 to $421,000,000 in 1943.

The preponderance of war materials in Canadian exports is indicated by the following table showing exports to various Allied Nations and theatres of war.

Domestic Exports to Allied Nations and Theatres of War, 1939-43

(Millions of Dollars)

Country	1939	1940	1941	1942	1943
United States	380·4	443·0	599·7	885·5	1,149·2
United Kingdom	328·1	508·1	658·2	741·7	1,032·6
British India	5·2	11·2	38·0	167·9	134·6
French Africa	0·1	Nil	0·2	0·6	71·3
Russia	0·3	"	5·3	36·6	57·7
Australia	32·0	33·9	37·3	78·9	46·7
Newfoundland	8·5	12·6	31·9	50·8	43·5
British South Africa	18·0	37·9	36·1	27·5	35·6
New Zealand	12·0	9·8	10·0	30·3	28·1
Iraq (Mesopotamia)	Nil	0·1	1·2	20·2	22·1
British East Africa	0·8	4·8	3·9	5·1	18·7
Turkey	Nil	Nil	Nil	0·4	14·5
Italy	2·2	0·9	"	Nil	8·8
Ceylon	0·4	0·4	0·3	1·3	7·4
China	2·6	2·5	6·6	7·8	Nil



Powerful mobile cranes transfer war materials manufactured in all parts of Canada from railway cars to steamships for transport to Allied Nations.

Courtesy, Canadian National Railways

Shipments to China, interrupted during 1943, have been resumed and amounted to $14,900,000 during the first eight months of 1944 while shipments to Italy have increased to $113,500,000 during the same period.

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 growth of tourist travel in Canada, to the point where it became one of the nation's great 'service' industries, was a remarkable development in pre-war years. Tourist expenditures are, in part, the return that Canada derives from scenic attractions, fish and game, summer and winter sports activities and other attractions. The War has, of course, curtailed tourist traffic. Total expenditures in Canada of travellers from other countries were estimated at $89,500,000 in 1943 as compared with $81,900,000 in 1942 and $149,000,000 in 1939. Expenditures of Canadians abroad were $37,200,000 in 1943 as compared with $27,700,000 in 1942 and $81,000,000 in 1939.

As a large part of the traffic from the United States customarily travels to Canada by motor-car, the curtailment in the use of automobiles during the war years has been the main factor in reducing international tourist expenditures. The effects of the decline in motor traffic first became pronounced in 1942 when the expenditures of United States motorists in Canada were $26,000,000 compared with $54,000,000 in 1941. In 1943 there were further contractions in the expenditures of motorists but these were more than offset by much heavier expenditures by persons travelling by rail than in former years, which reflects a growing volume of business and official travel.

Expenditures of Canadian travellers in the United States in 1943 showed an increase of $9,300,000 over 1942 but a decrease of $33,300,000 from the amount in 1939. In order to conserve Canada's supply of United States dollars for more essential uses, the Government, in July 1940, placed restrictions on pleasure travel involving the use of United States dollars. Since then Canadian expenditures in the United States have represented mainly expenditures for such purposes as business trips, travel for health reasons, etc. Modification of these restrictions was made in May, 1944. Under the new regulations Canadians may obtain up to $150 in United States currency for one trip in a 12-month period, or up to $75 for each of two trips in the same period.

Expenditures of Foreign Travellers in Canada and Canadian Travellers Abroad, 1942 and 1943

Class of Traveller	1942			1943		
	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	2,900	3,300	—400	2,500	3,500	—1,000
Travellers from and to the United States—						
Automobile	26,000	2,600	23,400	17,000	1,900	15,100
Rail	32,000	13,900	18,100	49,000	22,000	27,000
Boat	4,000	500	3,500	6,000	700	5,300
Bus (exclusive of local bus)	6,000	2,600	3,400	5,000	3,200	1,800
Aeroplane	3,000	1,100	1,900	3,000	1,200	1,800
Other (pedestrians, local bus, etc.)	8,000	3,700	4,300	7,000	4,700	2,300
Totals, United States	79,000	24,400	54,600	87,000	33,700	53,300
Totals, All Countries	**81,900**	**27,700**	**54,200**	**89,500**	**37,200**	**52,300**

Canadian Balance of International Payments

Canada's external economic relations are revealed in outline by statements of the Canadian balance of international payments. The statements present, in statistical form, a summary of the commercial and financial transactions occurring between Canada and other countries. They furnish, therefore, an over-all view of the external relations of the Canadian economy just as national income studies provide an outline of its internal structure. In an economy such as Canada's, where external sources of income and demand furnish an important dynamic element to activity within the

country, the balance of payments focuses attention upon the impact of external demand upon the Canadian economy, the expenditure of income outside of Canada, and the resulting financial and exchange aspects.

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 and non-Empire countries. In so far as is possible, the statement for Empire countries represents the sterling area and the statements for non-Empire countries represents the United States dollar area.

With the sterling area, the problem has been one of finding means of financing the growing British shortage of Canadian dollars resulting from the extraordinary war-time needs of the United Kingdom for Canadian munitions, food and raw materials. These needs, of course, have increased to unprecedented proportions as the United Kingdom is a principal base of operations against the Axis. In the earlier years of the War, this shortage was principally met by the Canadian Government repatriating Canadian securities owned in the United Kingdom and by the accumulation of sterling balances by the Foreign Exchange Control Board. Some settlements have also been effected by purchases of gold from the United Kingdom which has, in turn, been sold in the United States to settle Canadian deficits there. In 1942, however, besides some additional repatriations, a new method of meeting the growing needs of the United Kingdom for Canadian dollars was introduced when a contribution of $1,000,000,000 was made to the Government of the United Kingdom for expenditure on war supplies in Canada. In the same year the major part of the accumulation of sterling balances by Canada was converted into a loan of $700,000,000 to the United Kingdom. In 1943 a further development in the methods of financing the war-time needs of the Allied Nations was the appropriation by the Canadian Parliament of $1,000,000,000 for Mutual Aid, for the production and transfer of Canadian war supplies to the United Nations. There were also special receipts of United States dollars from the United Kingdom in 1943. Increasing current payments by the Canadian Government to meet the overseas expenditures of the Canadian Forces have also provided a very substantial source of Canadian dollars for the United Kingdom. In short, the United Kingdom has been able to obtain such a large volume of commodities from Canada for the prosecution of the War only because of special receipts of Canadian dollars such as have been outlined above.

In the case of the balance of payments with non-Empire countries, the central problem has also been one of scarcity—in this case a Canadian shortage of United States dollars. The customary deficits in Canada's current account with the United States were greatly augmented by the War in each year until 1943, principally because of the rapid rise in Canadian imports from the United States. At the same time, net credits from other foreign countries whose currencies are convertible into United States dollars have sharply contracted with the decline in exports to Continental Europe and Asia.

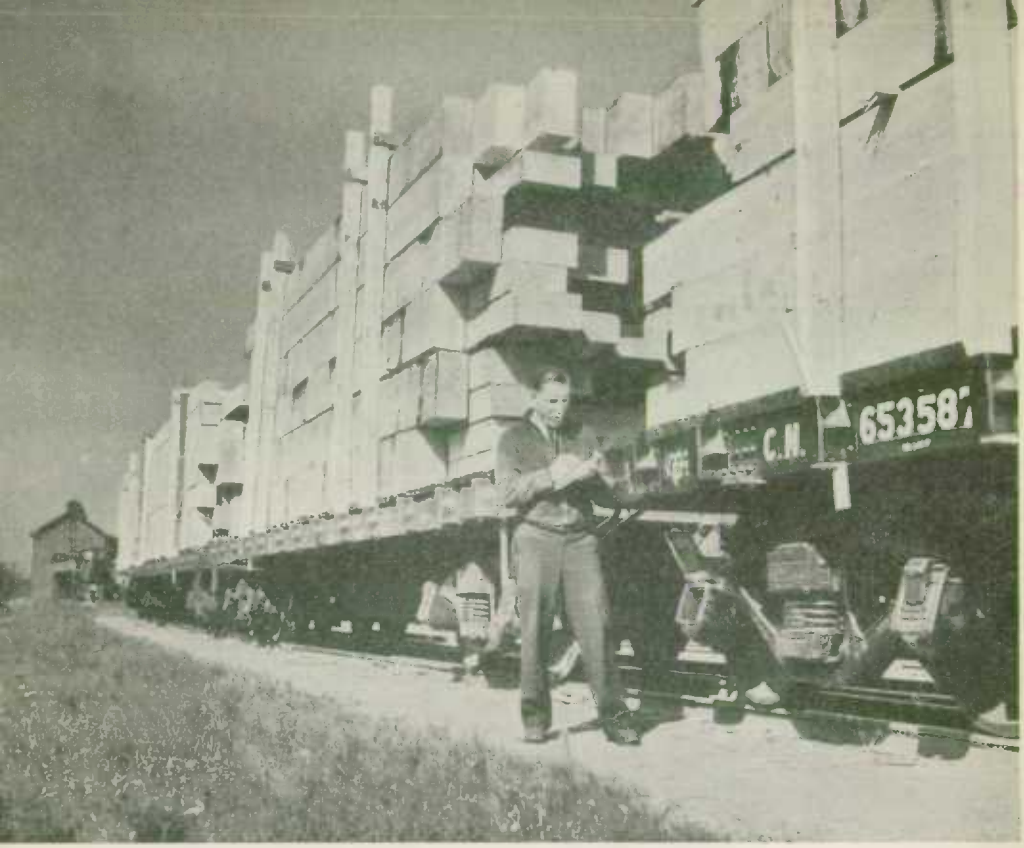
Since, during the war period, the deficits incurred with the United States dollar area have had to be settled with United States dollars, it became necessary to conserve United States dollars for the more essential purposes of the War and to develop new

External Relations

Tangible evidence of Canada's important role in the supplying of war materials and essential supplies to the fighting fronts has been given in the recent signing of Mutual Aid Agreements. *Top:* The Rt. Hon. Malcolm MacDonald, M.P., High Commissioner for the United Kingdom, and the Rt. Hon. W. L. Mackenzie King, Prime Minister of Canada, signing the Agreement with the United Kingdom. *Centre:* The Hon. Sir Wm. Glasgow, K.C.B., High Commissioner for Australia, and the Rt. Hon. W. L. Mackenzie King signing the Agreement with Australia.

Marking closer relationship between Canada and China, Dr. Liu Shih Shun, Chinese Ambassador to Canada, and the Rt. Hon. W. L. Mackenzie King sign the Treaty by which Canada relinquished her extra-territorial rights in China.

National Film Board



A Shipment of Canadian Lumber Destined for Great Britain.

Courtesy, Canadian National Railways

sources of United States dollars. Exchange control with the control of capital movements provided the principal means of conserving United States dollars. Government measures have also limited expenditures on Canadian pleasure travel and non-essential commodities in non-Empire countries. As a result of the agreements entered into at Hyde Park in April, 1941, new sources of United States dollars were produced with the sale of munitions on a large scale to the United States Government and further development of the production of raw materials in Canada. Settlements made by the United Kingdom in United States dollars, and in gold sold in the United States, have also been a factor in meeting deficits in the United States. Another factor of increasing importance in alleviating Canada's shortage of United States dollars has been the growing volume of imports of capital arising, mainly, from the purchase of outstanding Canadian bonds by United States investors.

The rapid and continued rise in the value of imports during the War has been the primary factor in the expansion in payments to the United States dollar area. Imports from the United States have grown steadily from $472,000,000 in 1939 to $1,311,000,000 in 1943. The demand for imports is, of course, closely related to the war production program. Imports of capital equipment and munitions production expanded imports of materials, fuel and components and represent a major part of the increase in 1942 and 1943. Direct Government purchases in the United States of aircraft and other equipment for the Armed Forces have been substantial and were particularly large in 1943.

Estimated Canadian Balance of International Payments, 1942 and 1943

(Millions of Canadian Dollars)

Item	1942[1]			1943[2]		
	Credits	Debits	Net	Credits	Debits	Net
A. CANADA AND ALL COUNTRIES—						
Current Account—						
Merchandise trade, after adjustment	2,515	1,406	+1,109	3,050	1,579	+1,471
Net exports of non-monetary gold	184	–	+ 184	142	–	+ 142
Tourist expenditures	81	26	+ 55	88	36	+ 52
Interest and dividends	67	270	– 203	59	261	– 202
Freight and shipping	221	228	– 7	288	294	– 6
All other current transactions	308	345	– 37	437	688	– 251
TOTALS—Current Account	3,376	2,275	+1,101	4,064	2,858	+1,206
Special gold transactions[3]	23	23	–	143	143	–
Capital movements	1,235	1,343	– 108	677	1,360	– 683
Billion-dollar contribution	–	1,000	–1,000	–	–	–
Mutual aid	–	–	–	–	511	– 511
Balancing item[4]	7	–	+ 7	–	12	– 12
B. CANADA AND EMPIRE COUNTRIES—						
Current Account—						
Merchandise trade, after adjustment	1,541	226	+1,315	1,763	200	+1,563
Tourist expenditures	2	2	–	1	2	– 1
Interest and dividends	7	51	– 44	5	52	– 47
Freight and shipping	127	49	+ 78	148	47	+ 101
War services	[5]	[5]	–	128	499	– 371
All other current transactions	149	229	– 80	21	50	– 29
TOTALS—Current Account—						
United Kingdom	1,657	434	+1,223	1,889	740	+1,149
Other Empire Countries	169	123	+ 46	177	110	+ 67
All Empire Countries	1,826	557	+1,269	2,066	850	+1,216
Special gold transactions[3]	–	23	– 23	–	143	– 143
Capital movements	884	1,129	– 245	20	586	– 566
Billion-dollar contribution	–	1,000	–1,000	–	–	–
Mutual aid	–	–	–	–	502	– 502
Balancing item[4]	–	1	– 1	–	5	– 5
C. CANADA AND NON-EMPIRE COUNTRIES—						
Current Account—						
Merchandise trade, after adjustment	974	1,180	– 206	1,287	1,379	– 92
Net exports of non-monetary gold	184	–	+ 184	142	–	+ 142
Tourist expenditures	79	24	+ 55	87	34	+ 53
Interest and dividends	60	219	– 159	54	209	– 155
Freight and shipping	94	179	– 85	140	247	– 107
All other current transactions	159	116	+ 43	288	139	+ 149
TOTALS—Current Account—						
United States	1,461	1,641	– 180	1,898	1,917	– 19
Other Foreign Countries	89	77	+ 12	100	91	+ 9
All Non-Empire Countries	1,550	1,718	– 168	1,998	2,008	– 10
Special gold transactions[3]	23	–	+ 23	143	–	+ 143
Capital movements	351	214	+ 137	657	774	– 117
Mutual aid	–	–	–	–	9	– 9
Balancing item[4]	8	–	+ 8	–	7	– 7

[1] Revised figures. [2] Preliminary. [3] This represents gold and United States dollars 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. [4] 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. [5] In 1942 expenditure on War Services are included in "All other current transactions".

A Port Arthur Grain Elevator.—This fully mechanized elevator, the largest in the world, is one of many such bulwarks on the food front.

Courtesy, Hydro-Electric Power Commission of Ontario

CHAPTER XIV

Internal Trade—Prices—Cost of Living

Internal Trade

The diverse resources of the various parts of the country have led to a vast exchange of products and the task of providing goods and services where they are required for consumption or use by a population of 11,507,000, very unequally distributed over half a continent, accounts for a greater expenditure of economic effort than that required for the prosecution of Canada's great volume of external trade, high though the Dominion ranks among the countries of the world in this field.

Internal trade is broad and complicated, including as it does the transportation and distribution of goods within the country through the medium of railways, steamships, warehouses, wholesale and retail stores, and other agencies. It also includes all services such as those carried on by doctors, hospitals, theatres, schools, banks, insurance companies, and innumerable others. All such activities, even if not productive of material goods, add substantially to the national income.

Unfortunately, owing to the many ramifications of internal trade, its statistical measurement presents great difficulties. Nevertheless, some idea of its extent may be gathered from the fact that, in 1943, the national income arising from productive operations in Canada was estimated at $8,700,000,000 while the value of exports of Canadian produce (excluding gold) though proportionately very much higher than normal was $2,971,000,000 in that year.

Wholesale Trade

Results of the Census of Merchandising and Service Establishments for 1941 show a total of 24,758 wholesale trading establishments or agencies with annual sales of $5,290,750,500 of which $4,278,341,500 represented the sale of goods on own account while the remaining $1,012,409,000 represented sales made on commission for others. Wholesale firms required the services of 94,627 male and 22,844 female employees to whom $189,449,100 was paid in salaries and wages. In addition there were 13,656 proprietors actively engaged.

These figures summarize the activities of wholesale firms which differ widely not only in the commodities dealt in but also in the services or functions performed. There are duplications in the total sales figures, some types of wholesalers transacting business with other types. Included in the totals are 9,417 establishments classified as wholesalers proper and consisting chiefly of regular wholesale merchants engaged in servicing the retail trades. These had sales of $2,358,475,300. The remainder of the establishments consist of such types of business as agents and brokers, grain elevators and other assemblers of farm products, sales offices maintained by manufacturers at locations apart from the plant and the bulk tank stations operated by the wholesale distributors of petroleum products.

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. Final

results of the Census of Merchandising for 1941 show a total of 137,331 retail stores with $3,440,901,700 sales, an increase of 24·9 p.c. over the volume of business transacted in 1930, the only other year for which complete details are available.

Retail trading provided employment for 297,047 full-time employees in 1941 of whom 188,658 were male and 108,389 were female and to whom $289,379,500 was paid in salaries and wages. There were also 95,561 part-time employees who received $25,058,000. In addition there were 131,823 proprietor workers engaged in their own stores.

Sales on the instalment plan were reported at $310,620,400 or about 9 p.c. of the total volume of retail business. Customers' accounts owing to retail merchants, representing accounts outstanding not only on instalment sales but also on open account and charge purchases, amounted to $240,269,200 at the end of 1941.

Chain Stores.—There has been but little change in the proportion of the total retail trade transacted by retail chains in recent years. There were 532 chain-store companies operating in Canada in 1941 and these had 8,011 stores and $642,999,500 sales or 18·7 p.c. of the total business of all stores including both chains and independents. In 1930 the corresponding ratio was 18·3 p.c.

Current Trends.—The marked upward trend in dollar volume of retail purchasing which was evident in Canada during the first part of the War has slackened greatly during recent years, a result which may be attributed in part to the fixing of prices and in part to the curtailment of supplies. Retail sales were 14 p.c. higher in 1942 than in 1941. The following year witnessed an increase of only 4 p.c. over 1943 while sales for the first seven months of 1944 stood about 7 p.c. above the corresponding period of the preceding year. Stores specializing in durable consumer goods continued to register declining sales, figures for stores dealing primarily in electrical household appliances recording the largest decreases.

Retail Services

In addition to the more than 137,000 retail merchandise stores in operation in 1941, there were 49,271 service establishments recorded in the results of the Census of Merchandising and Service Establishments and these had total receipts of $254,677,900 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 forms a large proportion of the total. Included in the personal services group are 14,529 barber shops, beauty parlours, or combined barber shops and beauty parlours with total receipts of $30,563,900. Included in the amusement group are 1,244 motion-picture theatres with box-office receipts (exclusive of taxes) amounting to $41,368,800. Figures for 1942 and 1943 reveal a further expansion in motion-picture theatre attendance and receipts. There were 205,826,197 paid admissions in 1943 while box-office receipts, exclusive of amusement taxes, amounted to $52,567,989. Dominion and provincial amusement taxes at motion-picture theatres amounted to an additional $13,381,361.

Loading Grain at Port Arthur, Ont., the Greatest Grain Shipping Centre in the World.—For seven months during the year, freighters on the Great Lakes waterways carry enormous quantities of grain, coal, oil and miscellaneous commodities destined for the markets of the world.

Courtesy, National Film Board

Co-operative Associations

Co-operative business organizations in Canada occupy an important position in the marketing of agricultural products, purchasing of farm supplies, and in operating co-operative stores. For the year ended July 31, 1943, in comparison with 1942, the value of grain marketings increased from $87,000,000 to $134,000,000, live stock from $40,000,000 to $63,000,000, dairy products from $39,000,000 to $44,000,000, fruits and vegetables from $15,000,000 to $19,500,000, and poultry and eggs from $7,000,000 to $11,000,000. According to reports received in 1943, shareholders and members financially interested numbered 585,826 and total business exceeded $350,000,000. The members' equity amounted to $62,850,226 consisting of paid-up share capital of $13,325,560, and reserves and surplus of $49,524,666. From 1942 to 1943 total working capital increased from $20,000,000 to $25,000,000.

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 1,675 co-operative associations reporting in 1943, a total of 518 handled food products to the value of $12,000,000 and 229 associations handled over $2,000,000 worth of clothing and home furnishings for their members and patrons. These associations included the business of approximately 330 urban consumer societies. Petroleum products, handled by 500 associations, were valued at $10,000,000.

In order to increase crop and live-stock production, farmers of 625 associations purchased $19,000,000 worth of feed, fertilizer and spray material on a co-operative basis.

Credit unions are active in all provinces of Canada. At Dec. 31, 1943, there were 1,780 credit unions chartered in Canada with a membership of 374,069. More than $154,000,000 has been lent to the members of the various credit unions in Canada during their period of operation. Loans in the year 1943 totalled about $17,000,000.

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 400 such companies in Canada with net assets of over $12,000,000 and insurance at risk amounting to over $1,000,000,000. These have a long history of successful operation.

Approximately 105,000, or 6 p.c., of the telephones in Canada are operated by rural co-operative companies in which there is a total investment of $22,000,000.

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. 927, 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. The Act provides for the publication of reports of such investigations and for prosecution when a combine is found to exist. During the War, direct price and supply controls of the Wartime Prices and Trade Board, the Department of Munitions and Supply and other Government war-time agencies have operated in fields of industry and trade to which the Combines Investigation Act is applicable. As such controls are removed, competition will be required to resume its automatic functions. The Combines Investigation Act designed to prevent undue restrictions on trade will assist in the development of a vigorous system of private enterprise in the post-war period.

Railway Tank Cars at a Gasoline Storage Yard.

Courtesy, National Film Board

Wholesale Prices

It is of more than passing interest that after five years of war, Canadian wholesale price levels are still approximately upon a par with 1926 averages. Prices in 1926 provided a representative reference level for the period following post-war deflation in 1920 and 1922. This level was approximately 50 p.c. higher than in 1914, and 56 p.c. lower than the 1920 inflationary peak.

The general wholesale price index did not return to a parity with 1926 until July, 1943. From that time until August, 1944, there was an increase of approximately 2 p.c., with prices after the first quarter of 1944 showing a slightly weaker tendency. The August, 1944, index of 102·3 recorded a war-time increase of approximately 42 p.c., and about 30 p.c. of this rise had occurred before December, 1941. The August, 1944, index number of Canadian farm product wholesale prices was 101·2, almost exactly on a par with the general wholesale index. The general wholesale index and the farm product series had moved on roughly the same level since October, 1943. Prior to that time this relationship had not existed since 1930, with the exception of a brief interval during 1937.

Price history during the First and Second World Wars presents several noteworthy parallels and contrasts. Both wars interrupted a decline in price levels, and both times in the initial stages war-time stimulus to commodity markets was offset by military reverses. In both wars, prices commenced to advance sharply in the latter part of the second year. However, in place of the rapid increases of 1916 and 1917, there were in 1942 and 1943 only moderate gains. Organization for the control of prices was established by most of the major belligerents in the early stages of the conflict. In Canada, key commodities were placed under control as early as September, 1939, and regulations establishing maximum prices for commodities in wholesale and retail levels became effective in December, 1941.

Index Numbers of General Wholesale Prices and Wholesale Prices of Canadian Farm Products, August, 1939, and January, 1943, to December, 1944

(1926=100)

Year and Month	Index Numbers of—		Year and Month	Index Numbers of—	
	General Wholesale Prices	Canadian Farm Products		General Wholesale Prices	Canadian Farm Products
1939			**1944**		
August	72·3	58·4	January	102·5	104·0
			February	102·7	104·3
1943			March	103·0	104·5
January	97·1	87·7	April	102·9	104·0
February	97·5	88·6	May	102·5	101·8
March	98·6	91·3	June	102·5	102·0
April	99·0	92·3	July	102·5	102·0
May	99·3	92·8	August	102·3	101·2
June	99·6	94·4	September	102·3	101·0
July	100·1	96·4	October	102·4	103·0
August	100·4	97·4	November	102·4	103·1
September	101·1	97·9	December	102·5	103·3
October	101·9	103·6			
November	102·4	104·2			
December	102·5	104·6			

Retail Prices, Rents and Services

The Third Year of the Price Ceiling.—Since the introduction of the general price ceiling in December, 1941, the cost-of-living index has shown only moderate increases. It rose from 114·6 on Oct. 1, 1941, to 117·7 on Oct. 1, 1944 (August 1939=100).

Under the price ceiling the prices of most goods and the more important services, as well as rents, were frozen at levels prevailing in the "basic period", Sept. 15 to Oct. 11, 1941. A few types of commodities were exempted from the ceiling, but where their prices tended to rise unduly and the goods were important, maximum prices were later established (e.g., the more important fresh fruits and vegetables). Price control is under the jurisdiction of the Wartime Prices and Trade Board, which is also the responsible war-time agency in the sphere of civilian supply (see p. 27).

The "basic-period principle" which governs the administration of price control involves not only the stabilization of prices but also the maintenance, so far as possible, of the same price-quality relationships and the same price ranges as in the basic period, as well as the maintenance of a normal proportion of supplies of low-price lines. It involves, too, the distribution of scarce goods to the various regions and dealers in the same proportion as previously. Since price control greatly restricts the "free market" which normally regulates production and distribution, it is necessarily linked with controls over supply and distribution, such as rationing, the allocation of raw materials and, where necessary, the direction of production and the simplification of products. Similarly, rent control has involved the protection of tenants against arbitrary eviction.

War-time increases in costs have been a serious threat to the price ceiling, in addition to the general pressure of expanding buying power. To a substantial degree, the "squeeze" of higher costs has been absorbed by producers, importers

Scoring Canned Fruits after Testing.—A group of skilled women is employed by the Consumers Section of the Department of Agriculture for this purpose.

Courtesy, National Film Board

and distributors. In some businesses the impact of increased costs has been offset by the higher volume of output or sales, and in many fields cost-reducing measures, frequently introduced by the Prices Board, have helped to reduce the squeeze. Where such methods proved insufficient, and where a continued supply of the commodity concerned was necessary, subsidies have been paid (sometimes directly and sometimes through bulk purchasing or remission of duties by the Government); in some instances (e.g., certain foods, lumber), ceiling prices have been raised.

In fixing maximum prices for goods not sold during the basic period (e.g., goods made of substitute materials, or goods that had been off the market in the basic period and later reappeared), the procedure is to determine the price at which these goods would have been sold in the basic period, taking into account their usefulness, serviceability, durability and intrinsic worth, rather than their cost of production. Where a price so determined does not cover current costs of production, the problem is dealt with in the same way as any other arising out of higher costs.

The major problems of price control that arose during the first two years of the general ceiling were discussed in "Canada 1944". This review deals with some of the problems encountered during the third year.

In the interests of greater clarity and better enforcement, specific maximum prices have been set for some goods, particularly products of primary industries, to replace individual ceilings based on each seller's "basic period" prices. Such specific maximum prices have usually been set at the wholesale level, with allowance for regional differences and with regulated retail markups or, in some instances, specific retail prices. During the year such standard maximum prices were set for a number of important goods, including standard retail prices for beef, veal, lamb and mutton, and lumber and fuelwood.

Increasing costs of lumbering operations necessitated a number of price adjustments which made it difficult for many producers of woodenware to maintain ceiling prices on their products. In the autumn of 1943 the Timber Administrator announced that no further increases in the price of lumber would be permitted. To reinforce stability of prices, specific wholesale and retail prices were set for the various regions, replacing the system of individual price ceilings. Those manufacturers of essential woodenware who were in need of financial relief were given assistance by means of subsidies arranged for whole industries (e.g., "hard" furniture, and fruit and

vegetable containers), by bulk purchases (e.g., basket bottoms) or by special subsidy arrangements with individual firms covering slack and tight cooperage, baskets, thread spools, handles for tools, and certain other wood products.

Maintenance of the price-quality relationship became an important problem in the apparel field, with the development of shortages of certain types of yarns and fabrics and of rubber for footwear, and the resulting need to use substitute materials. Manufacturers were, therefore, asked to submit samples and specifications of their products to the Administrator concerned. To facilitate the investigation of complaints they were required to mark their name or trade mark, as well as the style number and size, on each garment, and to attach a price tag. Similar regulations were made for footwear. The Standards Division of the Wartime Prices and Trade Board has a staff of competent inspectors who undertake test checks and surveys to detect instances of quality degradation and follow back the merchandise from the retailer to the manufacturer, so that offenders can be prosecuted.

The production of durable consumer goods such as automobiles, washing machines, stoves, etc., has been suspended in many cases and greatly reduced in others. With the wearing out of articles in use and the depletion of dealers' stocks, the used goods market assumed increasing importance, and special measures had to be taken to keep the prices of used goods under control. Owing to the great variations in the type and condition of second-hand goods, a seller's "basic period" prices are difficult to determine. For some used goods (e.g., automobiles, bicycles, vacuum cleaners, stoves), dealers' selling prices were, therefore, fixed as a percentage, depending on age, of the price of similar new goods. While the sale of personal and household effects was originally exempt from the price ceiling, such sales of the above-mentioned durable goods were brought under control to prevent the use of this exemption as a means of evading price control.

Fresh fruits and vegetables were originally exempted from price-ceiling regulations owing to the administrative difficulties involved in fixing and maintaining appropriate ceiling prices on products that are seasonal, perishable, variable as to supply, quality and size, and sold by a great many small-scale producers. Sharp price increases occurred in the summer of 1943, resulting from increased demand and a short domestic crop. In order to keep down the cost of living, price control was imposed on most of the important fresh fruits and vegetables in the course of the subsequent year.

With the defeat of Germany in sight, manufacturers and government agencies have given increasing attention to the question of expanding civilian production. With this in mind, the Wartime Prices and Trade Board has been carefully reviewing its restrictive orders with a view to removing them just as soon as war conditions permit. A good many orders prohibiting and restricting the manufacture of civilian goods (particularly those using metal) have already been removed so that manufacturers could plan new lines of production even though shortages of, and controls over, raw materials and labour supply might for the time being preclude any considerable increase in such production. In addition, the Board's regulations concerning new business entries were relaxed considerably in the summer of 1944 and since then permits have been granted more freely.

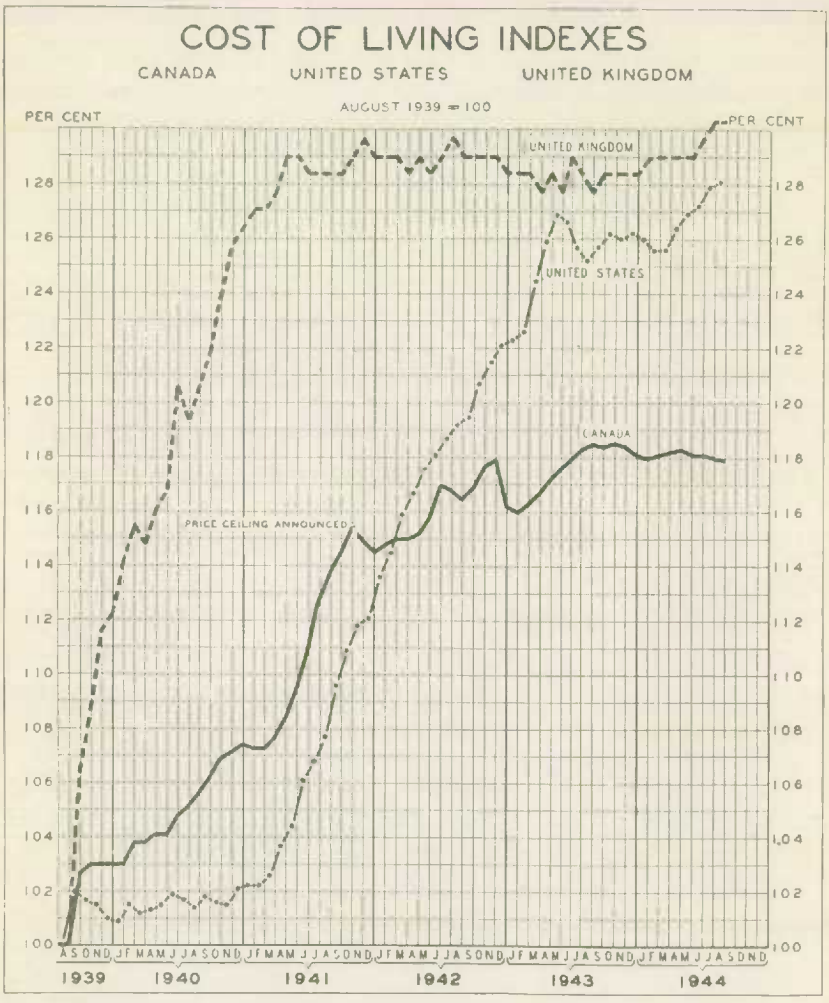
Now that the reconversion of industry has begun, the pricing of goods not sold during the basic period has become a major problem of price control. In the sphere of imports the same problem has been much accentuated since the Government decided to revoke Schedule I of the War Exchange Conservation Act, which had prohibited the import of a long list of articles from non-sterling areas.

In accordance with Government policy with respect to price control in the transition period, maximum prices for all "new goods" will continue to be fixed in strict accordance with the basic-period principle. At the time of writing (October, 1944) the inflationary pressures remain great and while curtailment of war contracts will in time work strongly in the opposite direction, the early stages of the transition period are likely to be complicated by some continued shortages and bottlenecks in reconversion, by large "pent-up" consumer demand and by war-inflated costs, all of which factors will work to raise prices. Following the War of 1914-18, for example, prices rose abruptly in late 1919 and the early part of 1920 and then declined even more abruptly for more than a year. In continuing to adhere to the ceiling policy, therefore, the objective is to prevent inflation and thus to lessen the risk of deflation. By keeping prices down, the opportunities for developing and expanding domestic and external markets should be increased; in this way the objective of a large volume of production and a high level of employment will be furthered.

In some instances, of course, manufacturers of new products have been unable to operate under basic-period ceilings owing to war-time increases in costs which they could absorb only while producing on government account and at full capacity. In a number of cases, some departure from the basic-period rule has been authorized as had, indeed, been done in previous years. Such adjustments, however, have been treated as exceptions and every attempt has been made to have cost increases absorbed by manufacturers and dealers. In many instances costs have been regarded as being only temporarily inflated and are expected to fall as a result of reduced labour turnover and overtime, increased labour efficiency, technical improvements, lower shipping rates, better and cheaper materials and increased volume of civilian production.

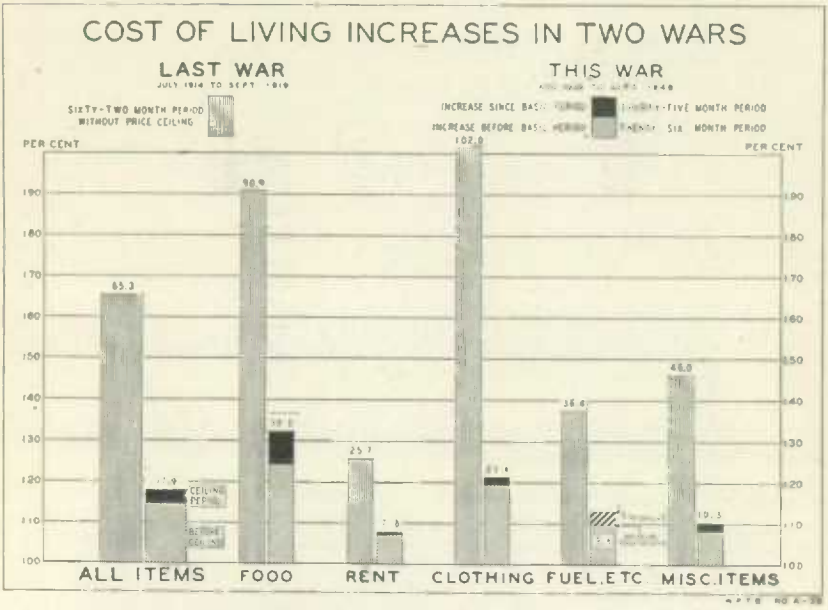
Linemen at Work over a Railway Yard.

Courtesy, Canadian National Railways



Cost of Living

Movements in the official cost-of-living index in 1944 were the smallest for any of the five war years. From January to August, 1944, the index varied between 119·2 and 118·9, a level only fractionally higher than the 1943 average of 118·4. Food prices continued to show moderate net advances, but these were partially offset by substantial declines in domestic electricity rates in many of the larger urban centres. Price increases in budget group indexes from August, 1939, to August, 1944, were as follows: food 32·4 p.c., rent 7·8 p.c., fuel and light 9·8 p.c., clothing 21·4 p.c., home furnishings and services 17·4 p.c., and miscellaneous items 7·6 p.c. The over-all increase in the total cost-of-living index was 18·0 p.c.



This offers a considerable contrast to changes during and after the First World War. Five years after its start, the cost-of-living index for Canada had risen by more than 60 p.c.

Index Numbers of Living Costs in Canada, 1936-43, and by Months, 1944

(Av. 1935-39 = 100)

Year and Month	Food	Rent	Fuel and Light	Clothing	Home Furnishings	Sundries	Total
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	130·7	111·5	112·9	120·5	118·0	108·0	118·4
1944							
January	131·5	111·9	112·7	121·1	118·4	108·9	119·0
February	130·9	111·9	113·0	121·3	118·4	109·1	118·9
March	131·1	111·9	113·0	121·3	118·4	109·0	119·0
April	131·5	111·9	113·0	121·4	118·4	109·0	119·1
May	131·7	111·9	112·5	121·5	118·5	109·0	119·2
June	131·1	111·9	112·5	121·5	118·4	109·0	119·0
July	132·0	111·9	108·9	121·5	118·3	109·0	119·0
August	131·5	111·9	108·7	121·3	118·5	109·0	118·9
September	131·2	111·9	108·7	121·5	118·4	109·0	118·8
October	130·8	112·0	108·7	121·6	118·4	108·9	118·6
November	131·6	112·0	108·1	121·6	118·4	108·9	118·9
December	130·3	112·0	108·1	121·6	118·4	108·9	118·5

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, 1868-1944

Fiscal Year	Total Revenue	Per Capita Revenue[1]	Total Expenditure	Per Capita Expenditure[1]	Net Debt at End of Year	Net Debt Per Capita[1]
	$	$	$	$	$	$
1868	13,687,928	3·90	14,071,689	4·01	75,757,135	21·58
1871	19,375,037	5·25	19,293,478	5·23	77,706,518	21·06
1881	29,635,298	6·85	33,796,643	7·82	155,395,780	35·93
1891	38,579,311	7·98	40,793,208	8·44	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[2]	60·12	2,340,878,984	266·37
1931	357,720,435	34·48	441,568,413[2]	42·56	2,261,611,937	217·97
1933	311,735,286	29·32	532,369,940[2]	50·07	2,596,480,826	244·19
1936	372,595,996	34·03	532,585,555[2]	48·64	3,006,100,517	274·53
1937	454,153,747	41·12	532,005,432[2]	48·17	3,083,952,202	279·22
1938	516,692,749	46·33	534,408,117[2]	47·92	3,101,667,570	278·13
1939	502,171,354	44·57	553,063,098[2]	49·09	3,152,559,314	279·80
1940	562,093,459	49·39	680,793,792[2]	59·82	3,271,259,647	287·43
1941	872,169,645	75·79	1,249,601,446[2]	108·59	3,648,691,449	317·08
1942	1,488,536,343	127·73	1,885,066,055[2]	161·75	4,045,221,161	347·11
1943	2,249,496,177	190·44	4,387,124,118[2]	371·41	6,182,849,101	523·44
1944	2,765,481,945	240·34	5,322,717,737[2]	462·58	8,740,084,893	659·57

[1] Per capita figures for census years are based on census populations and for intervening years on official estimates. [2] Includes advances to railways and transfers from active to non-active assets.

Financing the Present War

The War Budgets.—The first War Budget was passed by Parliament immediately after the outbreak of war in September, 1939, and since then there have been five more, each bringing increases and adjustments in the tax system to meet war-time needs. The details of the first five of these budgets are discussed in earlier editions of this Handbook. The details of the sixth, presented by the Minister of Finance in June, 1944, are discussed below.

Sixth War Budget, 1944.—The taxation changes proposed in the Budget of June 26, 1944, were largely of an incentive character. In the field of individual

A Corner of the General Office of the Foreign Exchange Board.—This organization is an important, though little publicized link in the war-time financial machine.

Courtesy, National Film Board

income taxes the major change was the removal of the savings tax, the deduction of which at the source was alleged to be discouraging overtime work. The changes in corporation taxes were designed to assist industry in making the transition to peace-time conditions. While representing no general relaxation of the severe burden of war-time taxes, they should enable business to go ahead with confidence in making the capital investments necessary in converting to peace-time production.

A provision allowing for a one-year carry back and a three-year carry forward of business losses, including losses incurred in farming, was probably the most important measure having a permanent value. This allowance was much more generous than that previously on the statutes which provided for a one-year carry forward only, except in the case of farming, where the period was two years. Under United States legislation losses may be carried two years either forward or back from the taxation year, while in the United Kingdom they may be carried forward six years. The Canadian provision is biased toward the future, in keeping with the forward looking character of most business ventures, but at the same time makes it possible for business to charge losses which it may encounter in the first post-war year against profits of the last year of the War.

A second part of this program provides for depreciation at double the normal rates in respect of capital expenditure, whether on new or used assets, made after a date to be set by the Government, provided such expenditure represents a new investment by the taxpayer. This measure is of particular significance, in that it represents an attempt to find a way out of the dilemma of having to repeal the excess profits tax too early by the standards of general and fiscal economic requirements, or leaving it so late that reconversion or other new investment would be delayed.

A third measure was designed to meet the arguments of the business world that war-time taxes were depriving businesses of funds which should be spent on maintenance and repairs but which could not be so spent because of labour and material shortages and other restrictions. The Minister of Finance stated in his Budget speech that attempts had been made to find an equitable formula which

would permit the establishment of reserves for deferred maintenance, but that these attempts had been fruitless in view of the difficulty of finding a single formula that would fit all industries. He recommended, therefore, and Parliament so enacted, that expenditures on maintenance and repairs, in a period following a date to be set by the Government, may be charged back to the extent of one-half against the income of previous years but not earlier than 1943. This will enable businesses to obtain the maximum tax advantage from whatever reasonable volume of repair and maintenance expenditures they wish to make after the War when materials and labour are again plentiful.

Under another amendment expenditures on scientific research and experimentation, defined broadly as "any activity in the field of natural or applied science for the extension of knowledge", will receive more generous recognition by the taxing authorities than hitherto. Previously such expenditures were not allowed as a deduction if they did not relate directly to the taxpayer's business or were in the nature of capital expenditures. Under the new provision *all* such expenditures of a current nature will be allowed over a three-year period.

Under amendments to the Excess Profits Tax Act, authority was given to repay the refundable portion of the tax in case of bankruptcy, liquidation, etc., and also to approve assignment of it by way of security where the Governor in Council is satisfied that the proceeds are to be used by the taxpayer in making expenditures that will contribute to the post-war conversion of the taxpayer's business and will provide substantial employment. Another amendment provided for the adjustment upward of a taxpayer's standard profit to the extent of 5 p.c. of the increase in capital employed between the commencement of the 1939 taxation period and the commencement of the 1944 taxation period, and a further provision granted the minimum 40 p.c. rate for the first year of any new business commencing after June 26, 1944.

In addition to the removal of the savings requirement from the personal income tax, there were many other changes of significance. The definition of dependants was broadened to include in-laws of the taxpayer and illegitimate children; the medical expenses provision was made more generous; a helplessness allowance of $480 a year was granted to blind persons; certain changes were made affecting the conditions for obtaining marital status; alimony payments were made eligible as a deduction from income; pay and allowances of members of the women's armed services divisions were made exempt up to $1,600 rather than $1,200; and several other amendments were also enacted.

Apart from the income taxes, other changes included the repeal of restrictions on importations from hard currency countries under the War Exchange Conservation Act and the removal of customs duties on imported agricultural implements. No significant changes were made in any of the other tax sources. Minor amendments were made to the Succession Duties Act, the Special War Revenue Act, and the Customs Tariff, which were largely of a technical character.

Revenues and Expenditures

In the fiscal year ended Mar. 31, 1944, both revenues and expenditures again far exceeded any year in the history of the Dominion. Net revenues increased by $515,986,000 to $2,765,482,000, an increase to which all important tax sources contributed. Of total disbursements of $5,322,718,000, expenditures on the War accounted for $4,587,023,000 or approximately 86 p.c. This amount included

$912,603,000 representing Canada's contribution to the war effort of the United Nations as a whole through United Nations Mutual Aid. Ordinary expenditures, covering the normal operating costs of the Government, increased by $69,130,000 mainly owing to increased debt charges arising out of the War. Special expenditures, mainly for agricultural relief purposes, increased by $6,208,000, while expenditures on Government-owned enterprises remained unchanged. The over-all deficit for the year amounted to $2,557,236,000 compared with $2,137,628,000 in the previous fiscal year.

Summary of Total Revenues and Expenditures, Fiscal Years 1940-44

Item	1940	1941	1942	1943	1944
	$'000	$'000	$'000	$'000	$'000
Revenues					
Customs Import Duties	104,301	130,757	142,392	118,963	167,882
Excise Duties	61,032	88,608	110,091	138,721	142,124
Income Tax	134,449	220,471	403,606	910,189	1,151,757
National Defence Tax	–	27,672	106,637		
Excess Profits Tax	–	23,995	135,168	454,581	468,718
Sales Tax	137,446	179,701	236,183	232,929	304,915
War Exchange Tax	–	61,932	100,874	94,553	118,912
Other taxes	30,457	37,404	125,962	186,784	237,503
Totals, Revenues from Taxation	467,685	770,540	1,360,913	2,136,720	2,591,811
Non-tax revenues	73,931	89,215	102,911	116,079	133,283
Totals, Ordinary Revenues	541,616	859,755	1,463,824	2,252,799	2,725,094
Special receipts and other credits	20,477	12,415	24,712	66,697	195,388
Totals, Revenues	**562,093**	**872,170**	**1,488,536**	**2,319,496**	**2,920,482**
Less Refundable Taxes	–	–	–	70,000	155,000
Net Revenues	–	–	–	2,249,496	2,765,482
Expenditures					
Ordinary expenditures	398,323	390,629	444,778	561,251	630,381
Capital expenditures	7,030	3,358	3,430	3,276	2,622
War expenditures (special)	118,291	752,045	1,339,674	3,724,249	4,587,023
Other special expenditures[1]	89,113	42,869	63,976	31,288	37,496
Government-owned enterprises[2]	42,079	18,182	1,214	1,248	1,307
Other charges	25,958	42,518	31,994	65,812	63,889
Totals, Expenditures	**680,794**	**1,249,601**	**1,885,066**	**4,387,124**	**5,322,718**
Deficits	**118,701**	**377,431**	**396,530**	**2,137,628**	**2,557,236**

[1] 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.

[2] Includes net income deficit of the Canadian National Railways incurred in the calendar years 1939 and 1940 of $40,096,000 and $16,965,000, respectively, taken into the accounts of the Dominion in the fiscal year after the close of the calendar 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 subscriptions. 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 subscriptions.

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 subscriptions. The Fifth Victory Loan, dated Nov. 1, 1943, was sold in a total amount, for two maturities, of $1,571,311,550 ($1,383,275,250 for cash) from 3,033,051 subscriptions. The Sixth Victory Loan, dated May 1, 1944, was sold in a total amount, for two maturities, of $1,405,013,350 (all cash) from 3,077,123 subscriptions. The Seventh Victory Loan, dated Nov. 1, 1944, was sold in a total amount, for two maturities of $1,500,079,600 (preliminary figure) from 3,179,700 subscriptions. These last figures do not include 20,115 conversion subscriptions of $144,719,700.

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 Sept. 30, 1944, 41,741,794 applications were received for Certificates having a purchase value of $297,050,872.

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. In February, 1944, the maturity date of new Certificates is June 15, 1947.

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.

The decision to make the change is occasioned by the growing interest in income tax statistics from an economic and social standpoint. Formerly the statistics were in the nature of an administrative report covering the annual work accomplished by the Taxation Division of the Department of National Revenue during a fiscal year.

Now, it is believed that the statistics are of sufficient importance to be presented in the nature of a national report covering the income earned by, and the taxes levied on, all taxpayers in respect of a specific calendar or taxation year.

Statistics on the new basis are not yet available but, as an indication of the manner in which the income tax is broadening out, the table given below 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 in the fiscal years ended Mar. 31, 1936-44.

Record of Assessable Returns Filed by Taxation Years[1], 1936-42

Taxation Year	Individual Returns Filed	Corporation Returns Filed	Totals Returns Filed
	No.	No.	No.
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	980,454	16,218	996,672
1942[2]	1,748,562	16,670	1,765,232

[1] Calendar year in which income earned in the case of individuals and for corporations the business year ending within the calendar year. [2] Preliminary figures.

Checking Tags on a Shipment of 5,000 Bren Guns Made in Canada for our Chinese Allies.—The Chinese Bren takes a different type of ammunition to that used on the Western Front.

Courtesy, National Film Board

Collections under the Income War Tax Act, Fiscal Years 1936-44

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				
	$	$	$	$	$	$
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	103,308,249 [1]	131,565,710	12,282,259	759,957	226,847	248,143,022
1942	295,874,285 [1]	185,835,699	26,642,106	1,626,669	264,258	510,243,017
1943	533,915,059	347,969,723	26,710,946	1,369,851	223,093	910,188,672
1944	811,888,495 [2]	311,378,714	25,670,804	1,272,389	1,546,633	1,151,757,035

[1] Includes National Defence Tax amounting to $27,672,018 in 1941 and to $106,636,747 in 1942.
[2] Includes $2,317,733 collected from 1942 "Deferred Tax".

Provincial Finance

The financial position of the provinces has shown continuous improvement during the war years. Between 1939 and 1942 (fiscal years ended nearest Dec. 31, 1939 and 1942) ordinary revenues, exclusive of shared cost contributions of other governments, increased by more than $75,000,000 while ordinary expenditures, exclusive of amounts paid by other governments, remained almost constant. Approximate major revenue increases were as follows: excess of Dominion subsidies for vacation of income and corporation tax fields over 1939 yield of these taxes, $30,000,000; liquor control, $26,500,000; Quebec sales tax, $13,000,000; public domain, $10,000,000. Succession duties decreased approximately $6,000,000. Increased expenditure mainly for education, highways, public welfare and general administrative overhead, was roughly offset by a decline of almost $30,000,000 in the net provincial relief burden.

In the provincial fiscal years ended nearest Dec. 31, 1941 and 1942, 82·8 p.c. and 84·7 p.c., respectively, of the gross ordinary revenues were accounted for by the eight revenue sources listed on p. 201. The 1942 figures in parentheses are subject to revision. Dominion of Canada subsidies and subventions, $75,658,000 ($137,365,000), 18·7 p.c. (33·6 p.c.); gasoline taxes, $59,878,000 ($47,669,000), 14·8 p.c. (11·7 p.c.); liquor control, $46,348,000 ($59,988,000), 11·4 p.c. (14·7 p.c.); corporation taxes, $45,156,000 ($1,029,000), 11·2 p.c. (0·3 p.c.); public domain, $33,635,000 ($34,819,000), 8·3 p.c. (8·5 p.c.); motor-vehicle licences, $31,639,000 ($26,467,000), 7·8 p.c. (6·4 p.c.); succession duties, $27,362,000 ($21,944,000), 6·8 p.c. (5·4 p.c.); retail sales taxes, $15,806,000 ($16,704,000), 3·9 p.c. (4·1 p.c.).

The most significant change in the provincial revenue structure during the war years has been the stabilization of a greatly increased proportion of provincial revenues by the provisions of the Dominion-Provincial Taxation Agreement Act, 1942. By this Act each province agreed to vacate the personal income and corporation tax fields for the duration of the War and a certain readjustment period thereafter in return for a Dominion subsidy equal to either (*a*) the province's revenue from these sources during the fiscal year ended nearest Dec. 31, 1940, or (*b*) the

province's net debt service cost for the same period. A further provision of the Act guaranteed provincial gasoline tax revenues at the 1940 level. The effect of these provisions is well illustrated by the figures on p. 200.

Aggregate Provincial Revenues and Expenditures, 1921-41

NOTE.—Figures for 1940 and 1941 are not strictly comparable with preceding years. Years following 1939 include provincial fiscal years ended 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
	$	$		$	$
1921	102,030,458	102,569,515	1941—		
1926	146,450,904	144,183,178	P.E. Island	2,146,000	2,134,000
1929	183,598,024	177,542,192	Nova Scotia	18,529,000	17,435,000
1930	188,154,910	184,804,203	New Brunswick	13,754,000	12,853,000
1935	160,567,695[1]	181,175,687[1]	Quebec	110,347,000	91,459,000
1936	232,616,182	248,141,808	Ontario	136,022,000	119,530,000
1937	268,497,670	253,443,737	Manitoba	22,346,000	19,798,000
1938	287,955,846	273,861,417	Saskatchewan	30,408,000	27,817,000
1939	296,873,259	289,228,598	Alberta	28,104,000	20,845,000
1940	355,311,000[2]	330,930,000[2]	British Columbia	43,135,000	37,947,000
1941	404,791,000	349,818,000			

[1] Nova Scotia figures are for fourteen months and Ontario figures for five months. [2] Quebec figures are for nine months.

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 $1,708,272,500 and in 1942 to $1,696,629,157.

Aggregate Provincial Direct Liabilities, 1941 and 1942

NOTE.—Figures are for the fiscal years ended nearest to Dec. 31.

Item	1941	1942	Province	1941	1942
	$	$		$	$
Gross funded debt	1,708,272,500	1,696,629,157	Prince Edward Island	9,489,494	9,319,882
Less sinking funds	*—151,552,067*	*—164,637,242*	Nova Scotia	98,977,109	90,482,357
Net Funded Debt	1,556,720,433	1,531,991,915	New Brunswick	97,008,979	95,575,372
Treasury bills	279,187,921	259,569,171	Quebec	383,525,453	385,896,586
Savings deposits	38,192,476	39,704,954	Ontario	724,985,944	705,039,363
Temporary loans	8,324,778	4,357,659	Manitoba	112,251,698	110,094,282
Superannuation and other deposits	18,425,574	17,955,292	Saskatchewan	208,593,307	202,345,209
Accrued interest	21,129,559	18,086,134	Alberta	150,827,448	149,756,765
Accounts payable and other liabilities	14,003,224	20,516,775	British Columbia	150,324,533	143,672,084
Totals, Direct Liabilities (less sinking funds)	**1,935,983,965**	**1,892,181,900**	**Totals, Direct Liabilities (less sinking funds)**	**1,935,983,965**	**1,892,181,900**

Municipal Finance

The revenue resources of municipalities in Canada are limited generally to direct taxation, based on assessed valuations of real and other types of property. In 1942 the total taxable assessed valuations on which taxes were levied was

$7,731,795,000 of which approximately $7,267,498,000 or 94 p.c. was real property. Personal property assessment is still used in some provinces, although not as extensively as in the past. Aside from real property, the most important type of valuation for taxation purposes is the business assessment although not all provinces assess for business purposes separately and distinctly from real property valuations. Income assessment disappeared in 1942 as a result of the operation of the Dominion-Provincial Tax Agreements whereby the Provinces and municipalities have abandoned the income tax field for the duration of the War and one year thereafter so as to leave it open to the Federal Treasury.

Total municipal revenues, including local schools, for 1942 are estimated at $323,900,000* of which $241,700,000 or 74·6 p.c. represents taxes on real estate. Other types of taxes produced $33,500,000 or 10·3 p.c. of the total while $48,700,000 or 15·0 p.c. was derived from miscellaneous sources. In 1939 total municipal revenues amounted to $309,900,000; 77·4 p.c. was derived from real property taxes while other taxes represented 10·3 p.c. of the total.

The support of local schools represented the largest single item of expenditure in 1942 and required $86,400,000 or 27·3 p.c. of total municipal expenditures estimated at $316,800,000.* Other services such as public welfare, streets and roads, police and fire protection, etc. (but excluding debt service charges), amounted to $153,100,000 or 48·3 p.c. and debt service charges including debt retirement amounted to $77,300,000 or 24·4 p.c. of the total. In 1939, total expenditures were $321,300,000† with $80,800,000 or 25·1 p.c. going for the support of local schools; $154,100,000 or 48·0 p.c. for other services and $86,400,000 or 26·9 p.c. for debt service and debt retirement.

Bonded Debt and Other Direct Liabilities.—The rapid growth of municipalities, together with increased demands and responsibilities for improvements, schools and other services, has resulted in the incurring of a heavy burden of debt.

Municipal Bonded Debt and Sinking Funds, by Provinces, 1919, 1941 and 1942

Province	Gross Bonded Debt			Sinking Funds	
	1919[1]	1941[2]	1942[2]	1941	1942
	$'000	$'000	$'000	$'000	$'000
Prince Edward Island	970	3,195	3,217	603	717
Nova Scotia	17,864	34,038	33,317	12,886	13,434
New Brunswick	11,188	26,142	25,931	9,009	9,446
Quebec	199,706	502,707	483,450	91,606	89,736
Ontario	243,227	345,207	315,362	52,786	51,366
Manitoba	55,563	73,857	67,938	33,745	31,169
Saskatchewan	39,585	50,078	49,245	23,214	24,055
Alberta	66,870	52,753	50,011	8,578	7,795
British Columbia	94,742	108,514	108,426	29,032	30,346
Totals	**729,715**	**1,196,491**	**1,136,897**	**261,459**	**258,064**

[1] Not entirely comparable since more complete detail is available in later years. [2] Debt for rural schools in the Maritimes not included.

A significant factor in the situation is that the greater part of the municipal long-term debt is represented by serial or instalment-type debentures, which require yearly repayments of principal. While the benefits of debt reduction are manifold, certain expenditures for the rehabilitation of existing assets and for new improvements neces-

*Statistical Summary, Bank of Canada, August-September, 1943. †Statistical Summary, Bank of Canada, August-September, 1942.

stated by normal expansion have had to be taken care of. But on the whole the bonded-debt situation of the municipalities has undergone substantial improvement.

The reductions in recent years have been due largely to a general curtailment, during the depression years, of capital undertakings and works requiring debenture financing. The extension of provincial control over municipal borrowings has also been a major factor in this regard, as well as the fact that the greater part of the total municipal debt is represented by serial or instalment type debentures, which require yearly repayments of principal. While certain expenditures have been sorely needed in many communities, such as for the rehabilitation of existing assets and for new improvements as a result of normal expansion and growth, these were sacrificed in the early years in the interests of the taxpayer. Latterly, under war-time conditions this policy of deferment has been continued so as to free the financial market to the Dominion Government for its war-financing needs. The post-war period will, no doubt, bring about a resumption of capital borrowings by municipalities to meet such capital expenditures, as municipalities will play an important role in post-war construction and reconstruction in correlation with post-war plans of Federal and Provincial Governments.

Aggregate Municipal Direct Liabilities, Fiscal Years Ended in 1941 and 1942

Item	1941	1942	Province	1941	1942
	$	$		$	$
Gross debenture debt	1,196,491,013	1,136,896,940	P. E. Island	2,746,464[1]	2,614,582[1]
Less sinking funds	−261,458,503	−258,063,903	Nova Scotia	24,496,992[2]	22,509,784[2]
Net Debenture Debt	935,032,510	878,833,037	New Brunswick	21,118,498[2]	19,129,583[2]
Temporary loans	106,051,245	89,056,655	Quebec	501,049,496	494,769,623
Accounts payable and other liabilities	125,044,287	132,863,721	Ontario	320,194,650	284,884,132
			Manitoba	61,334,423	54,594,223
			Saskatchewan	87,438,896	82,817,073
			Alberta	57,099,759	53,762,110
			British Columbia	90,648,864	85,672,303
Totals, Direct Liabilities (less sinking funds)	**1,166,128,042**	**1,100,753,413**	**Totals, Direct Liabilities (less sinking funds)**	**1,166,128,042**	**1,100,753,413**

[1] Excludes rural schools. [2] Excludes liabilities of public utilities except for debenture debt and sinking funds; also excludes rural schools.

Testing Gum Adhesive before Use on Postage Stamps.—In this scientific age even the gum used on postage stamps is the subject of research and must be edible.

Courtesy National Film Board

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 (see p. 206).

Bank Notes Outstanding, Representative Years, 1900-44

(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 [1]	119,507,306
1910	89,628,569	82,120,303	1937	141,053,457 [1]	110,259,134
1920	305,806,288	288,800,379	1938	161,137,059 [1]	99,870,493
1929	204,381,492	178,291,030	1939	184,904,919 [1]	94,064,907
1931	153,079,362	141,969,350	1940	277,095,305 [1]	91,134,378
1932	165,878,510	132,165,942	1941	406,433,409 [1]	81,620,753
1933	179,217,446	130,362,488	1942	572,256,208 [1]	71,743,242
1934	190,261,981	135,537,793	1943	773,426,716 [1]	50,230,620
1935	127,335,340 [1]	125,644,102	1944	927,917,481 [2]	37,683,660 [2]

[1] Since Mar. 11, 1935, the figures used represent Bank of Canada notes. [2] 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

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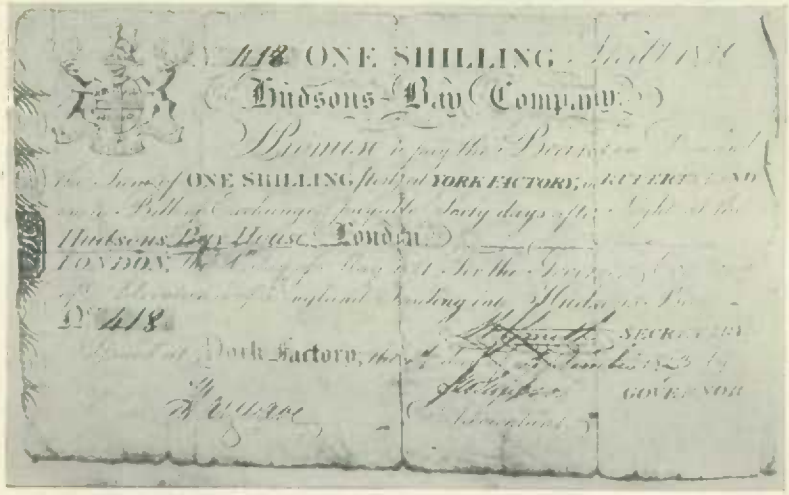
Hudson's Bay Company Money.—The brass coins represented one "Made-Beaver"—the unit of currency used in the fur trade for many decades. It was equal to the skin of an adult male beaver in prime condition and was still in use in some districts as late as 1910. About 1820 the Hudson's Bay Company found that currency was badly needed by the Selkirk settlers and, as a result of negotiations with the Governor-in-Chief of Rupert's Land, promissory notes of one pound, five shillings and one shilling were put into circulation at Red River in 1823. These notes were the circulating medium of the Northwest until 1870 when the Company's land became part of the Dominion of Canada.



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 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 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 1944 the number had decreased to 3,084. 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, 1944

Bank	Branches in Canada and Abroad[1]	Total Assets	Liabilities to Shareholders	Liabilities to the Public	Total Liabilities	Loans and Discounts	Deposits by the Public
	No.	$ '000,000	$ '000,000	$ '000,000	$ '000,000	$ '000,000	$ '000,000
Bank of Montreal	442	1,527	75	1,449	1,524	266	1,385
Bank of Nova Scotia	277	542	36	505	541	133	462
Bank of Toronto	158	281	18	262	280	55	256
Banque Provinciale du Canada	132	111	5	105	110	19	104
Canadian Bank of Commerce	478	1,179	50	1,127	1,177	263	1,078
Royal Bank	615	1,695	55	1,637	1,692	337	1,557
Dominion Bank	120	275	14	260	274	72	248
Banque Canadienne Nationale	200	291	12	277	289	54	272
Imperial Bank of Canada	165	327	15	311	326	75	300
Barclay's Bank (Canada)	2	33	2	31	33	4	24
Totals, Oct., 1944	—	6,261	282	5,964	6,246	1,278	5,686
Totals, 1943[2]	2,589	5,148	282	4,849	5,131	1,334	4,592
Totals, 1942[2]	2,642	4,400	281	4,102	4,383	1,370	3,834
Totals, 1941[2]	2,830	4,008	279	3,712	3,991	1,403	3,465
Totals, 1940[2]	2,846	3,707	279	3,411	3,690	1,324	3,180
Totals, 1939[2]	2,861	3,592	279	3,298	3,578	1,244	3,061
Totals, 1938[2]	2,875	3,349	279	3,057	3,336	1,201	2,824
Totals, 1935[2]	2,978	2,957	278	2,668	2,946	1,276	2,427
Totals, 1930[2]	3,598	3,237	305	2,910	3,215	2,065	2,517
Totals, 1920[2]	4,876	3,064	252	2,784	3,036	1,935	2,438
Totals, 1910[2]	2,621[3]	1,211	179	1,019	1,198	870	910
Totals, 1900[2]	641	460	98	356	454	279	305

[1] As at Dec. 31 of previous year. Does not include sub-agencies. [2] 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. [3] 1911.

The banks of Canada had among them, at the beginning of 1944, 135 branches (not including sub-agencies) in other 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, 1942 and 1943 the annual increases over the preceding years amounted to 14 p.c., 16 p.c., and 18 p.c., respectively. Cheque transactions were $44,011,000,000 in the first nine months of 1944, representing a gain of 14·7 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.

Inspecting Newly Minted Coins at the Royal Canadian Mint.—As the coins pass—4,000 in 90 seconds—on the belt, they are examined by trained experts for defects of every description.

Courtesy, National Film Board

Bank Debits at the Clearing-House Centres, by Economic Areas, 1939-43

Economic Area	1939	1940	1941	1942	1943
	$	$	$	$	$
Maritime Provinces	679,947,972	824,489,836	940,712,152	1,075,736,890	1,243,762,861
Quebec	9,820,399,452	9,973,060,607	11,068,666,580	12,751,093,627	15,373,881,025
Ontario	13,618,490,448	15,384,403,480	18,214,788,841	22,136,164,250	24,681,702,142
Prairie Provinces	5,478,229,879	6,118,407,201	6,591,645,027	6,722,376,622	9,199,963,592
British Columbia	2,020,284,080	2,137,113,355	2,427,144,584	2,840,882,813	3,297,405,107
Totals	**31,617,351,831**	**34,437,474,479**	**39,242,957,184**	**45,526,254,202**	**53,796,714,727**

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 1943. 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 $8,534,000,000 at the end of 1943. This latter figure was equal to $741·66 per

*1943 figures are from the Insurance Abstract, 1943.

head of population. In addition, there was $213,000,000 of fraternal insurance in force by Dominion licensees and $226,000,000 of insurance in force by provincial licensees. Thus the total life insurance in force in the Dominion at the end of 1943 was approximately $8,973,000,000. 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, and to $229,000,000 in 1943.

Fire Insurance.*—The report of the Superintendent of Insurance for the year ended Dec. 31, 1943, shows that at that date there were 267 fire insurance companies doing business in Canada under Dominion licences, of which 59 were Canadian, 73 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 1943 besides $13,372,229,828 of fire insurance in force in companies with Dominion licences, there was also $1,494,965,108 in force in companies with provincial licences, or about $14,867,194,936 in force in 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 1943 there were 267 companies, of which 58 were Canadian, 73 British and 136 foreign.

The total net premium income of Dominion-registered companies for 1943 was $52,202,266 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 decade although decreases were shown for a few years prior to 1935 and for 1942 and 1943. As recently as 1910, the premium income of companies doing an automobile insurance business was only $80,466; in 1916 it was $909,503 and in 1943 $18,895,360. The premium income of combined accident and sickness insurance came second with $7,709,337. Personal property insurance was third in 1943 with $4,458,004. The premium income of all accident and sickness insurance combined totalled $18,968,480.

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

* 1943 figures are from the Insurance Abstract, 1943.

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, 1944, the total number of individual annuity contracts and certificates under group contracts issued was 109,704. The net receipts for the entire period totalled $238,749,783.

On Mar. 31, 1944, there were in effect 99,430 contracts and certificates. Annuity was payable under 28,199 of these and annuity was still deferred under 71,231. The total amount of annuity payable under the vested contracts was $11,203,827 and the value of outstanding annuities, both immediate and deferred, was $213,561,537, this being also the balance at credit of the Annuities Fund as of Mar. 31, 1944.

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 1943 there were 40 loan companies that reported, with a paid-up capital of $34,283,316 (Dominion companies $18,885,241 and provincial companies $15,398,075).

The reserve funds of all real-estate-mortgage loan companies at the end of 1943 were $22,080,663 (Dominion companies $13,000,233 and provincial companies $9,080,430); liabilities to the public $125,939,274 (Dominion companies $93,777,695 and provincial companies $32,161,579); and liabilities to shareholders $59,049,819 (Dominion companies $33,174,651 and provincial companies $25,875,168).

Printing Postage Stamps.—Intaglio printing on this rotary press produces about 1,000 sheets an hour.

Courtesy, National War Board

Boxes containing five-cent coins being released from the vaults at the Royal Canadian Mint for distribution, simultaneously, to every province of the Dominion.

Courtesy, National Film Board

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 1943 were $3,032,715,830 as compared with $805,000,000 in 1922 (the earliest year for which figures are available). The bulk of these assets ($2,803,189,885 in 1943) was represented by estates, trusts and agency funds. The assets of Dominion companies in 1943 amounted to $375,114,488 and of provincial companies to $2,657,601,342.

Small Loans Companies and Money-Lenders

Small loans companies make 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 1943, had an aggregate paid-up capital of $3,740,000; reserve funds, $583,110; borrowed money, $3,548,100; other liabilities, $2,749,437; small loans made, $19,328,551; small loans balances, $9,768,505.

The Small Loans Act, 1939 (c. 23, 3 George VI), passed by the Parliament of Canada, came into force on Jan. 1, 1940. Under this Act, 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, 1943, there were 62 licences issued under the Small Loans Act, 1939, of which 3 were issued to small loans companies and 59 to money-lenders. The 59 money-lenders made personal loans in 1943 of $10,342,680 and at the end of that year had outstanding small loans balances of $5,221,810.

CHAPTER XVII

Education

The British North America Act assigns education, with few reservations, to the control of the provinces. But the close relation of education to national welfare has from time to time brought some forms of it under the care, stimulation and bounty of the Central Government. According to the Constitution, the Federal Government controls "Indians and lands reserved for Indians". It operates 349 exclusively Indian schools and ten mixed schools with an enrolment of 18,000 pupils. It also operates 8 penitentiaries with 3,300 inmates whose education is expected to receive more attention in the near future. Under national defence it supports the Royal Military College at Kingston, Ont., and the Royal Canadian Naval College at Royal Roads near Victoria, B.C. It has long supported a Canadian Officers Training Corps and recently a University Air Training Corps and University Naval Training Division in the universities and, on request, bears the cost of cadet training.

Summary Statistics of Education in Canada, 1942

NOTE.—Figures in even hundreds are approximate only.

Type of School or Course	Institutions	Pupils	Teachers	Expenditure
	No.	No.	No.	$
Provincially Controlled Schools—				
Ordinary and technical day schools	32,200	2,029,762	75,332	
Evening schools	450	83,757	2,450	
Correspondence courses	8	25,333	340	135,000,000
Special schools	20	5,244	500	
Normal schools	92	7,200	958	
Privately Controlled Schools—				
Ordinary day schools	845	95,836	6,162	6,800,000
Business training schools	188	27,226	650	
Dominion Indian Schools	363	17,281	575	1,878,726
Universities and Colleges—				
Preparatory courses	60[1]	20,483	1,413	
Courses of university standard	155	48,067	5,424	22,000,000
Other courses at university	10[1]	37,308		
Totals	**34,400**	**2,397,497**	**93,500**	**165,700,000**

[1] Includes only affiliated schools that are not enumerated in "Courses of university standard".

Recent Trends in the Field of Education

Elementary and High-School Curricula.—Changes in the organization and selection of curricula are being effected despite war-time limitations. These are observed in a change of emphasis in the elementary grades where growth in knowledge is replacing the more formal grade standards in the accumulation of knowledge. Accompanying this, the emphasis is being shifted to organizing the content of several subjects into enterprises with the hope that the pupil will become a partner and accept the challenge to help organize and carry through the enterprise.

In the high-school years, emphasis is being placed on such subjects as physics and mathematics which can contribute to preparing additional war personnel. Technical education has expanded greatly. Youth Training classes, night classes and regular classes keep the technical schools busy early and late.

Young Students in a Rural School Taking a Singing Lesson.—They are illustrating a percussion band by motions, thus developing the rhythm necessary in music.

Courtesy, National Film Board

The composite school which is gaining in popularity in the Prairie Provinces is intended to provide a broad and varied high-school program. A plan which has been suggested by the Manitoba Educational Association Committee contains the following optional courses: college preparatory, commerce, agriculture, industry and home economics, all of which choices contain such subjects as English, health and social studies. These are subjects which, along with citizenship, are receiving more emphasis in the elementary grades.

Vocational guidance is receiving considerable attention in several provinces as seen in the appointment of Guidance Directors and the establishment of classes in guidance and job information.

Enrolment.—Pupil population continued to decrease in 1943-44. The downward trend in the number of beginners has probably touched bottom and may be expected to rise. Loss of high-school students is more problematical. Boys and girls stop school to join the Armed Forces or because of increasingly attractive offers from business. Average daily attendance has been lowered by secondary and even elementary school pupils staying home to work on the farm, in the orchard, etc. Contributions of teachers and pupils to the war effort during vacations have been considerable, including farming and activities in war charities, war savings and salvage campaigns.

Nearly all private schools are filled to capacity. High war-time incomes, crowded public schools, absence of parents from homes and lack of domestic help are among contributing factors.

Nursery schools in Quebec, Ontario and Alberta provide help for mothers who work in the daytime. Plans call for three types of care to be provided upon request: the day nursery, which is usually open from 7.30 a.m. to 6 p.m.; the school project caring for school-age children during non-school hours from about 7.30 a.m. to 6 p.m. and on Saturdays and holidays; foster day-care programs, using the facilities of the local Children's Aid Society, provide day care for physically or mentally handicapped children. A small charge is made for these services.

Normal School Training.—The Normal schools across the Dominion have been undergoing transformations from within during the war years. In keeping with the modern philosophy they teach, the following trends are observable although not all of them could be found in all Normal schools: fewer hours devoted to lectures and more time given to practice teaching in regular classes; stressing the use of diagnostic tests before teaching subject matter; emphasis on action and activity or enterprise procedure with the work organized as problems challenging youth; division of the Normal-school year into two or three divisions to meet the demand for teachers; increased library facilities available to teachers in the field to keep experienced teachers abreast of the times and enable new teachers to learn more about the profession; appointment of successful experienced teachers as supervisors to aid permit teachers in their work (Manitoba); provision for Normal instructors to spend part of their time supervising new teachers in the field and integrating the work of the Normal school with work in the classroom (Saskatchewan).

In Alberta the Normal is now affiliated to the Faculty of Education of the University of Alberta with provision for students beginning education in Normal school and continuing in summer schools to complete a four-year course towards a Bachelor of Education degree.

University Training.—The impact of war has resulted in a variety of changes in university curricula. New courses have been added, old ones modified or accelerated. Able men with Junior Matriculation have been given intensive courses in mathematics, physics and chemistry, thus saving a year in engineering without altering the schedule of the regular classes. An attempt to speed up medical courses by eliminating the summer vacation did not work well and has been generally cancelled as efficiency was being sacrificed to speed. In fact there seems to be a general feeling that acceleration by means of summer-school work is definitely harmful in the professional faculties.

Almost every university has instituted new science courses for the benefit of the Armed Forces while other courses have been modified to increase their war contribution. Almost every campus is dotted with student sailors, soldiers and airmen preparing for technical work in the Services. Programs of research on war problems have been, and are being conducted in numerous departments and contribute in no small measure to solving war-time problems.

Special courses have been given in personnel management, architecture, first aid, etc., and extension work is expanding.

The universities are now considering ways and means of providing accommodation and instructors for demobilized personnel. The Department of Pensions and National Health has estimated that from 30,000 to 35,000 men and 5,000 women from

First-Year High School Students Taking a Course in Nutrition in a Domestic Science Laboratory.

Courtesy, National Film Board

the Armed Forces will seek admission to the universities. Indications are that faculties in Commerce and Business Administration will be taxed to capacity and Engineering, Arts, Education, Medicine, Agriculture, Dentistry, Law, Pharmacy, followed by Journalism, Theology, Veterinary Science, Social Service and Library Science will have increased enrolment.

Vocational and Technical Training.—The Vocational Training Co-ordination Act of 1942 provided grants to co-operating provinces to fit civilians for war service in the Armed Forces or industry, and train discharged men and women for employment. Students in medicine and science may receive loans or scholarships to help them complete their courses. Loans are also available for Normal school students.

In 1937 appropriations were made to co-operating provinces to increase the employability of young people; 50 p.c. was contributed by the Federal Government. Free courses were made available in mining, agriculture, household science and technical subjects. In 1939 the Youth Training Act on the same basis provided, for needy young people, training for gainful employment. At the expiration of this Act its benefits were continued under the Vocational Training Co-ordination Act.

Physical Training.—British Columbia has a well-integrated, comprehensive recreational and physical educational program planned to cover the various seasons for the community members and including: individual and group games, swimming and life saving, physical fitness classes, home nursing, first aid, etc. Summer-school classes provided a curriculum for men, women and civilian protection leaders such as the A.R.P., auxiliary police and fire units. The Federal Government contemplates such a program for all of Canada. The National Physical Fitness Act, 1943, provided for a "National Council on Physical Fitness", a "National Director of Physical Fitness" and "National Fitness Fund".

School Administration.—Annual conventions of educational organizations are improving co-ordination and providing leadership in Canadian education. The Canadian Trustees Association met at Toronto on Aug. 1-2, 1944, and favoured such progressive movements as community schools. They pointed to the need for a Dominion-wide association of school administrators with a central office, preferably at Ottawa. Similarly the Teachers' Federation at their convention considered that their services

Classroom in a School Car in Northern Ontario.—These travelling schools, the only ones of their kind in the world, provide thoroughly modern education for children in scattered communities in northern Ontario. The cars travel in circuits, spending usually a week with each group in turn and sufficient home work is given to keep the children busy until the return of the car.

Courtesy, Canadian National Railways

to education could be expanded by enlarging their central office and locating it at Ottawa. The Canada and Newfoundland Education Association is becoming increasingly recognized as a progressive educational institution.

The problem of financing the schools increases in importance from year to year. Among other considerations is the desirability of financing groups of schools as one. The movement towards forming larger units by combining single districts is gaining momentum. In Alberta the movement began in 1931 and by 1940, 50 large divisions were formed from all but 79 of the rural schools. British Columbia is, in the main, noted for consolidations, notably the Peace River organization and the Abbotsford experiment. Saskatchewan has permissive legislation. Manitoba has one municipal unit and a number of consolidated schools. In Ontario several townships or part townships have been organized as single units. The County Schools Finance Act 1943 and Rural Schools Assistance Act bids fair to combine most of the 1,348 single districts into county units and revolutionize rural education in New Brunswick. Three counties adopted the larger unit within three months and others followed or will soon follow. In Nova Scotia by 1943 a majority of the municipalities had been organized as units and more are expected to effect this change. In Prince Edward Island some consolidation is hoped for in high schools. There the chief advantage is expected to result from additional high-school facilities and a broadening of the curriculum for those of non-academic bent.

The shortage of qualified teachers is increasing. The employment of several hundred teachers who have not been teaching for many years and hundreds of high-school graduates with only a few months of professional training cannot but reduce the

level of teaching. This is particularly true where returning ex-teachers find themselves facing new curricula based on activity techniques or where the permit teachers had been schooled under formalized training. As the majority of these are stationed in the rural districts the chief deterioration must be expected in the outlying districts where good teaching is badly needed.

Shortage of teachers is reflected in the general increase in salaries. For eight provinces of Canada, Quebec excluded, the average salary increase paralleled the increase in the cost of living fairly closely from 1939 to 1943.

Public Libraries

The Canadian Library Council, incorporated in 1943, has obtained financial backing from the Carnegie Corporation to promote library service and librarianship on a national basis. Significant social changes, induced or hastened by five years of war, have necessitated a co-ordination of professional library service to meet the requirements of expanding programs of adult education and community study groups. The volume of reading has decreased during the war years but such discussion groups as citizens' forums, farm forums and study groups associated with international affairs have made the library a source of reference material and the librarian a counsellor on "book talk" rather than a curator of books. The Library Council has recently distributed to the libraries specialized bibliographies on subjects of such national interest as reconstruction, demobilization and unemployment.

To meet the needs of rural or isolated communities, provincial educational authorities and extension departments of universities are increasing their travelling libraries and mail service. The policy of central regional book pools, where small association libraries may obtain books on a collective contribution basis, is proving successful in many districts. These function under different names such as Union Libraries and County or Township Associations and their number is growing in several provinces.

A Travelling Library during Children's Hour.—This street car, stocked with a wide variety of literature, serves outlying residential districts of a western city.

Courtesy, National Film Board

The Parliament Buildings, Ottawa, looking west on Wellington Street towards the Confederation Building.

Courtesy, National Film Board

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