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DEPARTMENT OF
TRADE AND COMMERCE



CANADA

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A FACT A DAY ABOUT CANADA

FROM THE

DOMINION BUREAU OF STATISTICS

APRIL 1940

SIXTH SERIES

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James Muir,

Editor.

1944
NATIONAL SURVEY
OF CANADA

from the

Dominion Bureau of Statistics

No. 184. Mon. April 1, 1940 - Micarta

Every schoolboy who owns a bicycle, and, indeed, most of those who do not, know something about bearings. Old men of today began to learn much about them in their boyhood. When the high bicycles were introduced it was a great sight to see the bicycle clubs, the members arrayed in bright, tight-fitting uniforms or suits, speeding away into the country. It was arduous work, compared with today. Their machines had roller bearings at first and, as the wheel developed, ball bearings came into being. These ball bearings worked wonders, and still do a marvellous job where turning a shaft in a cavity or slot is a necessity.

We have had all sorts of bearings in the last two generations and more particularly in the last few years. The latest is Micarta, the plastic of the Scientist. Andrew Carnegie once made a notable comment when the head of a steel concern stated that his firm could not afford to employ a chemist. Carnegie's observation was that, if the man had only known, the firm could not afford not to employ a chemist.

Micarta bearings, a plastic, have come into considerable prominence during the war months. Micarta is made of cloth which has been saturated with a synthetic resin, baked and squeezed. It is said to be as strong, pound for pound, as steel. A roll-neck bearing, made of this material and weighing no more than fifty pounds, can carry a million pound load when used to support a gigantic rotating mill. Statistics show that fabric bearings have sustained such a pressure long enough to roll more than 200,000 tons of steel, in a few instances 450,000 tons, before it was necessary to replace them. Formerly an average of only two thousand tons could be rolled on bronze bearings. With this new material the saving in power ranges from 25 to 50 per cent.

Bearings are only one of more than three hundred directions in which Micarta is used. It covers tables in restaurants, bearings for the shafts of power vessels, stain-proof and sanitary insulating living for refrigerators. It keeps the control wires of aeroplanes functioning properly when moulded into small pulleys. It makes decorative trays, screens and murals, and so on.

No. 185. Tues. April 2, 1940 - Wild Plums in Manitoba

So much is said and written of wheat in the Prairie Provinces that in our minds we connect the Prairie with little else that grows. So a word or two about something else will help to balance our vision.

The nearest thing to an orchard tree fruit growing native in the wildwoods of Manitoba is the wild plum. Prairie farm gardeners have attained more ready success with native plums than with imported European apples. Marked improvement has been gained in plums of first rank hardiness during recent years. Commercial nurserymen offer planters a considerable choice for spring planting.

In the improved Manitoba native Canada plums are Assiniboine, McRobert, Mina, Bounty, Dandy, Olson, Mordel, Mammoth, and Cheney. In the improved native Americana plums are Dropmore Blue, and C.K.C. Many other varieties have been named in each of these two groups of native plums, but the above are in favour at present, states the Department of Agriculture. Varieties omitted due to lack of quality include Aitkin and Winnipeg. A number of others that served the North Central United States well for many years, such as Surprise, Terry and Wolf, are no longer distinctive, and are less well adapted locally than Assiniboine, McRobert, Bounty, Mina, Dandy Dropmore Blue, and C.K.C. to the Canadian prairie gardens.

Of this group of seven, Bounty and C.K.C. ripened at the Morden Station last year by the middle of August. Mina followed soon after. All three are productive and command high rating as canned product. For this spring planting Bounty and C.K.C. may not be available as nursery stocks are light. They are mentioned here as being very good prospects, and as deserving attention by visitors when they visit Experimental Stations in August. Mina carries some Eastern Asia plum blood, as probably does C.K.C. This is apparent in the apricoty flavour of the canned fruit.

McRobert ripens about the same time as Assiniboine, being the end of August or first of September at Morden. The former has more colour and more general appeal than the old reliable Assiniboine. Dandy and Dropmore Blue are, like the other five, hardy, productive and deserving.

Olson is a superior wild plum from the Riding Mountain country. It tends to over-bear which results in small fruits. Mordel is the plum with the raspberry-like flavour when canned. It does not ripen until the first or second week of September. Its lateness is its handicap. Mammoth and Cheney have been receding in the public eye. The former is pleasing as dessert.

To step up the ladder of quality among the plums at present available is to sacrifice winter hardiness to some degree at least. Tecumseh is fairly hardy, early, attractive in appearance, and aristocratic both as dessert and canned. Other fine varieties are Radisson, Underwood, Tokata, La Crescent, and Fiebing. These are planted with confidence at Morden but become more speculative in the prairies to the Northwest. Ember and Emerald are of top quality. Their growers require patience as they are not harvested until mid-September.

Plums do not breed true from seeds. Only vegetatively propagated nursery trees are true to variety.

The production of plums and prunes throughout Canada last year was 223,200 bushels.

No. 186. Wed. April 3, 1940 - National Research Council at War

The National Research Council is a creation of the Great War of 1914-18, but it was not one of those war creations that died when Armistice Day came. Research is a long-term activity and scientists and research workers require years of training for field services. There can be no non-active reserve of scientific workers to be called up and trained in an emergency. They are front line troops and, if available at all, are in active training and available for immediate attack upon any new problem of peace or war.

Early in 1915, the United Kingdom realized that, while there were many individual laboratories and numerous scientists available, there was need for a co-ordinating body that could serve as a dairy horse for ideas, plan and support comprehensive investigations and avoid unnecessary duplicate and waste.

Accordingly an Honourary Advisory Council for Scientific and Industrial Research was set up for this purpose and in this way the forces of scientific research played an increasingly important part in the struggle. In order to co-ordinate Empire activities as well it was suggested that similar institutes should be set up in Dominions and to keep in touch with what was going on in the British Isles. This was done in Canada and the National Research Council has developed from that beginning.

The primary function of the original council was to organize, stimulate and support the development of scientists and a scientific attitude in industry. This could not be done efficiently in Canada unless the council had laboratories of its own, well equipped and competently manned, to which the government departments and industrial organizations could refer problems and from which advice on special scientific matters would be available.

At present over one hundred war projects, tests, examinations and studies referred by government departments have been undertaken since the war began. Innumerable inventions and suggestions which pour into government departments are examined and make a continuous service and it is expected that, as the war proceeds and the production of supplies increases, greater demands for testing, investigation, and report, will be made.

In 1914 Germany had a well ordered and co-operative system of scientific and technical research running through its entire industrial fabric. Great Britain had no such co-ordination. Britain has today and so has Canada.

No. 187. Thurs. April 4, 1940 - Transportation Factors in War

During the course of this war, in which economic factors, such as the movement of supplies from the industrial front to the theatre of war, play such a major role, Canada's transportation facilities, a tight mesh covering the whole expanse of the Dominion, are called upon to render valuable aid.

Canada is much better equipped to-day to handle large amounts of freight than it was during the last war. The Canadian railways, can handle double the freight they could transport in 1914-18. Locomotives are heavier and more powerful than they were a quarter of a century ago, having a tractive effort to-day of 90,000 pounds as compared to 52,000. Rails on the main lines are 20 to 50 pounds heavier and can bear a much weightier load. Box cars and other freight rail vehicles have an increased capacity from 33 to 42 tons. Speed in travelling has been stepped up to nearly double what it was in 1914.

The transport of vast quantities of foodstuffs, war supplies and of large numbers of troops from Canada's inland to the Atlantic seaboard to await conveying to Great Britain is proof of the predominant role which Canada's great railway system will play during the war.

The picture of Canadian transportation would not be complete, however, if the other major factors, which play their part in the conveying of goods and men, were not mentioned.

Within Canada's frontiers lies a great inland system of water transport. Ships plying the waters of the Canadian Great Lakes are an important agency in the freighting of goods, especially wheat and other essentials from the vast production area of Western Canada.

Much improvement has also been brought about during intervening years between this and the last war in motor transportation. Canadian highways are vastly better and hard-surfaced roads throughout the Dominion are travelled daily by freight bearing trucks of enormous size.

To add a final touch to the picture, mention must be made of the gigantic strides made in air transport. Not only are thousands of miles of transcontinental and branch airlines, with valuable facilities and personnel, a prime factor in transportation, but they are contributing greatly to the Empire Training Plan, the biggest factor in Canada's war effort.

No. 188. Fri. April 5, 1940 - Cold Storage Holdings

The first mechanically refrigerated cold storage warehouse in Canada was opened in 1894, but data on the quantities of goods held in storage were apparently not compiled regularly until 1917, when the Cost of Living Commissioner obtained figures as at the first of each month. Before doing so an investigation was made for the years 1913 to 1916. While obtaining the data for 1917 some comparative figures were also obtained for 1916.

Previous to this, however, the Board of Inquiry Into The Cost of Living, 1915, through the Statistical Branch, Department of Labour, had obtained data for the beginning of February, 1914. Some interesting comparisons can be made from the figures then received. On February 1, 1914 there were 39,874,139 lb. meat (not including 2,000 tierces Pork Stuffs, being cured) as compared with 81,100,937 lb. on February 1, 1940—when at War—and 54,837,199 lb. on February 1, 1939—when at peace. Twenty-six years ago on February 1, butter in cold storage amounted to 5,640,306 lb. On February 1, 1940 there were 23,613,102 lb. creamery butter in cold storages and 9,067,978 lb. in dairy factories. The amount of cheese held on February 1, 1914 was 1,453,407. Twenty-six years after the quantity in storages was 19,240,682 lb. and there was an additional amount of 1,361,667 lb. in cheese factories. On that far day there were 86,681 dozens of cold storage eggs held, while on the same day this year there were 779,652 dozens. Fish in cold storage then were 8,720,878 lb.; this year there were 26,135,554 lb. held under refrigeration.

Apples on that pre-First-Great-War February totalled 37,395 barrels. This February there was the equivalent of 1,421,024 barrels.

These stocks reflect the advance in production of Canada's food products, an advance which required additional storage accommodation. In our "Fact A Day About Canada" for February 23, 1940 we stated that there were 406 cold storage establishments with an approximate capacity of 58 million cubic feet, but on February 1, 1914 there were only about 100 public and private establishments with a capacity of about 20 million cubic feet.

The publishing of the report of the Commissioner re Cost of Living in 1917 caused a furore as can be found by a reading of Hansard of those days. Business firms now look forward, sometimes anxiously, to the publication of the statistics of stocks on hand of food commodities as such data are found to be very valuable in planning their buying, selling and storing for the next month.

No. 189, Sat. April 6, 1940 - Let Us Eat More Cheese

Canadians eat only slightly more than $3\frac{1}{2}$ pounds of cheese per capita each year, as compared with 5 to 6 pounds in U.S.A., and 13 pounds in Great Britain.

Despite this small consumption, and in the face of large exports of Canadian cheese amounting to nearly 91 million pounds in 1939, Canada imported 1.4 million pounds of cheese. Doubtless nationals of the countries from which they came caused some of this importation, but much of it would be for people with special acquired tastes.

Imports have come from our neighbours to the south, from the United Kingdom and from the continent of Europe. From the Mother Country we get English Cheddar, Cheshire and Stilton. The first named is a hard cheese of fine flavour made at Cheddar in England, but it is also made in the United States, in Canada and elsewhere. Cheshire is also a hard cheese made in the English county of that name, while Stilton was originally made at that place in England, but is now made elsewhere. Sometimes Canadian Cheddar cheese of around 10 lb. in weight get the name of Stilton but this is not correct. The true Stilton is an unpressed cheese of waxy texture which, when ripe, is permeated with a blue-green mould.

Among other cheeses imported is processed Gruyère. The true Gruyère, from which the processed is made, is sometimes called Schweitzer and Emmenthaler. This is the well-known Swiss cheese containing numerous holes. It was originally made at Gruyère in Switzerland, but is also made in Finland and France.

France and the United States supply us with Camembert, a soft unpressed cream cheese originally made at Camembert, near Argentan, France. We also get from France the Roquefort cheese, a highly flavoured blue-moulded cheese made at Roquefort in the Department of Aveyron from the milk of ewes, sometimes with the addition of cow's milk. It is cured in caves. There are other cheese of the same name in imitation of it. The Italians, too, make a cheese, Gorgonzola, somewhat resembling Roquefort.

In the Province of Limburg or Limbourg, in Belgium, there originated the Limburger cheese. This (hold-your-nose) cheese is not usually eaten until an unpleasant odour, peculiar to it, has developed from the curing. Our imports, however, are made in the United States.

That nice looking ball cheese, usually with a crimson outside, that you sometimes see, is a Dutch pressed cheese known as Edam. It has a yellow colour and is noted for its fine flavour. Made in convenient sized balls of around 3 to 4 pounds, it is named after the village of Edam, near Amsterdam in the Netherlands. Incidentally, there is a village of that name in Saskatchewan.

Other cheeses imported for Canadian gourmets are Danish Blue, Romano (made in Italy from sheep's milk), Asiago, a whole milk cheese also from Italy, Gammelost and Mysost from Norway, (the latter a cheese made from whey), some varieties of

goats' milk cheese, Gouda from the Netherlands and some varieties from Belgium.

Cheese has so many advantages as a nutritious food and can be prepared in so many enticing ways that it is surprising our per capita consumption is not very much larger.

No. 190. Sun. April 7, 1940 - Apple Juice the newest Canadian Beverage

If an apple a day will keep the doctor away a tin of fresh apple juice a day, which represents several apples, should prove a considerable added insurance to keep this good man at arm's length. This, the newest of Canadian beverages has taken the country by storm, not only is it a healthful beverage but it goes a long way toward using up the great stock of apples in Canada, a large part of which would have been exported to the British Isles had not war disrupted the trade.

Fresh apple juice differs from cider in that it is not fermented. It is the pure, natural juice of fresh, ripe apples, actually liquid fruit, with all the elements of the apples themselves, filtered and pasteurized. It is naturally high in food value and incomparable as a thirst quenching drink. Until a few years ago the only form in which the juice of apples was available as a beverage was in the form of sweet or hard cider, sold in bottles or kegs. Practically all cider was sold without undergoing any treatment to effect preservation other than the possible addition of sodium benzoate.

It may have been that with the invention of acid resisting tin can and the improved methods of pasteurization, the output of fresh apple juice as a beverage would have rapidly advanced, but the reason for the big jump in its output in recent months has been due to conditions arising out of the war.

When the war started Canada had begun to harvest one of the biggest apple crops in the history of the country - 15,000,000 bushels. Normally about half of the apples grown in Nova Scotia, British Columbia, Ontario and the other commercial producing areas are exported. It was soon learned that shipping space would be at a premium and the season's export would not likely exceed 3,000,000 bushels or about 20 per cent of the crop. This meant that an extra 4,000,000 bushels at least, or a total of more than 11,000,000 bushels would have to be put on the market in Canada.

Million of bushels have been used for canning, drying and as fresh apple juice. So good has been the quality of fresh apple juice produced by Ontario, Nova Scotia and British Columbia companies, that it appears that it will become an established national beverage.

At present there are ten companies in Canada making fresh apple juice, five in Ontario, three in Nova Scotia and two in British Columbia. The value of the combined output from the 1939 apple crop will, it is estimated, be around \$15,000,000.

No. 191. Mon. April 8, 1940 - Agricultural Situation in Canada after Seven Months of War.

With the invasion of the Scandinavian countries marking the end of the first phase of the war, a review of the effects of the first seven months of hostilities upon Canadian agriculture is of interest. In making a comparison of exports, production and prices for the seven months ending March, 1940 with the seven months ending March, 1939, it must be noted that not all of the changes which have occurred during the past seven months are attributable to the war. Some of the changes would have occurred even under peace-time conditions, but the extent of the changes has probably been accentuated by conditions arising out of the conflict.

While some improvement has taken place in the general economic condition of Canadian agriculture during these seven months, many production areas have been adversely affected. During the first two months of the war, little change occurred in the aggregate value of exports of farm products. In November and December, considerable increases in the value of exports were recorded and by the end of March 1940, a total of 257.2 million dollars worth had been shipped abroad compared with 202.1 million dollars in the same period ended March 1939. Practically all of the increase was due to increases in shipments of wheat and wheat flour and bacon and hams.

Exports of wheat and wheat flour expressed in bushels of wheat amounted to 132.6 million bushels valued at 102.1 million dollars compared with 107.3 million bushels valued at 66.8 million dollars for the seven months, September 1938 to March, 1939. Exports of bacon and hams during the first seven months of the war totalled 162.1 million pounds valued at 28.3 million dollars as compared with 95.7 million pounds worth 16.7 million dollars. The increased shipments of bacon are chiefly due to greater hog production in Canada which was under way prior to the outbreak of war. However, part of the increase of 11.6 million dollars in total value of shipments can undoubtedly be attributed to the war. Exports of cheese rose from 49.4 million pounds in the period September 1938 to March 1939 to 61.1 million pounds for the seven months ended March, 1940.

The export of many products has been adversely affected. Poultry shipments declined from 2.9 million pounds to 1.1 million pounds. Tobacco exports have been reduced by almost 40 per cent from 12.4 million pounds to 7.5 million pounds. Exports of apples have dropped from 2.8 million barrels to 1.3 million. Barley exports at 10.6 million bushels have been reduced one million below the corresponding 1938-39 exports. Exports of vegetables have been considerably higher, but this has been chiefly due to heavy exports of canned beans and tomatoes.

Exports of agricultural products have been affected by the desire to conserve shipping space and foreign exchange. Thus, exports of many farm commodities which were expected to be increased have on the contrary been restricted. Products considered to be non-essential have been most affected.

Compared with March 1939, prices of Canadian farm products in March 1940 averaged nine per cent higher. Most of the increase occurred in prices of field products which were 15 per cent higher. Animal products had increased four per cent. Prices of bacon hogs in March 1940 were slightly lower than in March 1939. It had been expected prior to the outbreak of war that hog prices would average considerably lower in 1940 because of the greatly increased production. In relation to the supply, therefore, hog prices have been well maintained. Beef cattle prices were only slightly higher. Cattle prices were expected to rise during 1940 but heavy supplies of pork have tended to keep prices down. Prices of cheese and butter have

shown increases of 20 and 26 per cent. Wool prices in March were 94 per cent higher than at the same time a year ago. Sheep prices, influenced by the higher prices for wool and somewhat lower supplies of sheep and lambs, gained 26 per cent during the twelve months. Wheat prices were 45 per cent higher and oats and barley prices rose 39 and 36 per cent, respectively.

Cash income of farmers during the first seven months of the war has shown an increase. This has been due to a greater volume of products sold and to higher prices for several important commodities. During the remainder of 1940, further gains in cash income are expected, if production is maintained. Economic improvement in agriculture has not been evenly distributed, however, and those regions producing crops for which the market has been restricted have fared poorly. Incomes have been adversely affected in fruit and vegetable areas in the Maritime Provinces, Quebec, Ontario and British Columbia and the tobacco section of southern Ontario.

While farm prices and income have risen, farmers have not obtained the whole advantage of the rise as some increase has occurred in living and farm operating costs. Indications point to probable increases in farm wage rates in 1940 and somewhat higher prices for goods purchased. However, the net income of farmers is expected to be from 10 to 15 per cent higher, as gains in the volume and prices of the major commodities will more than offset the rise in costs.

No. 193. Wed. April 10, 1940 - Canada's War Economy

Canada enters the eighth month of war well equipped to stand an economic strain. In the coming fiscal year, or the year ending March 31, 1941, it is expected that the war will cost Canada around \$500,000,000. Heavy as this burden will be, it amounts to only about 12 per cent of Canada's national income, estimated at \$4,100,000,000.

Here are some highly interesting facts, which prove that Canadians are comparatively well off. Britain's war expenditure now calls for about 29 per cent of the estimated national income. German war expenditure is around 40 per cent of the estimated national income. Which means that unless Germany can increase her national income, which is improbable, she cannot largely increase her war expenditure without making heavy inroads on a standard of living already below that of the Allied countries.

According to a report issued by the Dominion Bureau of Statistics, business operations showed marked expansion in the first quarter of 1940 over the same period of 1939. The heavy grain crop harvested last year and increased industrial demands due to war conditions were the main influences in the acceleration of productive operations. The index number of the physical volume of business averaged 130.9 in the first three months of the year as against 112.6 in the same period a year ago, a gain of 16.3 per cent.

Further and undeniable indication that Canadians are rising to meet the stress of the times is the marked increase in manufacturing; during the first three months of 1940, an increase of 25 per cent has been recorded. Iron and steel, external trade, both imports and exports, railway traffic and employment, particularly in manufacturing, logging, mining and trade, have all been accelerated to a considerable extent.

No. 192. Tues. April 9, 1940 - Denmark and Food Supply of United Kingdom

Germany's invasion of Denmark today will make a considerable difference to the United Kingdom's supply of some important food products. Among these the most important is bacon. In 1938, Denmark supplied the United Kingdom with 380 million pounds of bacon which was 49 per cent of the total imports in that year. In the same year Canada supplied 143 million pounds. Other important contributors to the total imports of 769 million pounds were Ireland with 60 million pounds, the Netherlands with 58 million pounds, Poland with 51 million pounds, Sweden with 28 million and Lithuania with 21 million pounds.

In addition to bacon, the United Kingdom imported in 1938, 74 million pounds of hams, 4 million pounds of fresh pork, 133 million pounds of chilled, frozen or pickled pork products, and nearly 9 million pounds of tinned bacon and hams. Total imports of all pork products were, therefore, approximately 990 million pounds.

In 1940 Canada will be able to make up partly the loss of Denmark as a source of supply. Canadian exports rose from about 170 million pounds in 1938 to 186 million pounds in 1939. Exports during the first 3 months of 1940 have been almost double those of the same period of 1939. Exports in 1940 should easily reach 280 million pounds, which was the quota originally granted in the Empire Trade Agreements of 1932.

The large pork production in the United States this year will be further means of making up the loss of the Scandinavian sources of supply. Some of this pork has already come into Canada for the domestic market and has freed Canadian bacon for the United Kingdom. Because of the danger to the hog-price structure in Canada, imports of United States pork since have been placed under quota regulation. With the United Kingdom's greater need of bacon from this side of the water, more American pork may be let into Canada, thus making possible considerably greater exports of bacon.

For many years Denmark has been Great Britain's second most important source of butter, being exceeded only slightly by New Zealand. In 1938, Denmark supplied 265 million pounds or 25 per cent of the total imports of 1,066 million pounds. New Zealand headed the list with the sale of 290 million pounds to the United Kingdom. Australia sent 201 million pounds and the other important contributor was the Netherlands with 80 million pounds.

In recent years Canada's exports have been negligible. In 1938 Canada exported only 3.4 million pounds to the United Kingdom. Canadian butter production is just about equal to Canadian domestic requirements and as a rule Canadian butter prices are slightly higher than the world market price. In recent years Canadian surplus milk production has gone into the manufacture of cheese and concentrated milk products. If the loss of Danish supplies means an increase in demand for Canadian butter, it is likely Canadian butter production will increase, but to some extent at the expense of other forms of dairy manufacture.

In addition to supplying the United Kingdom with bacon and butter, Denmark in 1938 also sent 95 million dozen eggs, 144,000 pounds of turkeys, 2.2 million pounds of cheese, 351,000 gallons of fresh cream and nearly 5 million pounds of condensed milk. Canada will, therefore, be called upon to assist in making up the losses in supply of these commodities. With Canadian live-stock production at a very high level, it will be possible to help make up the deficit, but an even larger production will be necessary to provide adequate supplies. Further increases in

Canadian live-stock output are dependent upon increased production or importation of feed grains. Probably both of these means will be used. Importations of feed into Denmark from the North and South American countries will be reduced and to some extent Canadian live-stock producers will benefit.

No. 194. Thurs. April 11, 1940. War Does not cause Mental Disease

The allegedly widespread belief that mental diseases are a common hazard of war, specially for men in active service, is effectively refuted by Dr. J. P. S. Cathcart, Chief Neuropsychiatrist of the Department of Pensions and National Health and International authority on neuroses.

Dr. Cathcart charged this belief as unfounded and arising from ignorance fostered by ill-advised propaganda. The eminent authority quotes figures showing that in the last war, out of 619,000 enlisted in the Canadian Army, there came to light during service of an average of two years or more, a total of only 1,750 mental cases of all types, including defectives. He states that, when this figure is compared with the admission incidence of mental disease in a similar age group of the male population of Canada for a similar period of two years, it is proven that there was no increase under war conditions.

Psychiatry has made great strides since the last war, declared Dr. Cathcart, and had justified public interest in it. However, no soldier need have his patriotism and enthusiasm dampened by fear of mental disease. This fear arises out of mis-conceptions and faulty interpretations to the public of findings of psychiatrists in connection with armed conflicts.

There were in Canada at the close of 1937, 57 institutions having the care and treatment of mentally diseased persons, of which two were controlled by the Dominion Government, four were private, 14 county and municipal, two psychiatric hospitals, five training schools for mental defectives and 30 were provincial institutions. A total of 44,731 persons received care during the year.

No. 195. Fri. April 12, 1940 -- Save the Wild Flowers

Some of Canada's most beautiful wild flowers have disappeared forever, for many years the system of land development has been destroying the flowers. The woodman's axe, clearing and cultivating farm lands, building up cities, close grazing of fields and woodlands, forest fires, and erosion of the soil have all been responsible for the destruction of the natural floral beauty of Canada. The toll has been increased by ignorance or thoughtlessness of persons in regard to what is left of the wild flowers, and unless some care is taken by the present generation and its successors, there is the possibility that no wild flowers will be left in the Dominion.

The preservation of wild flowers does not mean that no one is to pick them but it does demand a little thought on the part of the picker. For example, some wild flowers should not be picked at all. Plants like the white trillium are best left alone because they cannot be picked without removing all the foliage upon which depends the maturing of the bulbous root for the following season's crop of flowers. Other species, like violets and hepaticas whose flower stem rises

directly from the roots may be picked at will, provided the body of the plant is left undisturbed. Tearing up a plant by the roots to gain a bloom is wanton destruction and can end only one way--the passing of beautiful wild flowers from the Canadian landscape. It is against reckless plucking of wild flowers that the various horticultural societies throughout the Dominion make an appeal to the people of Canada.

No. 196. Sat. April 13, 1940 -- Schooling for Our Indian Population

From the time of the formation of the Dominion, the Government of Canada has been charged with the education of the native Indian children, and has maintained a system of schools for them quite distinct from the provincially-controlled schools. They are administered by the Indian Affairs Branch.

The enrolment of Indian children is now about equally divided between residential and non-residential schools. In the operation of the schools, especially the boarding schools, the different churches have much to do in co-operation with the Department, though the latter bears practically all of the actual cash outlay required. The programmes of studies followed are in a general way those of the departments of Education of the provinces in which the schools are situated, but in the residential schools special attention is given to farming, gardening, care of stock, manual training and domestic instruction. Provincial school inspectors visit the Indian schools in seven provinces, and in the other two the Department employs an inspector.

Attendance has improved steadily in recent years, and a greatly increased proportion of the children is reaching the higher school grades. Since 1919 attendance of all physically-fit children between the ages of 7 and 15 has been compulsory, and in 1931 the upper age limit was raised to 16.

The enrolment in Indian schools for the school year 1938 totalled 18,743, the boys numbering 9,138 and the girls 9,605. It should also be pointed out that some 200 Indian students were attending other schools or colleges, who were not included in the foregoing figures.

No. 197. Sun. April 14, 1940.- Trans-Canada Automobile Trip

Motorists desiring to make a tour across the continent within Canadian territory may now do so. There is as yet no continuous motor road all the way across the Dominion; there is still a stretch of territory north of Lake Superior not yet crossed by a highway, but the tourist can bridge this gap by shipping his car by steamer from Sault Ste. Marie, at the eastern end of Lake Superior, to the twin cities of Port Arthur and Fort William, at the northwest head of the Lake--a 250-mile voyage across Lake Superior which makes an interesting break in the motor trip. Information as to sailings, reservations, automobile rates, fares, etc., may be obtained from the Canadian Pacific Railway Company and the Canada Steamship Lines, Limited both with headquarters at Montreal, Quebec, or from their various agencies in Canada and the United States.

Following the route of the Trans-Canada highway from the Atlantic coast, the motor tourist may travel westward for more than 1,700 miles over improved highways to Sault Ste. Marie, Ontario. The route starting at Halifax or Sydney passes

successively through Truro, Parrsboro and Amherst in Nova Scotia; Moncton, Saint John, Fredericton and Edmundston in New Brunswick; Riviere-du-Loup, Quebec and Montreal in Quebec; Ottawa, North Bay and Sault Ste. Marie in Ontario and then by steamer to Port Arthur or Fort William. From there the Trans-Canada route leads westward to Vancouver, a motoring distance at present of approximately 2,000 miles, passing through Kenora in Ontario; Winnipeg and Brandon in Manitoba; Regina, Moose Jaw and Maple Creek in Saskatchewan; Medicine Hat, Calgary and Banff in Alberta; to Golden in British Columbia. A highway about 192 miles in length between Golden and Revelstoke, following the "Big Bend" of the Columbia River, has been recently completed. From Revelstoke the motorist may continue through Salmon Arm, Kamloops and Lytton to Vancouver and then by boat to Victoria and other points on Vancouver Island.

While the above is largely the most direct route it is by no means the only one. Alternative routes lead through areas the physical attractions of which are well worth the extra mileage. From Aulac in New Brunswick, near the Nova Scotia boundary, a branch route leads to the beautiful province of Prince Edward Island. From Moncton in the province of New Brunswick, a main trunk highway follows the east coast revealing much of the rugged coast line and marine beauty of that province. At the Quebec border this trip may be continued up the famed Matapedia Valley or a circular tour taken around the scenic Gaspé Peninsula. Passing through Ontario, a southerly route follows the St. Lawrence River and the shores of Lake Ontario to Toronto, then swings north through the celebrated Highlands of Ontario to North Bay, and then west to Sault Ste. Marie. Steamer connection can be made to Fort William or Port Arthur. Continuing on by way of Kenora and Winnipeg the route leads across the prairies as described above to Medicine Hat, Alberta. Here the motorist may continue by the southerly route through Lethbridge and Macleod in Alberta and by way of the Crow's Nest Pass to Cranbrook in British Columbia; or he may swing northwest to Calgary and Banff, and then down the Windermere road to Cranbrook and continue by way of Nelson, Princeton, Lytton and down the picturesque Fraser Valley to Vancouver in British Columbia, or he may take the delightfully scenic route which is only a little less direct, via Penticton and the Okanagan Valley to Salmon Arm on Shuswap Lake, and thence to the coast via Kamloops and the spectacular Fraser Canyon.

The Trans-Canada highway during the usual touring season of the year has numerous advantages over other trans-continental highways. Climatically it is the only one, sections of which are not tropically hot during the summer time. It does not traverse long stretches of desert, alkaline wastes and bad lands. In scenic beauty it is unrivalled by any other highway which spans the continent.

No. 198. Mon. April 15, 1940 -- About Vitamins

Five hundred years before the birth of Christ, Hippocrates, the "Father of Medicine" informed the people of his day that by eating liver they might be cured of "night-blindness". This disease, resulting from a lack of Vitamin A, is manifested by an inability to see in the dark and here is an indication that the feeding of a vitamin-containing food to cure a vitamin deficiency disease is by no means new.

Of the several vitamins and vitamin-like substances now existing, six are of primary importance insofar as human health is concerned, these being the vitamins A; B1; P-P or B2; C; D; and E.

Vitamin A is essential if the health of the eyes and the mucous membranes of the respiratory and digestive tracts is to be maintained. Lack of A may result in a lowered resistance to colds and the like. Large quantities of this vitamin occur in the liver oils of the cod and halibut and lesser amounts are found in butter, cheese, milk and carrots.

Vitamin B1 assists in carbohydrate metabolism and protects against such serious nervous disorders as poly-neuritis and beriberi. The latter, incidentally, is not unknown in Newfoundland, particularly during the winter season. Dried yeast, whole cereal grains, wheat germ, green vegetables and lean meat are good sources of B1.

Vitamin P-P, the pellagra-preventive factor, referred to by some as vitamin B2, is of less concern in Canada where pellagra, a serious and oftentimes fatal skin disease, is unknown, than in southern U.S.A. where the disease is widespread, particularly amongst the Negro population. Yeast, egg-yolk, lean meat and green vegetables contain vitamin P-P in liberal amounts.

Loose and malformed teeth, improperly developed bones, unhealthy, bleeding gums and ultimately scurvy are the results of avitaminosis C. Citrus and other fruits and vegetables are good anti-scorbutic foods and while it is probable that sufficient of this vitamin is consumed by all, it is well to remember that 4 weeks on a low C diet may be serious.

Vitamin D, probably the best known of all the vitamins, is the antiricketic or antirickets substance. It aids in regulating the mineral metabolism of the body, thus ensuring healthy bones and teeth. Cod and halibut liver oils, irradiated yeast, eggs and milk are excellent sources of Vitamin D.

Vitamin E, appears to be essential for general good health. Wheat germ oil, lettuce and commercial vegetable shortenings are good sources of vitamin E.

No. 199. Tues. April 16, 1940 -- Age at Marriage

The marriage rate in modern countries of the western world is appreciably influenced by the general level of prosperity prevailing. Marriages in such English-speaking countries, for instance, as the United Kingdom, the United States, Canada, and Australia tend to increase in "good times" and to diminish in "hard times", when great numbers of those who are contemplating marriage are led to postpone the event. Thus an examination of the figures for individual years over the past decade clearly shows that marriages reached a peak in 1929 after which the recession was steady and marked until 1932; for 1933 there was an improvement, though of little more than 2 p.c. over 1932, for 1934 a further improvement of over 14 p.c. was recorded, and the improvement continued from 1935 to 1937. This general trend for Canada as a whole was followed in the figures for each province, except in the cases of Prince Edward Island and Saskatchewan, both of which showed decreases as compared with 1936.

The average age of all bridegrooms in the Dominion in 1936 was 29.1 years and that of all brides 25.0 years. The average excess of the bridegroom's age was thus 4.1 years. It may be noted in the following table that when the contracting parties are grouped by age of bridegroom, the average difference in age is less for the younger groups, grooms under 20 being 0.4 years younger than the brides, while the excess of the average bridegroom's age was 1.4 years in the group 20-24 and steadily

increased for each quinquennial age group until it was 11.6 years for the bridegrooms 50 years or over in 1936. On the other hand, when the parties are grouped by the age of the bride, the same regularity is not shown. In the case of brides in the age groups 25-29 years and 30-34 years, the bridegrooms approximate most closely in age to their brides.

Since this table is based upon all marriages contracted during the year, the figures given should not be understood to signify the average ages at first marriage. Out of each 1,000 bridegrooms in 1937, 937 were bachelors, 53 widowers, 10 divorced men; out of each 1,000 brides, 958 were spinsters, 34 widows, 8 divorced women. The first year in which as many as 1 p.c. of those marrying had previously been divorced was 1928. The comparison between the figures of divorces granted, and the number of divorced persons re-married is of some interest. Thus 1,870 divorces were granted in 1937, while 895 divorced males and 731 divorced females married again. This, of course, does not mean that these were the same persons.

Age Group of Bridegrooms	Excess of			Age Group of Brides	Excess of		
	Average Age of Bride- grooms	Average Age of Brides	Average Age of Bride- grooms		Average Age of Brides	Average Age of Bride- grooms	Average Age of Bride- grooms
All bridegrooms ..	29.1	25.0	4.1	All brides	25.0	29.1	4.1
Under 20 years ...	19.1	19.5	-0.4	Under 20 years.	18.5	24.7	6.2
20-24 years	22.9	21.5	1.4	20-24 years ...	22.4	26.6	4.2
25-29 years	27.3	23.8	3.5	25-29 years ...	27.1	29.8	2.7
30-34 years	32.1	26.2	5.9	30-34 years ...	32.1	34.4	2.3
35-39 years	37.1	28.8	8.3	35-39 years ...	37.2	40.2	3.0
40-44 years	42.3	32.5	9.8	40-44 years ...	42.2	46.4	4.2
45-49 years	47.3	36.7	10.6	45-49 years ...	47.4	51.9	4.5
50 years or over..	59.7	48.1	11.6	50 years or over	58.9	61.2	2.3

No. 200. Wed. April 17, 1940 - Guarding Buckingham Palace

There was a remarkable event in London today. Quebec's famous Royal 22nd Regiment, the Vingt-deuxième, took over the guard duty at Buckingham Palace from the Welsh Guards for a few days. They were described as measuring up in smartness, precision and soldierly bearing with the guardsmen. London cheered. The King and Queen watched the ceremony from one of the palace balconies, and later the King came out to receive the royal salute.

Standing on guard at Buckingham Palace today is symbolic of the defence of Canada. But it is more than that, it is a proof of what the Empire means to us all. The event thrilled the United Kingdom, and it sent a thrill across Canada.

The situation could not be better described than was done by the New York Times which said editorially:

What can the shades of Louis XIV and Napoleon be thinking now? French-Canadian sentries from Quebec stand guard this week over Buckingham Palace. The symbolic heart of the British Empire is in their keeping. One of the wonders of the Western World has long been the sight of French-speaking sentries in British uniforms on the Plains of Abraham. Now Londoners will see them in their own

capital, as will King George, too, when he leaves his palace on state occasions.

All the Kings of France, with their conquering armies, were not able to accomplish this miracle. It is at once a stroke of imagination, a tribute to the French in Canada, a proof of what the Empire means, perhaps even a foretaste of the closer Anglo-French union that may come.

No. 201. Thurs. April 18, 1940 -- Canada's Historic Highways

The first highway of importance in Canada was the Chambly Road in the Province of Quebec, which was opened in 1665 under the instructions of M. de Courcelle, Governor of New France. It was built by the French to connect Montreal with the chain of forts along the Richelieu River as a defence measure against the Iroquois Indians.

In Ontario the Niagara Portage Road between Queenston and Chippawa was opened by the United Empire Loyalists in 1788. It was the principal route of travel to the Upper Lakes region and served as an important strategic position and line of communication during the War of 1812-14 and the Rebellion of 1837-38.

Yonge Street, which leads into Toronto from the north, was planned by Lieutenant-Governor Simcoe in 1793 as a military road and commercial highway between Lakes Ontario and Huron. It was laid out and constructed by the Queen's Rangers in 1794-96, and named in honour of Sir George Yonge, a member of the British Government who later became the Governor of the Cape of Good Hope. Dundas Street (The Governor's Road) was planned by Governor Simcoe in 1793 to promote the settlement of the province. It provided communication between Lake Ontario and the Thames River, and was named after the Honourable Henry Dundas, Secretary of State for War and the Colonies.

In Western Canada three historic roads have been marked—the Dawson Road, the Roseau Route, and the Cariboo Road. The Dawson Road, a land and water route from Fort William to Red River, was Canada's first attempt to provide an all Canadian highway linking the East with the Prairie Provinces. Surveyed in 1858 and completed in 1871, this road was 530 miles long and took its name from the engineer who carried out the survey.

The Roseau Route was the war road of the Sioux Indians leading to the Lake of the Woods, and it was also the earliest route to the West used by the French explorers and traders under LaVerendrye in 1733.

The Cariboo Road in British Columbia was completed in 1865 and played an important part in the gold rush to the Cariboo area. This road runs from Yale to Barkerville, and the wealth in gold which has passed over it is estimated at more than forty million dollars.

In the early days roads were auxiliary to water routes as avenues of transportation. They were used during the summer season when portages were necessary to avoid obstacles in river and lake travel, and in winter when ice prevented navigation. With the spread of settlement and the demand for means of communication between centres of population, overland routes became necessary and road construction got under way in the pioneer stages of the development of the Dominion. The advent of the automobile and the consequent rapid growth of tourist traffic gave added impetus to road-building with the result that Canada's highways now comprise about a half million miles.

No. 202. Fri. April 19, 1940 - Forest Fire Losses Reduced

Forest-fire protection agencies in Canada did good work in 1939. Figures reveal that the measurable damage and loss from forest fires for the year amounted to only \$2,729,321. This compares with an average loss of slightly less than five million dollars a year for the ten-year period 1930-39. These figures are based upon the money spent in actual fire-fighting and upon the stumpage value of the timber which would have accrued to the governments had the timber been utilized.

Human agencies started 85 per cent of Canada's forest fires during the ten-year period ending 1939. Neglected campfires caused 20 per cent of the fires, careless smokers 15 per cent, settlers' clearing fires getting out of control 17 per cent, and incendiary fires amounted to 9 per cent. Fifteen per cent of the forest fires were started by lightning.

While conditions vary somewhat in the different provinces, in Canada as a whole, May is usually the worst month of the year from the point of view of the number of fires and area burned over. In the period before new vegetation comes up and before the leaves come out on the deciduous trees, there is an abundant supply of dead material on the ground. In the absence of frequent rains, this material becomes very dry and provides ideal fuel for the inception and rapid spread of surface fires. On the average, more than 25 per cent of the forest fires occur in May.

August is probably the worst month from the viewpoint of damage to timber. Slightly less than 25 per cent of the fires normally occur in this month, but they are usually quite destructive to the more valuable coniferous forests. In a dry summer with high temperatures prevailing these forests become highly inflammable, and fires once started spread rapidly, both as surface and crown fires, destroying much timber.

No. 203. Sat. April 20, 1940 - Indian Population Increasing

Indians in Canada are no longer a vanishing race, according to a census taken last summer by the Indian Affairs Branch of the Department of Mines and Resources, which reveals that there are 118,406 Indians in the Dominion compared with 112,510 in 1934. The latest count shows 59,767 males and 58,649 females. The Indian census is taken every five years, the Indian Agents gathering the vital statistics in their respective agencies, while in the outlying districts the information is collected by the Royal Canadian Mounted Police, missionaries, traders and others.

Like those of other races, the Indians' manner of livelihood depends largely upon the climatic and physical features of the areas in which they live. In southern Ontario, southern Quebec, and parts of the Maritime Provinces the Indians are engaged largely in agriculture, and some of them find employment in nearby industrial centres. Another group occupies the great hinterland comprising the northern parts of the provinces from the north shore of the St. Lawrence River to the Mackenzie Valley and Yukon. These people are dependent mainly on hunting, fishing and trapping for their existence, and large tracts of land have been set aside where only the Indians are permitted to hunt and trap. Efforts are being made to have this policy extended wherever feasible, having regard to the interests both of the Indians and of wild life conservation.

A third group of Indians is found in the Great Plains region and in the foothills country of Alberta, where their lands are suitable for agriculture and stock-raising. In 1878, when the great buffalo herds were virtually wiped out, these Indians had to turn to farming and ranching, and within two generations a large number of them have developed into prosperous, self-reliant farmers. Still another group of Indians inhabit the northwestern coast of British Columbia. These people had a highly developed culture before the appearance of the white man. They are fisher-folk, trained to the sea, and for many years have been prominent in the fishing industry.

No. 204. Sun. April 21, 1940 - Toronto Scots on Guard

A selected detachment of the Toronto Scottish Regiment took over the King's Guard at Buckingham and St. James's palaces today from the Royal 22nd Regiment of Quebec. Huge crowds, estimated to be the largest since the coronation, watched the colourful ceremony.

Wearing battle dress and the dark blue Glengarry bonnets of their regiment, the Scots swung into Buckingham Palace fore court to the strains of their own pipe band. It was a unique occasion, for this time Canadians took over from Canadians. It revived the memory of the ancient alliance between the Scots and the French, when both were enemies of the English. That is no more. Queen Elizabeth is colonel-in-chief of the Toronto Scottish and the King is colonel-in-chief of the Royal 22nd.

As the motionless ranks of the new guard and the old guard faced each other, the band of the Grenadier Guards broke into the strains of "Men of Harlech" and the ancient ceremony of handing over the keys took place. Captain Gerard Charlebois, commander of the retiring 22nd guard, stepped forward slowly and handed the King's keys to Captain MacKenzie Robinson, young commander of the Toronto Scottish detachment.

Then to the skirl of pipes, the detachment for St. James's marched away from Buckingham through a lane which had been formed through the sea of people outside. The Toronto Scots will be on guard for four days.

No. 205. Mon. April 22, 1940 - Pulp from Sawmill waste

The war has struck the trade of the United Kingdom with the Scandinavian Countries in wood and woodpulp and so Canada will have to increase its exports to fill the already existing need. In that connection an interesting story comes from the Department of Mines and Resources.

Spruce sawmill waste in Eastern Canada has a potential value of approximately \$3,000,000 a year in the form of pulp chips delivered to the pulp mills, according to the Forest Products Laboratories, Ottawa. The more general use of this waste material for the manufacture of chemical pulp would benefit the pulp mills by conserving raw materials, and tend to reduce operating costs of the sawmills which now have to add the cost of disposing of waste to lumber costs. So far the use of sawmill waste for chemical pulp has been very limited, but as a result of investigations carried out last year efforts are being made to encourage sawmills and pulp mills to co-operate in the wide-scale development of this outlet for waste material.

A survey of representative sawmills conducted by the Department during the summer of 1939 reveals that slightly less than half the volume of the logs used in the manufacture of spruce lumber in Eastern Canada emerges from the sawmills in the form of lumber. Although many useful and profitable by-products such as lath, pickets and boxboards are made from the materials not suitable for lumber manufacture, investigation shows that even the most efficient sawmill usually finds it necessary to burn a considerable quantity of wood. When the production of spruce lumber is fairly high, as was the case in 1937, about 440,000 cords of sound wood are destroyed in refuse burners annually in Quebec and the Maritime Provinces because of the lack of markets for such material.

No. 206. Tues. April 23, 1940 - Wood Seasoning

A remark was made yesterday about the use of wood mill waste, which suggests that something should be said about the seasoning of the wood itself.

Development of dry-kilns with automatic control of temperature, humidity and air circulation has radically changed lumber seasoning practices.

Certain species of wood can now be dried in kilns and put to exacting uses a few days after being sawn, while other species, more difficult to dry, may be made ready for fabrication in a matter of weeks. Formerly timber was piled in a yard for several months and sometimes for years. If it was required for exacting uses such as for furniture it was held in a building for a further long period before being finally used.

The use of these highly efficient dry kilns also eliminates to a large extent losses through checking, cupping, staining and other seasoning defects which formerly were sometimes responsible for reducing the value of wood by as much as twenty-five per cent.

No. 207. Wed. April 24, 1940 - Planning Successful Farm Year

To illustrate the point that volume of business is very important, in this year of war, an example is here quoted from the analysis of the business of 258 farmers who shipped milk for manufacturing purposes. The milk producers, who built up their total farm receipts to \$30 per adjusted acre, had average operator earnings of \$1,288 as compared with earnings of only \$54 where the total receipts per adjusted acre were less than \$13.

As high operator earnings are sought by all farmers, the problem is to attain high receipts per acre. A budget of anticipated expenditure and revenue for the coming year should be prepared. Under expenditure, in addition to such current outlays as wages of family and hired labour, feed and seed purchases, repairs, threshing, taxes and some other items, add sums to cover depreciation of buildings and machinery, interest on capital or mortgage or both, as the case may be. At the bottom of this long list of expenses, wages for the operator, calculated at such rates as may be considered a fair remuneration for his labour and management should be set down. The list of anticipated revenue includes the expected receipts from the dairy herd; milk and milk product sales and sales of

cattle and calves; revenue from crops, hogs, sheep, poultry and other enterprises, each considered separately. All estimates of revenue should be made on a conservative basis.

If the operator is worth the wages he has allowed himself, the total of the revenue should equal or exceed the expenditures. Seldom does a farm budget balance on the first trial, and most frequently one will need to seek means whereby the receipts may be increased. Additional live stock or crops may have to be considered, or changes in farm practices may have to be made to obtain higher production per cow, hen, acre or other unit.

The carefully prepared and written budget approach to the business of the year thus reveals, before the year's work begins, what may be expected under normal conditions. Should the prospective net returns, as calculated, appear unsatisfactory in the first trial, try again. There is still time to make changes in the plan before the business year is too far advanced. This method has been found to stimulate business turn-over in agriculture, with consequent improved net returns, just as it does in urban industry.

No. 208. Thurs. April 25, 1940 - Bacon for Britain

Great Britain will not require any early additional shipments of bacon from Canada to replace supplies which have been cut off by the German invasion of Denmark. This fact has been made clear and definite by an exchange of cables between Canada and Britain within the past week. It comes as a surprise to many Canadians who had assumed without question that there would be an immediate call for increased bacon exports from Canada.

The reasons for this situation are as follows: first, excessive amounts of bacon in storage in Great Britain and with the approach of summer weather British authorities regard it as imperative to use up stored products before authorizing increased imports. Second, production of bacon in Great Britain and Ireland continues at higher than expected levels. Third, problems of shipping continue to present difficulties. Bacon must be handled in refrigerated space. Ships so equipped are not numerous and in view of their speed and construction are often required for other purposes. Finally, it is the apparent intention of the British authorities to restore bacon rationing at an early date and thereby restrict consumption. One purpose of the rationing undoubtedly is to require British civilians to eat home produced food and thereby conserve foreign exchange.

Some of the above reasons apply to the immediate present and others to the future, but it can be stated definitely that no indication has yet been given that Britain will at any time require greater quantities of bacon from Canada than are provided for in the present contract.

What this means to the Canadian producer of hogs and bacon may be estimated only after examining the Canadian situation. The present contract of 5,600,000 pounds of bacon and ham weekly uses the products of about 48,000 Canadian hogs. The Canadian domestic trade consumes the products of about 40,000 hogs weekly. On the average, therefore, Canadian packers can sell the product of less than 90,000 hogs each week. From November 4 to April 4 weekly marketings of hogs in Canada averaged more than 96,000. During this period there has been accumulated in storage the product of about 280,000 hogs. According to present estimated this amount is sufficient to

make up any possible deficiency of exports which may result from short hog marketings during the summer months. With current marketings exceeding the amount required for export and domestic use, it is apparent that greater quantities of pork products will be offered for sale in the domestic market. The pressure of increased supplies on the domestic market will in all probability result in lower prices for the products. Experience indicates that lower prices will increase consumption, consequently it may be possible to market the whole Canadian production. If prices to Canadian consumers decline, there will be some decline in hog prices. What that decline may be cannot be forecast until experience demonstrates what reduction in price will put into consumption the additional quantity necessary to clear our markets.

With regard to the more distant future, there seems to be no possibility of making any definite prediction at the present time. It may be assumed that if the war continues for a long period Britain will call upon Canada for greater supplies of bacon and many other food products. However, since the duration and course of the war cannot be predicted, it is equally impossible to predict when an increased demand for bacon may come from the British Government.

No. 209. Fri. April 26, 1940 - Healthy Meat

There is a sure and certain way of knowing that meat bought in Canada is wholesome and in every way fit for human consumption, and that is to buy "Canada Approved" meat. This is more than ever important today. These words stamped in several places on the carcass is a guarantee of wholesome meat. At every packing plant or abattoir where animals for meat are killed, from which shipments are made interprovincially or for export, inspectors of the Health of Animals Division, watch for any signs of disease in every part of the animal and unwholesome or diseased meat is condemned and must not be sold for human food. These inspectors are qualified veterinarians. The inspection extends to seeing that the sanitary condition of the equipment and personnel in the plant is maintained at a high standard. Yards, pens and stables belonging to a plant under inspection of the Health of Animals Division must also comply with the regulations under the Meat and Canned Foods Act.

All animals are inspected before slaughter by these officers, and a very strict post mortem examination is made immediately after slaughter. This is followed by intensive supervision of all details during the working hours, day and night, in the curing, canning, rendering or other process, handling, packaging, and shipping out of all meat and meat products. No curing materials, spices, and such like, can be used unless they carry the endorsement of the Dominion Government. Even the railway cars and other vehicles that carry meats are supervised for cleaning.

All meats which bear the legend "Canada Approved," give assurance to the Canadian public that everything possible has been done to insure pure food. Such meats may be purchased from local markets.

No. 210. Sat. April 27, 1940 - Water Powers of Canada

The fresh-water area of Canada is officially estimated at 228,307 square miles--an area nearly twice as large as the whole land area of the British Isles, and certainly larger than the fresh-water area of any other country in the world. As many

parts of this well-watered country are situated at considerable heights above sea-level, there are great sources of potential energy in the rapids and waterfalls of the rivers conveying the waters from these areas to the sea. Water power, therefore, is among the chief natural resources of Canada, and its development has in recent years contributed materially to swell the volume of Canadian production.

The progress of civilization in its material aspects may be measured by the extent to which the resources of nature are adapted to the uses of mankind. These resources yield, in the first instance, raw materials such as coal and iron, cotton and lumber, hides and wool, which enter into so many things that they are spoken of as basic commodities. Energy, until comparatively recently, was secured largely by the combustion of coal and was therefore looked upon as a secondary product, whereas, when produced from falling water, it is just as much a primary product as coal itself. Energy now enters so largely into the scheme of modern existence that it is recognized as basic. Statistics are published, just as with the production of pig iron, coal or cotton. In this case they show the kilowatt hours of electric energy produced and take note of undeveloped water power as being a source of raw material, just as important as uncut forests or untapped oil fields. The relationship of power to production is now so vital, that those associated with power development in any country are keenly interested in methods and progress in other parts of the world. To facilitate a study of world power conditions, three Plenary World Power Conferences have already been held to consider the technical, economic, and statistical aspects of power development. The latest of these Conferences, held at Washington in September, 1936, was composed of representatives of more than fifty member States. Following these Conferences, sectional meetings were held to consider special problems related to the production and supply of energy. Tentative arrangements have been made for the holding of a fourth World Power Conference at Tokyo, Japan, in 1942.

Canada is richly endowed with water-power resources and is in the forefront as regards their utilization. In fact, practically every large industrial centre throughout the Dominion is now served with hydro-electric energy and has within practical transmission distance substantial reserves for the future. More than 95 p.c. of the total main-plant equipment of the central electric stations of Canada is hydro-power, and this equipment generates more than 98 p.c. of the total electrical output. Indeed, water power is a mainspring of industrial progress in the central provinces, which have no indigenous coal supplies.

No. 211. Sun. April 28, 1940 - Mines and Minerals

The early settlements in the lower St. Lawrence valley were hemmed in by the non-agricultural rock formations of the Canadian Shield which approached closely to the first points of colonization. An important epoch of Canadian expansion, about the middle of the 19th century, coincided with the surmounting of the transportation difficulties presented by the arm of the Canadian Shield which crosses the St. Lawrence river above Montreal and is responsible for the series of rapids between that city and Lake Ontario. A second and greater period of expansion followed again when railways bridged the barriers of rocky country separating Lake Superior in the east and the Pacific coast in the west from the extensive agricultural plains of the Prairie Provinces. These forbidding areas, with their exposed ancient rocks, their forests, and their lakes, which impeded Canadian growth and agricultural settlement until nearly the end of the 19th century, have now become the chief source of the expansion of wealth and productive activity because of

their resources of pulpwood, water power, and mineral deposits.

The discovery of minerals in Canada was closely associated with the early exploration of the country. Iron and silver, and later coal, were reported in Nova Scotia by some of the first French adventurers. Bellin's maps published in 1744 indicated the existence of silver-lead not ten miles distant from the now famous Cobalt Silver Camp. However, in the early period of Eastern Canada's history such development of mineral resources as occurred was almost entirely incidental to the agricultural colonization of the country and consisted principally of the smelting of bog iron ores and of the production of such necessities as salt and building materials.

Though coal was discovered on Vancouver island in 1835, it was the alluvial deposits of the Fraser river and the gold rush to the Cariboo in 1859 that really opened up the interior of the mainland, so that, on the western coast, mineral exploitation preceded agricultural settlements.

No. 212. Mon. April 29, 1940 - Later Mineral Discoveries

These early isolated discoveries were followed by others, notably the gold ores of Nova Scotia, the copper-nickel of Sudbury, the silver of Silver islet on Lake Superior, copper-gold at Rossland, and silver-lead in the Kootenays. A foundation for the mining industry was laid with the setting up of the Geological Survey of Canada under Sir William Logan and the publication in 1863 of the *Geology of Canada*. However, it was not until the mining development in British Columbia in the 1890's and the discovery of rich deposits of silver and gold in northern Ontario in the first decade of this century that the mining industry began to give promise of its tremendous possibilities. The first period of rapid increase from 1895 to 1900 resulted from the placer discoveries of Yukon and the expansion of lode mining in British Columbia. The next important increase in 1906-13 followed the discovery of silver and gold at Cobalt and Porcupine.

War prices stimulated the production of base metals from properties already developed, but on the whole active prospecting was much curtailed during the war period. However, in the decade following the War, new discoveries were widespread and the expansion was very rapid. The aeroplane furnished a means of comparatively easy access to remote districts and the discovery of new deposits of minerals increased annually. Important discoveries of base metals were the copper-gold areas of Rouyn in western Quebec, and the copper-gold-zinc ore bodies near the Manitoba-Saskatchewan boundary. Expansion programs were carried out at nickel-copper properties in the Sudbury district of Ontario and silver-lead-zinc properties in British Columbia. New gold mines were brought to the production stage in western Quebec, northwestern Ontario, and eastern Manitoba. An intrepid prospector went farther afield and uncovered silver-radium ores at the easterly end of Great Bear Lake.

It should not be imagined from the brief outline given above that the successful and profitable development of mining enterprise in Canada has depended solely upon the discovery of the ore bodies. Even in the case of occurrences of free-milling gold ores, a long and expensive process of exploration is required before the possibilities of a property as an economic producer can be determined, and, only a very small percentage of mining claims, though showing promising indications of mineralization when located, ever develop to profitable production. In the case

of base-metal ore-bodies, not only is the expenditure for preliminary development necessary, but also difficult problems in metallurgy are present, requiring long periods of research and experiment for their solution before profitable production is made possible. The nickel-copper deposits of Sudbury were discovered in 1883, but production on an important scale did not come until after 1900 and the greatest expansion has occurred since 1918. The great Sullivan silver-lead-zinc deposit in the Kootenay district of British Columbia was discovered in 1892, but production upon anything like the present scale did not come until after 1918. when a successful method of separating the lead and zinc had been worked out.

No. 213. Tues. April 30, 1940 -- Current Production of Minerals

The trend in the development of the mineral resources of Canada was affected by the incidence of the depression for several years after 1929. The decline in the prices of base metals materially reduced the prospecting for, and development of, new deposits of these metals, but the higher price of gold after 1932 greatly stimulated the development of auriferous deposits. Prospecting for gold ores and the exploration and development of known auriferous deposits have been more extensively carried on throughout Canada since 1932 than ever before. These activities have been common to both the older producing camps and new areas. In certain of the older camp properties closed prior to the revaluation of gold were reopened and placed in production or further explored as to their economic possibilities. In some of the producing mines the higher price for the metal permitted a very considerable extension or increase of pay ore with the resultant milling of rock of lower gold content and important increases in ore reserves.

The economic recovery since 1932 and the rising trend in base-metal prices have resulted in a rapid increase in production from deposits which were already known and partly developed before 1929; this expansion has occurred in spite of the fact that base-metal prices have not yet reached the level relative to gold which existed prior to 1929. The metals, copper, lead, and zinc were produced in greater quantities in 1938 than ever before in Canada in spite of a decline in prices as compared with the previous year. Prospecting for new base-metal deposits was not particularly active, but on some producing properties, developments disclosed valuable new ore bodies.

Production of various non-metallic minerals, especially asbestos and coal, have realized important gains since 1932. The gains in the structural materials industries, where recessions were severe during the period of business depression, have been encouraging since 1933, but there is room for a large expansion in this division when the construction industry recovers its normal activity.

In 1937, the latest year for which comprehensive world figures of the Imperial Institute are available, Canada stood first in the production of asbestos, nickel, the platinum metals, and radium; third in zinc and silver; and fourth in gold, copper, and lead. During that year, Canada produced approximately 89 p.c. of the world production of nickel, 58 p.c. of the asbestos, 10 p.c. of the copper, 12 p.c. of the gold, 11 p.c. of the lead, 10 p.c. of the zinc, and 8.5 p.c. of the silver.

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