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No. 245. Thurs. June 1, 1944. -- Bucksheet Pancakes

Buckwheat pancakes are a typical Canadian dish and when served with maple syrup, jam, or other sweetener, they are especially esteemed. They are also popular with our neighbours to the south of the border. Although pancakes are popular at any time, the Shrove Tuesday feast of pancakes has become an institution.

Buckwheat is a native of Central Asia, from whence its culture has spread to many lands. "Buck" is a corruption of the German "Buche" which means "beech". The fruits of the buckwheat plant resemble miniature beechnuts. Although buckwheat is less nutritious than wheat, it is said to be superior to rice.

The rapidity with which buckwheat can be grown assists the farmer in many ways. This particular quality makes it a suitable crop for poor, badly tilled land, while it is often sown in fields that have become infested by weed growth. The buckwheat plant acts as a smothering agent. The crop is sometimes used as a green feed and may be ploughed in as green manure. In some sections of the country, farmers and bee men grow it especially for its flower from which we get our buckwheat honey. The seed is also widely used as poultry feed.

The production of buckwheat in Canada last year amounted to 6,243,000 bushels, of which Ontario accounted for 3,578,000 bushels, Quebec 1,528,000, New Brunswick 613,000, Manitoba 106,000 with lesser quantities in Prince Edward Island and Nova Scotia. The bulk of it is consumed in Canada. The production of buckwheat flour last year amounted to 1,098,000 pounds.

No. 246. Fri. June 2, 1944. -- Refugee Industries

Canada, in providing asylum for refugees who fled their native lands when war broke over Europe, has gained much by adopting a benevolent attitude toward these people. Most of the refugees came from Czechoslovakia, although Germans, Poles Belgians, Roumanians, Hungarians, Netherlanders and French are also represented.

They brought with them specialized industrial knowledge, much of which was new to Canada. As a result of the initiative of these people, vast new industries have sprung up in Canada, which in addition to making a valuable contribution to the Dominion's war effort, are assisting generally in the economic development of this country.

The industries established by these refugees have grown by leaps and bounds since 1939. In that year there mere three establishments included in the refugee group, but by the end of 1942 the number had increased to 56. The capital investment showed a proportionate rise, increasing from \$368,000 in 1939 to \$18,700,000 by the end of 1942.

The spectacular growth is further illustrated by the increase in the number of employees working in these refugee plants. In 1939 there were only 75 persons employed, but at the close of 1942 the number on the payrolls had increased to nearly 5,000. The amount paid out in salary and wage disbursements rose from \$69,000 in 1939 to over \$6,200,000 in 1942.

The cost of raw materials used by these establishments rose from \$69,000 in 1939 to \$11,000,000 in 1942, while the gross value of products manufactured showed an increase of similar magnitude from \$185,368 in 1939 to \$22,668,000 in 1942. Although the greatest number of refugee establishments are engaged in the manufacture of textiles and textile products, others manufacture animal products, wood and paper products, iron and steel products, non-metallic mineral products, chemicals and vegetable products.

The majority of these industries have settled in Eastern Canada; 27 in Quebec, 24 in Ontario and others are located in Nova Scotia, Manitoba and Saskatchewan and British Columbia.

No. 247. Sat. June 3, 1944. -- June Bridals

Wedding bells ring out more often in Canada in June than in any other month of the year. Just why there is a preference for entering wedded bliss in June is difficult to say, but it is possible that we have inherited the Roman superstition of luck in that month. In Olde England the bride was careful to choose an evening in June with a growing moon and a full tide, both of which were considered lucky.

Whatever may be the reason or reasons, June most definitely is the most popular month for weddings. The year 1942 will serve to illustrate: Of the 127,000 wedding ceremonies performed in Canada in that year, no fewer than 12 per cent were celebrated in the month of June. August was chosen by the next greatest number, followed by September and October. December, January, February and March do not appear to be as popular with brides as the other months of the year, with March, the Lenten month, the least popular.

In only two provinces did brides differ in their choice of June as the most popular wedding month in 1942. These two provinces were Saskatchewan and Alberta and the month chosen was November. June was second choice for brides in Saskatchewan, but it was placed third in Alberta.

Nova Scotia, Quebec and Ontario brides were unanimous in their choice of September as the second most popular month in which to wed. In Manitoba, October was the second most popular month, while in Alberta, July was acclaimed by the second largest number and in British Columbia the month of August was the second best month.

No. 248. Sun. June 4, 1944 -- Mahogany

While its handsome appearance is no doubt the primary reason for the popularity of mehogany as a furniture wood, the fact that it shrinks, swells and warps very little together with its ability to resist indentation, are other important factors. It is easily worked with tools and takes different finishes and excellent polish. It veneers and glues well and makes good plywood.

The great beauty, hardness and durability of mahogany was noticed on board Sir Walter Raleigh's ship in 1595. Dr. Gibbons brought it into notice as well adapted for furniture in the early part of the 18th century and its use as a cabinet wood was first practically established by the cabinet-maker Wollaston, who was employed by Gibbons to work up some mahogany which had been brought to England. The earliest known use of the wood in England was in Nottingham Castle, built in 1680.

True mahogany occurs naturally only in tropical America, including the West Indies, Mexico, Central America and South America. The mahogany tree grows to a large size. They do not form pure stands but are scattered through the forest with usually not more than one merchantable tree to the acre. In their native habitat the wood is rarely considered of great value and is even used for rough construction and as fuel.

On the North American Continent several small trees with very hard, reddish wood are called mountain mahogany, the wood of one of which is so hard that it is difficult to drive a null into it. The mountain mahoganies found on this continent include the curly leaf, hairy, birch-leaf. Trask, small-leaf and the California. No mahogany trees grow in Canada.

Canada imported 1,361,000 feet of mahogany lumber in 1942 and the value was \$221,000. The United States and British Honduras supplied the bulk.

No. 249. Mon. June 5, 1944. -- Teaching Staff's in Eight Provinces in Canada

The Dominion Bureau of Statistics has issued a report on the teaching staffs of schools in eight provinces of Canada, Quebec being excepted. There has been a sharp reduction in the number of male teachers during the first four war years, the total of which dropped to 10,290 in 1943 from 14,718 in 1939. The decline in the number of mele teachers reflects enlistment in the armed forces as well as numerous resignations in favour of more remunerative positions. The number of female teachers increased to 38,913 in 1943 from 35,400 in 1939. A special feature of the situation has been the large number of married women, former teachers, returning to the schools.

In 1939 there were 8,739 university graduates among the approximately 50,000 teachers and in 1943 there were only 7,883. In pre-war years there were comparatively few teachers who did not hold either a first or second class professional certificate or a certificate representing special qualifications in a certain field. The number of first-class teachers has nominally remained about the same although requirements have generally been relaxed for those who have obtained certificates within the period. The number of second-class teachers has fallen by about 5,000, the compensatory increase having been largely in the personnel with lower qualifications, especially holders of temporary permits to teach.

The level of experience of teachers in seven of the eight provinces, Ontario and Quebec being excepted, has on the whole been maintained, though not among teachers in rural schools. The average teacher had had 7.7 years experience in 1939 and in 1943 the average stood at 7.8. Teachers in city schools in 1939 had had, on the average, 15.7 years of experience, and in 1943 the figure was 17.5. In one-room rural schools the average number of years experience fell from 4.7 in 1939 to 3.3 in 1943.

There has been a pronounced increase in the movement of teachers from school to school, except in cities, and especially in towns and villages. In June 1939, the average teacher had been teaching in the same place for almost three years, and in June 1943 for about two years. The average tenure of teachers in city schools rose from 11.3 years in 1939 to 12 years in 1943. The tenure of teachers in town and village schools declined from an average of four years in 1939 to 2.5 years in 1943, while in one-room rural schools the average declined from 1.9 years to 1.6 years.

A factor in the increased movement of teachers is undoubtedly their scarcity, with the consequent higher bidding of school boards for their services. The overall increase in annual salary in the four years has been \$200, and the differential as between rural and urban salaries has been appreciably reduced. The average teacher received a salary of \$854 in 1939 and by 1943 the figure had been in reased to \$1,057. The average salary of teachers in city schools rose to \$1,784 in 1943 from \$1,613 in 1939, in town and village schools to \$1,113 from \$960, in rural schools of more than one room to \$1,039 from \$839, and in one-room rural schools to \$853 from \$607.

No. 250. Tues. June 6, 1944. -- Count of Ration Book No. 4

A count of the fourth ration book indicates a continuance of the migration within Canada shown by counts of each of the first three books, according to a report issued by the Dominion Bureau of Statistics. The war has favotred certain provinces with respect to population and to cause others to lose. The largest gain through civilian migration in the three-year period since the census of 1941 was shown by British Columbia and the largest loss by Saskatchewan.

The cities of Canada have, in general, gained very greatly and this is most conspicuous in the case of the larger cities. The counties containing Montreal, Toronto and Vancouver seem to have added something of the order of 50,000 persons each through civilian in-movements.

The estimated population of the nine provinces of Canada, based on the count of the fourth ration book was 11,927,000 at April 1, 1944, an increase of 438,000 since June 1941. The population of the province of Ontario recorded an increase by internal migration of 58,000 over 1941 and British Columbia 90,000, while that of Saskatchewan declined 86,000 and Manitoba 25,000; the net change in the numbers of persons actually present involves as well natural increase and enlistments in the armed forces.

No. 251. Wed. June 7, 1944. -- Expanding Use of X-rays

Although the X-ray has many uses, both from a medical and industrial point of view, it is perhaps best known to the average person through its application in the fight against tuberculosis. It is applied in the detection of cancer, is an invaluable aid in ascertaining the extent of fracture of broken bones and is used in the examination of internal wounds. On the battle fields, self-contained portable equipment makes possible early X-ray examination of mounds received in combat.

Before a recruit is accepted for service in the armed forces, he or she must undergo a thorough medical examination which includes an X-ray examination of the chest. In recent years mass X-ray tests of sections of the civilian population, including office and industrial workers, as well as school children, have been taken. In addition, many hundreds of people submit themselves for periodic X-rays. In this way hundreds of unsuspected cases of tuberculosis have been detected and cures brought about before the disease had made dangerous inroads.

The war has speeded up the industrial applications of the X-ray. Today, vital parts of fighting equipment arc subject to X-ray tests in order that hidden flaws may be discovered before shipment to the battle zones. The X-ray is used in chemical analysis work, to discover the existing strains on structural materials, in the inspection of automobile tires and aeroplane propellers. Even foodstuffs such as candy, vegetables for canning, shelled nuts and dried fruits are examined by X-ray.

At several of the more important ports of entry, the Customs Department uses the X-ray in searching for articles intended to be smuggled into the country. Again, in the jewellery business X-ray equipment is used to assess the value of gems, particularly pearls. Another curious use to which it is put is to obtain information as to the authenticity of paintings of the Old Masters.

The X-ray was discovered accidentally in 1895 by William Conrad Roentgen, a German physicist, who while investigating the passage of high voltage electric currents through vacuum tubes, happened upon this great find. Due to his uncertainty as to the exact nature of the ray, he called it the X-ray.

No. 252. Thurs. June 8, 1944. -- Increased Farm Tractor Usage

The trend toward the replacement of the horse by the tractor on the farms of Canada is forcibly illustrated when the figures of the 1931 and 1941 censuses of agriculture are compared. During the ten-year period, the number of horses on the farms declined by 13 per cent, whereas the number of tractors in use increased by no less than 51 per cent. Thus, it would appear that this faithful animal, which has served man for many centuries has been unable to resist the steady onrush of the machine age.

A though the figures illustrate a striking change over a period of ten years, the great majority of Canadian farmers still rely upon the horse as the principal source of farm power. It, therefore, seems reasonable to assume that even though Debbin may still further give ground to the tractor, there will always be a sphere of usefulness for the horse on some farms of this Dominion.

In Europe the task of supplying farm power to assist in the restoration of agrioulture in the devastated countries is going to be a tremendous one, and it is expected there will be a demand for Canadian horses. The census of agriculture reveals that there were 2,789,391 horses in Canada in 1941, a decrease of 13 per cent from the total recorded in 1931. The number of tractors on the farms was 158,844, an increase of 51 per cent. Roughly, two-thirds of the tractors were over 15 horse power.

No. 253. Fri. June 9, 1944. -- Durum Wheat

A search through the records of Canada's trade with other countries reveals that Italy used to be one of Canada's biggest wheat customers. In the earlier years of Mussolini's career as Dictator of Facist Italy, during the course of which he inaugurated his "self-sufficiency programme", Canada shipped huge quantities of wheat te that market. In 1927, for instance, wheat exports to Italy totalled 12,000,000 bushels. Year by year as Italy and the Italian Empire produced more and more wheat, our exports of wheat to that country fell away. By 1939 they had dropped to 500,000 bushels.

The Italian market colled for Durum wheat --- a very hard wheat which was especially suitable for the manufacture of macaroni and similar products. No doubt, as a partial consequence of the shrinkage of the Italian market, Canadian production of Durum wheat was diminished. Just how sharply this has been reduced is perhaps more clearly seen when it is stated that in former years 50 per cent of Manitoba's wheat erop was composed of Durum varieties. This had fallen to five per cent of the total in 1942.

Another factor in more recent years which has tended to reduce the production of Durum wheat in western Canada was the introduction of rust-resistant varieties. It was discovered by many farmers who believed that Durum wheat was rust-resistant, that these varieties were as susceptible to rust as other spring wheats. The introduction of Thatcher and other rust-resistant types of wheat undoubtedly lead to a further decline in the production of Durum, although the trade factor was still an important element.

Because of its particular qualities only limited amounts of Durum wheat can be used for bread making in Canada. Consequently it has never found favour in the home baking industry.

No. 254. Sat. June 10, 1944. -- Irish Moss - 1

The two rusts are not the same, of course, a parasitic fungus making trouble in the wheat field, a limy secretion from a microscopic water animal doing the damage to Irish moss, which is a salt-water seaweed. As explained by Dr. A. W. H. Needler, director of the federal fisheries research station at St. Andrews, N.B., the limy secretion spreads a thin white covering over spots of the moss, causing deterioration and reducing the yield of gelose, the mucilaginous or gummy substance which gives this seaweed its commercial value.

Gelose itself is a complicated carboh drate which only a scientist could describe fully but it has a good many uses which can be simply stated. It is used, for example, to stabilize such mixtures as chocolate milk, to keep canned poultry and meat from becoming mushy, in mixing water soluble paints, in certain textile operations, in clearing beer, in preparing cosmetics for the beauty shop and polish for the shoe shiner, and so on.

As for the Irish moss industry, it has made pretty rapid progress in the Maritimes in the past three or four years, a state of affairs explained chiefly by the fact that war has halted the flow of North American imports of the moss from Europe. In 1940 the Canadian production was only 10,000 pounds or so, dried weight. By 1942, however, it had jumped to a little more than 2,000,000 pounds and though it dropped off a bit last year it was still something like 1,200,000 pounds, twothirds of it from Prince Edward Island shores. The average price obtained for all grades of the moss, bleached and unbleached, is estimated to have run to about 15 cents a pound in the past two or three seasons, with the export price for highgrade quantities several cents above that. Even at the lower price, or, indeed, less than that, a million pounds or so of Irish moss means a fairly tidy sum for producers.

No. 255. Sun. June 11, 1944. -- Irish Moss - 2

In the post-war period, Dr. A. W. H. Needler says, Canada's Irish moss will have to compete with cheap production in some other countries and also with better supplies of gums from other seaweeds or from entirely different sources. Present prices in the Maritimes will "almost certainly" have to be reduced and high quality will definitely be necessary. But competition and price changes will not mean that the industry in the Atlantic provinces will have to "fold up", not at all.

"If a real effort is made to improve both the quality and the efficiency of production", Dr. Needler goes on, "our industry will probably be able to survive and grow, even against such competition. The use of products of this type is increasing and it is well worth while making a real attempt to keep a place in this field".

Introduction of an inspection system, to assure buyers of obtaining Irish moss which will at least measure up to certain minimum standards of quality, and grading supported by governmental inspection, will probably be necessary aids in the proper further development of the industry.

So far as Irish moss in the Maritimes is concerned, it is present almost everywhere on the outer coast of Nova Scotia, increasing in abundance from east to west, but it has not been found in commercial quantity in the Bay of Fundy. In the southern part of the Gulf of St. Lawrence it is abundant over a wide area. It occurs in commercial quantities on all sides of Prince Edward Island, and, on the mainland, from the Strait of Canso to Malagash and from Richibucto to Point Escuminac. Some is present on the west coast of Cape Breton but the island's resources have not been well explored. The moss is also present about the Bay of Chalcur and on the Gaspe coast though there has been no important commercial production north of the Miramichi estuary. Distribution in the northern part of the Gulf of St. Lawrence has not yet been determined.

There are resources ready for further exploitation, then, but there's this to remember: Exploitation cannot be really successful unless quality production is made the harvester's rule of conduct.

No. 256. Mon. June 12, 1944. -- Life Insurance

The life insurance business was introduced into Canada by companies from the British Isles and the United States about the middle of the nineteenth century. By 1875 there were at least 26 companies, and possibly several more, competing for the available business in Canada, as against 41 active companies registered by the Dominion and a few provincial companies in 1942. Of the 41 active companies registered by the Dominion, 28 were Canadian, three British and 10 foreign.

As a result of the adaptation of life insurance policies to the needs of the public, and of the growing wealth of the country, the increase in the amount of life insurance in force has been remarkable. In 1869 the total life insurance in force in Canada by Dominion registered companies was only \$35,680,000 as compared with approximately \$7,876,000,000 at the end of 1942. This latter figure was equal to slightly more than \$684 per head of population. In addition, there was \$196,000,000 of fraternal insurance in force by Dominion licensees and \$187,000,000 of insurance in force by provincial licensees.

Thus the total life insurance in force in the Dominion at the end of 1942 was approximately \$8,250,000,000. The premium income from Canadian business of all Dominion registered companies, not including fraternal benefit societies, increased from \$90,000,000 in 1920 to \$221,000,000 in 1930, but decreased to \$216,000,000 in 1942.

No. 257. Tues. June 13, 1944. -- Cerman Internees Produce Supplies

Six hundred carloads of supplies have been produced in the factories of a prisoner-of-war internment camp near Montreal, in the past twelve months. Canadian forests and textile mills provide raw materials daily, the internees convert them into a variety of products not used directly in prosecution of the war.

Several hundred prisoners of war are engaged in one woodworking shop on contracts for packing boxes currently exceeding 65,000. This shop also produces stretcher carriers, hospital chairs, shoe trees, naval lockers and other wood products.

In a sewing shop, prisoners of war sit at 28 sewing machines making doctors' gowns and masks, hospital pyjamas, holdalls, ration bags and similar cloth articles.

In a boot repair shop, German cobblers rebuild 1,200 pairs of boots a week and

salvage leather and other parts of the boots. Ten thousand pairs are presently on hand for stripping and rebuilding. A quantity of them will go Overseas to countries occupied by the Allies.

Internees maintain their own hospital, barber shop, library, classrooms and recreational facilities, receiving the help of the International Red Cross in furnishing books, sports and other equipment.

A monthly pay cheque of approximately \$3,000 from the Canadian Government compensates internees for their works program. This cheque is converted into tokens which they exchange at their "Kantino" (canteen) for tobacco, cigarettes, soft drinks and other sundries. Their income is bolstered four times annually by German pay which their paymaster explains as, "A sum of \$13.29 per prisoner received quarterly from Germany via the Protecting Power - from German shipping companies taxed for the purpose by Adolph Hitler."

The internees are chiefly German seamen captured by Canadian naval units.

No. 258. Wed. June 14, 1944. -- Food Consumption in Canada

Preliminary estimates of food supplies available for civilian consumption in Canada for 1944 indicate that in general the situation has improved over 1943. The present level of consumption is materially higher for most items than before the war and with full employment it is highly probable that a substantial percentage of the population is now obtaining more food than before the war. An over-all increase in agricultural production in Canada since 1939 has made it possible to increase civilian supplies of food during a period when exports to the United Kingdom and other United Nations have been at high levels. Supplies of dairy products, excluding butter, have increased substantially since 1939 and a further increase is indicated for 1944. Fluid milk consumption continues to increase despite the greater use of milk for the manufacture of butter, cheese and other dairy products.

Supplies of all meats, with the exception of mutton and lamb and canned meat, are expected to average higher for 1944 than for 1943. Exports of pork products and beef have been particularly heavy but marketings were sharply higher in the first six months of 1944 and, while a similar increase is unlikely for the last half of the year, supplies will probably be adequate unless there is a sharp upturn in the demand from Europe.

A continuation of the expansion of poultry production in 1944 has made greater quantities of poultry meat and eggs available to consumers. Exports of eggs in powdered form will be substantially greater in 1944 than was the case in 1943 but increased production has more than offset this requirement. Supplies of fish, both fresh and canned, are expected to average lower in 1944 than in 1943.

Butter production has not increased sufficiently to maintain the high level of pre-war consumption but the decline has not been great and, under rationing, the product has been well distributed among consumers. The level of consumption in 1944 is expected to average slightly lower than that of 1943. Not much change is indicated for the consumption of other fats and oils including lard, shortening and edible oils.

Canada's reliance on off-shore supplies of sugar made it necessary to ration this commodity at an early date following the outbreak of war. Since that time consumption has been stabilized at approximately 80 per cent of the pre-war level and no significant change is indicated for 1944 as compared with 1943.

With relatively good crops of most fruits and vegetables, together with greater imports of citrus fruits and dried fruits, supplies of these products are for the most part expected to be higher in 1944 than in 1943. Consumption of potatoes in 1944 may not average as high as that of 1943 but estimates of production this year are still in the preliminary stage. With abundant supplies of grain products available it is not expected that any material change will take place in the consumption of these products as between 1943 and 1944. The current level of consumption is about 10 per cent higher than that of pre-war.

Greater imports of tea and coffee have made it possible to increase the ration of these products and consumption will be somewhat higher this year than in 1943. Not much change is expected in the supplies of cocoa between the two years.

No. 259. Thurs. June 15, 1944. -- The Mackerel

On the North American side of the world the mackerel ranges the Atlantic from Cape Hatteras to the Straits of Belle Isle, and in Canadian waters it is taken along practically the entire east coast of the Dominion. In European waters it is found from Norway to the Mediterranean and in the Adriatic. On this continent the mackerel first appear off Cape Hatteras in the spring, coming in from the sea from a southerly or southeasterly direction, and move rapidly northward to the Canadian coast. In the fall or early winter they return southwards. They travel in great schools, swimming at the surface or close to it and are rather erratic in their wanderings. They spawn from May to July, with June probably the month of heaviest spawning. Small crustaceans and fish and other small creatures which swarm the sea make up most of the mackerel's meals.

The mackerel is a comparatively small fish, trim, with an elongate, streamlined body. It is blueish in colouring and brilliantly marked with characteristic black stripes on the upper body. Colour is pale on the underside of the fish -varying shades of yellowish white. Small finlets stud the tail and the tail fin itself is narrow and tapered, with a deep "vee". The fish greatly resembles its big "cousin" the Bluefin tuna, a member of the same family -- and sometimes known as the "horse mackerel". The tuna, in fact, has been said to be practically identical with the mackerel except for its giant size.

In Canadian waters, the mackerel fishery is confined to the Atlantic coast, with virtually all of the catch taken in the inshore waters. Much the greater part of the catch is taken by Nova Scotia fishermen. Quebec, Prince Edward Island, and New Brunswick landings rank in that order, so far as size is concerned. The bulk of the Quebec landings are made by fishermen of the Magdalen Islands.

Two methods of fishing are utilized in taking mackerel in Canadian waters. Much of the catch is landed by gill net fishermen while the remainder is taken in traps of netting set up on the mackerel's migration route along the shore.

Mackerel are marketed principally as fresh and pickled fish, although some are canned and a few are smoked. The business in pickled mackerel and salt mackerel fillets has an important place in Canada's Atlantic fishing industry.

Outside the Dominion the main markets for mackerel, a fine food fish, are the British West Indies and the United States. Most of Canada's output of pickled mackerel is exported to the Indies and the United States, though the latter country is elso a buyer of substantial quantities of Canadian fresh and frozen mackerel.

No. 260. Fri. June 16, 1944. -- Feeding Colts

Foals should be fed in such a way as to be kept growing thriftily during their entire growing period. Well fed foals will make approximately half their entire growth the first year. It is consequently important to feed them liberally during that period as rarely will they reach their greatest size if stunted at this time.

Foals should be taught to eat grain and hay if kept inside as soon as one month old. The best quality hay, free of dust and mold should be given to foals. Alfalfa and clover being rich in minerals are good growing feed and should make at least part of the winter ration. A few pounds of roots will improve the ration.

For the summer months pasture is the best and cheapest way to grow foals. If pasture is abundant and of good quality no supplementary feed is required except for foals under 1 year of age to which a little grain will be beneficial. Where pastures become short, a little grain or hay or both are advisable.

At the Dominion Experimental Station, Kapuskasing, Ontario, good results have been obtained in feeding foals up to weaning time, the same concentrate mixture as fed to the mares. This mixture consisted of 3 parts oats, 1 part bran, 1 part linseed oil cake meal and 3 per cent minerals. Foals on pasture and fed all that they would consume of this meat mixture made an average daily gain of $3\frac{1}{2}$ pounds from birth to four months of age.

Foals can be weaned at four to five months of age, but whenever possible they should be left longer with their mothers. Mares not working too hard, in good condition and still supplying a good amount of milk may easily feed their foals until six months old. If foals have to be weaned very early, a rich concentrate mixture is essential and 10 to 15 pounds of skim milk daily for a few weeks will help considerably.

After weaning, the proportion of farm grain (oats, barley or corn) may be gradually increased in the mixture as foals are getting older and according to the quality of the hay fed. Little or no protein supplement is required in the concentrate mixture if the hay fed is mostly legumes of good quality. The quantity and quality of hay to feed depend somewhat upon the grain available. As for the grain, seldom will foals need more than $\frac{3}{4}$ pounds per 100 pounds live weight daily. Salt and water should be available at all times or at least given regularly.

Regular exercise, clean well-ventilated, roomy quarters, good care of the feet are a few more points which should be taken care of for success in raising good horses.

No. 261. Sat. June 17, 1944. -- Languages Spoken in Canada

Official languages are not to be confused with mother tongues. Mother tongue, being used in the home, is natural to a person even if he is unable to speak it on account of youth, infirmity or for some other reason, whereas the official languages are those recognized by statute for general use. Thus the immigrants to a new country bring with them their mother tongues and continue to use them in their homes but these have no relation to the official languages in the country of their adoption. Canada is officially bilingual, the two languages being English and French. Out of a total population in 1941 of 11,507,000 no fewer than 9,209,000 were able to converse in English, including 7,735,000 who could speak English only and 1,474,000 who could use both English and French. Slightly under one-third of the population could speak French, including 2,172,000 who used French only and the 1,474,000 both English and French.

There were only 115,000 persons who could speak neither English or French as compared with 275,000 in 1931. The public school system has been responsible for most of the progress. It is true that many of the adult immigrants, especially in urban parts, do acquire a working knowledge of one or other of the official languages, provided they are not too old to do so and they have an adequate economic or other incentive.

All children in Canada are required by law to attend school to at least 14 years of age and teaching in the schools is carried on in either English or French. Persons of Scandinavian origin speak either English or French in the largest proportions. Most of them speak English; comparatively few speak French. The Germans followed the Danes, Norwegians and Swedes, with only a slightly larger percentage unable to speak either of the basic languages.

No. 262. Sun. June 18, 1944. -- Brickmaking

Brickmaking is an ancient art, dating back to the earliest times in the civilization of mankind. It is intimately connected with the life of the ancient Egyptians. Readers of Biblical history will recall that the Children of Israel during the Captivity were required to make bricks without straw, an almost impose ble task with the material available. Undoubtedly the tower of Babel was constructed with bricks.

Compared with the earliest examples, the bricks made by the Roman at the beginning of the Christian era, and by the Chinese, to build their great wall, seem almost modern, and yet the art which was developed in those days to a high degree of usefulness was lost in Europe when the Roman Empire fell. In Europe, the art began to be revived from the 12th and 13th centuries.

Progress in making bricks was greater in England than in any other country because forests became denuded and stone was scarce in large areas where cities and towns grew. Brick manufacture was commenced in America about the middle of the 17th century. There was a brickmaker operating on the North Shore of the St. Lawrence River as early as 1665, according to the census of that year.

In 1942 there were brick and tile plants active in every Province of Canada except in Prince Edward Island. Some of the plants specialize in fancy bricks with which many of the beautiful homes of Canadian cities are built. The production of building bricks in that year totalled 182,000,000.

Although the figures vary in the different sections of the Dominion, the 1941 Census of Canada reveals that 29 out of every 100 dwelling places were surfaced with brick. There were nearly 9,500 persons in 1941 who earned their living as brick and stone masons, all of whom, of course, were men.

No. 263. Mon. June 19, 1944. -- Egg Powder for Britain

The drying of eggs in Canada for delivery to the British Ministry of Food in the form of powder is an outstanding example of the highly developed methods of sanitation and expert workmanship in vogue in the production of Canadian food products. The work is carried on under the Special Products Board.

The success of Canadian egg powder really begins with the high quality of the shell eggs used, while the drying plants, of which there are nine at present working under the strict supervision of the Board, are models of sanitation. No detail is overlooked. The lids of all cases of the graded and inspected eggs arriving at the plants must be removed outside the breaking room, and the eggs transferred to sanitary buckets or other suitable containers. From the buckets the eggs are taken directly to the breaking table and broken by girls in white overalls. A stainless steel knife is used to break the eggs into a stainless steel cup on a tray, and as each egg is cracked and the shell separated, the girls raise it to about chin level, dropping the contents into the cup with a quick, expert jerk. This removes the thin albumen which would otherwise stick to the shell.

When two or three eggs have been broken, they are again examined for off odours in order to avoid a possible undesirable egg contaminating the contents of the cup and consequently of the whole bucket. When the cup is full, the melange - liquid eggs - is poured into a bucket and when the bucket is full it is emptied into a settling tank equipped with sieves, and from there it is pumped from a line filler to holding vats. From these vats, the melange can either be pumped to the drier or poured into moulds and put into a sharp freezer. The melange arrives at the vats at low temperature around 35 to 40 degrees, and from the vats, high pressure pumps force it directly to the drier.

When the melange comes from the nozzle it resembles a small cloud of mist which is immediately picked up by the inlet air and carried part of the way in the air current before it becomes dry and falls as a powder to the bottom of the chamber. The powder is continually removed by an auger and conveyed to the sifter. As the powder travels, it is cooled to a temperature of at least 80 degrees F., the specified temperature at which powder must be packed. The packaging is a process which requires full supervision at all times, in common with every phase of converting a shell egg into dried egg powder.

No. 264. Tues. June 20, 1944. -- Inspection of Eggs for Powder

From the moment that eggs destined for egg powder are purchased by the Special Products Board they are practically under continuous inspection until delivery in the form of powder to the British Ministry of Food. There are nine plants in Canada drying eggs for the Special Products Board. Their daily processing amounts approximately to 75,000 pounds of powder which requires around 8,500 cases - 30 dozen to the case -- of Grade A Large eggs, enough to fill 14 railway cars. This quantity is based on the fact that a case of Grade A Large eggs yields 40 pounds of liquid and that it requires four pounds of liquid to make one pound of powder.

On assembling the purchased eggs, they are inspected, graded, made up into carlots, re-inspected, and passed or rejected. The breaking process is under continuous inspection which covers the entire processes of drying and packaging. Packaging itself requires full supervision at all times, and the moment a carload of the powder is made up into carlots of 56 pound cartons, the contents are reinspected by sample by the resident government inspector. The samples are forwarded to Science Service, Dominion Department of Agriculture, Ottawa for becteriological and chemical analyses, and the grade determined according to specifications of the Special Products Board. In addition to the regular carlot analyses, check analyses are run on each individual unit of every plant twice a month. This check works effectively because it sometimes brings out inferior powder which might otherwise not be traced. This inferior powder can be corrected once its source is known. An additional test is made on the melange -- the liquid eggs -- to see if it increases in bacteria as it passes along the lines to the drier.

Besides taking check samples and sampling cars, it is the duty of the resident inspector to maintain sanitation and to check temperatures daily throughout the drying operations. He must see that packaging is done correctly, that the proper weights are in the packages and also check the condition of the shell eggs arriving at the plant. He works in co-operation with the plant management and the Dominion Department of Agriculture to produce a powder of the highest possible standard.

No. 265. Wed. June 21, 1944. -- Canada's Forest Resources

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

Canada's forests cover an area of 1,220,400 square miles, or more than one-third of the total land area of the country, but a considerable part of this vast forest is not suitable for commercial operations, either because it is too difficult and expensive to reach, or because the trees are not of satisfactory size and quality. The accessible productive portion of the forest covers 430,000 square miles, or 275,000,-000 acres. 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 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 per cent of the accessible stand is of softwood species.

No. 266. Thurs. June 22, 1944. -- Canadian Live-Stock

The Canadian live-stock industry had its beginning at a very early stage in the development of the country. The earliest settlers were dependent on cattle not only for their supplies of meat and milk but in many cases oxen were used in the clearing and breaking of land.

Jacques Cartier brought cattle with him in 1541 and more were brought in by Champlain. Additional stock came to Quebec from Brittany and Normandy during the seventeenth century. Cattle moved to the Prairie Provinces shortly after the first settlements were opened and in 1823 a herd of 300 cattle was driven to the head of the Great Lakes and disposed of to the colonists of the Red River Settlement. During the early years of settlement formers slaughtered their own live stock for household purposes. Later groups of farmers clubbed together to provide their meat requirements. Then came the local butchers who bought cattle directly from farmers to provide meat for the urban and rural communities. Still later commercial packing and slaughtering houses were established and the marketing of live stock was organized on a commercial basis, with stockyards and other handling facilities located in the larger centres.

By 1871 the total cattle population of the country had risen to slightly over two million head. Since that time there has been a continuous upward trend in numbers of cattle on farms. The growth in cattle population has been relatively slow, however, and has been at approximately the same rate as the growth in human population. In 1943 total cattle population was estimated at 9,665,200 head, of which slightly more than one-third were milk cows.

Not until recent years has an estempt been made to distinguish between dairy cattle and beef cattle on farms. In 1942 there were 702,700 cows kept mainly for beef as compared with 3,794,700 milk cows. This would indicate that approximately 16 per cent of the cattle are of the beef breeds. The dairy breeds, of course, provide considerable quantities of beef and yeal as well as providing the dairy products.

Transportation was one of the important problems of cattle marketing during the development stage and it was not until the completion of the first transcontinental relevant that cattle could be brought to market in any volume over long distances.

The major beef-cattle producing areas of Canada lie in the foothills region of southern Alberta, although the range area extends into southwestern Saskatchewan and also into the inter-mountain valleys of British Columbia. Beef cattle have always been raised to some extent in the Fastern provinces and are still of some importance, particularly in Ontario, but dairying is more important in this region and many of the beef cattle are brought in from the Western ranges for winter feeding.

No. 267. Fri. June 23, 1944. -- Beef Exports

Beef and pork products are the only meats which have been exported from Canada in any volume, and the volume of pork products in the form of bacon, hams and fresh pork has been much more extensive than that of beef. The United Kingdom has generally been the most important market for Canadian meets, although in certain periods shipments to the United States have been of significance.

From Confederation to 1880 shipments of beef averaged from two to five million pounds and were mainly destined to the United Kingdom. For the next decade total exports were very low, being generally less than one million pounds. There was some increase in the last few years of the century and a peak of 9.7 million pounds was exported in 1901, the demand probably arising out of the South African War.

Then followed another period of low exports until the outbreak of the first World War. During that war there was a considerable increase in volume, first to the United States but in the later years largely to the United Kingdom. In the year ending March 31, 1919, 92 million pounds were shipped to the United Kingdom and 34 million pounds moved to the United States. In the next year the shipments to the United Kingdom declined to below 29 million pounds, while those to the United States remained about the same. During the ten years of the twenties shipments of beef to the United States remained fairly substantial at between 20 and 60 million pounds but declined sharply during the early years of the depression. There was a minor recovery, particularly in shipments to the United Kingdom, from 1933 to 1938; but exports to that market dropped to zero in 1940-41 and there was no movement until after the end of March, 1943. In the following twelve months exports recommenced to the United Kingdom and substantial shipments are going forward in the current fiscal year.

After the outbreak of the second World War the domestic demand for meat increated rapidly and with the substantial export demand for pork products there was a shortage of beef on the Canadian market. During that period beef cattle were being held back on farms for re-stocking. However, herds have now been built up to the point where marketings are increasing repidly and a substantial volume of beef is available for shipment outside of Canada.

The historical record indicates that Canada during peace time was never a substantial exporter of beef. This product meets very keen competition from the Argentine and Australia in the United Kingdom market and the volume available for export has not been sufficiently large to justify the development of the shipping facilities necessary for moving the product in good condition. The export of live animels has, up to the present, offered a more satisfactory market for Canadian beef.

No. 268. Sat. June 24, 1944. -- Pork Exports

Export shipments of pork products, although higher than beef, exceeded 20 million pounds in only three years during the period from Confederation to 1802-93 and were generally below 10 million pounds. From that year there was a gradual increase to a total exceeding 136 million pounds in the year ended March 21, 1900. The movement continued to be over 100 million pounds until 1907. Exports then ranged from 60 to 100 million pounds until 1912 but declined to 27.5 million pounds in 1913-14.

There was an immediate expansion in the export of pork products after the outbreak of World War I, shipments reaching a total of over 230 million jounds in 1919-20. During this period, however, there were very substantial imports of pork from the United States, which were re-exported or replaced the Canadian product on the domestic market.

Unfortunately the quality of the pork shipped to the United Kingdom during the period of the First World War was not up to standard and the Canadian product sold at a substantial discount in the United Kingdom market. After the war a concerted effort was made to retain Canada's position on the United Kingdom market and every effort was made to improve the quality of the product. Grading regulations were introduced and the quality was greatly improved. The competition from Denmark was particularly keen during this period.

Exports to the United Kingdom remained in the neighbourhood of 100 million pounds until 1925-26 when a gradual decline commenced, a low of 11 mi lion pounds being reached in 1930-31. Total exports of pork products in that year were less than 17 million pounds.

At the Empire Economic Conference held in Ottawa in 1932 Canada was granted a quota of 280 million pounds of pork products. This quota was subsequently above current shipments and encouraged greater production and exports. The British market then improved rapidly and by 1937-38 a total of 190 million pounds was shipped. There was a slight recession in the next year but shortly after the second World War broke out the United Kindgom asked Canada to increase her exports of pork products as quickly as possible. A Board was set up in Canada to handle these products and as the price improved the production of hogs increased rapidly. Exports increased similarly and during the year ending March 31, 1944, over 667 million pounds of pork products were exported to the United Kingdom. Exports are continuing on a very large scale and Canada is at present working on the fulfilment of a twoyear contract covering the years 1944 and 1945.

Since the Germans overran Denmark, Canada has been the principal supplier of pork products to the United Kingdom market. During this war grading regulations have been strictly adhered to and the quality of the product shipped has been well maintained. It is hoped that the United Kingdom market will continue to be an outlet for a large volume of Canadian pork products, but the future movement will be influenced by many factors which have yet to be decided.

No. 269. Sun. June 25, 1944. -- Wood for Aircraft

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

The specifications of lumber acceptable to the aircraft industry are so rigid that only a relatively small proportion of the lumber sawn from carefully selected logs is good enough to meet requirements. Consequently, the supply of the large quantities of aircraft stock needed imposes a heavy drain on the limited stocks of large-size Sitka spruce trees that are still available. It is estimated that the output of "aeroplane spruce" in 1943 totalled 30 million board feet, which figure may be compared with the production of 26 million feet in the last full year of the War of 1914-18.

In addition to Sitka spruce to be used in the fabrication of structural components, the aircraft industry requires large quantities of plywoods for use in covering wings and fuselages. In building up these plywoods, veneers which conform to exceptionally high specifications must be used. It has been found that the yellow birch of Eastern Canada provides the best wood for the manufacture of aircraft veneers and consequently there has been a keen search for birch logs of the requisite quality.

Production of this material in quantity is difficult because only occasional trees are large enough and of sufficiently high quality to meet the requirements. Output of yellow birch vencer logs totalled 66,500 tons in 1940 and is estimated at 110,000 tons for 1943. Production of such aircraft plywoods in 1943 is estimated at $33\frac{1}{2}$ million square feet.

No. 270. Mon. June 26, 1944. -- Oats

History does not record whether or not the Scots discovered oats. It does reveal that the natives of Caledonia consume catmeal in liberal quantities although man, whether Scot or otherwise, has long since taken second place to the animal population in the consumption of oats. As a standard feed grain for horses, . oats have been grown in many lands; but in Canada the use of oats mixed with other grains has increased tremendously as a feed for cattle, hogs and poultry.

Canadian records make little mention of the production of oats in the early days of white settlement, but as far back as 1868 nearly 2,000,000 bushels of oats were exported from Canada, chiefly to the United Kingdom and the United States. About 30 years later the export movement had increased fivefold, the total exports in 1899 exceeding 10,000,000 bushels.

It was during the first Great War that exports of Canadian oats really surged upwards to reach a total of more than 62,000,000 bushels during the crop year 1915-16 and more than 64,000,000 bushels in 1916-17. The shipments slumped to 28,000,000 bushels in 1917-18 and averaged approximately 28,000,000 bushels annually during the succeeding nine years. Then followed a number of lean years in the export field which carried along until World War II provided an export outlet to the United States.

World competition in the export of oats is not comparable to that in wheat, despite the enormous production of this grain in European countries and in North America. The United Kingdom is probably the largest single importer, while Switzerland, the Netherlands, Belgium and Italy are the next best customers and Denmark and France occasionally substantial importers. The principal exporting countries in pre-war years included Germany, Russia, Roumania, Czechoslovakia, Argentina, Chile, the United States and Canada. Their combined exports, however, were only a small part of the total production of oats, emphasizing that this crop is predominantly grown as a feed grain in the country of production.

No. 271. Tues. June 27, 1944. -- Barley

Some authorities suggest that barley is the oldest of all cultivated cereal crops. At one time it constituted an important part of the diet of people in southern Europe, but like oats it has been largely a feed grain for live stock in Canada during the history of grain growing in the Dominion. A small percentage of the Canadian barley crop goes into the production of malt products, and some is consumed as human food, chiefly in soups, but the crop as a whole is considered a feed for live stock and its use in Canada has greatly expanded with the growing hog population of the present war period.

Barley was an important cereal crop in Ontario in the latter part of the nineteenth century, and at that time fairly large exports were made to the United States. The record shows that in 1889-90 the United States imported about 10,000,000 bushels of Canadian barley, most of which was produced in Ontario. This trade suffered when in 1890 the tariff on Canadian barley entering the United States was increased from 10 cents per bushel to 30 cents per bushel.

Since that time, Western Canada has greatly expanded its production of barley and tariffs on barley entering the United States from Canada had been considerably modified, with the result that exports on a fairly liberal scale have again been made possible. The movement of Canadian barley to the United States has been erratic during the past 20 years, but in the two years 1942-43 and 1943-44 the United States bought very heavily from Canada, and in fact provided the only important outlet for Canadian surplus supplies.

The production of suitable malting types of Canadian barley for the United Kingdom market was a subject of intense study during the period between the two wars. and prior to the outbreak of the present conflict Canadian barley was being purchased in fairly liberal quantities by Scottish distillers. The peak was reached during the banner year 1928-29 when Canadian exports of wheat also reached their highest total on record, but exports receded sharply during the next ten years and did not again approach the pre-depression totals until the United States began to buy heavily during the two crop years 1942-43 and 1943-44.

International trade in barley prior to the slump in 1930 was running in the neighbourhood of 175,000,000 bushels annually and up until 1929 Canada was enjoying a good share of this movement. Chief competitors were Roumania, the United States, Argentina and Poland, while Russia occasionally came on the market and was a big exporter in the calendar year 1930.

Trade figures show that Germany was the largest importer of barley in those years, although some of the barley shipments credited to Germany may have been in transit to other countries. The Netherlands also imported liberally and with Belgium and Germany ranked high in the list of European continental importers. The United Kingdom imported roughly 20 per cent of the total international trade in barley in those years of liberal shipments.

Barley has presented no surplus problem in Canada during the war years 1939-44, largely because of the great expansion which has taken place in Canada's livestock population, and the ready market in the United States for any surplus held in Canada.

No. 272. Wed. June 28, 1944. -- Rye

Like wheat, rye is in the category of a bread grain; but in many countries where it was formerly consumed largely by the human population, rye has been displaced by wheat. It is believed that at one time rye was eaten extensively in the British Isles but it has now given way almost entirely to wheat.

The decline of rye consumption in favour of wheat consumption was discussed by the International Review of Agriculture in 1929 and the following reasons advanced for the trend toward wheat:

"The habit of doing what other people do, especially those whom we consider superior has no doubt been one of the strongest forces working in favour of an increased wheat consumption. Wheat, being too expensive to be used by all people, came quite early to be regarded as a mark of superior social position, and consequently its use spread as the result of social ambition and imitation.

"As rye has been more the bread of the country than of the city, the growth of the city population has also been a strong contributing factor to the decrease in the consumption of rye bread and so has too the increase in the real wages of the masses, an increase which has made it possible for them to realize to a still greater extent their social ambition in respect of wheat eating.

"The increase in the demand for wheat has been met by a huge increase in the supply owing to the opening up of new production areas in non-European countries, the improvement and cheapening of transport, the results obtained by seed selection, which has been more generally directed towards wheat than rye cultivation, and not least, the invention of methods for producing nearly unlimited quantities of cheap synthetic nitrogen, a factor of a much greater importance for wheat-growing than for rye-growing." The historical background of rye suggests that it is of more recent cultivation than either wheat or barley. It was produced extensively by the early central and northern European peoples and the ability of the crop to thrive under adverse climatic conditions was probably responsible for the extension of the rye-growing area in the northern regions of Europe.

Rye bread and other human foods produced from rye still hold an important place in the diet of the people of Russia, Poland and Germany where the bulk of the world's rye crop is produced. It is also a feed grain in some of these countries, but its chief use is the production of rye flour for human consumption.

In Canada the production of rye was relatively small during the early part of the twentieth century but during the first World War there was a notable expansion of acreage and production.

This expansion continued during the early post-war years and the peak of rye acreage in Canada was reached in 1922 when more than 2,000,000 acres were seeded and a crop of more than 32,000,000 bushels harvested. Most of this crop was produced in the Prairie Provinces where the Province of Saskatchewan contributed heavily. The trend of rye acreage was mainly downward between 1922 and 1938 but in the year that World War II commenced there was a notable rise in rye acreage and this was fairly well sustained until 1943.

Canada has been exporting rye in varying amounts since Confederation. As early as 1882 more than 1,000,000 bushels of Canadian rye were exported but the period of greatest export was between the two wars. During the second World War most of the rye exported from Canada has found its way to the United States, but in normal times Canadian rye would be exported to several European countries. It is apparent from Canadian statistics, however, that a large part of the rye crop produced in Canada never leaves the farms. Some of this is consumed as live-stock feed but doubtless a good deal also disappears as food in the homes of farmers who came to Canada from European countries where rye flour was heavily consumed.

No. 273. Thurs. June 29, 1944. -- Flaxseed

Although Canada produces both fibre flax and flax for oil, the principal production is flaxseed for oil. This crop was produced extensively in Western Canada when the prairie regions were being opened up for settlement prior to the first Great War. It is an excellent crop to grow on new breaking and the settlers who came to the West to farm in the three years 1911-13 went quite heavily into flaxseed production.

More than 2,000,000 acres were planted to flaxseed for oil in 1912 and a crop of more than 26,000,000 bushels was produced. This proved to be the yeak for both acreage and production until wartime developments necessitated the expansion of acreage in 1943, although production fell short of the 1912 crop despite greater seed acreage.

In the early years of high production, Canade was an exporter of flaxseed, largely to the United States but on occasion to the United Kingdom. The crop became less popular after the first Great War and almost disappeared just prior to World War II. Canada was then in the position of a net importer, being obliged to import from Argentina in order to keep her crushing industry in operation.

Since 1941 Canada has engaged in a program aimed at greater production of flaxseed for oil, not only because the oil was needed for war industry but because the by-product of oilcake and meal was in heavy demand as a high protein feed for the greatly expanding live-stock industry. As a result of these wartime developments, Canada has again become an exporter of flaxseed, most of which has gone to the United States.

Crushing facilities for flaxseed and other oil-bearing seeds has also been greatly expanded in Canada during the past two years and it is expected that by the end of 1944 this capacity will reach 8,000,000 bushels per year. Part of the crushing facilities is being devoted to the processing of soybean, another oil-seed crop which has been grown more extensively since 1939 and for such wartime crops as sunflower seed and rapeseed. Most of the oil produced from flaxseed is used in the paint, varnish and oilcloth industry and there would appear to be a large prospective post-war market for this oil during the period of rebuilding which will follow the cessation of hostilities.

No. 274. Fri. June 30, 1944. -- Manufacturing in Canada

The gross value of manufacturing production in Canada in 1943 has been placed at \$8,393,163,000 in a preliminary estimate compiled by the Dominion Bureau of Statistics. This represents an increase of 11 per cent over the final 1942 valuation of \$7,553,795,000 and an advance of no less than 140 per cent over the 1939 production value of \$3,474,784,000.

The increase in the number of employees and in the salary end wage disbursements has been no less striking. The estimated number of employees in 1943 was 1,262,000, an advance of 10 per cent over 1942 and 92 per cent over 1939. The estimated total of salary and wage payments in 1943 was \$1,918,519,000, constituting an increase of 14 per cent over the total paid out in 1942 and an increase of 160 per cent over the 1939 aggregate.

Among the industrial groups, those engaged in the manufacture of equipemnt and supplies needed for war purposes continued to expand at a rapid rate, while those engaged in the production of consumers' goods expanded their operations moderately to meet the increasing demands of the civilian population.

The estimated gross value of production in the iron and steel group of industries rose to \$2,319,533,000 in 1943 from \$2,112,822,000 in 1942. Chemicals and chemical products advanced to \$761,433,000 from \$501,656,000, non-ferrous metal products to \$1,016,522,000 from \$901,569,000, and non-metallic mineral products to \$378,691,000 compared with \$358,075,000.

The gross value of products manufactured in the vegetable products group in 1943 was estimated at \$1,050,677,000 compared with \$965,896,000 in 1942, animal products \$965,689,000 compared with \$861,191,000, textile products \$781,887,000 compared with \$793,305,000, wood and paper products \$979,582,000 compared with \$961,843,000 and the miscellaneous industries \$139,149,000 compared with \$97,438,000.



