

A Fact a Day about Canada

from the

Dominion Bureau of StatisticsNo. 274. - Thurs. July 1, 1937 -- Fur Farms

The trapping of wild fur bearing animals has a definite place in the pages of Canada's earliest history. In those days it was the practice of trappers to keep foxes caught out of season alive until the fur was prime. This custom was the beginning of the modern industry of fur farming.

In 1912 and 1913 the Dominion Commission of Conservation conducted an exhaustive inquiry into the history and possibilities of fur farming in Canada, and the resulting information gave an impetus to the industry. With the increased interest in this comparatively new endeavour came a large demand for foxes to be used as foundation stock. Fabulous prices were now obtainable for the live animals, sales of proved breeds in 1912 being recorded at from \$18,000 to \$35,000 per pair.

The number of fur farms from this time forward rapidly increased, companies as well as individuals engaging in the business. In the year 1919 the collection of data on fur farms by the Dominion Bureau of Statistics was begun, and the records for that year show 424 fox farms and five miscellaneous kinds. At this date, the industry was centred chiefly in Prince Edward Island, but with the ensuing years, the field broadened, and in 1935 there were 7,495 farms, comprising 6,632 fox farms and 863 in the miscellaneous class.

At the present time Quebec is credited with almost one-third of the total number of fur farms, Ontario 14 per cent, New Brunswick 13, Nova Scotia 12, Prince Edward Island 10, Alberta 6, Manitoba 5, Saskatchewan 4 and British Columbia 4, according to the Fur Statistics Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 275. - Friday, July 2, 1937 -- Territorial Fishing

So rich a fishing area as the North Atlantic could not fail to attract many countries in the early days. Old customs then established became elevated into rights, some of which have lasted until the present. The French shore is a Newfoundland question, now a sentimental one entirely.

Different, however, is the question of United States rights whose fishermen in the colonial period provided the chief food supply for New England and who were granted by the Treaty of Versailles in 1783 a specific liberty to a share of the Canadian inshore fisheries. Losing this by the War of 1812, the United States after 1818 surrendered all but their liberty to call at Canadian ports for shelter, wood or water, or to make repairs, and to fish around the Magdalen Islands and on the north shore of the Gulf of the St. Lawrence from Point Joli eastward, and to dry and cure their fish in any of the unsettled bays, harbours and creeks on that portion of the north shore.

By the Reciprocity Treaty of 1854 to 1866, the fish and fish products of either country were admitted into the other duty free. After that treaty was abrogated, there were various arrangements and rearrangements, but the most workable of all has been the so-called "Unratified Treaty of 1888" under the terms of which United States

fishing vessels were to be granted annual licenses authorizing them to purchase in Canadian ports provisions and outfits, to tranship their cargoes and to ship crews. Out of this treaty grew the *modus vivendi* licenses at \$1.50 per registered ton, the arrangement in effect today.

During the past hundred years the fishing industry of Canada has risen from an output of \$125,000 to over \$60,000,000, but that was abnormal. It is now around \$26,000,000, according to the Fisheries Branch, Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 276. - Saturday, July 3, 1937 - The Basis of Western Civilization

So accustomed are western people to the structure of the highly organized society built for us throughout the ages and operating successfully around us that comparatively few give a serious thought -- city people in particular -- to the food supply of our domestic animals. When we read about wheat, its supply and demand, we think unconsciously in terms of human need.

Yet our western civilization could hardly have been formed without the assistance of these animals. They have done great things for human kind, ploughed our land, borne our burdens, given the milk, without which hosts of children would have perished, provided the vitalizing meat, given us leather and wool.

The one basic difference between ourselves and the North American Indian, every whit as capable and intelligent as a Teuton or a Celt, has been that the Canadian aboriginal did not possess suitable domestic animals to work with and for him. If we were suddenly dispossessed of those best friends of ours, the whole structure of our society would be changed and starvation would stare us in the face.

These domestic animals have to be fed and that is one of the problems the farmer has to consider. The Old Testament figure of speech, "All flesh is grass", is very real to him. When his hay crop is abundant one of his worries for a season is over. The same with his oats. We grow more oats than wheat, although we hear much less about it. We feed more oats than wheat to our animals. The average crop in the last five years was 348 million bushels, while the average wheat crop was 320 million, according to the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 277. - Sunday, July 4, 1937 - The National Emblem

The first national emblem of Canada was undoubtedly the beaver and it was considered as the national emblem until 1821. In that year the union of the fur-trading companies, the North West and the Hudson Bay, diverted the fur-trade from the St. Lawrence Valley to Hudson Bay. The triumph of the Hudson's Bay over the Nor'Westers meant the virtual loss of the fur-trade to Canada, and the beaver therefore ceased to be applicable or suitable as a national emblem.

Before this happened the Maple Leaf was regarded as the emblem of the French Canadians, as distinct from the thistle which was the emblem of the Scottish Canadians. In 1834 the Maple Leaf was formally adopted as the emblem of the St. Jean Baptiste Society of Lower Canada but during the time of the rebellion in 1837, it was almost regarded as an emblem of disloyalty -- to such an extent that there was hostility to its adoption later in the Canadian West.

During the visit of the Prince of Wales, later King Edward VII, the Maple Leaf was formally adopted by resolution as the badge or emblem worn by native-born Canadians in the procession in Toronto where the Prince was being welcomed. In the same year the 100th Regiment, the Royal Canadians, incorporated the Maple Leaf in their badge.

At the time of Confederation, the armorial bearings of Quebec and Ontario bore the Maple Leaf and its acceptance became more or less official. Since then it has appeared on Canadian coins, stamps and as a badge of the Canadian militia.

The Canadian national anthem, the Maple Leaf, was composed in 1867 by Alexander Muir, a Toronto schoolmaster who came to Canada at the age of three. He was a graduate of Queen's University. He died thirty-one years ago.

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No. 278. - Monday, July 5, 1937 - Sending Cattle to Britain

The movement of cattle from the range to lands where there is better forage and an opportunity of finishing them satisfactorily for the beef market is more or less world wide for every continent has some dry range which produces lean cattle easily but fat cattle with great difficulty.

An example of this migration was afforded by the passage in former days of lean Icelanders across the sea to the United Kingdom, where they were fattened. There has not been much of that lately but until comparatively recently there were half a million head in a year. In the southern region of the Andes, Argentine cattle cross the Bolivian high plains to reach the market in the nitrate mining camps of Chile. The poor animals have to travel three days and nights without food or water through mountain passes in freezing cold.

Much easier is the lot of the Highland sheep driven slowly to market along roads with wide tracks on each side covered with luscious green grass, the sheep improving all the way. Cattle from the Irish Free State, which now sends the largest supply of meat on the hoof to the United Kingdom, have a short journey.

Western Canadian cattle going to market have a long hard journey travelling by train to the cities of Eastern Canada, and the experience of the animals which have to cross the ocean to Glasgow or Liverpool, is not a bed of roses when winds blow into gales and ships swing over on their beam ends.

We sent about 40,000 head of cattle to the United Kingdom last year, but two or three years ago we sent about 55,000, according to the External Trade Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 279. - Tuesday, July 6, 1937 - Instalment Buying

Instalment buying is not new; it existed in ancient Rome, where houses were sold on time payments. But apart from its use in the purchase of houses and lands, the scheme did not develop real significance until the nineteenth century, when rapidly increasing production created the necessity for more widespread markets. The past fifteen years have witnessed a rapid growth in instalment buying, the scheme being generally restricted to the purchase of durable goods such as furniture, musical instruments, expensive books or encyclopaedias and some other commodities having a high resale value.

Instalment buying in Canada has reached its greatest development in the purchase of motor vehicles. There are several reasons for this. The popular appeal of the motor car is high. But its cost is also sufficiently great as to prohibit its outright purchase for cash by large numbers of the people. The motor car itself is adapted to the scheme. It is durable, insurable, and, within the time limits generally set for completion of all payments, has a high resale value.

The motor dealer, being obliged to pay cash to the manufacturer before delivery of cars to his showroom, is usually unable to provide extensive credit services for his customers. To meet this situation, financing corporations have been formed which discount customers' notes, pay cash to the dealer and then collect instalments from the purchaser as they fall due.

Out of almost 116 thousand new motor vehicles purchased in Canada last year, about 43,000, or more than one out of every three, were bought on the instalment plan through the facilities of these financing corporations. The amount of the loan averaged \$700 per new vehicle. Used vehicles are also bought on the instalment plan. There were about 95,000 used motor vehicles whose purchases were financed last year. The average loan in this instance was \$265, according to the Internal Trade Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 280. - Wednesday, July 7, 1937 - Eggs for Export

The producing of eggs for export to those countries which need them seems to offer possibilities in Canada, judging by the effective way the Irish have tackled the problem.

The eggs of the Canadian hen were worth over \$40,000,000 to the Canadian farmer last year, a sum large enough to make most men in big business open their eyes. Some years ago the value was about \$70,000,000. In 1902 the value of Canada's export of eggs was barely \$2,000,000. It rapidly increased until 1910 when eggs had to be imported from Russia and China. During the War years the export again increased. The number in 1916 was 14 million dozen, rising from three million in 1913. It was down to less than two million last year.

The poultry business is suitable to intensive agriculture. Enormous numbers of poultry are raised in China and eggs are exported. Canada gets eggs, especially dried eggs, from that country. Millions of dozens are converted yearly into dried powder by which means one thousand eggs weigh only twenty-two pounds, easily transported and are said to keep indefinitely. Exporting countries find a great market in Great Britain, which imports more than all the rest of the world combined.

While meat is a great muscle-making food it is not so important as our appetites make us believe, because it is partly a food and partly a stimulant. We do not need the bacon with the eggs but it makes them taste fine, and we cannot forget that 97 per cent of the edible portion of the egg is digestible, which is unusually high.

The farm egg industry brings more returns financially than the fishing industry, and there is poultry meat in addition.

The foregoing figures come from the Agricultural Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 281. - Thursday, July 8, 1937 - Irishmen Going Back Home

The elections in the Irish Free State and the plebiscite regarding the constitution have focussed our attention upon that country during the last few days and it may be at least topical and probably illuminating to give some figures relative to the emigration and immigration that have been taking place in recent years.

Irish people used to come to Canada in thousands; indeed, at one time they were the leading racial group in the great Province of Ontario. As late as 1924, over five thousand left the Irish Free State for this Dominion, but in the last five years the total was only 377, or an average of 75 a year.

On the other hand Irish people returning from Canada to the Old Land years ago were comparatively few, but today it is different. During these last five years 960 have gone back home, so that the Irish Free State has gained from us a net balance of 583 persons.

Eleven and twelve years ago, over 26,000 people were migrating to the United States from the Irish Free State but in the last five years the total has been only 1,845 while in that same time 7,871 have returned, leaving a net loss to the United States of over six thousand persons.

Turn to Australia. Australia has always been a favourite country with Irish people. In the last five years, despite the long and expensive journey to the Antipodes, over one thousand have gone there and only seven hundred returned home, leaving a net balance of exactly 300 in favour of Australia.

These figures are taken from an official Irish Free State publication received by the Dominion Bureau of Statistics.

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No. 282. - Friday, July 9, 1937 - The Marmot

The marmot is a member of the squirrel family but because of its heavy body is much less active than most of its other relatives. The true marmot is a native of the higher Alps and Pyrenees. Those living in Canada and the north-eastern United States are thickset and are commonly called ground hogs or woodchucks. Those found along the Pacific Coast are grizzled gray and buff hoary and those of the eastern sections are reddish-brown.

Marmots are animals of open glades and hillsides rather than the thick bush. They make large burrows, usually having several openings towards one of which the animal rushes when alarmed. These burrows are a nuisance to the farmers in their field work and the marmots are persistently trapped and hunted.

In the fall the animals become very fat and when winter sets in hibernate. A spell of warm weather in early spring will revive a few of them and out they come to prowl about. But as soon as the temperature drops they scamper back for more sleep. This habit is responsible for the myth of "Ground Hog Day", February 2.

The skin of the Canadian marmot is of little commercial value because it is rather thin and coarse, although the pelts of the western animals are better. The class of marmot skins suitable for coats come from Asia, Northern Europe and China. In 1934 there were 21,000 skins treated in the Fur Dressing Industry of Canada, but

the following year showed a great decrease. Its popularity in the making of fur coats is increasing as shown by the 12,000 pelts used last year, according to the Fur Statistics Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 283. - Saturday, July 10, 1937 - Limestone

Limestone is a general term to indicate rocks composed of carbonate of lime. They may vary in colour from white to nearly black. Most of the limestones are of marine origin and consist of the different types of marine life, particularly various types of corals and mollusks. The purity of it depends largely upon the nature of the ocean bed. Muddy bottoms where such organisms as clams live, result in rock which will be of a shaley nature, but where shells are mingled with sand, the rock will be more like sandstone. The purest form comes from where corals or oysters have fastened themselves to a rock bottom. Many limestones result from particles of dust falling into water charged with carbonate of lime.

When subjected to heat and pressure, limestone undergoes a recrystallization and all traces of the original organisms are lost. In this way we get the rock that is known as marble.

There is a growing demand for finely pulverized limestone for use as a mineral filler in the manufacture of rubber, linoleum, oilcloth and putty. Finely crushed limestone is continually coming into more extensive use as a filler in chemical fertilizers, replacing inert fillers such as sand. A new use for it is in the manufacture of rock wool for heat and sound insulation.

According to the Mining, Metallurgical and Chemical Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce, the sales of limestone produced in Canadian quarries last year amounted to four million tons, an increase of 179,000 tons over the year before. This does not include the limestone consumed in the cement industry nor the 800,000 tons that were burnt in the manufacture of lime.

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No. 284. - Sunday, July 11, 1937 - Rubies

The Ruby is the birthstone of July. That is the name given to the "gem of gems" by the Hindus, who prize it above all other precious stones. It is said to bring to its wearer health, wealth, wisdom and happiness, and is the emblem of true love. It is also said that the man who possesses a flawless ruby may dwell without fear in the midst of his enemies.

Sir John Mandeville, in the fourteenth century, writing a treatise on gems, assures the fortunate owner of a brilliant ruby that he will live in peace and concord with all men, that neither his rank nor his land will be taken from him, and that he will be preserved from all perils.

The Lord commanded the ruby to be placed on Aaron's neck and Solomon said: "Who can find a virtuous woman, for her price is far above rubies?" In another passage he declares that wisdom and understanding are "more precious than rubies".

The ruby is a red variety of the species Corundum. All other varieties of this species, including the blue, are known as sapphires. Only a fraction of one per cent

that are mined today are of gem quality. It is rare to find one of over one and a half to two carats free from imperfections. A clear, transparent, flawless ruby is the rarest and highest priced of all gems. The greatest supply comes from Burma, Siam and Ceylon. A few have been found in Australia, Madagascar and North Carolina.

Not very many of the rarer rubies come to Canada as commercial imports but there are in the possession of families many fine specimens that have been handed down from generation to generation. Imports are valued around \$10,000, according to the External Trade Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 285. -- Monday, July 12, 1937 -- Bauxite for Aluminium

The word "aluminium" or "aluminum" can be traced back to "alumen" of Ancient Rome but the metal aluminium was discovered just about one hundred years ago. Only since 1910 has there been a wide and increasing use of it.

Although not found free in nature, aluminium is the most abundant metallic element. It is found with mica, slate, corundum, feldspar, cryolite, clay and bauxite. At present the entire output of aluminium is obtained from bauxite of certain specifications. This ore is a mixture of minerals, but does not occur in Canada.

The metal is obtained by the electrolysis of bauxite concentrates and cryolite. When the molten aluminium sinks to the bottom of the pots, it is drawn off every day or two through a tap hole and cast into pigs or ingots.

Europe and North America are the only continents having aluminium production. The United States leads all other countries by a wide margin. Canada's capacity to produce it is large but the consumption is very small, and the export market takes care of the surplus.

France is the leading country in the production of bauxite. The State of Arkansas is the great producing State in the United States. Other important producers are Dutch Guiana and British Guiana in South America and Hungary, Italy and Yugoslavia in Europe.

Most of the bauxite used to produce aluminium in Canada comes from the United States and British Guiana. Over three million hundredweight of this ore was imported last year, according to the External Trade Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 286. -- Tuesday, July 13, 1937 -- Oil Cake and Meal

Every farmer, and lots of other people, know something about the oil cake that is fed to cattle, but not very many are acquainted with the process of making oil cakes and extracted meals.

There are three processes of removing oil from seeds and nut meats. One is by direct pressure, frequently hydraulic, by which the oil is squeezed out and the residue compressed into a hard, dense cake or slab, which usually retains oil to the extent of five or ten per cent.

Another is by the expeller or screw process, which is continuous and produces a residue of highly compressed meal in pieces of a size suitable for feeding purposes and of one to two per cent less oil than the direct pressed residue. In either case, the removal of the husk, if desired, is a preliminary process.

The third process is the extraction by solvents such as gasoline, benzine, alcohol, carbon bisulphide, etc. This is effected by dissolving out the oil and distilling off the solvent. The residue, after being cleaned and dried, is sold as an extracted meal which contains much less oil than do the residues of either of the other processes and is considered to have a slightly poorer feeding value. Extracted meals should not be confused with ground meals.

Of late years there has been a largely increased importation of oil cake and meal, principally soya bean and palm nut, while cotton seed has been decreasing. Last year the soya bean oil cake and meal imports were 138,000 hundredweight, palm nut 35,000 and cotton seed 32,000. There are only two firms manufacturing these products in Canada, according to the General Manufactures Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 287. - Wednesday, July 14, 1937 - Pork Eating Canadians

As consumers of meat, it was a surprise to find two or three years ago that the Canadian people had swung from pork to beef. In 1933 the per capita consumption of pork was 75 pounds and of beef 55 pounds. In 1934, however, the consumption of beef was 69 pounds and of pork 66. Beef was again the leader in 1935, but last year the consumption of pork was once more in the lead with 68 pounds to 60 per capita. There are more than twice as many cattle on Canadian farms as swine.

The Canadian people eat far more poultry than mutton. The consumption of poultry was 18 pounds per capita last year, while that of mutton and lamb was only six pounds. Canadians are amongst the smallest mutton consuming people in the world.

It might be said that chicken is the favourite meat dish and that, except around Christmas, comparatively little turkey, duck or goose is to be found on the dinner table. There are more geese than ducks on Canadian farms but more turkeys than the two of these combined, the number of turkeys being over two million. There are 56 million hens and chickens busy around the barn-yard, according to the Agricultural Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 288. - Thursday, July 15, 1937 - The Japanese Beetle

The Japanese Beetle for the past twenty years has been doing enormous damage to fruit crops and a wide variety of vegetation in the Eastern United States, and the Dominion Department of Agriculture is endeavouring to determine whether this destructive insect has invaded Canada.

The Department is now carrying on trapping operations at several points in Ontario near the international boundary. The beetles are fond of bright sunlight with a background of perennial borders or shrubbery and, therefore, it is necessary to seek the cooperation of owners of gardens and private property in order to locate the traps properly. These traps will be visited regularly by an inspector of the



Entomological Branch to see that they are functioning properly and to determine whether any beetles have been caught. As little inconvenience as possible will be caused the occupant of the property, but a real service to the community will be rendered by such owners.

The Japanese Beetle is strongly attracted by the odours of geraniol and erigenol, two essential oils used in perfumery and the beetles are lured into the traps by means of these.

The beetle is a beautiful and brightly coloured insect of about half an inch in length. It is a bright metallic green except for the greater part of the wing covers which are coppery brown. There are five white spots on either side of, and two near the tip of the abdomen.

This information is furnished by the Department of Agriculture with a request for as wide publicity as possible.

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No. 289. - Friday, July 16, 1937 - The Modern Fishing Industry

In Canada today there are 72,000 people who are dependent upon the fishing industry for a livelihood. The capital invested in boats, nets, traps, piers and wharves, freezers, etc., amounts to \$27,000,000.

As for the value of the fish marketed, whether in a fresh, dried, canned or otherwise prepared state, the outlook may be considered promising when the figures of the past are studied.

About the time when the first settlement work on Vancouver Island was being done, the building of Fort Camosun, now Victoria, the production of the fishing industry of Canada was \$125,000. When the Canadian farmer was finding a good market for his produce in the United States during the Civil War in that country, the fishing industry had reached and passed the million dollar mark. Ten years later it was valued at six million dollars. The peak was reached in 1918 when the value was \$60,000,000. By 1932, it had dropped to \$26,000,000 but is now on the upward swing, the 1936 value being \$39,000,000.

According to figures issued by the Fisheries Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce, we find that cod and salmon were for a long time the leading fish. In 1895 salmon definitely took the lead and the high price obtained for lobsters has now forced cod down to third place. British Columbia is credited with 96½ per cent of the salmon marketed last year and the Atlantic coast provinces with the lobster and cod. Nova Scotia was first in cod and Quebec second.

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No. 290. - Saturday, July 17, 1937 - Evaporated Milk

The Great War taught us many things about food; among them is an increased appreciation of milk. In three months of the occupancy of Belgium the number of cows was reduced from 1,800,000 to 700,000. At that point the protests of the Relief Commission halted the slaughter but in Northern France absolutely all the cattle were taken before the Relief Commission arrived.

What was to become of the babies was the problem, and it is safe to say that there was scarcely a child born in the north of France -- which is also true of many in Belgium -- whose continued life was not dependent during all that period upon condensed milk, much of which was sent from Canada. The children got a pitiable ration but it enabled them to survive. It saved millions of lives.

By the processes of condensation and evaporation, along with hermetic sealing, milk can be reduced in bulk and canned so that it will keep for years. It was only as late as in 1900 that the method of evaporating milk completely and reducing it to a powder was discovered. Man is now no longer dependent upon his neighbourhood for his milk supply.

Canadian condensed and evaporated milk goes far abroad, where it is too hot to produce or keep milk, such as Guiana and Equatorial Africa; or too dry as in parts of British South Africa; or too cold as in Greenland; or too mountainous as in some mining districts of British Columbia, or wherever prospectors or travellers wander. Last year the export of evaporated milk alone, seemingly the favourite, was about 70 tons, going to many lands and islands of the sea, according to the External Trade Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 291. - Sunday, July 18, 1937 - The Locust Bean

Most Canadian youngsters experience some difficulty in understanding the statement in Scripture that John the Baptist lived on locusts and wild honey. Instinctively the Canadian youth thinks of those clouds of insect pests that land in a district of the West and wipe out vegetation bare to the ground, even clutter up the rails so that a giant locomotive cannot grip the steel and is stalled. The wonder is not lessened by his knowledge that one of the seven plagues visited upon Egypt was locusts.

Youngsters on the other side of the Atlantic, however, have no such difficulty. In many countries the locust to them is instinctively the locust bean. With the smallest of coins, such as our one cent piece, they can purchase quite a handful of the dried locust beans. To them it is a sweetmeat, as highly prized as a stick of gum to a young Canadian. The beans are dried in the pod and the whole thing, pod and all, is chewed with immense relish. The beans are small; the pod, which is the chief delight, being long, broad and flat and dark brown in colour. John the Baptist had really a rich, sustaining dish and, with honey added to it, a sustenance that makes for muscular strength and stamina far more than most of the foods that are our favourites in Canada today.

Locust beans are not grown in Canada but we are importing about 200,000 pounds yearly of beans and bean meal, chiefly from Greece and other Mediterranean countries and from the United States, according to the External Trade Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 292. - Monday, July 19, 1937 - Helium from Natural Gas

The commercial production of helium during the later stage of the war, a substance that in 1916 was almost a scientific curiosity and of which only a few cubic feet were in existence in the laboratories in Europe, is one of the many recent spectacular achievements of scientists.

Helium is a light non-inflammable gas which is a most valuable substitute for hydrogen for the inflation of the gas bags of airships. The inflammability of hydrogen and the explosive nature of its mixture with air was the cause of the destruction of such airships as the British R 34 and the United States Z R 2. Helium eliminates this danger. Other uses are being found in experiments in the phenomenon of radio activity, in mitigating caisson disease in deep-sea diving and in the treatment of respiratory troubles such as asthma.

In 1915 the Board of Invention and Research of London, England, investigated the source of supply of helium within the British Empire. Canada was found to have the largest. Two years later successful experiments with natural gas at Hamilton, Ontario, warranted the erection of an experimental station at Calgary, Alberta. From the natural gas obtained in the districts in which these cities are located, it is estimated that 10 to 12 million cubic feet of helium could be produced yearly. However, very little, if any, is now being made in Canada.

Natural gas found in the areas mentioned before, contain about .35 per cent helium. The production of natural gas in Canada last year was 27 million thousand cubic feet. Should aviation expand in the future to the use of airships, it looks as though helium might become another valuable asset to Canada and to the world in general.

This information comes from the Mining, Metallurgical and Chemical Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 293. - Tuesday, July 20, 1937 -- Beeswax

Unrefined beeswax is used in the manufacture of furniture and floor polishes, preparations for dressing and waterproofing leather goods such as boots and harness, and for grafting, sealing and sewing waxes. In the refined form, it is used in the composition of many cosmetics and ointments, as well as for modelling flowers, fruits and anatomical exhibits. Refined wax is still used largely for the manufacture of church candles and since 1907 the percentage of beeswax in each church candle must be stamped upon the butt.

Observations within the British Empire have brought to light an interesting fact -- countries which provide large quantities of honey furnish little or no beeswax. Empire sources of beeswax are mainly tropical African territories, but Canada is the great honey producer. When bees are domesticated they are supplied with wax foundation for combs and after the cells have been built up and filled with honey, only the wax capping is removed in extracting the honey. In tropical countries the whole comb is taken from the wild bees.

Beeswax is cleaned by melting it in large double-jacketed pans or tanks, similar to the double-boiler. The wax floats to the top and when cooled can be lifted out in a solid block leaving any impurities such as dead bees, honey or water in the bottom of the container. Good beeswax is of an orange or golden-yellow colour and by bleaching it in the sun or with chemicals, can be made snow-white.

Canada's export of honey to the United Kingdom alone increased from 1,543,000 pounds to 2,416,000 in the last year. Increased production increases the use of prepared wax foundation. This may account for part of the increase of \$50,000 in the imports of beeswax last year, most of which came from the United

States, according to the External Trade Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 294. - Wednesday, July 21, 1937 - Empire Film Library

Canada has responded to the appeal to the Dominion and Colonial Governments to make good the shortage of films in the Empire Film Library at the Imperial Institute by presenting 68 copies of twelve different films dealing with life in the Dominion.

The Director of the Imperial Institute drew attention last August to the fact that over 1,000 films already in the Library cannot meet anything like the full demands being made from 2,500 colleges, schools, institutes and a variety of social organizations. Last year the issues of Empire films totalled 17,000 and audiences must have reached the stupendous total of 3½ million persons.

The Canadian Government Motion Picture Bureau which was organized some fifteen years ago, had close to six thousand films of Canadian interest in active circulation last year. There is a rapidly increasing use of these educational films by churches, community, fraternal and other organizations particularly in Canada, the British Isles, New Zealand, the United States and the Orient. There were 96 Canadian films shown in Germany, 70 in Italy and 53 in the West Indies.

As yet the use of educational films in Canadian schools and colleges is in its infancy. However, in a short time a report on the subject will be issued by the Educational Branch of the Dominion Bureau of Statistics.

At the present time the motion picture producers are also making use of educational material on their programmes and according to the Internal Trade Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce, there were 117 million admissions to theatres in 1935.

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No. 295. - Thursday, July 22, 1937 - Canadian Exhibits Abroad

The organization of Canadian exhibits abroad originated in the Department of Agriculture, was later taken over by the Department of Immigration and Colonization but is now part of the Department of Trade and Commerce. The Exhibition Commission has its headquarters in London, England, and has a liaison officer in Ottawa.

The primary purpose is to assist Canadian manufacturers to demonstrate their products under the most favourable conditions and to direct attention to the Dominion as a land of opportunity.

Canadian sections were organized in seventeen exhibitions last year. In London during the British Industries Fair held in February, the Canadian section accommodated 28 individual exhibitors representing 44 firms. At the same time in Birmingham, 12 Canadian industrial undertakings were shown as well as a large display of economic minerals and export timbers. A second exhibition at Birmingham in October dealt chiefly with timber and minerals associated with the building trade.

In France, the Canadian section displayed timber, minerals, fresh apples, grain and flour. An illuminated map showed Canada's national parks. For the first time a Canadian section was organized in the Royal Netherlands Industries Fair and 18

individual exhibitors represented 29 Canadian industries. A large Government display, including timber, minerals, casts of Canadian fish and a thirty-foot panoramic map of the Dominion, was prepared and shipped to the Centennial Exhibition at Adelaide, Australia. The rest of the exhibits were in the British Isles.

According to the External Trade Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce, the export of living animals for exhibition purposes last year was valued at \$207,000 and the import at \$150,000.

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No. 296. - Friday, July 23, 1937 - Marketing of Precious Metals

Prior to 1908, although measures were in existence in several countries which required all gold and silver articles to be of a certain fineness before receiving the mark of approval of the country in which they were made, Canada was being flooded with inferior goods having all the appearance of the genuine articles and with marks of quality that were calculated to deceive the purchaser. With the object of protecting the public, the dealer and the manufacturer, a standard for platinum, gold and silver, as well as articles made from these metals, has been established.

An important requirement of the Precious Metal Marketing Act is that if an article is stamped with a mark of quality, then it must also be stamped with a registered trade mark. This necessitated going carefully through 63,000 trade marks and making a drawing of each mark registered for articles of precious metals, with full details of application.

Administration is effected mainly through an inspector whose duty it is to inspect the stocks of manufacturing plants, retail and departmental stores. Constant checking of all advertisements in the daily papers throughout Canada for the misuse of words and improper descriptions of articles of precious metals, formerly prevalent, has greatly decreased the deception.

Canada's production of these metals amounted to \$147,000,000 last year. About four million dollars worth was imported and over \$85,000,000 worth exported, according to the Mining, Metallurgical and Chemical Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 297. - Saturday, July 24, 1937 - Ghee or Clarified Butter

To the average European who has lived in India, "ghee" conjures up a picture of dirty, oily fat with an offensive rancid smell. It is a solid form of milk fat free from water, proteins and salts. Milk from cows and water buffaloes is used chiefly, occasionally that from sheep and goats. The term "ghee" is now restricted to the native product and "clarified butter" to that made under Government supervision.

Because of the lack of storage facilities such as we in Canada possess, the inhabitants of semi-arid regions were forced to evolve a method of keeping dairy products. For centuries, the people of India and like countries have used a rather unsanitary method of storing butter fat. The milk was put into a large earthen or brass jar and inoculated with a starter of sour milk. When it curdled, it was diluted with warm water and churned with bamboo sticks until butter formed. The granules of butter were skimmed off and allowed to drain. During this period much

rancidity developed. The butter was again heated and cooled to allow the proteins to settle. The liquid fat was stored away in containers.

Under European supervision the natives are being taught to use the separator and churn. However, old customs are difficult to break. Natives who are supplied with sterilized milk cans into which they are to milk, prefer to use the native gourd and then pour the milk into the clean can, thus defeating attempts to promote sanitary methods. Nevertheless, progress is being made under supervision in the creameries where sterilizing equipment is installed.

Fortunately, Canadians can depend upon butter placed in cold storages. In addition to the large quantities which were held in creameries, Canadian creamery butter in cold storage plants in the Dominion on July 1 this year totalled 16,800,000 pounds, according to the Agricultural Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 298. - Sunday, July 25, 1937 -- Our Western People

Eyes are focussed more or less upon the Prairie Provinces at this time because of the drought conditions which are seriously affecting economic conditions. Data collected during the quinquennial census last summer have brought to light many important features.

In all three provinces, the proportion of urban population has declined due to the effect of the agricultural depression upon the commerce and industry of urban communities, while the rural population has increased in spite of the conditions of hardship and privation. A pronounced movement of rural population has been from southern Saskatchewan to the northern part and into northern Alberta. Alberta has shown the greatest population increase.

Although there is still an excess of males over females in the three provinces, the proportions between the sexes have been brought more nearly to a balance. In Manitoba and Saskatchewan, the increase in population in the five-year period has been accounted for by the increase of females; in Saskatchewan there was an actual decrease of males. Decreases in male population were found to be chiefly among the single men. The married population increased in all three provinces.

There has been a decline in the population of British races in the last five years in Manitoba and Saskatchewan, and a slight increase in Alberta. People of French origin have slightly decreased in Saskatchewan but have increased in the other two. Marked increases have taken place in the number of Germans and Ukrainians. These, however, should be interpreted with reserve as there has been a great deal of confusion in the reporting of the Teutonic and Slavic races in the period since the War.

This information comes from the Census Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 299. - Monday, July 26, 1937 -- Veterinary Science

Veterinary science, although confined chiefly to the health of animals, indirectly protects human beings against such communicable diseases as tuberculosis. But it was not until the 18th century that it was studied systematically.

According to the census of 1931, there were 1,046 veterinaries in Canada. The Dominion has only two colleges offering degrees in this science, one in Quebec and one in Ontario. The number of graduates annually is now around 50; about one-third of them are from the United States.

It is interesting to note that there is no veterinary college in the Western or Maritime Provinces, although these provinces possess over two-thirds of the horses and nearly half of the cattle in the country -- the two kinds of livestock which take up the greatest amount of the veterinarians' time.

About 30 per cent of the Dominion veterinaries are to be found in the large cities, a number of them being attached to Departments of Agriculture and serving a province wide area.

There are fewer veterinaries in Canada now than 25 years ago. The average age of those now practising is about 50. This is further evidence that the supply is not being maintained. Those under 25 years of age numbered 12 and there were 164 over the age of 65.

This information comes from the Educational Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 300. -- Tuesday, July 27, 1937 -- Limes

The lime belongs to the citrus fruits and is cultivated similarly to the lemon and orange. The trees seldom exceed eight feet in height and can be grown in poorer and more exposed, though not colder, situations than either lemons or oranges. The leaves are heart-shaped and the yellowish or greenish flowers are sweet-scented. The fruit is green or yellow and smaller than the lemon.

There are two species of limes which grow in England. Lyne, linde and linden are other old English forms of the name. The wood is used for cabinet work, musical instruments and carving. The masterpieces of Grinling Gibbons, the famous English carver and sculptor, were wrought in wood of the lime tree. Some of his outstanding work was done on the choir stalls of St. Paul's and in Windsor Castle.

Attempts are being made to popularise fresh limes on the tropical fruit market. The delicate skin is very subject to mechanical injury and liable to wastage through shrivelling but with care they can be shipped without losing their bright, shiny and attractive appearance. Because they undergo little colour change during cold storage, fruits for particular markets may be picked at approximately the required state.

The Island of Dominica supplied the greatest number of limes a few years ago. Now St. Lucia has taken the lead. Montserrat, Trinidad and Grenada are also producers. Most of the 13,000 boxes of fresh limes imported into Canada last year, came from the British West Indies. According to figures supplied by the External Trade Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce, the imports are about four times greater than they were five years ago.

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No. 301. - Wednesday, July 28, 1937 -- Central Electric Stations

Hydro-electric power has made possible economic developments which coal and steam could scarcely have supported and it has hastened the spread of industrialism in Canada. Central electric stations had a total output of over 25 billion kilowatt hours in 1936. It is estimated that the actual work done by water power in 1936 would have required the consumption of close to 16 billion tons of coal if done by thermal engines.

Pulp and paper and mining concerns purchase the major proportion of the output of these stations. Well over one-third of the production was absorbed by pulp and paper mills alone. Both these industries use a large proportion of the purchased electricity for heat and electrolytic processes.

The manufacturing industries use a large amount of electricity. The energy supplied by the central electric stations drives about 83 per cent of the electric motors and 65 per cent of all the power equipment used; these ratios having increased from 73 and 45 per cent respectively during the past decade. By the way, the total value of capital invested in central electric stations is greater than in any other manufacturing industry and the volume of their business puts them in the forefront of Canadian manufacturing industries.

While commercial and street lighting, and household services which central electric stations supply, play subordinate roles as far as the amount of current used is concerned, the cheap provision of these services has been immensely important in improving living conditions in the rural as well as urban communities. The domestic consumption last year was about two billion kilowatt hours.

This information comes from the Public Utilities Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 302. - Thursday, July 29, 1937 -- A New Use for Yellow Cedar

Experiments in the Ottawa laboratories of the National Research Council have proven that yellow cedar is equally as satisfactory for plate separators in storage batteries, if not more so, than the Port Orford, Oregon, cedar which has been used almost entirely heretofore. This discovery should develop into a wide market for the British Columbia wood as the number of storage batteries sold last year at factory prices, was worth over three million dollars and is increasing.

Yellow cedar is sometimes referred to as yellow cypress, Alaskan cypress or Alaska cedar. In Canada it is found only on the Pacific Coast from Alaska to the southern boundary of British Columbia on the west slope of the Coast range, and on the adjacent islands. Although not as large as the Western red cedar, it generally reaches the height of 80 feet and measures from 2 to 3 feet in diameter.

The wood itself is of a pale yellow colour and when freshly cut has a very strong rank odour which often gives it the name of "Stinkwood". This smell practically disappears in seasoning. It is fairly hard and strong, with low shrinkage factors and high durability against decay. Its resistance to acids is its most valuable property in the making of battery separators. The cut in 1934 was 40,000 board feet but increased to 100,000 the following year.



According to the Mining, Metallurgical and Chemical Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce, the money spent on battery separators of wood in 1935 amounted to \$154,000, an increase of nearly \$12,000 over the year before.

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No. 303. - Friday, July 30, 1937 -- Vocational Training

This year the Dominion Government is encouraging a programme, in cooperation with the provincial governments, for the establishment of unemployed youth. A sum of one million dollars was voted for the specific purpose of developing training projects within the various provinces. Plans have already been approved in the four Western Provinces.

The greatest dearth of skilled labour seems to lie in the building trades. Before the War, the Old Country was the source of supply of skilled workmen. There the well-established system of apprenticeship in the building trades produced excellent mechanics. Due to the War, the supply of skilled labour was cut off. Furthermore, many a young man migrated to the United States during the building boom. A survey of the principal cities of Canada revealed a disturbing shortage and an almost total absence of apprentices. In the last few years, Ontario, British Columbia and Nova Scotia have passed Apprenticeship Acts, designed to bring about the systematic entry of young men into these trades.

The motor vehicle repair and the barbering and hair dressing trades have also been under the Apprentice Act in Ontario since last year. A new feature requested by these trades is that certificates of qualification be issued to all mechanics and operators.

To make such a scheme entirely successful, vocational guidance must begin with the later years of public school and continue through high school and technical schools so that when a boy or girl is handed to an employer for practical training, there will be close cooperation between school, parent, employer and government.

The enrolment of full-time day students in vocational schools in Canada is about 65,000 and evening students 57,000, according to the Educational Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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No. 304. - Saturday, July 31, 1937 -- Glassware

It has been stated that in the Vatican Studios in Rome, where glass mosaics are made, as many as fifty thousand tones in glass are available. An enormous variety of shade and intensity of colour is obtainable by variations in the materials used. The final colour is affected, not only by the colouring agent used but also by the type of glass and by the treatment to which it is subjected. Reheating of the glass after removal from the melting furnace is often essential.

Red glass was originally produced by the use of copper compounds. The glass when first removed from the furnace is amber and develops a red colour upon reheating. When gold compounds and selenium are used, they act in a similar manner. Selenium red glass has the advantage that the colour remains uniform with varying thickness of the glass and the amount of light transmitted is high. Consequently selenium glasses are useful for traffic lights.



Amber glass is produced by the use of charcoal, usually with sulphur or sulphur compounds. Yellows are made with various foundation glass mixtures by the use of silver or uranium compounds; the silver compounds giving a true canary yellow and the uranium salts a slight greenish tinge.

Green shades are produced from iron compounds; deep olive green from chromium. Cobalt compounds give deep rich blues and manganese dioxide produces amethyst colours. Purple can be obtained by the use of gold.

As a rule, so-called black glasses are not truly black, as in front of an intense light they appear purple. Black glass is produced when a sufficiently large quantity of a substance like manganese or cobalt is used.

Coloured glass is used extensively in tableware of which we imported close to \$1,000,000 last year. Most of it came from the United States and Czechoslovakia, according to the External Trade Branch of the Dominion Bureau of Statistics, Department of Trade and Commerce.

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