PREBIND



Vov. 2-No. 7

A Matter of Acres U.B.C.

MONTREAL

July, 1920

DURING the past couple of months, conflicting statements regarding the available acreage of good farming land within a radius of fifteen miles of existing railroads in Western Canada have been made, and though the matter of five or six thousand acres in a total of approximately 30,000,000 at this stage of settlement, is not one of great importance, nevertheless, from a statistician's point of view, it is of considerable interest. Col. J. S. Dennis, addressing the Alberta Industrial Con-

gress, placed it at thirty million acres; the Western Canada Colonization Association in their recent announcements at twenty million; while Mayor Brown of Medicine Hat, in his speech to the Canadian Manunear future, and using a statement prepared sometime ago, the Federal Electoral Districts were taken as a unit to show the total population; the rural population; the area available for settlement; the area cultivated; the number of farmers or farms; the number of acres cultivated per farm, and the population per farm, etc. Having that data, the next step was to prepare maps showing all the land open for settlement outside of the 15 mile radius. Ascertaining that, by subtracting it from the total, the balance is the land available for settlement within the 15 mile radius.

The information on hand in our main Reference Library at headquarters, Montreal, and in our Bureaus of Canadian Information at New York, Chicago and London, Eng., is at your service. Inquiries are invited and will be promptly answered by personal letter. Please do not hesitate to write if you desire information about Canada or its resources. Addresses are shown on back cover. The next step was to find out how many settlers, as given in the Census, were residing on land outside of the 15 mile radius. There is absolutely no reliable data from which this could be accurately determined. By re-

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It is of particular interest to know, then, that one of the ablest statisticians, and bestknown old-timers in the West, Mr. William Pearce places the figures at 33,818,000, and in

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Having estimated them, they were subtracted from those given in the Census of each Federal Constituency, which indicated the number of settlers residing within the 15 mile radius, and allowing for each settler an area of 320 acres, for



PREBIND



Agricultural and Industrial Progress in Canada

A monthly review of Agricultural and Industrial progress in Canada, published by the Department of Colonization and Development of the Canadian Pacific Railway at Montreal, Canada.

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It is of particular interest to know, then, that one of the ablest statisticians, and bestknown old-timers in the West, Mr. William Pearce, places the figures at 33,818,000, and in working out these figures he has produced some interesting data on the acreage under cultivation in the Prairie Provinces. They are based on his long years of residence in the West and firsthand knowledge of the country, and in this respect probably, Mr. Pearce, as a surveyor, engineer, statistician and business man, is better acquainted with the whole of these provinces than any other single individual.

Method Adopted to Determine Area

The method adopted to determine the quantity was as follows: Taking the area within 15 miles of already established railway lines and those which will probably be constructed within the There is absolutely no reliable data from which this could be accurately determined. By referring to Table 25 in the Census of 1916, where information is furnished by municipalities, a close approximation could be obtained, but it was noted that the boundaries of said municipalities are not coterminous with those of the Federal Constituencies, and in many cases not with the township boundaries. To correct this, therefore, would have involved a much greater amount of work than the attainment of absolutely accurate boundaries warranted, so it was assumed that every settler would have 320 acres of land; and taking the Department of the Interior Homestead Maps, showing the lands which are now patented, and which, of course, must have been entered and resided on at the date of the Census, there is no doubt that it is

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reasons hereinbefore stated, gives the area occupied within this radius.

Percentage of Lands Available

The next question was what percentage of those lands available would likely be settled. That involved a decision on which, of course, there may be very great difference in opinion. By settling is meant, would probably be settled upon within the next 15 or 20 years. The lesser the percentage remaining to be settled in the older constituencies, of course, the less of it would be settled, from the fact that the lands left were not the most desirable tracts, and it is particularly noticeable in the percentages given for Manitoba, that in the very best constituencies so far at least as grain growing lands are concerned, such as Souris, Neepawa, Brandon and Lisgar, the percentage of that available for settlement that will be so settled is placed very low.

Again, some of the constituencies in Saskatchewan are placed as high as 90% and five at 80%. This favorable showing regarding Saskatchewan will not continue as settlement is extended outside of the 15 mile radius. Manitoba averages 39.5%, Saskatchewan 70.1%, and Alberta 37.1% of the lands available for settlement that will probably be so settled.

There are two other elements in connection with the percentages that have to be considered. One is in the way of muskegs, sloughs, etc., and another what might be called the semi-arid portions of the country, such as Medicine Hat, Lethbridge, Swift Current, etc. They had to be placed low on account of deficiency in rainfall. It will be noticed, however, that in those constituencies, the most arid of the lands are outside of the 15 mile belt.

Irrigated Land Supports Larger Population

There is one thing to be borne in mind in connection with that phase and that is, where any considerable area of land can be irrigated, as there is no doubt it will be in the near future, by reason of the increased production of the irrigated portions, the district as a whole would support a larger population than those portions where very many now anticipate irrigation would not be beneficial.

In Manitoba, the number of acres cultivated per farm varies from 16.07 in the Constituency of Selkirk to 276.19 in Souris. For the province the average is 125.2 acres and the rural population per farm is equivalent to 6.78.

In Saskatchewan, the number of acres cultivated per farm varies from 69.05 in Prince Albert to 284.34 in Assiniboia. The province averages 152.6 acres per farm and the rural population per farm is 4.67.

In Alberta, the number of acres cultivated per farm varies from 34.51 in Edmonton West to 156.7 in Macleod, an average of 83.5 acres per farm, while the rural population per farm is 4.65. Worked out on the foregoing basis, the results are as follows:—

	0	% that will	
Province	Area	likely be	Area
	Available	settled	
Manitoba	10,214,981	39.5	4,032,000
Saskatchewan	24,493,786	70.1	17,186,000
Alberta	33,921,752	37.1	12,600,000
	68,630,519	49.27	33,818,000

In the three Provinces combined 68,630,519 acres, of which 49.27% or 33,818,000 are likely to be settled. For convenience say 34,000,000.

Canada's 1920 Crop Acreage

A total of 16,921,000 acres has been sown to wheat in Canada this spring, according to the preliminary estimate of the Dominion Bureau of Statistics. Compared with last year's acreage of 19,126,000 acres this shows a decrease of 2,205,000 acres or twelve per cent. The area to be harvested from fall wheat is 740,300 acres, which leaves a spring wheat acreage of 16,180,700 as compared with 18,453,175 acres in 1919.

The total estimated area sown to oats is 15,291,000 acres as compared with 14,952,000 acres last year, an increase of 339,000 acres or two per cent. Barley has an acreage of 2,574,900 acres in 1920 as against 2,645,509; rye 730,100 as against 753,081; peas 219,065 against 230,351; mixed grains 900,800 against 901,612; hay and clover 10,492,900 against 10,595,383; and alfalfa 220,800 as against 226,869. With the exception of oats, these crops all show a decrease, barley, rye and alfalfa of three per cent., peas of five per cent. and hay and clover of one per cent. Mixed grains are practically equal to last year.

The preliminary estimate of acres planted, or to be planted to potatoes is 802,500 acres as against 818,767 last year, a decrease of 16,267 acres or two per cent.

Area Sown in Western Canada

The area sown to wheat in the three Prairie Provinces totals 15,502,700 acres, as compared with 17,750,167 acres, a decrease of 13 per cent. Oats extend to 9,613,700 acres, or 2 per cent. above last year's area of 9,452,386 acres. Barley has an area of 1,751,500 acres, as against 1,800,745 acres, a decrease of 3 per cent., and rye 562,100 acres, as against 573,218 acres, a decrease of 2 per cent.

By provinces the areas in 1920 and 1919 (the latter year being in brackets) are: Wheat— Manitoba, 2,563,500 acres (2,880,301); Saskatchewan, 9,422,800 acres (10,587,363); Alberta, 3,516,400 acres (4,282,503). Oats—Manitoba, 1,884,200 acres (1,847,267); Saskatchewan, 4,934,400 acres (4,837,747); Alberta, 2,795,000 acres (2,767,372). Barley—Manitoba, 876,100 acres (893,947); Saskatchewan, 477,800 acres (492,586); Alberta, 397,600 acres (414,212). Rye—Manitoba, 272,000 acres (298,932); Saskatchewan, 203,800 acres (10,482); Alberta, 86,300 acres (83,804).

The June Crop Situation

Crop prospects from coast to coast, in regard to grain, fruit and vegetables, give reasonable ground for optimism as to Canada's agricultural and horticultural production for the coming summer, and a brief glance at the following summary will indicate the conditions prevailing in the different provinces, as reported by them, on June 30th.

The various pests are making themselves felt—cut-worms and grasshoppers are being fought with every weapon known to agricultural science. There is still danger from frosts—there has been hail at a considerable number of points —and the help problem is ever in sight, but so far as agricultural growth is concerned the crops are in a most favorable position.

British Columbia.—Prospects for the biggest crop in the history of the province are held out by the Minister of Agriculture of the province who states: "The season has been late but crop prospects are exceptionally good, growers are optimistic, and a larger acreage will be under cultivation this year."

Alberta.—Alberta has experienced most favorable moisture conditions with continual light showers. Wheat acreage has decreased about 10 per cent. but the oat and barley acreage has increased. Pastures are in excellent condition, and livestock thriving. Warm weather is bringing on the late grain. A large supply of hay and green feed is anticipated. In the south a slight loss of seed has been experienced from drifting.

Saskatchewan.—The most favorable crop reports ever sent out are being issued. There has been abundant precipitation, the ground is saturated, the soil bed is excellent and seed has germinated with exceptional rapidity.

Manitoba.—The situation in the province is stated to be the best since reports on crop conditions were first issued in 1904. Farmers are optimistic and looking for an exceptional crop.

Ontario.—There has been abundant moisture and grain fields are in fine shape. Hay is somewhat thin and the crop is apt to be light. Pastures are showing luxurious growth and cattle assuming fine condition. Fruit is looking unusually well and a large harvest is predicted, in spite of heavy wind on the 23rd which in the Niagara District shook quantities of fruit to the ground. Trees were overloaded and growers are not alarmed.

Quebec.—The province is generally reported to be in a very favorable condition. Periodical showers have brought all crops along wonderfully, and indications are for bountiful yields.

New Brunswick.—Ideal weather and splendid crop progress is reported. Grain and potato crops appear sturdy and promising. High cost of seed restricted area this year. Hay crop will be light.

Nova Scotia.—The outlook in the province is for excellent crops. Prospects in the apple orchards are bright, the blossoms having set well upon the majority of trees, and a record harvest expected.

Saskatchewan Aids Livestock Industry

Reference has sometimes been made in this BULLETIN to the extensive and unceasing assistance rendered by Federal and Provincial governments in the promotion of agriculture and specific aid to farmers throughout the Dominion. This is clearly exemplified in the last report of the work of the livestock branch of the Saskatchewan Department of Agriculture covering the year 1919, and which work was performed in addition to its routine operations.

During the autumn and early winter certificates were issued for the free shipment of 509 carloads of hay-cutting outfits and for the return of 317 carloads of these outfits to assist in cutting and baling hay to relieve the feed situation. A total of 10,827 tons of hay, straw, and feed were shipped free into sections where the harvests had not proved as heavy as others.

Beneficial Work of Department

Some of the most beneficial work of the branch was in the purchase and distribution of pure bred sires and grade females. The department purchases suitable sires for cash and sells them to farmers who realize the necessity for their use, on credit terms. A new record in this work was created in 1919, and the following figures will show how this work has increased. In 1913, 19 bulls were handled; in 1914, 41; in 1915, 84; in 1916, 150; in 1917, 158; in 1918, 135; in 1919, 195. About 50 per cent. of the purebred bulls sold on credit terms were Shorthorns, 25 per cent. Herefords, 15 per cent. Angus and the balance Holstein, Ayrshire, and Red Polled.

The grade females are sold to farmers on the same terms, and 1919 saw a greater number handled by the branch than any previous year since the system was adopted. In 1913, a total of 345 grade females were placed; in 1914, 483; in 1915, 368; in 1916, 342; in 1917, 1,322; in 1918, 1,725; and in 1919, 2,014. This means that more than 2,000 breeding females were saved from slaughter last year which would otherwise have gone to the stockyards.

Establishment of Sheep Herds

To assist in the establishment of sheep herds throughout the province last year the livestock branch placed 3,491 grade ewes on provincial farms. Much work was also done in the distribution of rams, carloads being brought from Eastern Canada and importations made from Great Britain.

A valuable work was done by the provincial veterinarian in travelling about the province assisting the veterinary surgeons and stockmen in various troubles which arose. Much effort was put into laboratory and bacteriological work and a vaccine evolved, which was distributed extensively to farmers.

Canadian Flax for Ireland

According to Trade Commissioner I. Vernon McKenzie, Canadian-grown flax seed has proved a great favorite with the farmers of Ireland where good flax is appreciated. Much seed was imported from Canada during the past two seasons which gave universal satisfaction, and there is every indication that exports from Canada this year will be much heavier. It is the general opinion of a large number of those in touch with the flax trade in Ireland thatprovided Canadian flax yields the same result as last year-it will effectually put Dutch seed out of the market and supersede it on Irish farms. Canadian flax seed has met its stiffest competition in Ireland from Holland and Japan. In fact during the past season, the only other varieties of seed grown in Ireland included some of Russia's 1917 output, and Irish seed from County Antrim and County Cork.

Canadian Fibre in Demand

As regards the value of scutched flax for sowing, Canadian fibre seed held a pre-eminent position according to government figures which included returns from five principal centres. All supplies in Belfast last year were quickly exhausted, and in the opinions of the leading importers in that city the results obtained in the last two seasons from Canadian seed have been satisfactory and at least equal to those obtained from seed from any other country. They believed that granted the season in Canada is favorable this year there will be a great increase in importation, and that Canadian seed, by the progress it is making, will oust Dutch seed from the large market it now holds among the farms of Ulster.

The majority of the Canadian seed used in Ireland came from south-western Ontario, the soil and climate of which region are very favorable to the production of high-grade fibre flax. The flax of the prairie provinces whilst producing great quantities of flax seed suitable for crushing for the manufacture of linseed oil and stock foods, the fibre is not generally suitable for the manufacture of linen of fine quality. Experiments, however, have shown that a high quality of paper can be made from the flax straw produced in the prairie provinces.

Western Wool Production

Approximately three hundred and seventyfive contracts have been entered into this season by growers in the province of Saskatchewan and the Canadian Co-operative Wool Growers, Ltd., under which the growers' clips will be marketed through the association. These contracts represent over 31,000 sheep and over 221,000 pounds of wool already definitely in sight. Approximately one hundred and fifty contracts have been received from Manitoba. This showing is as good, and possibly better, than the average at this time of the season in past years, according to the district manager of the Cooperative Wool Growers for Manitoba and Saskatchewan. "I anticipate an increase of 100,000 pounds of wool handled this year over last year," he states.

The association is encouraging the wool growers of the western provinces to get together this year and ship in car lots (e.g., 20,000 pounds) from local points. Wherever they will do so, a special representative of the Co-operative will be sent to take delivery of the wool as it is loaded and ship it direct to the warehouses. The object of this procedure is to materially lessen freight charges and handling expenses.

How Paper is Made

In an article written for the Grain Growers Guide by Mr. J. N. Stephenson, M.S., Editor of the "Pulp and Paper Magazine of Canada," an interesting description of paper making from the tree to the finished product is given. As the subject is one of very special interest at this time of pulp and paper controversy, it is here reprinted:—

"To tell how paper is made in the space of a brief article is a difficult problem, but it will be possible to describe at least some of the more important and interesting features of the manufacture of Canada's most important manufactured product. Canadian paper mills manufacture every standard grade and many special varieties of paper, but the kind which makes up the greatest part of the production is newsprint paper. The annual output of newsprint is now at the rate of 800,000 tons, and within another year will be 900,000 tons, or more. It is this kind of paper which doubtless is most interesting to readers, because about 15 per cent. of the output is used for printing the news of the day in Canadian newspapers, and the rest is exported principally to the United States at a rate which practically amounts to the shipment of \$5,000,000 of gold each month, with a consequent stabilizing effect on the rate of exchange. It will be appropriate, therefore, if this description is limited to the manufacture of newsprint paper, although the making of other grades involve processes and machinery of a most interesting character which cannot be explained here.

The manufacture of newsprint paper begins with the tree, so that it is of the greatest importance to take good care of Canada's forests, whose spruce and fir form the foundation of the paper industry. When the wood arrives at the mill, either by floating down the rivers or hauled by rail, it must be sawed into blocks from two to four feet long, and the bark removed. For newsprint paper this is usually done by tumbling the blocks in huge barrels made of steel angle irons. Part of the barked blocks go to the groundwood mill and the rest to the sulphite

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mill, since newsprint paper contains approximately 80% of groundwood pulp and 20% of sulphite pulp."

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Making Pulp on a Grindstone

"In the groundwood mill the blocks are held by hydraulic pressure flat against a revolving grindstone, and the fibres are rubbed off. Everything that was in the wood—and often other things besides—remains in the pulp. The pulp from the grinders is mixed with water and screwed through strainers to remove big slivers, knots, etc., and most of the water is then removed to make less material to handle. In some plants the thick pulp is pumped directly to huge storage tanks in the paper mill or further dewatered and formed into sheets which are folded into bundles or 'laps' containing about 35% fibre."

Wood is Cooked to Make Sulphite Pulp

"The first operation in the sulphite mill is to chip the blocks into small pieces to facilitate the penetration of the cooking liquor. The liquor is prepared by burning sulphur and dissolving gas in lime water or in water which is trickling over limestone in a tower. The solution is bi-sulphite of calcium, hence the name 'sulphite' for this kind of pulp.

The chips and cooking liquor are fed into huge boilers or digesters. The cooking is done by steam for about eight to ten hours. By this process about one-half of the solid matter in the wood is removed, leaving only the comparatively pure cellulose fibre. A cord of wood yields approximately one-half ton of sulphite pulp, while the same cord would yield about a ton of groundwood pulp.

When the cooking is complete the chips are blown from the digester to a blow-pit where they strike a plate and are broken down to a pulp form. The pulp is washed to free it from residues of the cooking liquor, and the noncellulose constituents of the wood. After being washed, the processes of the screwing, thickening, etc., are practically the same as for ground wood pulp."

The Paper Mill is an Interesting Place

"One would hesitate to believe that the milky-looking liquid passing the paper machine screens, through slats only ten thousandths of an inch wide, could possibly be formed into a product which could be used for printing the daily news or for wrapping a parcel. Yet such is the perfection of the paper machine and the skill of the paper maker that this wonderful result can be accomplished with individual fibres averaging only an eighth of an inch, or less, in length.

In the most modern mills, where the production is kept high and manufacturing costs low, the pulps are simply run from the 'slush' storage, in the proper proportions, into large mixing tanks, from which it goes to the paper machines. Many mills still use the original mixer, the beater, and necessarily so where the pulp is handled in laps. In the beater the fibres are brushed and rubbed between a revolving roll and a stationary plate, a process which, besides mixing the fibres, improves their papermaking quality.

The mixed pulps or 'stuff' is run into storage tanks, called stuff chests, in the machine room, and pumped to a regulator which allows just the right amount to flow continually to the paper machine, the excess going back to the chest. Before the stuff reaches the machine it is again strained or 'screened,' to make sure the fibres are of uniform size, and extra water is added to get the proper interweaving of the fibres as the sheet of paper is formed.

The machine used for making newsprint, book, wrapping and writing papers is called the Fourdrinier, from the name of the two brothers who bought up and developed the original patent of Louis Robert, whose invention dates from 1799, only 120 years ago. In that time wonderful improvements have been made, modern machines making a sheet of paper 15 feet wide at the rate of 650 feet or more per minute. Some machines run more than 800 feet per minute, and the paper is carried automatically from one end to the other."

A Marvellous Machine

"The wire part of the paper machine is the most important and the wire cloth is the most expensive item of supply, costing as much as \$800 or \$900 for 160" machines, and lasting from three days to three weeks.

As the stuff flows out on the endless wire it contains about one part of fibre and 200 parts of water. It flows out on the moving wire at nearly the same rate as the latter travels. No sooner does the fluid spread out on the wire than the water starts to go through. Before this has proceeded very far, however, the fibres, in settling, have had a chance to unweave. The fabric is not of uniform strength in both directions, because the fibres have a tendency to lie in the direction the stream is flowing, therefore the paper is weaker across the machine than parallel to the direction of flow. Hence the paper tears more easily one way than the other. In slower running machines it is possible to make a paper of nearly the same strength in both directions.

Due to the speed of the machine and the limited length of the wire, only a portion of the water can drain through. An additional amount is drawn out by suction, applied through suction boxes with perforated tops, over which the wire travels. Before leaving the wire the paper passes between a pair of rollers, called 'couch rolls' which press the fibres together and squeeze out more water. In some machines a suction roll is used at this point. It is this roll, or the lower one of the pair, which drives the wire.

The paper is now made, so far as the interweaving of the fibres is concerned, and it contains about 90 per cent. of moisture. In order to improve the firmness, texture and finish and to remove more water, the sheet is passed through several pairs of ' press ' rolls, carried by fine woollen felts."

Evaporating the Water

"Most of the water is removed by evaporation, the paper passing over steam-heated drums called 'dryers.' This, of course, is expensive, so as much water as possible is removed by mechanical means, although the best that can be accomplished is to deliver a sheet about 35 per cent. dry to the dryers. As the finished paper will contain from seven to ten per cent. of moisture, nearly two tons of water must be evaporated."

Smoothing the Surface

"The finishing, or smoothing of the surface, is done by the part of the machine called the calender, a stack of nine to thirteen special steel rolls. The friction and weight of the rolls on the paper as it winds down through the stack really 'irons' out the roughness, presses down the frizzy fibres and gives a surface flat enough to take the ink properly from type and cuts in the press room. The endless sheet is then wound on reels and from these, in turn, is passed through a set of rotary shears that divide it into strips of the proper width, and these strips are wound on cores in rolls of the correct width and diameter, for the newspaper presses. Any breaks are carefully joined and a 'flag' or signal is placed in the roll at that point to warn the pressman of some defect in the roll. Wrapping the roll is comparatively simple, yet this and the loading into the cars must be conscientiously and carefully done if the paper is to arrive in good condition.

Some newspapers require paper in sheets. To accommodate them the mill must have another department, where the paper from the rolls is passed through a cutter, whose revolving knife cuts the strip into pieces the desired length. The sheets are then counted by reams and packed in bundles.

For special effects an extra high finish is sometimes required. To get this, the strips are passed through the super-calender, a calender stack made up of alternate rolls of steel and compressed paper or cotton. A very high lustre can thus be obtained, the paper often going through several times. The product is called 'super-news' and is largely used for pictorial sections of the paper.

When it is necessary to produce a special color or some other effects requiring a fundamental treatment of the stock, the necessary materials, color, sizing, clay, etc., are added in the mixer or the beater. For other grades of paper, the operation of the paper machine is practically the same as described, but such papers usually require special additional processes for the preparation of the raw material and the finishing of the paper. The selection of stock is of greatest importance, and more care is required at most points in the process."

Canadian Canning and Preserving Industries

Although of comparatively recent origin, the canning and preserving of fruits in Canada have developed into important industries and are still growing rapidly. At the end of 1918, according to the Dominion Bureau of Statistics, there were throughout the Dominion 253 such plants in operation.

There are 130 canning plants in Canada located as follows:—Ontario 88, Quebec 19, British Columbia 15, New Brunswick 6, Nova Scotia 2. There are 94 plants in which the evaporated process is used. Of these Ontario has 78, British Columbia 8, Nova Scotia 7, New Brunswick 1. There are also 29 for the preserving of vegetables, of which Ontario has 18, British Columbia 6, Alberta 2, Quebec 2, and Manitoba 1.

The total amount invested in the combined industries is given as \$16,252,986, of which \$4,969,105 is in land, buildings and fixtures; \$2,945,016 in machinery and tools; \$6,123,809 in materials on hand, and \$2,275,056 in cash accounts, etc. The number of employees is returned at 4,795 and the wages and salaries paid for the year \$2,834,237. The total cost at the works of the materials used during the year was \$15,019,746, and the total value of the products of the plants \$23,685,467.

Imports and Exports

Canada's exports of canned and preserved fruits and vegetables underwent a remarkable increase during the war period, jumping from \$299,412 in 1915 to \$13,730,824 in 1918. It dropped in 1919 to \$9,154,622. France was the principal importer in 1918, her purchases In 1919 she was amounting to \$10,122,681. still the best customer with imports of \$4,195,545. Exports to the United States in 1919 amounted to \$2,811,076 and to the United Kingdom \$1,917,597. Canada's imports of these products are considerable. In 1919 she bought canned and preserved fruits to the value of \$1,152,012, of which \$1,003,550 came from the United States. She also imported vegetables valued at \$580,881, practically all of which came from across the border.

Great Development Forecasted

If there is one industry more than any other that is due to experience a great development in Western Canada during the next few years, it is the canning industry. Unlike most other industries in this vast country, its movement will be from west to east. It has already been well developed on the Pacific Coast where the canning of salmon has long been one of the most important industries. In the interior of British Columbia, too, the industry has a good start, and in many parts of the province an evergrowing business is being built up in the canning of fruits and vegetables, for here are some of the largest fruit producing districts on the continent.

On the eastern side of the great Rocky Mountains, the industry has not advanced so far as it has on the western side. But there are signs that in the prairie provinces are opportunities for the building up of a large business in the canning of fresh water fish, and also vegetables and small fruits. Already a beginning is being made in Northern Alberta, where on the shores of Lake Athabaska a cannery is being established for the canning of white fish caught in this and other lakes in the north of the province.

Irrigated Land Produces Bountifully

Southern Alberta will probably be the scene of the next advance of the industry. Here are nearly a million acres of irrigable land on which a far larger variety of crops can be grown than in most other parts of the west. Peas, beans and other vegetables, tomatoes, strawberries, raspberries, and currants of an excellent quality, all eminently suitable for canning, can be grown in large quantities, and only await the establishment of canneries when they will be grown in such quantities as will surprise those who have imagined that on the prairies nothing can be raised but grain and live stock.

Once established in Southern Alberta, it will not be long before the canning industry is started in other parts of the Canadian prairies. Almost everywhere on the rich virgin soil of Alberta, Saskatchewan and Manitoba, vegetables of a size and quality that are astonishing to those who have not seen them, are grown with little trouble and expense. In most districts, too, strawberries, raspberries, black, red and white currants and small fruits can be grown in abundance. All that is needed is the incentive in the way of an outlet for the produce such as canneries would provide to make the industry a most important one in Western Canada.

Canada's Importation of U.S. Coal

Canada now imports \$60,000,000 worth of coal a year from the United States. This was the value of these imports last year, which, the war being over, may be considered normal. In 1919, the amount was \$70,603,005, and in 1918, when the manufacture of munitions was at its height, \$74,324,931. Practically all the coal imported into Canada comes from the United States, though a little dribbles in from other quarters in the form of ballast.

The quantity imported last year was 16,643,677 tons, of which 11,552,910 tons were bituminous and 5,090,767 anthracite. Coke to the amount of 381,606 was also brought in from the United States. Last year the imports of bituminous fell off to the extent of 5,000,000 tons; while those of anthracite increased by 337,889 tons; imports of coke were only about one-third those of the preceding year, when they totalled 1,075,491 tons.

The Rise in Coal Prices

The value of the bituminous coal imported last year was \$27,424,870; the anthracite \$32,647,759; and the coke \$2,476,450. trade returns indicate plainly the rise in coal prices since 1913. The average value per ton of the 11,049,593 tons of bituminous imported in that year was \$1.84; in 1919, the average value of the 11,552,910 tons imported was \$2.37. The rise in the price of anthracite has been much greater. The cost per ton of the 4,208,630 tons brought in during 1913 was \$4.81; the cost per ton of the 5,090,767 tons last year was \$6.41. The price of coke has risen still higher than that of anthracite, the average cost per ton having gone from \$2.84 in 1913 to \$6.40 last year. It may, however, be said that these figures do not represent the actual cost to the Canadian consumer, who must, in addition, pay the prevailing rate of exchange, which, during the last year, has been running all the way from eight to eighteen per cent.

Importation Increasing

The importation of anthracite coal into Canada, which is used chiefly for heating purposes, is steadily increasing, the imports in 1912 having been 4,084,407 tons and in 1919-20, 5,090,767 tons. In 1917, they went as high as 5,253,014 tons. In the matter of bituminous coal, imports from the United States are, relatively, declining. In 1913, 11,049,593 tons were brought in, and in the year ending March 31st, 1920, 11,552,910 tons, an increase of but 503,307 tons in eight years, during which time there has been a phenomenal development in manufacturing industries using power developed from either coal or water. In 1919, these imports reached their high-water mark, 16,568,-509 tons.

The relatively decreasing demand for bituminous coal from the United States is due to the rapid development of hydro-electric power in Canada, the total horse power now actually in use being 2,220,000. This has taken place within the last 17 years. Not only is it rapidly displacing at home, power developed from coal, but an increasing market for it is being found in the United States. During 1919 the combined value of coal and electrical power thus exported was \$20,000,000.

Canada also an Exporter

Canada is also an exporter of coal, the United States during a normal year taking about 1,250,000 tons. The volume of this trade yaries directly with the home production. In 1912, the quantity exported was 991,558; next year it was 1,630,468. Since then it has gone up and down, until last year, when the production at the mines fell 20 per cent. below that of 1918, the quantity was but 1,071,772 tons.

The Fur Industry Expands

The fur trade has been an integral part of Canada's industry since the earliest days of the French regime when it was a monopoly of the proprietary companies. Always a source of profit, the development of the last few years, the growth of the demand for furs, and the high prices they have commanded, have increased its value to Canada very greatly. The value of the present annual production has been estimated roughly at twenty million dollars.

Until comparatively recently the operations of the trade in Canada were in the main confined to the actual trapping of the fur-bearing animals. Most of the furs were exported in an undressed state to London or the United States either for sale at public auctions or consigned to dealers in those places. A certain proportion were dressed and manufactured in Canada for home consumption.

The figures of exports show changes which the war caused in the world organization of the industry. Extracts from the statistics of the fiscal years ending March 31st, 1914, 1918 and 1919 are as follows:—

Export of Undressed Furs from Canada

To England To United States	1914 3,000,000 2,100,000	1918 1,600,000 6,300,000	1919 3,700,000 9,600,000
Total Exports Total Imports	5,500,000	8,000,000	13,500,000

In the fiscal year 1914, England received the greater part of our fur exports. By 1918 she was importing 20 per cent. only, 78 per cent. going to the United States. The percentages for 1919 were 27 and 71 respectively, showing renewed activity in the English fur trade in the first year of peace. The total value of fur exports in 1919 as compared to 1918 increased five and a half million dollars.

Prior to 1915 London was the only place in the world where furs were sold at public auction. Since the first sale was held there by the Hudson's Bay Company in 1671, the English industry grew steadily until at the outbreak of the war the London market dominated the world's fur trade. The war changed the situation entirely, and in 1915 sales were commenced at St. Louis and in 1917 at New York. This form of international buying and selling of furs at auction has been found to be the most economical and effective method of distribution yet developed.

Montreal Auctions Thrice Yearly

The auction sales which have been inaugurated at Montreal and will probably be held three times a year, winter, spring, and fall, have changed the Canadian fur trade outlook considerably. A Canadian market has been provided to which Canadian trappers and dealers can send their furs. With Russian furs off the market, Canadian furs rank higher in the aggregate than any in the world. Their presence in quantity at an auction sale is counted on to attract the most important of the world's buyers and to ensure a high level of prices, which is all that is needed to bring furs to Canada from all parts of the world and to establish Montreal as an international centre for this trade.

The Evangeline Memorial Park

George E. Graham, Manager of the Dominion Atlantic Railway Co., writing in a recent issue of the *Canadian Courier*, gives some interesting information on Nova Scotia's historical and modern progress. Those who are familiar with Longfellow's poem "Evangeline"—and there must be but few who are not—will, doubtless, heartily endorse the project of the Dominion Atlantic to construct an Evangeline Memorial Park, for of all the heroines of early Canadian history, none is dearer to the heart—no story is more touching—than that of the heroine of Grand Pre.

Nova Scotia's history is filled with memorable deeds and drama, with beauty and valor, and spiritual reverence. We find, too, as in all history, the products of pride, ambition, revenge, lust and intemperate zeal. Its early years, torn with the strife of two great nations, are woven into a remarkable series of epic and drama, sounding deep and clear the "marching music of mankind."

No portion of America has an older or more fascinating history. California, the Virginias, Quebec are all predated by the Annapolis Valley. The Spaniard did not settle and sprinkle California with his missions till 1769, a century and a half after the founding of Annapolis Royal (1605). The Virginias received their first expeditions in 1607, and it was not till a year later that we find the white man finally housed on the summits of Quebec.

The History of Annapolis

The chief appeal of Nova Scotia's history is in her romance, beginning with those pages which relate the arrival of two small craft in the mouth of the Annapolis Basin, bearing gentlemen of the French nobility, including DeMonts and Champlain, garbed in the fashion of the court of Henry of Navarre. The scenic charm of the country moves the Baron Poutrincourt with delight, and he determines there to end his days a feudal baron, surrounded by his family, the French and Swiss soldiery, the curé and his fellow priests, Huguenot ministers, artisans and laborers.

A year later the ship "Jonas" comes swirling through Digby Gap—now broadside, now stern first—wind and tide at variance. She brings a Paris lawyer to become the historian of these knights errant.

Gladness at the fort, excitement in the nearby cluster of Indian wigwams—a hogshead of wine in the court-yard, general rejoicing. In the same summer, Champlain and Poutrincourt returned from the hazards of exploring an uncharted coast, and in their honor "Neptune and the Tritons," done by Lescarbot in good French verse, is staged at "Le Theatre De Neptune en la Nouvelle France," the first play written and produced in America.

Lady de la Tour

There, too, are the stories of the beautiful Marquise de Guercheville and the Jesuits, and of the arrival of their ship "The Grace of God," of Lady de La Tour commanding her husband's troops in defence of the fortress. Such stories crowd the pages, a host of fascinating, thrilling episodes, associated with different portions of the country—till we reach the expulsion of the Acadians—known to the world—the arrival of Cornwallis, of the New England Planters, and of the United Empire Loyalists, who soon followed.

Nova Scotia has a great scenic charm, but the fertility of its valleys, the fragrance of its orchards, or the equable character of its climate are not the sole attractions. It is twice fortunate in halo of old and romantic associations.

An Idealized Canadian Girl

An interesting development at Grand Pre, where lies the inspiration for Longfellow's poem "Evangeline," is being carried on by the Dominion Atlantic Railway. This company is constructing a Memorial Park, which, when complete, will recall the Norman Country from whence the early Acadians came. Within the park a chapel of Norman architecture will be erected by the Acadian French to the memory of their forefathers. The great Gothic gates of the main entrance are set in a stone gatehouse sheltered with a roof of tiles. An enclosure has been planted with more willow and poplar trees. located with due regard to ultimate landscape effects. An ample water garden has been planted with many kinds of iris, and an unusual collection of flowering native plants and shrubs. On a green plot will stand the bronze statue of an idealized Acadian girl, the work of Henri Hebert of Montreal. The bronze is now being cast in Paris. The unveiling will take place this summer with appropriate ceremonial.

It is contemplated to house at the park a collection of articles used by the French Acadians which to-day are scattered over the country in many private collections, and a library of documents, pamphlets, and books bearing on the French and Loyalist history of Nova Scotia is already being gathered.

Comparative Cost of Living in Canada

Based upon the figures of the Labor Gazette of Ottawa a comparative chart of the cost of living in the fourteen principal cities of Canada has been prepared by the Vancouver Sun, which furnishes a very interesting record. After careful computation the average family is taken to consist of five persons, and the weekly family budget includes meats, groceries, fuel and light, clothing and rent.

The statement furnishes some incongruities in as much as one coast city is almost at the peak of high prices, another at the base, whilst certain inland cities occur fairly well down on the list. The lower amount of fuel consumed, and of winter clothing necessitated on the Pacific coast, turn the balance in their favor and the three British Columbia cities are lowest in the list. As the Department publishes no statistics as to the price of clothing, the compiler must have collected his own figures or some information on which to base an estimate. Following is the list of cities in order of cost of living:-Regina, St. John, Winnipeg, Toronto, Ottawa, Hamilton, Calgary, Halifax, Quebec, Montreal, Vancouver, Victoria, Westminster. No figures are furnished for Edmonton for July, 1919, at which time the figures were taken.

Following is a comparative statement of the cost of the weekly family budget taken in July, 1918 and 1919:—

	1918	1919
Regina	\$26.49	\$28.55
St. John	24.06	28.12
Winnipeg	24.13	26.83
Toronto	25.24	26.49
Ottawa	23.85	25.47
Hamilton	24.35	25.26
Calgary	24.05	24.98
Halifax	20.58	23.91
Quebec	23.02	23.69
Montreal	22.01	23.05
Vancouver	21.28	22.50
Victoria	19.17	22.38
Westminster	19.54	21.85
Edmonton	21.45	No figures
	the set of the set	

Rent in 1919 was highest in Regina with \$8.08 in the family budget and lowest in St. John with \$3.46. The largest increase in rent during the period was in the city of Victoria where the weekly amount rose from \$3.23 to \$4.61 or \$1.38. Halifax rose \$1.15, Toronto .92, Westminster .82, St. John .46, and Hamilton .30. Other cities remained the same with the exception of Ottawa which registered the only drop, one of 23 cents. Fuel and light were highest in Regina where they formed an item of \$3.43 in the average family's weekly budget, and lowest in Calgary accounting for the sum of \$2.09 in the expense account. The average increase throughout the fourteen cities was 42 cents. The only drop in expenses of this kind was one of 13 cents in Hamilton, where this item in the weekly account fell from \$3.51 to \$3.38 in 1919.

The grocery bill in 1919 came highest in Victoria with an item in the family account weekly of \$10.23, though Halifax ran it a close second with \$10.14. Groceries were apparently lowest in Hamilton with \$8.09 only, being deducted each week from the family income for the grocery bill. The average increase in the cost of groceries per week over the fourteen cities was nearly 65 cents, the highest increase being \$1.30 in Winnipeg and the lowest 41 cents in Calgary. Halifax and Victoria also saw increases of more than a dollar in this item.

The average cost of the family weekly budget throughout the Dominion in July, 1919, was \$13.77 as compared with \$13.00 in the corresponding month in 1918. In July, 1914, it was \$7.42 and in May, 1920, \$16.65.

Colonization and Development in Canada

The second Annual Convention of the Alberta Industrial Development Association was held last month in Alberta, sessions being held at Medicine Hat, Lethbridge, Calgary and Edmonton. There was a large attendance of delegates which included a considerable delegation from the Canadian Manufacturers Association, who were en route across the continent to hold their own convention at Vancouver.

The official opening took place at Calgary, His Honor the Premier of the Province rendering the inaugural address. Outstanding addresses were given by Col. J. S. Dennis, "Development and Colonization in Western Canada"; F. H. Peters, Commissioner of Irrigation, Department of the Interior, "The Irrigation Problem in Western Canada"; Dr. H. M. Tory, President Alberta University, "Canada versus other open spaces of the World," and "Banking and Reconstruction by H. B. McKenzie, Assistant General Manager, Bank of Montreal, etc. The usual banquets, receptions and sight-seeing tours were on the program. Col. Dennis, in part, said:—

Colonization an Important Problem

I assume that I was honored with the invitation to address you to-day on this important subject owing to the fact that my residence of forty-eight years in the West and my work during that period in the services of the Dominion Government, the Hudson's Bay Company, the old Territorial Government and the Canadian Pacific Railway Company has given me a somewhat wide knowledge of the location and character of our natural resources and the methods we must adopt to secure their further development.

Colonization is the most important problem with which we are to-day faced in Canada. By colonization I mean, not only obtaining of the farmer to cultivate our vast unoccupied area of good agricultural land, but the increasing of our population by the immigration of desirable citizens who will undertake the development of all our other natural resources by providing the necessary capital and labor. Development is not possible without additional capital and labor, and these can only be provided through the medium of increased population secured by proper immigration and colonization efforts. We are naturally proud of the fact that our participation in the late war has given Canada a standing among the nations of the world and that to-day the name "Canadian" is recognized as distinguishing a citizen of a progressive and virile country, but our share in that great struggle has involved us in financial obligations which can only be met and discharged by increasing our population and developing those natural resources which, while potentially ample security for many times our national debt, can only be made productive of wealth through development.

War's Effect on Immigration

It is not possible to quote any definite figures as to the total population of Canada until completion of the 1921 census, but assuming that the published estimate of 8,500,000 is somewhat near the mark, it will be of interest to note our immigration returns for the past fifteen years. The total immigration for the period 1905-1914 amounted to 2,530,799, and for the period 1915 to end of 1919, to 503,197. The falling off in the latter period was, of course, due to the war, but the figures quoted will serve to emphasize the necessity for speeding up our immigration and colonization activities if we are to reach the total of an increase of, at least, 500,000 per year, which is certainly the minimum we should aim at.

The larger proportion of the immigration to Canada during the fifteen-year period above referred to has been to the four Western provinces of Manitoba, Saskatchewan, Alberta and British Columbia, and basing my estimate upon the census taken in these provinces in 1916, it is safe to assume that they now have a total population of two and one half million. What have we to offer the prospective immigrant to Western Canada to justify our expectations of a marked movement of desirable colonists to these Western provinces this year and a rapidly increasing number from year to year until our population reaches at least ten millions ?

What we have to offer, as I see it, in the order of their importance are as follows:--

Good Agricultural Land

In the four Western provinces we have an area of at least 225,000,000 acres of good agricultural land. Of this vast area, not more than 35,000,000 acres are at present occupied and cultivated, and of the balance of 190,000,000 acres of unoccupied land, 30,000,000 acres lie within fifteen miles on each side of constructed railway lines. Think of it, thirty million acres of good and cheap agricultural land lying idle within fifteen miles of our constructed railway lines in the West and the world crying out for food. Do we need any other excuse for an active colonization policy ?

The suitability of our vast unoccupied areas for successful agricultural, horticultural and animal industry has been conclusively proved by the prizes won in competition with the world for our grain, fruit and livestock, the product of the occupied areas of these four Western provinces, and we can therefore confidently assert that at the present time Western Canada offers to the landseeking colonist an opportunity to obtain good land at a low price within reasonable reach of transportation facilities, which does not exist anywhere else in the North American continent.

Excellent Available Fuel

The question of fuel available for domestic and industrial use is, of course, a vital matter in the development of any new country and is of primary importance in Western Canada where such a large part of our agricultural areas consist of open prairies. Fortunately in this matter Nature has been exceedingly kind to us. The provinces of Saskatchewan, Alberta and British Columbia contain about 17 per cent. of the known coal resources of the world, and these coals cover all the different qualities from lignite to bituminous, bituminous coking and anthracite. The province of Alberta alone contains known coal resources to the enormous extent of one thousand and seventy-five billion tons, and these facts will indicate that without depending upon the fuel obtainable from the natural gas and timber, referred to later on, our coal requirements for domestic and industrial needs are taken care of for many centuries to come.

Vast Supplies Natural Gas

During your trip so far through this province, you have had some opportunity of seeing something of the natural gas development, but it may interest you to know that natural gas has been developed in the province of Alberta within an area extending from the national boundary north for about 700 miles and from the Rocky Mountains east for 200 miles.

This natural product is now being utilized both for industrial and domestic purposes, and the possibility of its extensions as a fuel in generating heat, light and power is almost beyond measure.

You no doubt will also be interested to know in connection with our natural gas supply that we are at present producing gasoline from it, and the opportunities of extending this feature of development, so as to increase the supply of this widely used fuel for power purposes, are very marked. It is also interesting to note that investigations have proved the possibility of extracting from our natural gas the character of gas required for use in balloons.

Associated with our vast coal and natural gas areas, referred to, it may, in my opinion, be accepted that nature has also blessed this Western country with a vast deposit of petroleum.

Prospects for Petroleum

It is true that we are not justified at present in claiming that we have located and developed this vast oil field, but the exploratory work so far carried on over an area extending some 700 miles north to south in the province of Alberta, and at one or two isolated points in the adjacent province of British Columbia, and the oil obtained in small quantities in these widely separated points justifies the assumption that somewhere within the province of Alberta there exists one of the vast deposits of petroleum of the globe, and I personally venture the opinion that, sooner or later, and in all probability in the near future, a large producing oil field will be located through the medium of some of the many test wells that are now being drilled at widely separated points, and when that time comes we will not only have this great addition to our fuel supply but the benefit of the vast number of by-products resulting from the scientific use of crude petroleum.

Great Undeveloped Timber Areas

Timber has always played an important part in assist-ing in the development of new countries. This is particularly true of the prairie portions of Western America, where the first need of every settler is lumber. In this particular, Nature has again been exceptionally kind to the four Western provinces of Canada, for while the prairie provinces of Manitoba, Saskatchewan and Alberta produce a certain amount of lumber, the lumber needs of the prairie districts of these provinces could not be filled were it not for the vast timbered areas of the province of British Columbia. That province differs from its three sister provinces to the east in that it is more or less mountainous throughout, and only in the valleys is there opportunity offered for agriculture, horticulture and animal industry, but the province possesses one of the great undeveloped timber areas of the world. Conservative estimates indicate that the commercial standing timber in the province of British Columbia amounts to 366 billion This timber comprises cedar, Douglas fir, spruce, feet. hemlock, white fir, lodgepole pine, western yellow pine, yellow cypress, western larch, western white pine and cottonwood.

This vast timbered area has already been developed to a certain extent through the medium of sawmills and allied woodworking industries, but the extension of this portion of our industrial activity will offer opportunities for a further investment of capital coincident with our extension of agricultural settlement east of the mountains and of our overseas export lumber business. There would also seem to be an opening for the extension of our wood pulp and paper making industry in view of the present great demand for paper and the vast quantities of suitable pulpwood to be found in all these four Western provinces, and in this way ensure that this product will be manufactured at home instead of being exported as a raw product in the shape of pulpwood.

Clay and Clay Shales

At Medicine Hat you had an opportunity of seeing one of the large industrial plants engaged in utilizing our clay products. Throughout all the four Western provinces vast deposits of clay suitable for the manufacture of products have been located, and the utilization of these deposits, varying from common brick to fine porcelain, offers opportunities for wide development extension.

We have also been able to demonstrate the suitability of certain of our sand deposits in the West for the manufacture of glass, and where these deposits are located in close proximity to our natural gas supply this industry offers an opportunity for wide development.

Inland and Ocean Fisheries

The many large lakes situated in the provinces of Manitoba, Saskatchewan and Alberta provide quantities of freshwater fish, but our great fishery resources of Western Canada is on the coast line of British Columbia. This coast line covers in extent some 7,000 miles and may reasonably be claimed to provide one of the greatest fishing industries of the world. This industry has already been developed to considerable limits as will be indicated by the fact that the catch of eight kinds of fish during the year 1918 amounted to 223,000,000 pounds, valued at \$22,000,000. The export of a large quantity of this coast fishing industry, together with fresh-water fish from the interior lakes, comprises one of our important industries of the West, but like many other phases of the development of our natural resources is only in its infancy.

Iron Ore

With unlimited quantities of coal and natural gas as fuel, and the probable addition of crude petroleum to this list, it was only necessary for Nature to have blessed Western Canada with a large deposit of iron ore to insure her future as one of the richest countries of the world. In this particular, however, Nature seems to have been somewhat sparing in her gifts. We have indications of deposits of ore in the Lake Winnipeg district of Manitoba, some smaller deposits in the provinces of Saskatchewan and Alberta, and probably more important deposits at several points in British Columbia, but, as yet, sufficient development has not been completed at any of these points to justify the prophecy as to how far these deposits can be utilized in connection with our fuel to supply the steel which is rapidly becoming one of the most widely used products in the world's development.

Base and Precious Metals

The province of British Columbia to the west of us is now recognized as one of the most highly mineralized areas on the Continent, and the production of both base and precious minerals has already reached important figures in our national wealth. Vast areas of that province, however, yet remain to be intelligently prospected and developed. We now know that extensive areas in Northern Manitoba and Saskatchewan are also precious and base mineral bearing, and further development in those and other areas to be prospected will, without doubt, further extend our important mining industry in the West.

Railway Mileage

The rapid development of any country is dependent upon transportation facilities. In this matter, the four Western Provinces of Canada stand in an enviable position. To-day, we have a greater mileage of railway per capita in operation than in any other country in the world.

In the provinces of Manitoba, Saskatchewan, Alberta and British Columbia there are at present 19,875 miles of railway in operation, or one mile for each 110 persons. This fact should bring home to us all the vital importance of straining every effort to make productive through the medium of colonization and development our dormant natural resources, and it may be confidently asserted that unless we can, through this medium, rapidly and materially improve the existing conditions, many miles of these operated railways are not going to show profit for some years, and the satisfaction of having this exceptional mileage of operated railways and of being able to point to our unequalled transportation facilities will be dulled by having to pay operating deficits through the medium of taxation.

Having, in the foregoing brief manner, outlined to you our position in Western Canada and what we have to offer to the capitalist, the laborer and the immigrant looking for cheap and good agricultural land, how are we, through the medium of colonization and development, going to make these great undeveloped resources known to the rest of the world, and in this way stimulate their development?

In my opinion, what we need is more co-operative and concentrated effort on the part of the governments, corporations and individuals if this problem is to be met and solved in the near future. In this connection it is, I am sure, gratifying to us all to note that the movement which originated with this Development Association last year, has now resulted in the organization of the Western Canada Colonization Association, which is receiving such handsome financial support from representative citizens and corporations all over Canada.

Western Canada Colonization Association

Assuming that meetings like this we are holding to-day, the organization of the Western Canada Colonization Association and more co-operative and aggressive action on the part of the governments and corporations results in the adoption of a broad and comprehensive policy of colonization and development, where are we to direct our efforts to secure the capitalist, the agriculturist and the laborer which we need if results are to be obtained ?

Of the two and one half million immigrants to Canada in the period 1905 to 1914, to which I have already referred, 974,000 came from Great Britain, 875,000 from the United States and the balance from other countries, Our immigration during the war period 1914 to 1919 of half a million, also previously referred to, was divided 125,000 from Great Britain, 311,000 from the United States and the small balance from the other countries.

These figures serve to indicate the countries to which our new efforts to obtain immigrants should be specially directed, but we must realize that the war has created conditions in Great Britain and Northern Europe that must seriously affect the movement of both capital and people from those countries for some time, and our special efforts should, therefore, for the present be confined to the United States. We know that following every modern war in Europe there has been an increased movement of people to this continent, and can feel assured that as soon as conditions become more stabilized, and the exchange more favorable, we can expect a very large movement of both ca_vital and people from Great Britain and Northern Europe to Canada, but, in the meantime, we must follow the line of least resistance and stimulate the already large movement of both ca_vital and population from our neighbor south of the International Border. We have the opportunity for the capitalist, the land hungry settler and the laborer looking for new opportunity; they have the men and the money, and every inducement should be offered to stimulate the movement from south of the line of the capitalist or settler who will help us to speed up our Colonization and Development.

We may confidently assert that at the present time Canada and its opportunities stand out in the minds of the people of Great Britain, Northern Europe and the United States as a country of opportunity for the capitalist, the skilled mechanic, the ordinary laborer and the land hungry settler, but there is a lamentable apathy on the part of our governments, corporations and citizens generally to the vital and pressing importance of making our opportunities better known and of dealing aggressively and on broad lines with this question of Colonization and Development, the only medium through which our Dominion can be made, which in my opinion it is destined to be, the Key Stone in the Arch of the British Empire.

Settlers from Tulip Land

The great European invasion Canada has been experiencing since shipping was released is very general and drawing immigrants from a large area. Every continental country of ally and neutral is contributing its quota to this persistent stream. Every steamer sailing from European ports for the Dominion is crammed to capacity and the class of the new Canadian settler was never higher nor of a better type. The vessels of the Canadian Pacific Ocean Services alone handled 26,126 passengers in the months of April and May, and of this total 15,350 avowed their intention of settling in the Dominion and making their homes here.

A Staunch Stalwart Type

The land of dykes and tulips recently contributed a party of 65 big husky Hollanders who travelled out to Canada under the escort of the Canadian Pacific Railway and went through to Alberta where they are taking farms. The majority of them were accompanied by their families, the industrious careful households of rural Holland, and the party represented among them capital to the extent of \$80,000 which is being put into Western land. Every one of these Dutch immigrants, without exception, had spent his entire life farming in the low-lying fields and meadows of his native country, and in addition to being a staunch, stalwart type, the party represented a wealth of experience in many lines of agriculture.

Agriculture is an industry of prime importance in Holland, large flocks of sheep being raised there and numerous cattle brouse in the luxuriant meadows. Wheat, oats, barley and rye are successful crops on the small intensive farms, whilst Dutch flax and dairy products are world-renowned. Sugar beet, tobacco and hemp are also grown extensively, whilst market gardening and fruit culture are very profitable and have large followings. With experience in these diversified lines of agriculture these new settlers are a splendid asset to Canada and cannot fail to make good in mixed farming, which line it is their intention to pursue.

Future Canadians

Passing through on the train the little band, which had put behind it irretrievably the dykes and tulip gardens of its native home, was frankly delighted with the Canada seen from the train windows. All waxed enthusiastic at the large farms with their vast possibilities, viewing in anticipation their own homesteads in the west, so different from the small holdings with their limited acreage to which they had been accustomed. They were already planning out homes for themselves on the great western expanse where there is room for so many settlers. They come as homebuilders, adopting the land that adopts them, readily assimilable, soon to be Canadians and bring up their children true sons and daughters of the Dominion.

The University on Wheels

Agriculture is the Dominion's premier industry. Back of Canada's progress stands the farmer, and the country's advancement in agriculture is reflected in every phase of the Dominion's activity. The settlement of lands, better farming and every progressive move of agriculture is the concern of every resident in Canada no matter what his profession; the railways, the governments, industries and manufactures, and the consuming public are alike interested. The federal and provincial governments and the railways with a keen realization of this, have ceaselessly worked for the progress and development of this industry through the establishment of experimental farms, the circulation of literature and other propaganda matter, and many other methods. They have never ceased to advocate better farming, the scientific study of soils, crops and systems, land conservation and all that tends for greater and healthier production, enrichment of land, and improvement in living and social conditions in rural settlements.

No Better System of Education

No better system of education and aid to more successful farming has been devised than the "better farming train," or as it has come to be popularly termed "the University on Wheels," which journeys through the prairie provinces of the west under the auspices of the provincial Departments of Agriculture and Education and the Canadian Pacific Railway. It is in truth, a travelling university of agriculture bringing an agricultural course to the farmer's home with its intensive classes and demonstrations of the highest educational value.

The train has two large machinery cars carrying the livestock and feed, and two large flat cars, one fitted up with pens to carry sheep and hogs, and the other for use as a demonstration car. These were equipped in Winnipeg under the direction of Professor A. M. Shaw, Professor in Animal Husbandry at Manitoba University. Three large coaches are used in displaying field husbandry exhibits and another car for the dairy, mechanical, building, and poultry displays.

Moving Pictures and Nurseries

A very popular feature of the train is the moving picture car, in which films of an entertaining character are shown as well as those of an educational value. There are lecture cars for men and another for women. A nursery car is provided which contains sandpiles, slides and cribs, in charge of capable nurses, with whom mothers may leave their children whilst attending lectures or visiting the exhibits.

The train and entire equipment is furnished free by the Canadian Pacific Railway, which has spared no pains to make the better farming train of the greatest possible service and assistance to Canada's agriculturists.

That the train of exhibits and its attendant lectures and demonstrations is keenly appreciated is indicated from the fact that the daily attendance in rural sections has exceeded one thousand, in one week as many as 7,500 being present.

Immigration of Children to Canada

The Manchester Guardian, commenting on the report of the Canadian Government's inspector of British immigrant children, expresses gratification that the migration of children from orphanages to the Dominion appears shortly to be resumed. Since 1916 this migration was practically suspended, the report shows.

The paper outlines the unusual opportunities offered in Canada, both in industries and agriculture, and points to the increased number of children now in institutions as a result of the war as an argument for again opening the gates of Canada to the youthful emigrant.

More than ten thousand applications for children have been received by the child-saving institutions in England since the annual migration was suspended. Many of these applications are from agricultural districts, it is said, and a large portion of the applicants are childless.

The Labor Situation

The increase in the total volume of employment recorded in April was continued during the month of May, activity in building and railway construction being again a large contributing factor. Gains were steadily maintained in Ontario, Quebec, and the Prairie Provinces; the Maritime Provinces noted fluctuations, whilst British Columbia registered a slight average decline. At the beginning of May the percentage of unemployment among members of trades unions was 2.83, as compared with 3.44 at the beginning of April. According to returns received from nearly 5,000 firms, the increase in employment recorded in the latter half of April was continued during May. There were in existence during the month 73 strikes, involving about 12,005 workpeople, and resulting in a time loss of 145,168 working days. This was greater than in the previous month but less than in May, 1919.

Individual Trades Adversely Affected

Among the individual trades, metal, machinery and conveyances were adversely affected during the month. In foods, increases were recorded in the staffs of meat packing plants, abattoirs, and dairies, but sugar refineries showed less activity owing to shortage of raw material. The anticipated seasonal decline was exhibited in textiles and clothings, and leather workers were somewhat less active. General activity prevailed in the pulp and paper trades and in woodworking. A decline in clay, glass and stone in the earlier part of the month was followed by a recovery later, whilst conditions remained stationary in paint, oil, chemical and explosive factories. There was great activity in mining with the exception of coal which registered a slight fall. Railway construction made marked and heavy gains in every province. Logging operations declined as is expected at that time of year, but there was a corresponding gain in the employment at sawmills.

Family Budget Moves Upward

In prices, the general movement continued upward with increases in grain, fodder, live stock, fuel, building materials, and furnishings slightly offsetting decreases in eggs, milk, hides, textiles and raw furs. In retail prices, the average cost of a family budget of staple foods was \$16.65 at the middle of the month, as compared with \$15.99 in the middle of April and \$7.42 in May, 1914.

Gold and Silver Production, 1919

In the year 1919, the British Empire produced 11,686,342 ounces of gold valued at £49,659,686 in comparison with the 1918 production of 12,012,633 ounces worth £51,006,696. Canada's output in 1919 was 767,167 ounces worth \$3,260,459 and was the only country of the Empire to show an increase in output, her 1918 production being 699,681 ounces worth £2,973,-644. The world's total production for 1919 valued \$354,044,489, of which the British Empire accounted for \$241,556,689 and the United States \$58,488,890. There was a drop in the total amount of gold mined from the 1918 figures of \$373,494,624 and likewise from the British Empire's output of the previous year of \$248,301,124 and the United States figure of \$68,493,500.

For the nine months ending December 31st, 1919, the Dominion exported gold to the value

of \$3,384,952, as against \$7,549,862 in the corresponding period in 1918. The bulk of this, \$2,786,907, went to the United States, and in previous years practically all of Canada's gold export has been across the border. When it is considered that the Dominion's production of 1900 was only 1,350,057 ounces worth \$27,908,153, and that in a year when other countries fell off in their production, the Dominion made headway, prospects for future development are very bright, especially as there is a tendency on every side to reopen old mines and develop new properties.

Production Declined, Prices Increased

Canada's silver production for the year 1919 was 15,675,134 ounces, as against 21,383,-979 ounces in 1918 worth \$20,693,704, and 22,221,274 in 1917 valued at \$18,091,895. Prices thus have been increasing rapidly whilst production declined. Of the silver produced in 1919, 7,609,509 ounces were exported to the United States, as against 10,845,059 ounces sent in 1918. To the United Kingdom there was sent 2,912,055 ounces valued at \$3,210,960, or about one-third of the previous year's.

Iron Ores in Canada

• One of the most potential and least developed industries of Canada is the mining of iron ore, and instead of use being made of the vast deposits of the ore which underlie the part of the continent Canada occupies, the Dominion is importing about 96 per cent. of the iron ore used in Canadian blast furnaces or over two million tons per year.

Deposits of iron ore, according to official data, are widely distributed over Canada and in the main unexploited, only the conveniently situated and comparatively cheap mined ores of Newfoundland and the south shore of Lake Superior being developed to any large extent.

The Maritime Provinces and Quebec

In the province of Nova Scotia, the principal iron ore deposits are those at Clementsport, Nictaux, and Torbrook in Annapolis county; Brookfield and Londonderry in Colchester county; and the Pictou iron range in Pictou county. Some of the ore in this province is mined and blasting done at Sydney and North Sydney, where plants have been erected by the Dominion Iron and Steel Company and the Nova Scotia Steel and Coal Company.

Iron ores are found in New Brunswick in Carleton county near Woodstock. Other occurrences of iron have been noted at West Beach and Black River on the Bay of Fundy, near St. John, and also in Charlotte county near Lepreau. The most important deposits, however, yet found in this province, are those of the township of Bathurst, county of Gloucester. Along the north shores of the St. Lawrence river in Quebec, beds of magnetite have been discovered at many points, and thousands of tons have been shipped from here for their titanium content. Deposits of ilmenite or titaniferous ore also occur north of Montreal at St. Jerome, St. Lin, Ivry and other points. Limonite or bog iron ores have been mined for nearly 200 years in the St. Francis river district. Magnetite ores have also been found in the townships of Grenville, Templeton, Hull and Bristol, Leeds, Inverness, South Ham and Ascot.

Eastern Ontario

In eastern Ontario, chiefly in the counties of Hastings, Frontenac and Renfrew, numerous deposits of the ore are found. The four northern districts of Sudbury, Algoma, Thunder Bay and Rainy River are rich in iron possessions. Any one district contains enough low grade ore to warrant profitable commercial development. At Moose Mountain in the district of Sudbury, 100,000,000 tons of ore have been proven by diamond drilling. The Helen Mine in the Michipicoten range is the largest iron ore producer in Canada, the output approaching 1,000 tons per day. The deposit is some 1,400 feet long with an average width of 400 feet. Other known rich deposits are in the Atikokan range, the Lake Nipigon range, and ranges in Nipissing and Timagami.

The Prairie Provinces and B.C.

The prairie provinces of Manitoba, Saskatchewan and Alberta have as yet furnished no production of iron, but there are in these provinces a number of known occurrences of hematite, limonite and clay ironstone.

In the province of British Columbia, some iron ore has been mined on Texada Island, but here too the iron industry can hardly be said to have got a footing. A number of occurrences of ore have been noted on Vancouver Island, mainly at Head Bay, Klaanch River, Quinsam River and Gordon River. In the interior of the province occurrences of iron have been noted at Kamloops, Kitchener, Bull Run, Burmis, and elsewhere.

The development of Canada's iron deposits means a good deal to Canadian national and industrial development. It implies the continuous flow of freight traffic, the erection of blast furnaces, and steel plants, by-products plants, alloy furnaces, rail mills and all subsidiary forms of iron works usually found where such plants exist. More and cheaper agricultural implements would be the result, a general benefit to the Dominion.

Canadian Fisheries Convention

The Canadian Fisheries Association held its annual meeting in Vancouver last month when Mr. A. Hager was elected President. Representatives were present from all the provinces of Canada, and as a final result of the meeting the following resolutions were adopted:—

(1) That owing to the fact that development of Canada's fishery resources depends upon the demand in foreign markets, the Government would be well advised to enact legislation providing for standardization of the names of the various kinds of fish.

(2) The Railway Board was urged to provide sufficient refrigerator cars for shipment of fish inland.

(3) The Government is requested to communicate with the Canadian Fisheries Association before adopting hasty and ill-advised regulations affecting the fishing industry.

(4) The Government is asked to increase the appropriations at the disposal of the Biological Board of Canada for the purpose of carrying on fishery investigations.

(5) The Government is advised to send delegates to the Pan-Pacific Congress to be held at Honolulu late in the summer.

(6) A treaty between Canada and the United States establishing closed season for halibut fishing is suggested in order to conserve the species.

(7) It is also pointed out in a resolution that the Government should set aside sums of money for the discovery and opening of new halibut fields.

(8) In training young people for citizenship the fishing industry has been neglected.

Another resolution suggests that the Government should establish fishery schools which would be financed by the Government and the industry.

A College of Fisheries

As a result of the plans now under the consideration of the Maritime Branch of the Canadian Fisheries' Association, and Resolution No. 8, adopted at the recent Vancouver Convention of the Association, as set forth in the preceding article, a College of Fisheries will be established at Halifax, N.S. Professor Gill, director of the \$10,000,000 fund voted by the Canadian government for technical education and industrial training, will co-operate with the Fisheries Association in developing and financing the project, and he has also recommended that a substantial grant be made towards the establishment of a College of Fisheries in British Columbia.

For some time there has been the realization in the Federal house of the necessity for a more aggressive policy in the development of the Atlantic fisheries and many members have urged the provision of facilities for the technical instruction of men engaged in the various branches of the industry on the Canadian coasts. The idea is to provide instruction in seamanship, navigation, operation and construction of motor engines, improved methods of catching and curing fish and in utilizing their by-products. Germany, before the war, maintained over 20 fisheries' schools, and Great Britain had a large school at Grimsby and smaller ones at other ports, whilst Norway, Japan and other countries have developed excellent facilities for the special education of fishermen. Canada's Atlantic fisheries now yield an annual value of over \$16,000,000, and there is a growing recognition that the application of greater technical knowledge, especially in fish curing, offers possibilities of development on a very large scale.

Commercializing the Shark

Sharks, dreaded by sailormen, and hated by fishermen, have long been the pariahs of the seas, but now they can be fished at a profit, and hundreds of Canadian fishermen will be hunting them this summer. Not only can their skins be converted into an excellent leather, but their oil has assumed a commercial value, as a process has been discovered by which fish oils can be deodorized. Lord Leverhulme, the British soap king, has been acquiring interests in the British and Canadian fisheries, and it is reported that he has rights in the deodorizing process, and that his chief purpose in entering the fishing industry is to secure oils for his factories, one of which is located in New Brunswick on the shores of the Bay of Fundy. Sharks pursue the herring and mackerel schools in great number along the coasts of the Maritime provinces, in summer.

In Nova Scotia, the catching of dog-fish, which belongs to the shark family, has been carried on to some extent, the dog-fish being used in the fertilizer factories. Their skin can also be converted into leather.

Windbreaks for Snow and Sand

By B. M. WINEGAR, Forestry Inspector, C.P.R.

Railways use two kinds of fences for snow, a portable one which can be snifted any distance from track and a permanent one which is established on the right-of-way line. The former fence is taken down in the spring and piled up until fall. The advantage of this type of fence is obvious, being built in 12-14 and 16 ft. panels, it is easily handled. The maintenance, however, is very high, and the expense necessary in moving considerable. The temporary fence, however, is unsightly. Tree fences recommend themselves on account of their original cost, the small maintenance expense involved after plantations have been established several years, and because of their appearance. Their disadvantage is their liability to fire. Extra precautions are necessary on the part of the track forces to keep fire from getting into the plantation.

There are some fine examples of tree fences in the orchard belt of Ontario. Some of these fences have evidently been located at least fifty years. On the wind-swept prairies, too, settlers have found trees an excellent protection both in winter and in summer.

Tree Fences are now Cheap

Railway officers have been aware of the practicability and desirability of this type of fence for some time, but the price of lumber and posts, until recently, has not made tree planting very attractive. However, tree planting to-day, in Eastern Canada, can be done for less than one half the cost of wooden fences. Live fences are effective and economical. After the third and fourth year, no maintenance is required. They are decorative and do much to make the right-of-way attractive.

Planting has been done very successfully by the Intercolonial in Northern New Brunswick, since 1887. Here the local red spruce has been dug up from nearby fields and transplanted. This work is still being carried on.

When the trees reached a height of 9 feet to 10 feet, the tops are trimmed. Trees from 18 inches to 36 inches in height have been planted in two rows. From time to time any failures have been taken out and replacements made. This is perhaps the most striking example of just what can be done along this line.

The Canadian Pacific and the Soo line have been planting for a number of years in the prairie country. Moisture conditions limit the varieties to deciduous shrubs and trees. From six to eight rows of shrubs and trees are required. Locust, carragana, willow and poplar are the species used. Attempt is being made after the plantations have been several years located, to interplant with spruce.

Pine and Spruce are Best

The ideal snow fence appears to be the white or red spruce of this country, or the Norway spruce, planted two or three rows staggered. The trees hold their foliage well to the ground. They grow rapidly, making from 10 to 16 inches annually, after having become established. They make an excellent snow barricade, and are striking in appearance.

Balsam, though of a more rapid growth than spruce, is subject to more enemies, is considerably more brittle, and is not so satisfactory in holding its lower branches. It should do well, however, in mixture.

Cedar is used extensively, and although of slower growth than any of the other species planted, when once established, does extremely well. It makes an even more artistic show than perhaps any of the other species.

North of Lake Superior and west to the prairies where jack pine predominates, the use of this tree is to be recommended. It is of quick growth, but has the drawback of losing its lower branches quickly, especially when planted close. It should be used in mixture with spruce, balsam or cedar. Norway pine has the same growing characteristics, but, like the jack pine, it will probably do well in mixture. Use of hemlock has been recommended, but it would appear the least satisfactory of all trees mentioned.

Generally it can be stated that the best conifers to plant in any locality are the trees which thrive there under natural conditions.

It requires seven years at least to get sufficient growth to make effective snow breaks.

A factor which affects the cost of planting trees and on which success of the plantations depends is the distance which trees have to be hauled. If it were possible to lift trees only a short distance, say within half a mile, the loss would be greatly reduced. It is obvious, however, that where trees are transported from wagons to cars and then taken to destination, drying out of the roots occurs, and the loss is greatly increased.

Proper weather conditions are necessary for this work. Trees which are handled in cool, damp weather have a much better chance than if transplanted when weather is dry and hot.

When to Plant Trees

There has been much discussion as to the time when trees should be planted. Successful work has been done in the spring, and again from the middle of September till heavy frost sets in.

Where soil is very heavy and difficult to work, and where heavy boulders are found, the expense is greater and the difficulty of establishing plantations much increased. If it is necessary to use a spade to work the ground, roots of the trees are much more likely to get insufficient space than where ploughing is done.

The following methods have been suggested for establishing tree fences. Trees are planted from 2 feet to $2\frac{1}{2}$ feet apart in rows. These rows are from 2 feet to 3 feet apart. Two to three rows are necessary.

Nursery stock being impossible to obtain at reasonable figures, we are forced to depend largely on trees dug from the wood. Greater loss is anticipated from this class of material.

The smaller the trees planted, the greater the chance for success. The cost of lifting smaller trees and planting them is much less than the expense involved in lifting bigger stock. It is not practical, however, to use large trees. The expense would be too great, and handling and loss very high. Even nurseries do not handle large conifers except at a prohibitive rate. Nursery stock is, of course, much more easily handled than wild grown trees. It appears to be good practice when natural grown stock is used to plant trees from 18 inches to 36 inches in height.

Cultivating the Ground

The ground to be planted is prepared in the spring or fall preceding the planting. Ploughing

is done and a disc is used. If trees are to be planted in the fall, the ground should be cultivated during the summer season to keep down the weeds. It appears to be good practice to plough a strip about 12 feet wide, three feet of the plantation on either side being left for fire breaks. It is necessary to keep these fire breaks maintained for several years. Cultivation should be done for at least three or four years. Extra precaution should be taken to see that grass fires are not let run close to trees.

Departmental Publications

Any of the following publications will be sent free on request.

- Alberta, Saskatchewan and Manitoba.—A descriptive statistical booklet on the three prairie provinces with full information on the West.
- Western Canada.—Booklet devoted to history, progress, development, and possibilities of Western Canada.
- The Park Lands of Central Alberta.—Descriptive of the area tributary to the Calgary and Edmonton line of the Canadian Pacific Railway in Alberta. History, description of soils, development, lands open for settlement, and information for settlers.
- Irrigation Farming in Sunny Alberta.—Full description of Alberta's irrigated lands, their progress, production and possibilities.
- Improved Farms in Eastern Canada.—Lists of unoccupied farms in Ontario, Quebec, New Brunswick and Nova Scotia, together with area, adaptability and prices.
- List of Improved Farms in the Annapolis Valley.----Index to farm openings in the beautiful Nova Scotia valley, extent of holdings, and prices.
- Business and Industrial Openings in Western Canada.—Full listings of industries existing and business openings in the provinces of Western Ontario, Manitoba, Saskatchewan, Alberta and British Columbia.
- Canadian Pacific Reserve Farm Lands in Lloydminster and Battleford Districts.—Information of Canadian Pacific lands in these districts, history, farming information, progress, and possibilities.
- What Some Settlers Have Done in Western Canada. --Stories told by settlers from many lands, of the success they have achieved on western lands.
- Canada's System of Government.—Canadian government briefly outlined to portray its democratic traits.
- The Story of Canadian Nickel.—History of the nickel mining industry.
- **Canadian Oil Exploitation and Prospects.**—An expert engineer's history of Canadian oil development and future possibilities.
- Canadian Water Power Development.—Authoritative and exhaustive survey of water power reserves and possible development.
- Paper Pulp from Flax Straw.—An investigation engineer shows the possibility of the development of a new industry in the west.
- A Canadian Grain Handling Plant.—How Canadian grain is stored and shipped. Authoritative article on Canadian elevators.
- Value of a Settler to Canadian Railroads.—Computation from reliable statistics of a farming settler's revenue-producing worth to Canadian railroads.
- Returned Soldier Land Settlement Scheme.—Details of settlement conditions of returned soldiers on the Company's lands in Western Canada.

News Jottings

VICTORIA, B.C.-Agricultural production in British Columbia was \$14,000,000 more in 1919 than in 1918. Imports increased by less than a million dollars.

To afford more effective protection to loggers operating in the congested areas of the coast and Vancouver Island, wireless telephones will be employed by the forestry branch of the Department of Lands.

VANCOUVER, B.C .- The British Columbia pulp and paper mills produced 189,289 tons of pulp and 130,809 tons of newsprint in 1919, as compared with 139,387 tons of pulp and 120,483 tons of newsprint in 1918.

The North Pacific Havre-Calais line of steamships will run from this port serving French, Swedish and British Columbia ports. The first vessel of the line will arrive this month.

The Lamb Logging Company of this city purchased the North Pacific Lumber Company's limits near Sayward on Vancouver Island for \$550,000. There is about 225,000,000 feet of uncut timber on the property.

NEW WESTMINSTER, B.C.-It is estimated that the raspberry yield of the Lower Fraser Valley will be 1,200 tons this season, as compared with 1,000 last year. Strawberries will add another thousand, an increase of 300 tons over the previous season. Strawberries show about 100 per cent. increase in acreage, and raspberries 50 per cent.

Osoyoos, B.C .- Work is proceeding on the big reclamation and irrigation scheme here. A tract of 22,000 acres has been purchased by the provincial land settle-ment department, and 12,000 acres will be placed under water when the scheme is completed, the water being brought from the Okanagan river. The provincial government land department is directing the work and has over 200 men engaged.

WALLSBURY, B.C.-British Columbia Spruce Mills. Ltd., capitalized at \$1,000,000, has commenced construction work on a saw mill and planing mill having a capacity of 250,000 feet a day, or 35,000,000 to 40,000,000 feet a year.

CROW'S NEST, B.C.-The annual production of the coal mines in this area is in excess of 3,000,000 tons per year. In 1919, 534,675 tons worth \$2,116,652 were exported to the United States.

EDMONTON, ALTA.-Survey work on the south shore of Great Slave Lake will be carried on during the summer by Professor A. E. Cameron of the University of Alberta science department in the interests of the Imperial Oil Company. Other work will be done in addition to the oil survey, and a general report made at the end of the season as to the general industrial resources of the district.

More than 300 men will be engaged this summer carrying out the main highways improvement program of the province, and a considerable mileage of main roads throughout the province will be put into shape to qualify for the federal highways grant. Local farmers will be engaged in some of the work.

Lignite briquettes manufactured from the natural coal tar and lignite from Alberta coal mines will be placed on the Manitoba market before another year, according to the present plans of the Provincial Government. "Experts are now working on a solution of extraction of tar from the extensive Alberta sands, and it is hoped that the result will be to build up a market sufficient to keep the coal mines running the year round," states the Premier.

CALGARY, ALTA.-Those in close touch with the coal industry here state that there will be a larger export business done than ever before, large quantities of coal going to Manitoba and Northern Ontario. The output is confidently expected to be much greater than last year's.

The value of building permits issued during the first four months of the year totals \$809,000, compared with

\$603,900 last year. Permits issued during the month of April valued \$317,000 as against \$334,000 in the previous

Month valued sorr, out as against cost, out in the previous months of the year. A big lumber business is expected throughout the prairie provinces this year, with a corresponding increase in the cut of timber. The sawmills of the United Grain Growers anticipate cutting 23,000,000 feet, and will operate all the year round.

BANFF, ALTA.—Seaplaning is to be one of the chief sports in the Rockies this summer, and guests at the hotels here can book for flights over the Rocky Mountains for views and snapshots. Heavy bookings from tourists on both sides of the line have already been made and many have included a plane trip in their reservations.

REGINA, SASK .- It is estimated that twenty million dollars will be spent on building in the province this year. The rising price of lumber has reduced the margin between temporary and permanent building, and the increase in brick construction is more apparent than ever. Among the buildings to be erected are the briquetting plant at Bienfait, a new jail at Prince Albert, normal school at Saskatoon, C.P.R. depot at Moose Jaw, and many school buildings.

The rural telephone construction program approved by the Saskatchewan Department of Telephones for this year will result in the addition of 4,637 pole miles of lines by rural companies in 1920.

Contracts for four steel bridges, with concrete abutments, involving a total expenditure of approximately \$16,000 have been awarded by the Department of High ways

According to recently published government figures, there are 208 factories in the province, employing 3,177 workpeople, and using 14,500 horse power. Of these, 15 are sash and door factories, 21 machine repair shops, 22 flour mills, 32 printing and publishing businesses, and 15 aerated water works.

Expenditures for road and bridge construction, and maintenance in the province, involving a total outlay of \$413,900, out of a total appropriation of \$1,700,000, voted by the Saskatchewan assembly, have already been auth-orized by the Department of Highways.

WINNIPEG, MAN.—Preparations are under way for the reception and entertainment of the Imperial Press Conference here in August, and the provincial government, city council and board of trade are co-operating with the motoring and athletic clubs and the provincial newspapers to make the visit of the British journalists entertaining as well as educational.

The rush of immigrants to the West is unprecedented, and exceeds the tide of pre-war years. A very high class of settlers is in evidence both from the United States and Europe, the distribution being fairly evenly divided over the western provinces. During the months of March and April, 10,906 immigrants entered the Dominion from the British Empire, and 11,494 from the United States. A total of 1,686 entered from other countries. The greater

part of this number went to the western provinces. Over two million dollars will be expended this year in improvements on the schools of the city.

More than 150 new businesses were started in the city in 1919-20 than in the previous year. The new lines include 25 manufacturing plants of various kinds.

NEEPAWA, MAN.-The Western Match Company has decided to locate here, and will erect a factory of solid brick, 125 ft. by 30 ft., for the manufacture of matches.

OTTAWA, ONT .- Five grain elevators are operated or controlled by the Dominion Board of Grain Commissioners, with locations at Port Arthur, Moose Jaw, Saskatoon, Calgary and Vancouver. Those at Moose Jaw and Saskatoon have a capacity of 3,500,000 bushels, that at Calgary 2,500,000 bushels, and that at Vancouver, 1,500,-000 bushels, making a total capacity of 14,250,000 bushels. The cost of operating these elevators during the fiscal year ending July 31st, 1919, was \$669,545.

It is estimated that in 1919 the total Ca tput of condensed and evaporated milk was near 000 pounds, valued at approximately \$20,000,06. btal quantity of milk powder produced during the year amounted to 5,323,537 pounds, valued at \$1,662,352.

During the four months ending April 30th, Canadian paper mills produced 291,738 tons of paper, as compared with 262,672 tons in the corresponding months in 1919.

TORONTO, ONT .- The advisability of placing returned soldiers on small irrigated farms in Ontario has been urged by Noulan Cauchon, an Ottawa engineer. He claims that one and a quarter million acres of land could be irrigated between Windsor and Montreal, and a large amount of

swamp land in the Grand River valley be reclaimed. The King Edward Hotel has awarded contract for a 500-room extension to cost \$2,500,000. The hotel when completed will be as large as the Biltmore.

SUDBURY, ONT.-The L. R. Steel Service Corporation, which is chartered by the Dominion government, under a capitalization of \$10,000,000, has opened an office here and will lease a large store in the near future. The company operates a chain of stores throughout the United States, Canada and England, and arrangements are being made for a series of stores in the north country.

LONDON, ONT .- The Ford Motor Company have purchased a block of land adjoining their plant here, and it is their intention to erect a five-storey factory which will employ a total of 1,500 men. London will be the chief distributing centre for Western Ontario.

COPPER CLIFF, ONT .- The International Nickel Company have set aside the sum of \$600,000 for improvements at their mine. The sum of \$180,000 has been appropriated for betterment work, improving conditions for the workmen generally and renovating their dwellings.

QUEBEC, P.Q.-Sir Lomer Gouin, Prime Minister of the province, on his return from Europe, stated that what was creating most interest overseas was the enormous wealth of Canadian forests. He added that several large syndicates were coming to Quebec province to secure forest lands. He also predicted a large immigration from France, Belgium and England. Quebec has leased 40,000,000 acres of pulp wood lands

and still retains 76,000,000 acres.

MONTREAL, P.Q.-Another extension of the wide range of the services now operated by the Canadian Government Merchant Marine has been announced in the trial of trading with Martinique, Hayti, and Guadeloupe, the first trip of which will be made by the "Canadian Runner" this month.

The building activities of the city for the first five months of the year exceed those of the same period in 1919 by nearly \$4,000,000, and it is estimated that the total construction work for the year should be about \$12,000,000, compared with \$10,000,000 last year. Progress in building is slowly attaining its pre-war status. In the year 1913, the record was \$27,032,097 value of construction work.

Reports from hotels at St. Agathe, St. Faustin, St. Jovite and Lac Mercier, indicate that these resorts will be extensively patronized all summer. The reservations at all the hotels are practically filled and all the cottages on the lakes tenanted.

The Canadian Consolidated Rubber Company are making alterations to their factory which will entail an expenditure of \$100,000.

BERTHIER, P.Q.-The Austin Company, Ltd., match manufacturers, have their plants in operation with day and night crews working. They expect shortly to engage 200 additional men.

FREDERICTON, N.B. - Receipts from motor vehicle license fees in the province this year already exceed

\$150,000 according to a statement of the Minister of Public Works. The total receipts from this source last year were \$117,000.

A box shook, wood working, and hardwood flooring factory will shortly be in operation here and much labor will be employed. A considerable trade in onion shooks has been established with the West Indies, and this, it is believed, can be profitably developed. An expenditure of \$750,000 in the development of the

antimony mines of Lake George, 20 miles from here, is fore-casted by the management of the North America Antimony and Smelting Company.

ST. JOHN, N.B.-Pine Grove, one of the most desirable farm properties in York County, has been purchased for a Municipal Poor Farm. It consists of 400 acres, of which 75 acres are in cultivation, and \$12,000 was paid for the land

The record for the first four months of the present year shows a big gain in building. Permits issued totalled \$301,950, as compared with \$36,000 the same period last year.

HALIFAX, N.S.—The town of Imperoyal on the op-posite side of the harbor is growing rapidly and now has an estimated population of 4,000. Three years ago it did not exist. More than 900 men are employed in the Im-perial Oil Company's plant there, the present capacity of the refinery being 2,300 barrels of oil per day. By September it is expected that the capacity will be increased to 12,000 barrels daily.

TRURO, N.S.-Antigonish has three new lobster factories, and there are now ten in operation in the county. Fishermen are receiving \$10 per hundred weight, the highest ever paid on this coast.

DIGBV, N.S.-The Digby County Branch of the United Farmers of Nova Scotia has been organized to work in conjunction with other bodies of the association in the province.

ANNAPOLIS ROYAL, N.S.—A new industry here is the manufacture of saw and tool handles by Disston and Co. of Philadelphia, from short boards and planks supplied them by the Annapolis Hardwood Company. Thousands of old apple trees are being purchased for this purpose.

ST. JOHN'S, NFLD .- Engineers and surveyors are engaged on work preparatory to the erection at St. George' of a paper, pulp and saw mill, which is claimed will be me largest plant of its kind on the Island. Works will include veneer mills to manufacture birch wood and a factory for the making of boxes and barrels. The company is composed of British and American capitalists, who own and control 2,400 miles of timberland.

LONDON, ENG.—The British Trade Commissioners at Toronto and Winnipeg reporting on Canadian trade, state that the Dominion's vast resources give reason to hope that in the difficult times ahead she will create sufficient wealth to liquidate her heavy debt. and play an important part in the world's economy. Special reference is made to the great expansion in the pulp and paper industry.

The Hon. Duncan Marshall, after arriving here proceeded to Scotland to purchase a herd of Shorthorn cattle for his own breeding ranch in Alberta, and for the Asso-ciated Breeders of Ontario. He is accompanied by J. Carlyle, manager of the Prince of Wales' ranch in Alberta. The record of immigration to British Columbia shows a particularly heavy number of wealthy sottless during

particularly heavy number of wealthy settlers during the last eighteen months, representing an aggregate capital of twelve million dollars. In addition there are hundreds with capital of less than \$5,000.

The Empire Theatre, Leicester Square, has been privately sold at auction to the Allen Theatre Enter-prises of Canada. The purchase price is nearly half a million pounds.

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The Department of Colonization and Development has the following onlices established in the United States, Great Britain and Europe, whose representatives, at any time, will be glad to furnish information regarding Canadian agricultural, industrial and commercial enterprises.

E. G. WHITE, Supt., MONTREAL, P.Q. 335 Windsor St. Station. WINNIPEG. Man. J. F. SWEETING, Industrial Agent, Canadian Pacific Railway. CALGARY, Alta. M. E. THORNTON, Supt. U. S. Agencies. Ninth Ave. and First St. East. NEW YORK, N.Y. L. F. MOWREY, District Representative, 1270 Broadway. J. N. K. MACALISTER, Dist. Representative, ST. PAUL. Minn. Hackney Bldg., 4th and Jackson Sts. C. P. R. BUREAU OF CANADIAN INFORMATION, CHICAGO, Ill. 165 E. Ontario St. SPOKANE, Wash. R. C. BOSWORTH, Dist. Representative, 705 Sprague Avenue. L. P. THORNTON, Dist. Representative, PORTLAND, Ore. 208 Railway Exchange Building. C. A. VAN SCOY, Dist. Representative, SAN FRANCISCO, Cal. 299 Monadnock Building. A. E. MOORE, Mgr., European Organization, LONDON, England 62-65 Charing Cross, S.W. CHAS. DE MEY, Gen'l. Agent, C.P.R., BRUSSELS, Belgium 77 Boulevard Adolphe Max. THE HAGUE, Holland G. L. BOER, Actg. Genl. Agent, C.P.R., 20 Wagenstraat. CHRISTIANIA, Norway L. D. KIRKWOLD, Special Agent,

or any agent of the Canadian Pacific Railway Company or Canadian Pacific Ocean Services, in United States, Great Britain, or Europe.

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J. S. DENNIS, CHIEF COMMISSIONER, Department of Colonization and Development, Canadian Pacific Railway Company, MONTREAL, CANADA.

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