

could readily forgive the thought that his credulity was being overtaxed, or that an imposition was being practiced upon him. But take him through the length and breadth of these fair Provinces, and what a marvellous and bewildering transformation—still going on—would meet his gaze! In the place of the little log shanty or the sod cabin and barn would be found tasteful and comfortable dwellings and substantial steadings, with warm stables filled with sleek stock regularly fed with mixed rations, compounded with a view to profitable production of meat and milk; fruit plantations and smiling fields, with crops gathered by the self-binding harvester where trees and stumps or wild prairie flowers abounded. The beginnings of our agricultural progress date back to those thoroughgoing methods, associated with advanced live-stock farming, brought to this new land from the old by intelligent pioneers. Agricultural schools and experimental stations, dairy associations, farmers' institutes, professors of agriculture, co-operative cheese factories and creameries, pork-packing houses, elevators and warehouses, the centrifugal cream separator and the Babcock butter-fat test, industrial exhibitions, fat stock and dairy shows, World's Fair victories in live stock competitions, transcontinental railways, and cold storage shipments of dairy products and fruits, which have captured the best markets of the world on the basis of high-class quality: Query—can this be Canada! and has the rate of progress been so slow? What other country under the sun has made similar headway in the same space of time? Even the grumbler must be gratified in view of the retrospect; and the FARMER'S ADVOCATE to the farmers of Canada offers congratulations on his growing time, with the compliments of the season—A Merry Christmas and a Happy New Year!

### Canada's Agricultural Resources and Her Opportunity.

BY THE DOMINION STATISTICIAN.

The world is becoming more and more densely peopled. The population is not standing still. The "hatches, matches and despatches" do not balance each other. The natural increase of the peoples of the world may be estimated to be six per cent. in ten years. It may possibly be greater. Improvement in sanitary conditions and reduction in the destruction of life by war may overbalance that general disposition to put reproduction under bonds which some of our clerical friends believe that they have discovered. The food requirements of the world are, therefore, increasing yearly. There are more mouths to feed. Further, as the owners of these mouths grow in the grace and knowledge of civilization they require better food. Content with rye or rice during the formative period of their life, the nations become in their later stages of development more and more desirous of wheat products as the highest form of vegetable aliment. The world at large, and the black, yellow and red races, as well as the white race, are doing very much as the people of Canada have done. It is within the memory of living men and women when rye formed a much greater proportion of the food of the people of Ontario than it now does. In 1852 there was an acre of rye for every twenty of the population, and in 1891 there was one acre of rye for every thirty of the population—so rapidly and greatly has rye dropped out of the list of desirable foods. If Russia develops in civilization as rapidly as she has done, the greatest rye-eating population of the world will consume less rye, and the demand for wheat will proportionately increase. The changes taking place in Russia are seen in the fact that while the population increased during the present decade about 10 per cent., the consumption of rye decreased by 16 per cent. If Russia attain to the normal average of the wheat-eating proclivities of other countries, the home demand upon her acreage in wheat would exhaust, within a score of years, all her possibilities under conditions similar to those to-day existing. These are factors making for increase in the consumption of wheat. If all the world's population arrived at the stage of civilization to which Great Britain, the United States, and Canada have attained, the demand for wheat would be about 7,000,000,000 bushels a year, and the supply at present rates would be not more than 2,500,000,000 bushels. To meet the world's demand, based upon the requirements of the three countries named, would call for an acreage three times that now sown in wheat.

It must not, however, be forgotten that we do not really know the possibilities of an acre. Regarding it as a bank to be drawn upon without depositing, we all know that there must come a time when the farmer will hear the ominous words, "No funds to credit." Regarding the acre as a laboratory, to be managed scientifically, no man knows the limit of production. Taking only the world's acreage under wheat in 1897 and applying to it the English standard, there would be 4,750,000,000 bushels, or more than double the actual yield, and even England's standard of recent times has been exceeded in her past history, and can easily be exceeded again, if it pays. To take our own country, the census of 1891 showed that we had in the year 1890 in wheat 2,723,883 acres, yielding 42,000,000 bushels, or about 15 bushels an acre. This yield could easily be doubled.

But it is in the possibilities of the extension of the wheat area that Canada's future position as contributor to the world's stock of wheat is interesting and important. According to the "Statistical Year Book for 1897," the land

area of Canada (not including the Boothia and the Melville Peninsulas, and the great aggregation of islands within the Arctic Circle, forming the District of Franklin) is over 3,000,000 square miles, or 1,920,000,000 acres. Of that vast area we have given under 3,000,000 acres to wheat-raising. What proportion of the 1,920,000,000 acres is available for wheat is not known.

In Manitoba and in the Provisional Districts of Assiniboia, Alberta, Saskatchewan and Athabasca the Federal Government have 270,000,000 acres of land available for settlement. The Canadian Pacific Railway has unsold about 17,300,000 acres, of which 1,200,000 acres are in Manitoba. Other railway companies have about 5,500,000 acres available for settlement. The Canada Northwest Land Co. have 1,800,000 acres. Commissioner Chipman says "the Hudson's Bay Co. has a land grant in the fertile belt which amounts to 7,000,000 acres, of which about 500,000 acres have been sold, leaving say 6,500,000 acres available." The swamp lands of Manitoba are under the control of the Provincial Government, and have an area of about 1,000,000 acres. Here, then, in the new western part of Canada there are over 300,000,000 acres of land fit for settlement. Now, suppose that only one-half of that is suitable for wheat-growing, and that the average yield would be but one-half the English standard, you would have 2,250,000,000 bushels. If it pays, that average yield can be doubled.

It does not seem to me at all likely that in the near future the world's growth in population and in civilization will overrun the world's possibilities in wheat-growing even if we leave out of the discussion the enormous acreage in the other cereals, corn, oats, rye, buckwheat, and in potatoes and rice, all of which foods are used in greater or less quantity, according to the price of wheat.

What seems to me at present of greater importance to Canada is the question, "Are our farmers making the most of the market they have in the motherland?" The United Kingdom imported in 1897 of foods:

	Pounds.
Fish foods.....	274,369,760
Meats of all kinds.....	2,180,300,000
Butter, cheese, lard, milk, eggs, etc.....	1,251,000,000
Vegetable foods.....	20,948,000,000
Fruits.....	279,000,000
Total.....	24,932,669,760

It is difficult to grasp the meaning of these huge figures. A railway freight car holds about 50,000 pounds. It would take 500,000 cars to carry the food products Great Britain imports in a single year. These cars would form a train that would stretch from Belleville, Ont., to Montreal, and from Montreal to Vancouver—over 3,000 miles—in one continuous line. If put into barrels of a capacity of 200 pounds each, the annual food supply imported by Great Britain would require 124,663,348 barrels.

If ten thousand of these barrels were taken as the base, the column of barrels would rise in the air as high as two Mount Blancs, one on top of the other, with enough over to need Mount Carmel on the top of the second Mount Blanc to equal the height.

Mount St. Elias, the top of which is partly in Canadian and partly in United States territory, is said to be 18,000 feet high. Take that mountain, pile on it Vesuvius, Ben Nevis, Hecla, and the Rock of Gibraltar, and you would have just about the height of the 10,000-barrel column formed out of the foods imported into Great Britain in a single year. The highest mountain in the world, Mount Everest, in the Himalayas, would not be equal, by several thousand feet, to this food column.

Put ten thousand barrels together to form the base and pile all the remaining on that base, and the column would overtop Mount Chimborazo and on the top of it thirty of the highest edifices in the world, including the Eiffel Tower, Cologne Cathedral, St. Peter's (Rome), the Pyramid of Cheops, St. Paul's (London), etc.

These illustrations may help to give an idea of the vastness of the demand there is in Great Britain for food from the outside world.

Now as to value. The food imports of Great Britain are valued:

Fish foods.....	\$ 16,645,547
Meats of all kinds.....	189,490,838
Butter, cheese, etc.....	136,054,413
Vegetable foods.....	277,385,703
Fruits.....	16,998,957
Total.....	636,275,458

Taking the last five years, the production of gold in the British Empire is about \$100,000,000 a year, and in all the other countries of the world about another \$100,000,000. The production of silver the world over is about \$210,000,000. You would have \$410,000,000, and to make up the difference between these figures and the value of the eatables imported into Great Britain you would have to search through a long list of minerals before you attained your object.

It would take a great many Klondikes and South African and Australian gold fields to equal the value of the food imported annually by Great Britain.

The consumption of coal in the world is about 640,000,000 tons a year, valued at the pit's mouth at, say, \$1 a ton. The value to the coal owners of all the coal mined and consumed in driving all the steamships, all the locomotives, and all the factories, and in heating all the homes and hearths of all the world, is just about equal to the value of the yearly imports of food supplies into Great Britain.

Now, what share in this enormous business has Canada, with all her vast acreage, her special

climate, her capacity for transport by rail, river, canal, and cool ocean route? If the cars measuring the quantity of foods required by John Bull from outside countries were divided into sections, according to the countries supplying the demands Canada's section of the 3,125 miles of cars would be 243 miles long, or just 20 miles shorter than the distance between Montreal and Peterboro, Ont., by the C. P. Railway. Roughly, the section between Montreal and Peterboro would represent what we have managed to do; that between Montreal and Vancouver would represent what other countries have done, in which we could and should have an appreciable proportion. With over three thousand miles of freight cars to fill, we have thus far in our agricultural history only succeeded in filling 243 miles of freight cars.

Now, to come to particulars. Take the meat supply. Great Britain imports, as already stated, 2,180,300,000 pounds of meats of all kinds. Canada sends as her contribution 144,973,000 pounds, or 1 pound in every 15 pounds of the import. Canada could do a good deal better. Look at some of the articles. Of bacon, Great Britain imports 500,550,480 pounds. Canada supplies 32,511,696 pounds, about 1 pound in every 174 pounds needed. Of hams, the British imports were 193,293,000 pounds, and Canada's portion in that quantity was 13,342,896 pounds, somewhat more than 1 pound in every 144 pounds needed. Of beef, salted and fresh, the United Kingdom imported 398,497,000 pounds, and Canada supplied 1 pound in every 168 pounds wanted. Of live cattle, Canada supplied 1 beeve in every 5 Great Britain imported, and of sheep, 1 in every 10. We have no show at all in fresh and preserved mutton, though Great Britain needs to import 368,000,000 pounds weight in the year. Australia cuts us out of this business, and we don't begrudge our sister colony the trade.

To revert to our railway freight car illustration: of the 272 miles of cars that would be requisite to transport the meat imports of Great Britain during a year, Canada's share would be carried in 18 miles of cars.

In butter, cheese, lard, milk, eggs, and honey, Canada does, on the whole, somewhat better. The British demand is equal to 156 miles of freight cars, and Canada's supply would need 24½ miles of cars. In bare figures the demand was 1,251,000,000 pounds, and Canada's share in the supply of that demand was 196,292,000 pounds.

Of vegetable foods, wheat, peas, beans, barley, corn, rye, oats, flour, and meal and vegetables generally, Great Britain imports 20,948,000,000 pounds. These would require 2,625 miles of cars to convey them. Canada's share would be represented by only 195 miles. Look into some good map and see what a little dab the 195 miles is upon 2,625 miles.

Of fruits, Great Britain imports 279,000,000 pounds. To transport this quantity 35 miles of cars would be required. Canada's portion would be carried by 5 miles of cars. That Canada is able to supply one-seventh of all the English demand upon the world at large for fruit is very good evidence of the capabilities of the country in fruit culture.

There remains yet one feature to be considered. That is the extent to which we are dependent upon the Mother Country for a market for the products of the farm. Speaking in the large, we send out of Canada in the year, of meats, of butter, cheese, etc., of vegetable foods and of fruits, 2,800,000,000 pounds, and of this quantity 1,900,000,000 pounds go to the motherland. Roughly and on an average 70 per cent. of the exportable surplus of our farms and our orchards go to Great Britain, leaving but 30 per cent. for all other countries; and this percentage to Great Britain is an increasing percentage, notwithstanding that Great Britain's requirements are greater and greater year after year. What Canada has wisely elected to do is to cultivate this constantly increasing English market as her best possible market. In corroboration of the statement of the developing character of the British market, it is only necessary to give the figures for the last few years. In 1894, Great Britain imported of the above foods \$580,000,000 worth, which in 1897 had increased to \$640,000,000—\$60,000,000 more in three years.

In conclusion, I may point out that the present Minister of Agriculture in the Federal Government, Hon. Mr. Fisher, has applied himself earnestly, energetically, and with great skill and success, to the various questions of scientific farming; of adaptation to the wants of other countries; and of transportation, including cold storage, by which improvement in the net results obtained from our disposable surplus has been so wonderfully marked, as the figures show.

GEORGE JOHNSON.

Ottawa, Dec., 1898.

### Subsidizing Danish Farm Produce.

According to the Danish Budget for 1898-9, there are two steamboat services from Denmark to England, largely employed in the butter and bacon trade liberally subsidized. The railway line from Egsberg to Parkeston, in the first place, gives preferential rates for dairy produce for export, the gain last year to the farmers being represented at nearly £10,500. Then, since September, 1897, a grant of £4,166 has been made to the United Steamship Company of Denmark for establishing a bi-weekly service for the carriage of dairy produce to Grimsby. This special line is placed under Government supervision, and the greatest care is taken to see that the butter, cheese and bacon are properly treated. The rate of charges from Denmark to Grimsby are now fixed as follows: Butter, 16s. per ton; salt meat, 12s.; fresh fish, 18s.; eggs, 20s.; and fresh fish, 11s.