

# The World's Food Problem

## Where the Wheat Comes From—United States and Canada.

In the present circumstances, it seems likely that the burden of feeding the food-importing world will rest upon North America for the ensuing year. Wheat harvesting will begin in southern United States in May, and end in Canada in October. The crops of the two countries in past seasons total as follows, in bushels:

	United States.	Canada.	Total.
1916	639,886,000	220,367,000	860,253,000
1915	1,025,801,000	406,755,000	1,432,556,000
1914	891,000,000	161,280,000	1,052,280,000
5-year average.			

1910-14 . . . . . 728,225,000 196,026,000 924,251,000  
Official statistics credit Canada with a per capita consumption of 9.5 bushels, and the United States 5.3. Food and seed requirements of both countries total 700,000,000 bushels. It is customary for the United States to carry a reserve of old wheat of about 100,000,000 bushels, but in present circumstances that policy probably will be more honored by its breach than its observance, as is being done the present season.

Two-thirds of the wheat of the United States is winter and the Canadian almost all spring. The April 1 forecast of our winter wheat compares with final yields, as follows:

1917 estimate	430,000,000
1916 final yield	482,000,000
1915 final yield	674,000,000
Five-year average, 1910-14	495,000,000

The 1917 forecast was in part offset by an estimate of 60,000,000 bushels of rye, which last year yielded 47,000,000 bushels, 50,000,000 two years ago, and averaged 37,500,000 bushels in the five-year period between 1910-14. Undoubtedly the winter wheat has been reported at its worst, and subsequent reports must show improvement. It is not undue optimism at this time to assume a crop of 450,000,000 bushels of winter wheat, supplemented by 60,000,000 bushels of rye.

Blight and rust struck the spring crop of the United States in 1916. The acreage, yield, and production compared with former years as follows:

	Yield per Acre.		Production bushels.
	Acres.	acre, bu.	
1916	17,965,000	8.8	158,142,000
1915	19,161,000	18.4	351,854,000
Average, 1910-14	18,799,000	12.4	233,571,000

There is an abundance of subsoil moisture in the North west, and last autumn the fall ploughing was 25 per cent. larger than the year before. Fertilizers are not used there, and scarcity will have no effect on the acreage or yield. The high price of wheat is spurring farmers to great efforts, and an acreage at least equal to 1915 can be counted upon. With average weath the spring wheat should be 275,000,000 bushels, and possibly 30,000,000.

Canada's wheat area, yield and production compared as follows:

	Yield per Acre.		Production bushels.
	Acres.	acre, bu.	
1916	12,879,500	17.00	220,367,000
1915	14,675,300	28.08	426,746,000
Average, 1910-14	10,454,000	18.75	196,026,000

In Winnipeg wheat is now selling at about \$2 a bushel; soil is in good condition, seed is available, and it is a patriotic duty to raise wheat. The western Canadian farmer will be patriotic and put in 15,250,000 acres of wheat. With a yield no better than the five-year average between 1910-14, this would amount to 285,900,000 bushels. Assuming the weather will be average, let us put Canada down for 300,000,000 bushels.

The 1917-18 wheat supply of North America then may be estimated in bushels as follows:

United States:	
Winter wheat	450,000,000
Spring wheat	250,000,000
Total	700,000,000
Canada	300,000,000
Total North America	1,000,000,000
Deduct normal domestic needs	700,000,000
Total surplus for export	300,000,000

This is to be supplemented with 62,000,000 bushels of North American rye. High prices are now checking domestic consumption, and this result may be to add at least 25,000,000 bushels to the export store. With ordinary weather, North America can supply more than half the bread requirements of Europe without entailing hardship on the people here; while

closer milling would add 100,000,000 bushels to the total.

But it must not be forgotten for a moment that spring wheat is a creature of the weather. Estimates based on present conditions will not fill an empty stomach in case perverse weather causes a partial crop failure. The call is for increased production of possible substitutes.

## Morocco as Food Supply Factor

France Getting Large Quantities of Wheat and Barley — Indian Corn Also Raised — Egg Exports Grow From 40 Tons in 1914 to 5,799 Last Year — Large Trade in Wools and Hides — Beneficial Results of French Rule.

Writing from Paris on April 28, the correspondent of the New York Journal of Commerce says:

The wheat shortage of this year and the diminution of Europe's agricultural yield for years after the war together with the world's increasing demand, give interest and importance to any opening up of new resources. For a good many years past I have pointed to North Africa, and particularly to Morocco, as likely to furnish a respectable part of the needed new supplies. Algiers and Tunis, although their statistics are still kept separate, have swung into the general account of France. Morocco, under the wise and helpful French protectorate, is rapidly doing the same. I have received from the Foreign Office the figures of exports since the war. This may not be sensational, or as if another Dakota were being inaugurated, but they show a production which must be reckoned with.

Let us take cereals first, for which the soil and the population of a large part of French Morocco are already fitted. From the harvest of 1914 — practically before the influence of war was felt — the total quantity of wheat exported was 280,000 bushels, of which two thirds went to Tunis and about 60,000 bushels to Montenegro. Of barley 624,000 bushels were exported, of which one half came to France.

General Lyautey, Resident General of the French Government in Morocco, took it on himself to raise France for the next year, 1915, at least 635,000 bushels of wheat and 4,800,000 bushels of barley. Both estimates were greatly surpassed — the wheat by a sixth and the barley by an eighth, and 72,000 bushels of Indian corn were thrown in. Meanwhile, the French occupation troops had also been supplied, as well as the needs of the internationalized portion of Morocco at Tangier and the demands of Spanish Morocco, which has not yet been brought to the same degree of cultivation. And — which is much more to be noted — all these exports barely equalled one-sixth of Morocco's total production.

### GOOD SUPPLY OF GRAIN.

The crop of 1916 was still better. The exports to France were, up to the end of December alone, nearly one-half greater than Gen. Lyautey's estimate of what he could furnish and even more for barley, while Indian corn had been nearly doubled. Better still, oats appeared for the first time — to the amount of 25,000 bushels.

Now it is worth observing that neither Algiers nor any other of the older French colonies was able to furnish supplies to France in this proportion, that is, relatively to the extent of their farming lands and populations. In fact, large portions of Morocco have been under fair cultivation for a long time, with farmers laborious and skilled in agriculture not much more primitive than that of our own early American farms. The Berber, as distinguished from the Arab element of the population, is attached to the land by immemorial tradition reaching back as far as Moses in Egypt; and the negro mixture is not averse to farming. When it is remembered that Germany kept Europe on the verge of war for years by her claims to the metal mines of Morocco for her industries, which were not all of peace, this striking development of agriculture under French rule needs no comment. It is all the difference between peace and war, and its influence will be of growing importance when war is over.

A more curious development of farming in Morocco is shown by the enormous advance in the exportation of eggs. Before the war or rather, during the entire year 1914, France received from Morocco little over forty tons of eggs. In 1915, with the increase of French needs and the intensive development of Moroccan supplies, 2,200 tons were brought over to France — and, in 1916, the amount ran up to 5,799 tons. During the first months of this year

it has been possible to lower the high prices of eggs by still heavier imports from Morocco.

Like progress is shown in products which are not without significance, not only for the future prosperity of Morocco, but also for the resources of France. Such are certain fodder grains — millet, "dari," and canary seed — and, in a different line, almonds and vegetable oils.

### INCREASING WOOL TRADE.

After cereals, the chief exports of Morocco are wools and hides and these, too, are making very considerable progress. From 1910 to 1913 both together had an annual exportation of 3,000 tons, valued at about \$3,000,000. I have the figures of wools for the war years — wools of good middling quality. Particularly, they are fit for cloth manufacture.

In 1914 the exports from Morocco to France of such wools amounted to about 3,000 tons, just as in previous years not counting exports to Algiers, to Spanish Morocco, and to the Hinterland. It was not until March, 1916, that it was thought necessary to forbid any general exportation of wools fit for making troop cloth. This was before the sheep-shearing season began. The French Government became sole buyer of such wools, without any intermediaries. This made it possible to fix a price which was more profitable to the wool growers than any they had ever received and, at the same time, was cheaper for the French Treasury. It is likely that this object lesson in Government trade will be put to profit after the war is over, at least in the first difficult years. By November, 1916, the amount of these wools received in France was already 2,700 tons. It is expected that the yearly product for this single branch — wools for cloth — will be 3,000 tons, equal to the entire previous product of Morocco for all quarters and in all kinds. What is more gratifying to the French Government is that this is fully one-half of the amount needed by its army for one year of war.

As to hides, I can only say that Morocco furnished 641,000 goat skins in 1916 — and is expected to give 96,000 a month during the present year. From January to October, 1916, Morocco furnished 91,000 sheep skins to the French army.

It was only natural that this export progress of Morocco should be in the direction of France. With enemy countries like Germany and Austria, all trade had ceased. Then the French Government bought up for itself whatever was useful to its armies; and certain other export regulations have had to be made. To exporters, the future is of main importance. Is this rapid development of Morocco — a good-sized country with a large farming population — likely to continue after the war?

### MOROCCO TO BE A FACTOR.

Remember that it began before the war. It is a direct result of French administration. France will henceforth need for herself all possible resources in agricultural products and raw materials. For cereals, France has always been self-sustaining for the most part and so has not entered into American calculations directly. It is only the years of deficit in France that call on our resources. If, in the lean years certain to come after the war, Morocco can help out France it will be so much gain for the world's supply.

It is probable that Morocco, with all her possibilities in farming lands and the character of her population, will more and more have to be counted with in estimating the yearly harvests of the world. This is not a remote possibility, like the development of cotton-growing in French and English Africa, nor like the development of new petroleum wells in Algeria and Tunis, such as Germany coveted in Morocco and the Pearson combination is preparing now. Morocco has been annexed to the universe as well as to France, and her farming is here and has come to stay.

It would be a great mistake not to recognize the readiness with which the people of Morocco respond to the systematic impulse given them by the economic organization of the French Protectorate. In 1914, a special loan was to enable the Resident General to furnish the ports, beginning at Casablanca, with all necessary means and communications of trade. This has not been greatly hindered by war in Europe. Casablanca, since France came, has risen in population from 25,000 to 85,000, and its trade from \$3,000,000 to \$22,000,000. The Chaouia (Shavia) back of it has 1,500,000 acres under cultivation and as much more waiting. It has iron and phosphates and cattle of all kinds by the hundred thousand, including 15,000 camels. And the new city of Casablanca, not five years old, has 40,000 Europeans with five-story buildings rising up from Moorish wheat fields and reaching out to sea.