Can the World Feed Itself?

Thirty Million Men withdraw from Agriculture---Last Year's Deficit Two Billion Bushels

This article presents the views of Dr. James W. Robertson on the world's food situation as given in an address delivered during a recent tour of Western Canada and of which it is an abbreviated report. It also contains a specially arranged interview on his impressions of the West. No man in Canada is in a position to speak with greater authority on the world aspects of agriculture than Dr. Robertson.

The world is face to face with a food shortage of very grave proportions. So great is that shortage that one cannot hope that the production of the present year or next year will overtake it. Unparalleled though the efforts of farmers the world over have been and will continue to be, the world can hardly escape the danger of famine until the 1918 crop is harvested. Even under the most favorable of climatic conditions it will be some years before the world is again producing foodstuffs sufficient for its usual needs. And just when this food shortage is upon us, men and women in war work are being called upon to put forth efforts that are unprecedented in history and for which they require an abundance of the most nourishing foods. It is in view of these facts that the appeal is being made for greater and still greater production. We know that the farmer is a hard working man; that he is already driving himself almost to the limit of endurance. Under the circumstances he becomes impatient of urging and has a right to resent outside meddling. We feel, however, that too much cannot be done to let him know the facts, believing that with the facts fully before him he will continue to throw the last ounce of his industry and intelligence into the work of relieving the situation.

Causes of the Food Shortage

The causes of the world wide shortage are cumulative. There was a general shortage in the northern hemisphere last year of the five big cereal crops, wheat, corn, rye, barley and oats. Of these crops 1,908,000,000 bushels less were produced in 1916 than in 1915, or about two and a half times the total quantity of these crops raised annually in Canada. Even in normal peace times this shortage would have been serious, but its seriousness is greatly accentuated by the war. The shortage was due to several causes. One of these was the weather, over which, of course, there was no human control. The chief cause, however, was the withdrawal of labor from farm production. About 24,000,000 men are at present under arms, and it has been estimated that since the beginning of the war about 40,000,000 have been in active war service. Probably 60 per cent. of these came from farms. A great part of the French army was recruited from rural districts, the skilled mechanics of the cities being retained for munitions making. The same is true of Italy and her army. The Russian army also is widely recruited from the farming classes. Coming nearer home, we have an enormous withdrawal, comparatively speaking, from the farms of Western Canada, while in Eastern Canada, besides the enlistment in large numbers from among the farm workers there has been a tremendous flow of men attracted by the high wages paid for munitions making toward the manufacturing centres. Altogether, a conservative estimate would place the total number of men withdrawn from agriculture for fighting and munition making in the belligerent countries at some 30,000,000.

The scarcity of food has been accentuated to a considerable extent by losses due to destruction by submarines. For a long time 50 per cent. of the cargo capacity of most ships crossing the Atlantic was reserved for food stuffs. Many of these ships have been sunk, as have also doubtless many others which were loaded solely with food products. Of the food supplies which were still available after these great losses, it cannot be said that they had been husbanded to the best advantage. The temporary prosperity of munition workers, many of whom are receiving higher wages than ever before, has resulted in extravagant buying and living. Taking all these factors into consideration it is no exaggeration to say that the world at present faces a food situation that is nothing short of appalling.

Greater Production for 1918

All this has occurred in the face of a campaign for greater production. But we must not now slacken our efforts. The logical sequence to the work that has been done for greater production is to follow it by a further campaign for still greater production. We should use all the experience we have thus far gained in planning and carrying forward a campaign for larger acreages and higher yields in 1918 and the years that are to follow. We can better meet the needs of the Allies by the production of food than by any other service. The farmers of North America are in a better position than those of any other great wheat producing section of the globe for contributing to the food needs of the armies in Europe. A given tonnage of shipping can carry over twice as much grain from America as from Argentina and three and a half times as much as from Australia or New Zealand. It is vital at this juncture and will continue vital until the end of the war that shipping be employed on the routes where it can be used to greatest advantage. One of the most effective ways to conserve shipping is to provide as large a proportion as possible of the food requirements of the Allies from North America.

The urgent question, therefore, is to discover the methods by which we can increase our exportable surplus. This surplus can be augmented in three ways: First, by increased production; second, by the elimination of waste; and third, by the shifting of consumption on this continent from foods the armies and civilian populations of the Allies need to those which cannot be sent forward for their use.

Factors of Increased Production

The factors that enter into increased production are soil fertility, right conditions for moisture, the control of weeds and seed selection. In these factors are involved the question of good farming. Some years ago the Commission of Conservation surveyed 2,245 farms in Canada. These were average farms in districts selected in various parts so as to give fair average conditions. Looking over the records of the best 10 per cent. of these farms, it was found that they produced about 50 per cent. better crops and 50 per cent. more profit than the average of the farms visited. We should strive to get the other 90 per cent. to come up to the position of the best 10 per cent. If the methods practiced on these best farms were practiced on the whole of the crop area of Canada we would produce 400,000,000 bushels more per year on the same areas. One of the questions asked by the visiting experts was, "How does your farm produce as compared with 20 years ago?" To this question 30 per cent. of the farmers answered that the yield was the same; 40 per cent. reported an increase, and 30 per cent. a decrease. We can afford to take a lesson from even our enemy in the war. Germany is a country with a rather poor soil, but a country which is now feeding herself. Within some 30 years she had been able to effect an increase of 30 per cent. in her yields per acre. Our present methods of farming practice are exhausting a large percentage of our farms of their fertility. There is danger that the fertility in large areas will be reduced below the point for profitable farming.

The determining effect of moisture and temperature in crop production was well illustrated in 1915. That year the West had sufficient rain fall with the result that yields were the largest in its history. It is hard to realize the amount of moisture required to mature a crop. A ton of dry matter delivered in the elevator requires at least 300 tons of water passing through the plants to produce it. To conserve the moisture, summer tillage is necessary in Western Canada, and also has the beneficial effect of cleaning the land. Summerfallow seems a wasteful method of farming, but it is necessary where the rain fall is so light as it is in the prairie provinces. The immediate needs require careful attention to the matter of summer cultivation this season and the farmer can use his intelligence and the limited amount of labor in cultivating as well as he can to suit his conditions.

Good seed is important, and good seed requires a cultivation to match. The use of selected seed of wheat, oats and barley as compared with ordinary seed would mean increased production in Canada of some 70,000,000 bushels per year. The Canadian Seed Growers' Association has done valuable work in this connection. It has been in operation for 17 years and as a result of its work we are now securing about 40,000,000 bushels of grain more per year than would have been the case had farmers still been using unselected seed. Seed selection must

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THE NEED OF THE HOUR

The shortage of the world's crops of wheat, oats, corn, rye and barley for 1916 as compared with 1915 was nearly two billion bushels or about two and a half times the annual production of these crops in Canada. Thirty million men have been withdrawn from agriculture for active service and munitions making. The shortage due to this enormous reduction in productive man power has been further accentuated by unfavorable weather conditions, submarine losses and waste. The situation now is such that even with the most favorable conditions of growth the world cannot escape the danger of famine before the 1918 crop is harvested and it will be many years before the sufficient foodstuffs are being produced to serve the ordinary needs of humanity. The situation is one of the utmost gravity. Only the farmer, backed by every form of help that can be brought to his assistance, can avert disaster.

THREE INDEPENDENT FARMER CANDIDATES IN THE FEDERAL ARENA

R. C. HENDERS — J. A. MAHARG — J. S. WOOD

R. C. Henders, president of the Manitoba Grain Growers' Association is contesting the Dominion constituency of Macdonald. J. A. Maharg, president of the Saskatchewan Grain Growers' Association is a candidate in the Moose Jaw constituency and J. S. Wood, vice-president of the Manitoba Grain Growers' Association has been nominated for Portage la Prairie. All are independent of party control, have been nominated by their fellow farmers and are making their appeal on the Farmers' National Platform.