particular post-war problem. After 1918 this country quickly bounced back to rather solid industrial prosperity. We did it, as mentioned before, by creating new industries based upon our great power and raw material resources. In short, we found new frontiers of development and by pushing back those frontiers we made ourselves so prosperous for several years that our war debt was not at all beyond our capacity to carry.

What new frontiers will we find after this war? The writer is happy to offer his own humble suggestion as to what they might be: the migration on a large scale of people and industries from the chaotic old world to the newer, more peaceful, more secure land of Canada.

Canada will be able to make a magnificent contribution to this war. Canada is almost an industrial empire in itself. A few only of the dramatic figures of Canada's growth as an economic giant in the years between 1914 and 1939 have been recited in this paper. They present an impressive story of gathering strength, strength that can now be marshalled in the cause of victory.

In the long run, the cost of war to

Canada will be less than the cost to other countries. We are already producing new wealth, greater than our war costs. We are one country that is not fighting this war by using up its capital. It is not suggested that Canada is going to get rich out of this war. But the net economic sacrifices that we shall make, will be trifling compared to the sacrifices that will have to be made by the mother of the British nations. We in Canada are again producing the material sinews of war and getting paid for producing them.

In this war what we are matched against is an economy weaker than our own, that is, however, magnified in power by organization, discipline and an obvious willingness to make whatever sacrifices may be demanded. Surely it is obvious what such a challenge demands of us. It is that we too achieve an efficient national organization of our economic and financial life; that we too accept the necessary discipline and control: that we too pay the bills the only way they can be paid—by increased production and by personal sacrifice, which is just another way of saving by hard work and self-denial.

War and Canadian Agriculture

By J. E. LATTIMER

CANADIAN Agriculture is peculiarly dependent on the success of the allied armies in the present war. This is on account of the dependence of the agriculture of the country on world markets and greater freedom of trade as opposed to the self-sufficing, closed economy and regimentation of the totalitarian powers. The business of farming in Canada depends directly, and to a very great degree, on the extent of freedom of trade that may be maintained while the war proceeds and the freedom of trade that

EDITOR'S NOTE: J. E. Lattimer is Professor of Agricultural Economics, Faculty of Agriculture, Mac-Donald College, (McGill University), Que. may be secured when the war is over.

The recent development of this dependence, the position at the present time and the probable future position, is the subject of this discussion. The effect of the war, thus far, on agriculture and the probable effect for the duration will of necessity be included yet this is a minor matter compared with the main theme.

Development of Dependence on World Markets.

The dependence of Canadian agriculture on world trade has increased tremendously in recent years. The expansion of the cultivated area was greatest during the decade from 1911 to 1921 the period of the first World War. During the following decade further impetus was given to this expansion during what is termed the period of reconstruction in Europe—which went forward largely on borrowed funds. The result is that at the present time Canada must export a greater proportion as well as greater volume of surpluses than was available during the first decade of the present century.

At the beginning of the century the population of Canada was about exactly half of the number recorded in 1931. the last census year. During that time the field crop area became almost exactly three times as great. This reveals the increased dependence on world markets at the present time. During the first decade of the century the increase in area of field crops amounted in round numbers to eleven million acres. During the next decade, that of the first World War, the increase was seventeen million acres. The following decade the increase was eleven million and since 1931 the area has remained fairly constant. Considering the rate of expansion during the period it appears that the replacement of Russia by Canada as leading wheat exporter-one of the net results of the first World War-was a major factor in bringing about the increased dependence of Canada on world markets for farm products. Without this occurrence there certainly would have been expansion but indications are that it would not have been so rapid and also that it may have been compelled to assume a somewhat different direction.

The expansion during both the first decade of the century and that of the following was financed partly on borrowed funds. When the stage was reached that the return in goods might have been reasonably expected in order to square accounts for past committments the outflow of farm products met tariffs, embargoes, quotas, licenses and various methods of restriction including resort to substitutes and rationing which lumped together build up the self-sufficient phil-

osophy which is diametrically opposed to greater freedom of industry and trade.

This self-sufficient policy with resort substitutes and rationing may at to present restrict trade in farm products to a greater degree than some other goods such as the products of the mine for instance. The wide adaptability of many farm products and the possibility of consuming what may be produced locally may permit a great degree of self-sufficiency in this line, to those willing to forego great variety of diet. On the other hand the precious metals and the most necessary ones are not distributed evenly over the surface of the earth. And at the present time needed food is gone without in order to conserve exchange for the necessary world commerce of raw materials essential to armament. This condition has a disastrous effect on agriculture organized on the basis of world markets.

The conservation of exchange works to the advantage of Canada in comparison with neutral countries where sterling is at a greater disadvantage than at present with Canada. Similarly Canada suffers a disadvantage in exports in comparison with Australia and New Zealand in regard to exchange, though having at the same time a greater advantage in proximity to the major export markets. The need of conserving exchange depends to a great degree on both the direction and degree of the indebtedness of the countries concerned. Thus Canada is already proceeding to repatriate previous loans from Britain. Again British investments in Argentina make it necessary as well as convenient for Britain to continue purchases from that country, one of the keenest competitors of Canada in British food markets.

Some Contrasts with 1914 to 1918.

There are both similarities and differences in the effect on agriculture of the present war as compared to that of 1914-1918. The present war, similarly to the last, has already restricted the importing area of Europe for farm products. Again, the present conflict with the restriction of shipping has started in with similar methods to those prevailing during only the later period of the previous war.

The differences appear more important than the similarities from the point of view of influence on agriculture. Among these differences must be enumerated the pronounced difference in financing the present as compared with the earlier war, the degree of price regulation and the mechanization of operations.

Financing of wars appears to have altered greatly from earlier times. It is not so long since an important prerequisite of warfare was a well filled treasure chest or an abundant supply of the precious metals. To-day over two-thirds of the total gold supply of the world is held in one neutral country. Yet in spite of the maldistribution of the gold already mined, as well as that still unmined, over the earth's surface, there is no proof of any of the present neutral countries remaining out of the war through lack of money. Even in 1914 it was maintained at the outbreak of the war that it must be brief through bankruptcy of the participants if from no other reason. This time so far there have been no such prophecies.

It is the difference in methods of financing the present war—so far—as compared with the last that are important in their influence on agriculture. And in this connection it is necessary to remember that at the moment the chief creditor nation of the world is not lending to belligerents and further is supplying goods only on a cash and carry basis. This places the financing of the present war on quite a different basis from that depended upon in 1914 to 1918.

Whereas the method of financing at that time was based primarily on borrowing between nations, in so far as the allies were concerned, financing the present war is based to a much greater degree on taxation. This method has a far different indirect effect on prices than had the earlier method of international borrowing. In addition to the indirect effect on prices has been added the direct influence of governmental price regulation. The philosophy underlying governmental price regulation in Britain has been to regulate prices as nearly as possible to those prevailing in August 1939 or in the last month preceding the outbreak. Britain, always the major market in Europe for farm surpluses, has become, on account of the development of the war thus far, of even greater importance on account of the number of other European importing countries cut off from world trade.

In the light of recent developments the basis of the regulation of prices of farm products prevalent in Britain assumes even added importance to Canadian agriculture. This basis for price regulation may be necessary, wise and even satisfactory for Britain and at the same time may not be applicable to Canada at all. And this for the very simple and adequate reason that prices of farm products in Britain and Canada were on a very different basis in August 1939.

It may well be asked if Canada depends on the British market for the disposal of surpluses, then, how is it possible for prices of farm products to get far out of line in the two countries? To the superficial observer and particularly to those who do not wish to find an answer or explanation that may be less satisfactory to them, the claim that such a condition cannot occur and therefore is not the case, is quite satisfactory. The explanation of this peculiar condition lies in the fact that Britain has had a two price system in the purchase of some farm products for years. This two price system is that of paying the domestic producer a regulated price designed to expand agricultural production and at the same time buying the necessary imports at the most tempting world prices. This policy applies only to those products on an import basis. Only one need be mentioned. That is wheat. Since 1932 the domestic producer of wheat in Britain has been guaranteed a price of around \$1.25 per bushel. This price to the domestic producer has not prevented Britain from importing wheat in some of the years since that date at about half that

price. When such a policy prevails for seven years under peace-time conditions, it can scarcely be taken as only an emergency measure. In fact during this period it has been claimed that British policy in regard to agriculture was to pay the domestic farmer a price which would promote expansion without making food excessively dear to the consumer. This policy may be contrasted with that of many other normally importing European countries which during this time kept cheap goods out by high tariffs. Such self-sufficing policies prevailed not only in the totalitarian states but also to some degree in others.

It is not maintained here that prices in Canada may or should be based on similar foundations to those of Britain. If we wish to supply that import market lower prices than those of domestic producers will logically be necessary. What is argued here is that the basis satisfactory to Britain, that is the prewar prices, may be quite inapplicable to Canada if expansion of production is desired. This is on account of the lower price level for some farm products prevailing in Canada at the outbreak of hostilities. The extent, degree and method of price regulation differed in various countries prior to the war. Having a different start the degree, basis and method may be expected to vary for the duration of the war. The extent of price regulation, whatever it may be, is a chief factor in the influence that the war may have on Canadian agriculture.

The effects on farming of this war differ greatly from that of the war of 1914-18 on account of the greater mechanization of the fighting forces. One of the early developments during the earlier war was the purchase of horses and the complementary activity of transporting huge quantities of fodder to the scene of hostilities. The provision of horses and fodder is not necessary this time.

In addition to this is the stimulus to mechanization of farming which war brings to the industry on account of the necessity for expansion and the scarcity of labour. Already the result of this may be noted to some extent by the increased sales of tractors this season. This increased mechanization of both the armed forces and the method of carrying on farming effects a considerable saving in the volume of farm products required and directs to a considerable degree the variety of requirements.

Effects Vary According to Type of Farming.

The nature of the conflict and the scene of hostilities, thus far, both have a major influence on Canadian agriculture which has been quite different from that of the developments in the early years of the preceding conflict. The scene of activities embracing the Scandinavian countries and Holland and Belgium, have shut off outlets for grain. This development has also dried up an important supply source for dairy products, bacon, eggs and poultry, and made available an enormous amount of shipping tonnage. These different factors have a great influence on the disposal of surpluses of farm products effecting different products in different ways.

Restricted markets for grain overseas will, temporarily at least, lessen sales. From a longer term point of view these may prove only deferred sales as grain being non-perishable may be stored for some time though this storing entails considerable expense. The same action that has curtailed grain markets for Canada has also closed an important source of supplies for other farm products. No clearer example is needed to show that the effect of the war on agriculture depends chiefly on what type of agriculture is in mind as it has had and is having a vastly different effect on different products. The possible shifting of the scene of hostilities, makes it very hazardous to discuss the immediate outlook as the example cited shows. The immediate future is not what is chiefly in mind in this discussion but rather the probable influence on the more distant future which will be referred to later. In the meantime the proximity of this country to the war zone and this advantage to the allies as a food reservoir as well as the increased opportunity of Canada disposing of surpluses must be considered.

The increased cost and difficulties of shipping has brought the geographic advantage of Canada as a source of supplies as compared with countries such as the Argentine and Australia into high How temporary or permanent relief. this may be, is again another matter but up to the present this advantage has worked in favour of shipments of grain, cheese and bacon though even this geographic advantage was not sufficient to secure an outlet for many apples in the past season. This latter case was no doubt more dependent on the quota allowance of shipping than any other reason and comes under the method of financing the war, quota regulation and rationing already described.

The net result of increased shipping difficulties has been, so far, to reduce the total amount of farm products traded internationally and at the same time to turn over to Canada a greater proportion of that smaller total volume on account of this geographic advantage. How far this may proceed is a present problem. It might have been logically deduced -and indeed it was suggested in the press recently-that the taking over of Denmark would have necessitated a greater volume of bacon exports from Canada. Yet it has been officially announced more recently that such is not yet the With the removal of Holland in case. addition to Denmark as a source of supplies for dairy products it might logically be reasoned that some demand for butter might be made on Canada. Yet on May 15, 1940, butter sold on the Commodity Exchange, Montreal, at about 23 cents per pound which is very slightly above the price prevailing in the same month, 1939, when it was so low in price as to cause complaint. War-time production of essentials is supposed to yield production costs plus a sufficient profit to ensure plenty even though this price must be guaranteed. There is no doubt but that butter is now at the time of writing, May 1940, being produced at less than

cost of production, and this when it is supposed to be scarce and rationed in many parts of the world. This is one of the specific and definite effects of the present war on one phase of Canadian farming. Apparently this particular commodity is not at the moment scarce enough to increase the price in Canada.

Some of these examples are likely to be only temporary affairs. Yet they illustrate the mayhem that is being practised on international trade in farm products. They also pose the problem of what permanent influence, if any, they may have for the duration of the war and what carry over of them, if any, there may be into the post-war period.

Productive Capacity of Canadian Agriculture.

The immediate outlook for the disposal of surpluses of farm products of Canada does not appear bright. But the immediate prospects are not now the most important. More important is the prospect in the more distant future. This is brighter for several reasons. Among them should be mentioned the practical certainty that the surplus of staple farm products that has been the subject of many books, almost endless discussion and no small amount of legislation during the past decade will no doubt be used up. And this on account not only of the destruction of crops in the war zone but also on account of the impossibility of European countries, where mechanization of farming is not nearly so far advanced as mechanized warfare, being unable in a large way to provide food and fight at one and the same time. That Canadian agriculture as an industry has been able to compete in European markets is due largely to the fact that for every worker in agriculture in Canada there was in 1931 some 77 acres of improved land while in many of the European countries now at war the area of improved land per worker in agriculture varied from six in Poland, about seven in Germany and Belgium, nine in Holland and Czechoslovakia, ten in France and fifteen in Denmark. This difference in technique

of farming is certain to increase dependence on food supplies from Canada and other overseas countries when so many peasants are fighting or in uniform expecting at any moment to be drafted for that occupation. The output per man in farm products is the important factor when war creates a scarcity of man power. In output per man in the business of farming Canada would appear to be well in the lead in so far as figures are available for a comparison. This is on account of the sparseness of the population of the Dominion. Land being more plentiful than labour the latter was economized both by extensive and mechanized methods.

This organization makes farming in Canada peculiarly dependent on international trade. Some types of farming in Canada are far "out on a limb" in regard to European markets. Restriction of many of these markets has already weakened this limb tremendously. Hence, the dependence of farming in Canada on the successful conclusion of this war and the securing of a peace which will allow greater freedom of trade than is now prevalent or has been prevalent since 1930.

Any other alternative will mean a drastic reorganization of the farming business in this Dominion. The spread of the ideas of self-sufficiency, a closed economy, regimentation and rationing had gone a long way in Europe before the war started. This idea began in Italy in 1925 where it was termed the "Battle of Wheat". The idea spread rapidly during the thirties. At the outbreak of the war dependable markets for food surpluses of Canada were restricted pretty largely to Britain, Belgium, Holland, Denmark, Switzerland, Sweden, Norway and Finland. These are the countries that followed in the last decade, as far as it was possible in their environment, the policy of freedom of trade. At the time of writing (May 15, 1940) of these countries Britain and Switzerland remain potential European markets. France normally almost a self-sustaining area for farm products will no doubt return to an import basis

as during the earlier war. Yet the recent rapid spread of dictatorship and regimentation has confronted Canadian farming with a real problem. The brighter outlook mentioned above for the further future is premised squarely on the successful outcome of the war and securing a satisfactory peace.

Some suggest that the possible loss or restriction of European markets will necessitate greater dependence on the United States market for the surplus of Canadian farm products. At the moment of writing the Congress of the United States is providing a billion dollars for benefit payments to their farmers to be judiciously allotted to those farmers who will play ball with the administration to the end that surpluses will be less troublesome. Are they likely to willingly add to their present difficulties the possible surpluses of Canada? It seems unlikely as the North American continent is now organized on a basis of international trade particularly in cotton, wheat and pork products, as well as many other products important to Canada.

The same developments in the United States are responsible for this condition as in Canada. In fact they appeared there first. The rapid settling of the continent of North America together with the development of South America and Australia has completely substituted for the Malthusian spectre of the fear of famine the possibility of potential plenty. This has been done on the basis of freedom of world trade. This organization of agriculture on the basis of world trade is all wrong if extreme forms of nationalism with national self-sufficiency in regard to farm products entailing regimentation, rationing and dictatorship is to prevail.

Summary.

Canadian agriculture is simply one of the many things now in a state of flux on account of the war. This is particularly true not only on account of the physical difficulties of the disposal of surpluses of farm products but also on account of the trend toward national self-sufficiency in those products encouraged and developed during the past decade.

One of the results of the war of 1914 to 1918 was to allow the replacement of Russia by Canada as the leading source of supply of the wheat required in world That development permitted trade. farmers of Canada to increase dependence on world markets. During the past decade this increased dependence has created a problem as world trade became restricted. Any estimate of the influence of the present war on agriculture faces immediately the question of what degree of freedom of trade may be retained or secured for surplus farm products. The immediate prospect is for a curtailment rather than an expansion in total volume of these products exchanged. Of this reduced total volume required in world trade Canada may be called upon to provide a greater proportion on account of its geographic advantage.

For the more distant future the influence of the war on Canadian farming depends upon the degree of freedom of world trade that may be maintained or secured in the post-war period whenever that may be. Contraction in volume of farm products required in world trade during the past decade has been particularly hard on some phases of the farming industry. It has been especially severe on the grain growers. This development has been observed by the student of these matters and frequently discussed. Wishful thinking and abiding faith have obscured the problem from The present conflict compels many. attention to the issue.

If the present small volume of world trade is to be expanded the problem of financing purchases will require consideration. It would appear that a cash and carry basis of providing supplies will need to be modified at least after most of the cash acceptable between nations has been gathered in.

If the volume of world trade is to be still further reduced, then, the farming industry of Canada faces a drastic reorganization. Some degree of reorganization may be advantageous even though resorted to only from compulsion. For example we may have to produce for ourselves some of the root, vegetable and garden seeds formerly supplied by Holland and Denmark. Specialists on this question maintain that we should be doing this to a greater degree than is the custom even in more normal times. Even the loss of the major part of the overseas market for apples in the 1939-40 season did not prove an insurmountable problem. Restriction of volume of world trade in farm products has been, and is now, hard on the farming business. If there is further contraction, the situation will be more difficult.

The world war warranted expansion of farming on the basis of export markets. The reconstruction period of the twenties promoted further expansion financed by international credit. The following decade of the thirties found world trade in food products restricted. The present conflict has, so far, restricted the volume of this trade still more. The outstanding lesson of the past ten years, the past ten months or the past ten days, has been the increasing importance of the home market. The need for greater development of the domestic market is one of the effects of the present war just as the necessity of ensuring the maximum freedom possible of international trade.