



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

PROCEEDINGS  
OF THE  
SECOND INTERNATIONAL CONFERENCE  
OF  
AGRICULTURAL ECONOMISTS

HELD AT  
CORNELL UNIVERSITY,  
ITHACA, NEW YORK,  
AUGUST 18 TO AUGUST 29, 1930

*The Collegiate Press*  
GEORGE BANTA PUBLISHING COMPANY  
MENASHA, WISCONSIN

1930

*3 could*  
*Foreign trade*  
 RECENT DEVELOPMENTS IN EUROPEAN GRAIN IMPORTS)

RUDOLF FREUND

INSTITUT FÜR WELTWIRTSCHAFT UND SEEVERKEHR AN DER  
 UNIVERSITÄT, KIEL, GERMANY

WESTERN EUROPE'S position in the world grain trade is conveniently conceived of as resembling the industrial center in von Thünen's scheme, towards which the products of the outer agricultural zone move. This notion fails, however, to indicate clearly the important rôle which western Europe's agriculture itself played as an importer and processor of foreign grains. While it was undoubtedly true that the ever increasing consuming power of the industrial and urban centers furthered the importation of bread-grains from distant surplus countries, it was equally true that western Europe's agriculture as well, was based upon the unceasing influx of feeding-grain from overseas and from eastern Europe. A good many agricultural enterprises in western Europe manufactured imported barley and corn into livestock and dairy products to be sold in domestic markets, just as the larger mills ground imported bread-grains into flour for the bakeries and households of the cities.

The importance of grain imports to the agriculture of western Europe should not be underestimated. Expressed in terms of bushels of 60 pounds, the wheat imports of the countries west of Russia and Austria-Hungary, including Italy and Spain, averaged approximately 490 million bushels annually during the five years before the World War, while imports of barley and corn averaged approximately 380 million bushels per year during the same period. The difference between the imports of wheat and the imports of barley and corn expressed in terms of values, was, of course, somewhat greater than the foregoing figures would indicate, since the value of wheat per bushel was always greater than the value of barley or corn. But while the imports of wheat amounted to somewhat more than one-third of the total wheat supplies of western Europe, the imports of barley amounted to nearly two-fifths of the barley supplies. The ratio of foreign imports to the total supply of feeding-grains approached 50 per cent when corn was taken into consideration. Thus, western Europe was more dependent upon foreign feeding-grains than upon foreign bread-grains.

Hogs and cattle were not, of course, fed exclusively upon grain. However, by pushing part of the acreage which was to yield the much needed feeding-grains beyond the boundaries of western Europe, more land could be devoted to the production of green fodder, roots and tubers. Sugar beets and potatoes, though not grown primarily for feeding purposes, were the basis of an important continental livestock industry. The by-products of the beet sugar industry and the waste products of both crops, were fed to cattle and hogs. Thus, it was possible for western Europe to attain and maintain a high degree of self-sufficiency insofar as the production of livestock and dairy products was concerned. At the same time the milling industry ground even more domestic and foreign grain into flour than was needed within the area itself.

The foregoing statements with regard to the production and consumption of grains in western Europe prior to the war are in need of some amplification. Nothing has been said regarding oats, a higher proportion of which was supplied by western Europe's agriculture than was the case for barley and corn. However, I felt justified in omitting this crop since oats are used primarily as feed for horses rather than for cattle and hogs whose products enter into human consumption.

It must also be remembered that corn serves not only as a feeding-grain, but also plays an important rôle in the human diet, especially in Italy and Spain. This fact, however, tended to strengthen the dependence of western Europe upon foreign feeding-grains. The same thing held true in regard to the position of rye in the grain balances of the countries of western Europe. The area as a whole had a small deficit in rye, amounting to only 2.5 per cent of the total supplies. While most of the crop was used as bread-grain, especially in central Europe, part of it went into the feed troughs also, particularly that part of the crop exported from Germany to her northern and western neighbors. Incidentally, these exports of German rye for feeding purposes were greatly facilitated by the famous "Einfuhrschein-System" by which foreign wheat could be substituted for that part of the rye crop used for feed. All told, however, the rye crop aided the statistical position of western Europe's bread-grains far more than it contributed to the supply of feeding-grain.

Most important of all, it must be kept in mind that the general conditions described above, did not apply equally to all the coun-

tries of western Europe. Differences in natural conditions, in the social and economic structure of agriculture as well as industry, and differences in the tariff and the general agricultural policy of the various countries, rendered the picture of Europe's agriculture and of her grain trade particularly intricate and complex.

In a broad way, a distinction should be made between those countries admitting all kinds of grain free, and those levying a duty upon them. This difference of tariff policy originated in the struggle of the agriculture of western Europe against the competition of American and Russian grain in the '80's and '90's.

Following a policy of free trade, the United Kingdom and the countries adjacent to and largely dependent upon the English market, such as Denmark, Holland, Sweden, Belgium, and Switzerland, soon began to import the greater parts of their grain supplies. During the five years before the war they averaged to import more than three-quarters of the total amount of wheat consumed. They also depended to a large extent on foreign countries for their supplies of feeding-grains. England imported more than two-fifths, and the five continental countries mentioned imported more than one-third of their barley supplies in addition to very considerable imports of corn and feeding rye. Devoting most of the acreage hitherto used for grain production to use as pasture and to the production of forage crops, England and the north European countries were able to build up a very efficient livestock industry and a remarkable marketing system for the products thereof. But the demand of the fast developing industrial markets for meats and dairy products soon outgrew the production capacity of the nearby agricultural regions, supported though they were by ever increasing imports of foreign feeding-grains and other concentrated feeding stuffs. Development in this direction was most pronounced in England, where the presence of large estates limited livestock production somewhat more than was the case on the smaller holdings of western Europe. Thus, England was self-supporting only as regards her supplies of milk, cream, lamb, and veal. She had to import more than three-fifths of her meat supplies and about one-half of her dairy products. Furthermore, despite the fact that Denmark, Holland, Sweden and Switzerland were heavy exporters of livestock products to the United Kingdom, the English market had to draw very considerable quantities of such products from overseas. This applied particularly to beef and mutton

which were largely drawn from countries of the Southern Hemisphere. About two-fifths of her imports of pork products came from Holland and Denmark, the remainder consisting mostly of lard and ham, coming from North America. Dairy products made a slightly better showing. Three-fifths of England's butter imports, and a slightly smaller proportion of her cheese imports, came from European countries. Thus, the agricultural districts of western Europe exporting to the English market, had to content themselves more and more with the delivery of fresh, or lightly salted meats and dairy products, while the supply of bread- and feeding-grains, and a large part of the livestock products of staple character, such as frozen beef, mutton, lard, bacon, and even butter and cheese, were supplied by the American and Oceanic continents.

Thus, while the abundance of cheap foreign grain was made the very cornerstone of a thriving livestock industry in the free-trade countries, the larger continental states of France, Italy, Spain, and Germany protected their grain producing industry as the traditional basis of their farming systems, by a policy of high tariffs and other devices of governmental support.

The Latin countries of Europe were able to produce nearly enough grain to take care of their own requirements. Spain imported only five per cent of her total wheat requirements and no barley or corn to speak of. France imported about one-tenth of her wheat and barley supplies in addition to small quantities of rye and corn. During the five years before the war, Italy averaged to import about 22 per cent of her total wheat requirements and 13 per cent of her corn. These countries struck even a more favorable balance insofar as their supplies of livestock products were concerned. France and Italy imported some pork and pork products, but were able to export a certain amount of beef, butter and cheese.

The situation in the Latin countries of Europe was not wholly due to a protective policy. At least three other factors, whose effects on the agricultural situation in the Latin countries were certainly equal to those of the tariffs on farm products, should be mentioned. First, industry did not expand in the Latin countries as it did in England, Belgium or Germany. Second, the production of foodstuffs could be increased by curtailing the production of "industrial" crops, such as wool, flax, and hemp. This process

was furthered by the rapid growth of fiber exports from America, Australia and Russia. Third, crop yields were increased by the use of fertilizers, and by the promotion of the culture of sugar-beets, although on the whole the agriculture of Spain, Italy, and France was not benefited in this way to the same extent as was German and Austrian agriculture.

Germany, though one of the foremost protectionist countries of Europe, could not boast of grain or livestock balances as favorable as those of the Latin countries. The outstanding deficit item was that of feeding-grains. As the heaviest importer of barley in the world, Germany had to rely on foreign sources for almost three-fifths of her supply of feeding-barley. In addition, corn was also imported. Imports of wheat, on the other hand, did not amount to more than about 15 per cent of pre-war bread-grain requirements, taking wheat and rye together. This strikingly better balance between the production and consumption of bread-grains, was, however, more apparent than real. In the first place, part of the rye crop was fed to livestock. Second, the rapid growth of Germany's milling industry to a point where the output of flour far exceeded the requirements of the domestic market, was partly to be attributed to the urgent demand of Germany's livestock industry for the by-products of the milling industry.

Here we strike, it seems to me, the basic reason for the amazing growth of Germany's livestock industry before the war. While some foreign feeding-grains were imported, the German livestock industry was based for the most part upon the use of the by-products of industry. Consider the case of the potato, and even more striking, that of the sugar beet. Both crops were grown primarily to furnish human foodstuffs, but they became equally important as the bases of cattle and hog production, thus indirectly stimulating a more intensive type of farm management. Their cultivation on the large estates east of the Elbe River which were not usually given over to the production of crops requiring much hand labor, was made feasible by the importation of seasonal labor from Poland and Galicia. Thus, summarizing the achievements of Germany's agriculture in regard to its contribution to the nation's food supply, stress must be laid upon the influence of the root and tuber crops on the farming system, the importation of cheap labor for the cultivation of these crops, and the reliance placed upon foreign countries for supplies of feeding-grains.

Germany's livestock industry could not, however, fully satisfy the rapidly increasing demands of the industrial and urban centers for livestock products. Only small amounts of foreign meats were imported. The situation with regard to animal fats was less favorable. The hogs produced in Germany, which were largely fed on barley and potatoes, were not of a lard type though fatter than the Danish and English hogs. As a result, large quantities of American lard had to be imported. Similarly, ever increasing amounts of butter and of fat cheeses were imported, owing to a shortage of green fodder and of grassland to the production of which only comparatively small areas were well suited. Thus, Germany was on an import basis for most agricultural products except meats, but to a much smaller degree and for quite different reasons than England, with which she is often compared in the matter of agricultural trade.

A few words should be added about the grain trade of pre-war Austria-Hungary, also an adherent of the principle of protection. Before the war, the dual-monarchy represented an almost perfect example of self-sufficiency and of the division of labor insofar as agricultural production was concerned. In addition to some barley and corn which entered into external trade largely as a result of local conditions on the border, there were some special products such as malting barley, beer, sausages, prepared meats, and so forth, shipped out of the country, but they were insignificant compared with the trade within the boundaries of the states. Due to the fact that agriculture was highly specialized, internal trade was heavy. Hungary as the chief grain producer, shipped large amounts of grain and flour to the western areas which she also supplied with beef and pork. The deficiency of livestock products was somewhat greater in Austria proper than in Bohemia, where the by-products of a flourishing sugar beet industry were utilized in livestock production. The agriculture of Austria consisted largely of the production of dairy products, and of truck crops for the nearby capital city.

Against the background of western Europe's agriculture as it existed before the war, I shall now endeavor to picture the changes which have taken place since the war. You will not expect, of course, a complete record of the breakdown and subsequent recovery of western Europe during and after the war.

It is now apparent that the basic economic structure of the area



as a whole remained unaltered. The essential features of the trade in agricultural products are the same as before the war. There did occur, however, some very significant changes which, though not altering western Europe's position as the principal market for the grain surpluses of the world, did affect the demand for grain in at least three directions.

First, there is the marked decrease in the production and consumption of rye in the countries of middle and northern Europe. Taking industrial Europe as a whole, including Poland, Austria, and Czechoslovakia, rye supplies averaged 10 per cent less during the past three years, than before the war, the heaviest reduction occurring in Germany, Austria, and Czechoslovakia. In the years immediately following the close of the war, the deficit of rye, which was much heavier then than now, was made up by large imports, especially from North America, but since 1925 imports have declined rapidly. Not more than 3 or 4 per cent of the rye supply of industrial Europe originated in countries outside of western Europe during the past three years. Instead of a deficit there is now a serious rye surplus problem in middle Europe, due to a much lower per capita consumption than before the war. The lower per capita consumption of rye is undoubtedly due to changes in the diet of the people. Disgust with war bread may now be a past influence, but increasing urbanization, the reduction of the armies, which were once heavy consumers of dark bread, and the decrease of household baking among the rural population coinciding with the spread of large-scale milling and baking establishments are factors which are making their influence felt.

The second change, seemingly lasting in character, took place in the supply of feeding-grain, especially barley. When Russia ceased to furnish the barley needed for the maintenance of western Europe's livestock industry, over and above the amounts produced domestically, a serious shortage occurred which ultimately had the effect of decreasing the production of dairy and livestock products. The production of barley was soon increased, however, in Europe proper, and corn which was used as a substitute was imported in large amounts. The average production of barley during the past three years has been about 10 per cent higher than before the war. The countries around the North Sea led, with an increase of 33 per cent, followed by the Latin countries with an increase of 13 per cent, and Germany with an increase of 7 per cent.

Austria and Czechoslovakia have reached the pre-war level of production and only Poland and England still lag behind. On the whole, imports have decreased by about one-third of the pre-war figures, most of which is accounted for by the reduction of German and English imports. The northern countries of Europe import as much barley as before the war. The increase in production was not enough to offset the decreasing imports of foreign barley, so that western Europe as a whole shows a decrease in the amount of barley consumed, of about 7 or 8 per cent. However, only 23 per cent of western Europe's supply of barley comes from outside, compared with 33 per cent before the war. It should be kept in mind, however, that the livestock countries of northern Europe have an increased supply of barley amounting to more than one-tenth of their pre-war supplies.

To a certain extent the shortage of barley was offset by increased imports of corn, but to a smaller degree than would have been expected. All in all, corn imports averaged about 50 per cent larger during the past three years, than before the war. An increase of about 80 per cent occurred in the imports of the countries of northern Europe. Germany increased her imports about 67 per cent, and there was an increase in the imports of the Latin countries of about 50 per cent. Corn imports in England were only about 10 per cent greater than before the war. The supply of feeding-grains would seem to be relatively greater in the livestock producing countries of northern Europe than before the war, due to increased barley production and to increased imports of corn. Germany and England, however, appear to have had a smaller supply of feeding-grains than before the war, while the Latin countries of Europe had slightly larger quantities.

Coinciding with this development, we find that western Europe now depends to a larger extent upon imports of livestock products from foreign countries than it did before the war. What happened can be termed a substitution of the finished product for the raw-material, formerly processed within the boundaries of western Europe itself. The changes which have occurred in the trade of beef and dairy products are most striking. The net imports of beef into western Europe are now 75 per cent greater than before the war, the smaller increase in beef exports from the northern and Latin countries of Europe now being more than offset by imports, which bulk heavily in the case of France. Imports of butter

are now more than 50 per cent greater than before the war, in spite of the fact that the countries of northern Europe could increase their exports by 50 per cent. Germany now imports twice as much butter as before the war, an increase which is even larger than that of her beef imports. A slightly better showing is made, however, in the case of cheese, the average increase in imports amounting to only about one-third of the pre-war figure. The northern and Latin countries were able to keep up with the increasing demand more readily in the case of cheese than in the case of beef and butter. It is rather interesting to note that in the trade of pork and pork products the pre-war relationships in western Europe between domestic and foreign supplies seem to be re-established, although England imports about 50 per cent and Germany about 15 per cent more pork and pork products than before the war. However, the northern European countries, especially Denmark, have increased their exports to such a degree, that the imports of pork into western Europe from outside sources are no greater than before the war.

The rather gloomy picture of post-war developments in the rye, feeding-grain, and livestock trades, is little changed by developments in the wheat situation. As a whole, the area shows only a 5 per cent increase in its wheat supplies, made up of a 2 per cent increase in domestic production and a 3 per cent increase in imports. To be sure, a 50 per cent increase occurred in the wheat production of the countries of northern Europe, and an increase of about 25 per cent in the wheat imports of the Latin countries, but the amounts involved are rather small, and are offset by slight decreases in production in Germany and England, and corresponding increases in imports. It appears that the decrease in the use of rye in the bread diet of western Europe has not been offset by an increase in the amount of wheat consumed, a fact which is only to be explained by a declining per capita consumption of the bread-grains. This conclusion is borne out by the few reliable figures which are available, just as the heavier imports of meat and dairy products seem to support the higher consumption figures given for these products in the case of Germany and England. Unfortunately in the latter case, we have no means of checking the figures given, since domestic outputs are not adequately reported.

I do not wish to be interpreted as saying that the international

trade in bread-grains has about the same characteristics as before the war. I only maintain that the changes which have taken place have originated for the most part in the surplus countries rather than in those countries which rely largely upon foreign sources for their supply of bread-grains; that is, unless you are prepared to say that the apparent downward trend of European bread-grain consumption constitutes the main feature of the world wheat situation. I am not inclined to share this latter view. In the first place, the United States whose exports of wheat loomed so large in the world wheat trade after the war, is experiencing the same downward trend in the consumption of bread-grains as is Europe, except that the downward trend is more pronounced. It would indeed be difficult to say, whether the resistance of the world's largest buyer to the purchase of wheat or the increasing sales pressure resulting from decreasing consumption in the country with the largest exportable surplus, is the key to a proper understanding of the unsatisfactory picture presented by the post-war wheat trade.

The replacement of the leading surplus countries of pre-war times, particularly Russia and the lower Danube, by the countries of the Western Hemisphere, namely, the United States, Canada, Argentina and Australia, was certain to create economic problems as difficult as the re-establishment of western Europe's position in the world-trade. Witness, for example, the attempt of the North American export countries to substitute flour for grain in their trade with Europe—an attempt which proved a failure. Furthermore there is the ever present possibility that the former surplus countries will stage a come-back, and it seems to me that we are not far from realizing such a possibility.

The probable future development of the grain trade between the countries bordering the Danube, might be mentioned in support of the preceding statement. Up until last year this former surplus area did not contribute in a significant way to the world grain trade. Hungary, Rumania, Yugoslavia, and Bulgaria, though producing in the years 1926-1928 only slightly less wheat than before the war, exported only about one-third as much as before the war. The consumption of wheat in this area was about 25 per cent greater than during the pre-war years. These figures are based, of course, upon corresponding areas, eliminating as far as possible changes in international boundaries. If we set against these figures

the requirements of Austria and Czechoslovakia which form the natural outlet for the surpluses of the lower Danube, it appears that the recent wheat exports of the lower Danube countries were barely sufficient to meet the demand of the upper part of the former Hapsburg Monarchy, whereas before the war about one-fourth of the wheat production of the Danube Basin was exported to foreign markets. The fact that the Danube Basin has practically been eliminated as one of the world's largest wheat exporting areas is accounted for by the increasing consumption of wheat in the industrial area of the West, as well as in the agrarian countries themselves. Increased consumption is a more important factor in the situation than decreased production, which is significant only in the case of Rumania. All of the remaining Danube countries have produced slightly more wheat during the past few years than before the war. Conditions are similar in the case of feeding-grains. Production has about reached the pre-war level, but exports are much smaller than before the war due to increased domestic consumption. The domestic consumption of barley is about 16 per cent greater than before the war while the consumption of corn has increased about 11 per cent.

It is difficult to say, of course, whether or not the increased domestic consumption of grain (except rye) in the Danube countries has reached the saturation point. However, the still precarious financial position of the lower Danube countries will always make for a quick response to slightly improved world-market conditions, particularly since they can easily shift from wheat to corn, or from corn to wheat, in their human diet. The increase in the livestock population may ultimately check the readiness with which their surplus grains flow toward foreign markets. But the experience of the past year during which large offerings of wheat and corn were made from the lower Danube area indicates that too much stress ought not to be placed upon the importance of the livestock industry as a channel through which the surplus grain production of this area is likely to be absorbed.

The development of western Europe's trade in agricultural products during the post-war period cannot yet be described in terms of a well defined trend. Neither are there definite signs of a new course in governmental policy. England and the northern countries of Europe still adhere to the principle of free trade, under which it has been possible for the northern countries to maintain, and

in some respects even strengthen their position in the world's trade in livestock products.

On the continent, however, there was and still is much drifting along in matters of agricultural tariff policy. In most cases, the protective measures of the governments, now applied in an astonishing variety of ways and pursued with a vigor unknown before the war, arose out of emergencies such as the overproduction of rye, or the threat of imports of Polish hogs into Germany, or the temporary surplus of wheat in France. The haste and zeal with which the Continental governments acted during such emergencies should deceive no one as to the fundamental lack of a clear cut agricultural policy with definite objectives. It would seem that nearly all of the many governmental regulations relative to trade in agricultural products must be considered as temporary measures taken to meet temporary conditions. A literal interpretation should not be placed upon the slogan of agricultural self-sufficiency under which the majority of the foregoing measures were passed. Complete self-sufficiency could only be accomplished in one of two ways. Either the industrial capacity of Continental Europe must be greatly reduced, or still higher tariff walls must be built up around *all* agricultural products. I venture to say that a reduction in Europe's industrial output, desperate as such a measure seems, would fit in much better with certain definite trends in the world's industrial organization, than would a general increase in the tariff on all agricultural products. Granting for the sake of the argument, the efficacy of a tariff policy along the lines mentioned in promoting agricultural self-sufficiency, it must be recognized that such a form of self-sufficiency could be attained only at the cost of practically destroying Continental Europe's ability to export manufactured goods to the industrial markets of the world. In order to insure the production of sufficient quantities of agricultural products to meet her needs, it would be necessary to increase the price of foodstuffs to a point where, under the present organization of Europe's industry, it would be impossible for her to compete abroad. It is impossible for Europe to reconcile the policy of a high protective tariff on *all* classes of agricultural products with attempts to maintain a large industrial output, to keep employed her millions of workers, and last, but not least, to meet her reparation payments. Assuming that the structure of Europe's political economy remains unchanged,

it is necessary to choose between one or the other of the two alternatives. However, even admitting the necessity of allowing certain agricultural products to enter duty free, the question arises as to which products shall be placed on the free list. This is the problem with which western Europe is chiefly concerned today. Complete free trade is never seriously considered on the Continent. The question is as to whether such agricultural products as meat from the Argentine, butter from New Zealand, and flour from North America, shall be allowed to enter duty free to make possible low money wages and a revival of industrial activity, or whether a long-time tariff policy should aim at building up a protected livestock industry and perhaps a milling industry based upon free imports of grains. Stated in another way: Shall the agriculture of Continental Europe safeguard its grain production by means of high tariffs on imports of grain, and leave the market for livestock products to foreign countries with lower costs of production, or shall it develop its livestock industry with the aid of cheap grains, admitted duty free? As I have said before, no definite answer to this question has as yet been given. A multitude of baffling problems arise as soon as either one of the two alternatives is seriously considered.

It seems to me, however, that the present uncertainty as to the future course of western Europe's agricultural development, and as to what its policy with regard to agriculture shall or shall not be, is slowly disappearing, not due so much to developments within the several countries, as to external causes.