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THE WORLD WHEAT SITUATION, 1936-37

A REVIEW OF THE CROP YEAR

Joseph S. Davis

Tightness characterized the world wheat situation in 1936-37, in a degree broadly comparable with that of 1924-25 and 1925-26 and reminiscent of 1897-98. The crop year opened with the long-persistent carryover surplus reduced to moderate size. The 1936 world crop ex-Russia proved to be next to the smallest since 1925, and was the third small crop in

succession. With deficient grain harvests in the USSR, Russian exports to the outside world were negligible; more came from Iraq and Iran, which hitherto have hardly figured in the general picture. For what we term the world ex-Russia, total wheat supplies were the lowest since 1926-27, per capita supplies the

smallest since 1920-21, and utilization one of the smallest since 1929-30. Yet demands upon limited supplies were such as to force wheat prices to much higher levels during the crop year, and to reduce world carryovers to the lowest point in at least twelve years. While the flour trade continued to shrink, the geographical distribution of wheat supplies was such as to raise the volume of international trade in wheat sharply above that of any of the three preceding years.

The politico-economic background of the wheat situation in 1936-37 merits summary statement. It was marked by civil war in Spain, a general atmosphere of international tension, continuation of nationalistic policies by many governments, currency readjustment in the countries that had constituted the "gold bloc," the continued upswing of the business cycle, a marked increase in the volume of international trade, a period of active speculation in commodity markets, and an epidemic of strikes in the United States.

Revolution in Spain broke out in mid-July 1936, and developed into protracted civil war.

The insurgent right-wing coalition under General Franco has received important economic and military aid from Fascist Italy and Nazi Germany, and enjoyed various advantages from Portugal's friendly attitude, whereas the left-wing Loyalist Government has been aided by Soviet Russia. Great Britain and France have taken the lead in efforts to

restrict outside intervention, to safeguard merchant shipping in the Mediterranean, and to prevent the fire in the Iberian Peninsula from involving all Europe in conflagration. Participation in the Spanish struggle helped bring Italy and Germany into a rapprochement approaching an alliance. On the common

ground of resistance to the spread of communism, Japan and Germany reached an understanding in the fall of 1936, to which Italy became a party early in November 1937. Ominous danger of general war has led to intensive "rearmament" practically all over the world. Undeclared war in China broke out in July 1937, when the Kuomintang Government headed by Chiang Kai-shek finally undertook to lead a united resistance to Japan's creeping invasion; and the Japanese military machine has avowedly set out to make China safe for Japanese economic penetration.

Success in restricting to Spain the sphere of active war operations in Europe served to prevent these developments from having major reactions upon the world wheat situation during the crop year. In several lesser respects, however, they affected that situation: they strengthened the grip of existing national wheat controls, accentuated advances in ocean freight rates, helped force up prices of raw materials, rendered wheat markets sensitive to extra-commercial news, and caused enlargement of wheat and flour imports into Spain.

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Under the conditions just discussed, it is hardly surprising that nationalistic systems for maintaining domestic wheat production and regulating the grain trade, grain prices, and flour milling were nowhere radically altered in normally importing countries, French North Africa, or the Danube basin. Amidst many divergences among the various nations, it seems clear that the broad drift toward nationalistic wheat regulation, control, and subsidy has not ceased; and in many countries, including the United States, the tendency is to build permanent measures on the experience with emergency ones, rather than to abandon the latter with the passing of the emergencies that called them forth.

Even in such countries, under the influence of the general shortage and distinctly higher world prices, current applications of prevailing policies were modified. Protection and aid to wheat growers played a smaller role. Consideration for consumers figured more heavily. Safeguarding international payment balances and security against war, while perhaps no less weighty, were of less dominating importance. Subsidies to farmers were generally reduced or eliminated; in several instances wheat import duties were lowered; and emergency reserves were drawn upon instead of built up. With the passage of surplus problems for the time being, governmental policies and programs in most exporting countries exerted much less influence than for several years on the volume, course, and direction of trade. The unintended emergence of some countries as net exporters, however, must be attributed to the policies their governments have been pursuing.

A major event of the crop year was the surrender of the "gold bloc" countries, which had long resisted the tide of currency depreciation and devaluation that reached its flood in 1931-32 and 1932-33. Late in September 1936 France, the Netherlands, and Switzerland abandoned their former gold parities and took steps to keep their exchanges within moderate limits on provisional bases considerably lower. Several other countries shortly either followed suit, devalued further, or tied their currencies to sterling instead of to the French or Swiss franc. By the end of 1936, practically all impor-

tant commercial nations had departed from pre-depression gold parities,¹ and in May 1937 the average gold value of 45 such currencies was about 53 per cent of what it had been in May 1929.²

It is too much to say that national currencies are again in stable relationship to one another, and the French franc has depreciated considerably below the provisional basis first established. It is even uncertain whether any international monetary standard will again become as nearly universal as the gold standard was in 1929. With the readjustments just referred to, however, the basis for fairly stable exchange relations appears stronger than it has for some years.

The crop year 1936-37 was generally one of industrial and commercial recovery or advance to fresh high levels, in most countries one of at least relative prosperity, and in some countries exceptionally prosperous.³ For the first time since 1929, the League of Nations index of world industrial activity (excluding the USSR) rose above the average for that pre-depression year.⁴ Indeed, the average for July-

¹ Germany has avoided outright devaluations or even depreciation; but her currency, exchange, and trade are so regulated that adherence to the gold basis is for most purposes only nominal.

² See chart and discussion in the Cleveland Trust Company *Business Bulletin*, July 15, 1937; also *Economist* (London), Oct. 9, 1937, p. 62. On the readjusted basis, which has latterly been fairly stable except for France, the effective reduction in the gold equivalent of the various currency units since before the depression, up to about Oct. 1, 1937, represented about 20 per cent in Holland and Austria; about 30 per cent in Belgium, Switzerland, and Czechoslovakia; about 40 per cent in the United States, Great Britain, Canada, South Africa, India, Egypt, and Italy; somewhat more than 40 per cent in Sweden and Norway; slightly over 50 per cent in Denmark, Australia, New Zealand, and France; and still higher figures in Argentina, Brazil, Chile, China, and Japan.

³ While recognizing important elements of truth in it, we are unable to subscribe to the statement in the International Institute of Agriculture review of *The World Agricultural Situation in 1935-36* (p. 47), "that the present economic revival is a peculiar phenomenon, which has little or nothing to do with the course of the business cycle and is largely accounted for by artificial factors, such as far-reaching measures of Government intervention and a world-wide campaign of rearmament."

⁴ *Monthly Bulletin of Statistics*, September 1937. The less comprehensive index of the Bureau of Agricultural Economics, based on data for the United States

June 1936–37 was 101.9 per cent of the 1929 average, compared with 89.1 for 1935–36. The London *Economist* index of business activity in the United Kingdom continued upward in 1936–37, after having been above the pre-depression peak throughout the preceding year. Taking 1935 as 100, the index for 1936–37 averaged 110, as compared with 97 for the crop year 1929–30 and 103 for 1935–36; and the June 1937 peak was 113, as compared with the peak of 99 in August 1929.¹

Improved prices for farm products exerted substantial influence in several countries. Even in the United States and Canada, despite crop shortages, farm income was counted the highest in years. In Australia, pastoral and agricultural interests enjoyed a full share of the high and advancing prosperity. Prices of wool and wheat were considered very satisfactory, and during the year the index of prices of all export products passed the 1928 average. Late in August 1937 the Commonwealth Treasurer, in presenting the new budget to the Lower House, said: “. . . the present level of prosperity is higher than it has ever been in the history of the country.”² Close observers consider 1937 Argentina’s most prosperous year since 1919, largely because she had big crops of cereals that were in great demand at the best prices in several years.

The volume of international trade in commodities had risen erratically but slowly from its low point in 1932, until the autumn of 1936, when a sharp increase began. The League of Nations index, adjusted for characteristic sea-

sonal variations, averaged 68 per cent of the 1929 average in July–September 1932, 73 per cent in July–June 1932–33, 84 per cent in 1935–36, and 92 per cent in 1936–37. Quarterly figures for four quarters beginning with July–September 1936 were 85.3, 91.9, 92.8, and 98.1.² This notable advance—more rapid than even the rise in world industrial production—was the joint result of several factors. Chief among these were enlarged demand for industrial materials and products needed for building up armaments; heavy grain shipments incident to poor crops in the United States and much of Europe in 1936; increased imports of miscellaneous goods by countries that were profiting by exports of primary products; and sustained growth of industrial activity, employment, and payrolls generally.

Some slight progress was made in the direction of lowering barriers to international trade. The United States renewed activities under its trade agreements program. Under the Oslo Agreement of May 28, 1937, the governments of Belgium, Luxemburg, the Netherlands, the Scandinavian countries, and Finland are taking steps to diminish hindrances to trade in goods important to their commercial relations. Like an abortive earlier agreement, this is open to adhesion by other nations.

The crop year was marked by a notable boom in prices of basic commodities, which culminated in March–April 1937 and was followed by a pronounced recession.⁴ The boom was perhaps supported by credit-inflationary factors, but was based largely on rearmament intensification superimposed on the generally high and rising level of industrial activity. It was accentuated by fears of early shortage in supplies of many commodities. These led industrial buyers actively to compete for available supplies, and also swelled speculative purchasing of various industrial materials on an extensive scale. The speculation was overdone, as usual; high commodity prices helped to curtail consumption; and fears of shortage gradually gave way to confidence that ample supplies would be forthcoming.⁵ Under such conditions, wheat figures in the general commodity situation, and in turn that situation reacts upon the wheat markets. As in 1933, the course of wheat prices in 1936–37 was thus

and nine other leading industrial nations, likewise registered further substantial advances. See the chart in Bureau of Agricultural Economics, *The Agricultural Situation*, August 1937, pp. 9–12.

¹ *Economist*, *Trade Supplement*, Sept. 25, 1937.

² *The Land* (Sydney), Sept. 3, 1937, p. 4.

³ See League of Nations, *Monthly Bulletin of Statistics*, September 1937, p. 386, and *World Economic Survey*, 1934–35, p. 157; also chart and discussion by R. B. Schwenger in Bureau of Agricultural Economics, *The Agricultural Situation*, Oct. 1, 1937, pp. 9–10.

⁴ See price indexes in *Wochenbericht des Instituts für Konjunkturforschung*, Sept. 8, 1937. Moody’s index of 15 staple commodities, taking Dec. 31, 1931 averages as 100, rose from 162.9 on June 6, 1936 to a peak of 228.1 on April 5, 1937. By June 14 it had fallen to 198.2.

⁵ *Economist*, Sept. 25, 1937, p. 601.

substantially influenced by developments in other commodity markets; but the level of wheat prices was less affected than its course.

The official index of wholesale prices in the United States, based on 784 commodities, had risen from its depression low in February 1933 to a level about one-third higher early in 1935. After this level had been roughly maintained for some twenty months, the index rose by nearly 8 per cent between October 1936 and March 1937. Underlying this latter advance were currency forces tending toward inflation, and various stimuli accompanying recovery of business activity, such as had been operative earlier; but more important special factors were short crops of farm products in 1936, influences arising from social security taxes and wage increases, rearmament demands for various materials, and the wave of speculative buying encouraged by bullish

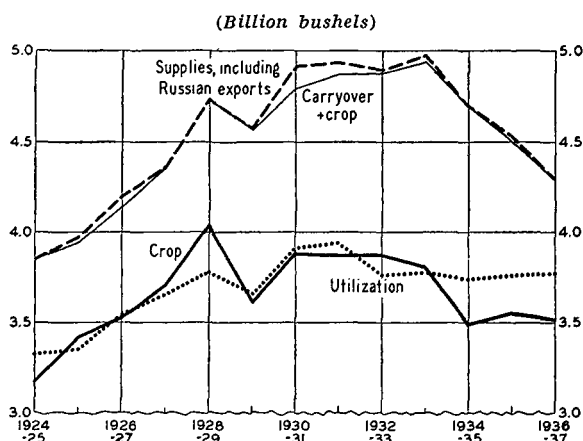
appraisal of commodity supply-demand relationships. Upward adjustments of multifarious prices largely sufficed to offset subsequent reactions in prices of basic commodities, and in March–August 1937 the combined index varied between 87 and 88 per cent of the 1926 average.

In the United States, labor controversies were unusually numerous, widespread, serious, and protracted. Several were precipitated by actions of the vigorous young Committee of Industrial Organization led by John L. Lewis, and many were complicated by the strife between the CIO and the much older American Federation of Labor led by William Green. Some affected flour mills, most notably in Minneapolis and Seattle. For the world wheat situation, the most important was the prolonged strike in Pacific Coast ports extending throughout November–January.

I. SUPPLIES FOR THE YEAR

Chart 1 brings out the striking changes in the world wheat-supply position in the three crop years that followed a lengthy period of huge surplus carryovers. For what we term

CHART 1.—WHEAT SUPPLIES AND UTILIZATION, WORLD EX-RUSSIA, ANNUALLY FROM 1924-25*



* Data in Table XXXII.

the "world ex-Russia,"¹ total supplies for 1936-37 were the smallest in a decade. For the first time since 1928, the crop year opened with only a moderate surplus of old wheat. The new crop ex-Russia was the third in suc-

cession to fall materially below current levels of annual utilization. Chiefly because the USSR had short grain crops, Russian exports were very small; and so were supplements obtained from other sources outside the defined area.² By the end of the crop year, carry-over stocks had been reduced to subnormal levels much as in 1925 (Chart 9, p. 121).

WHEAT PRODUCTION EX-RUSSIA

Adverse natural conditions were predominantly responsible for the small world crop of 1936. Wheat prices had been generally such as to stimulate wheat sowings, and the few governmental restraints on acreage exerted slight influence.³ Different forms of un-

¹ Chiefly excluding the USSR, China, Iran (Persia), and Iraq.

² Iraq and Iran, and probably some other countries that we also exclude from the world ex-Russia, were small net exporters in 1936-37 (see p. 137). Lack of comparable data prevents appropriate inclusion of these along with Russian exports in Chart 1 and the table on which it is based. Even at their maximum in 1936-37 (6-8 million bushels), such additions would hardly change the course of the curves perceptibly.

³ As to the United States, we have been unable to discern the influence of 1936 and 1937 "agricultural conservation programs" on the acreage sown to wheat,

favorable weather, however, limited the area sown in many countries, caused some heavy abandonment of seeded acreage, and generally reduced yields per harvested acre. Only in a few areas, notably including the Danube exporting countries and Turkey, were conditions more than usually favorable for good wheat crops. With only average weather conditions from seed-time to harvest, the 1936 world crop might have been 600 million bushels larger than it turned out to be.

Sown acreage for the crop of 1936 for the first time exceeded the high record set in 1933,¹ but the harvested acreage was not so high as in the years 1928 to 1933, if indeed it was as high as in 1934 and 1935.² New high records for harvested acreage were made in a number of importing and exporting countries whose policies have been stimulating wheat growing; these included Italy, Yugoslavia, Greece, Turkey, Algeria, Japan, and several countries with less than a million acres under wheat (Table III). In others,

which is officially recognized as a "soil-depleting" crop, and know of no published official or unofficial appraisal of that influence.

In Czechoslovakia, the contraction of wheat acreage in 1936 was very slight compared with the 8 per cent reduction sought, especially considering the regulation authorizing the monopoly to pay non-conforming growers 20 per cent less than the standard price for their wheat.

Dutch official restrictions on wheat acreage probably contributed little toward the slight reduction in acreage for the 1936 crop; they were abolished in December 1936. See H. E. Reed, "Farm Relief Measures in the Netherlands," *Foreign Agriculture*, February 1937, I, 87-97.

¹ While comprehensive data on sown acreage are not available, this statement seems safely based on sown acreage in the four chief exporting countries represented in Chart 5 (p. 110), plus reported acreage (mainly harvested) in the rest of the world ex-Russia. A new record for sown acreage was set in 1937; see below, p. 119.

² For the data in Tables I and III we are unable to take account of abandonment in the Canadian spring wheat acreage, which has been very heavy in several recent years.

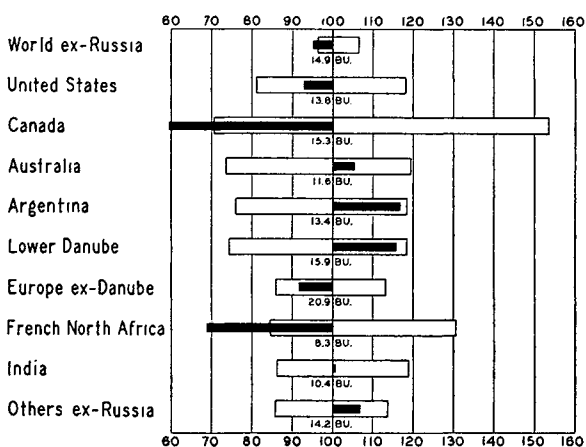
³ For Canada, acreage data for spring wheat are available only for the area sown; hence heavy abandonment is reflected only in data on yields (per sown acre). This helps to account for the extremely wide range of yields shown in the third bar in Chart 2.

⁴ See our "Survey and Outlook," *WHEAT STUDIES*, May 1936, XII, 329-30.

despite adverse weather, the 1936 harvested acreage was not far below previous records.

Yields per acre, however, were almost everywhere below the average for the preceding ten years (Chart 2) and still further below current normal yields. The outstanding exceptions with yields above average were Argentina, Australia, the Lower Danube countries, Turkey, Egypt, and Mexico; but apparently only in Egypt and perhaps Bulgaria were previous records exceeded. Yields were most

CHART 2.—WHEAT YIELDS PER ACRE, 1936, COMPARED WITH RANGES AND AVERAGES*
(Percentages of 1926-35 averages)



* Based on data in Tables I and IV. Hollow bars indicate maximum and minimum yields in 1926-35, solid bars yields in 1936, expressed in terms of average yields in 1926-35 which are indicated in figures.

conspicuously low in Canada,³ Spain, Portugal, and French North Africa (particularly Morocco); but they were much below average also in the United States and in Europe ex-Danube. For the world ex-Russia as a whole, the average was lower than in 1934 or 1935 and as low as in 1924; and it would be lower than in 1924 if we could compute it in terms of bushels per seeded acre.

Early prospects for 1936 harvests suggested a Northern Hemisphere crop ex-Russia of moderate size, roughly equal to the average for the five preceding years.⁴ In the United States abandonment of fall-sown wheat was recognized as heavy, but the yield outlook improved as winter-wheat harvest approached. In the spring-wheat belt of North America a

late spring had delayed seeding, but soil moisture conditions seemed fairly favorable in spite of scant sub-soil reserves in certain areas. Serious drought had occurred in French North Africa. Prospects were good in the Lower Danube and in Central Europe. In several other European countries unfavorable weather had restricted wheat seeding, in the fall and spring, and excessive rains in the winter hindered satisfactory progress of the crops.

In June-July 1936, however, the crop outlook changed radically for the worse.¹ Scorching heat and drought wreaked havoc in the North American spring-wheat belt, and made certain that crops would be very short almost throughout this region. In southern Europe and French North Africa, crops continued to deteriorate, with excessive rainfall accompanied by rust and lodging. The summer weather in most of Europe was not such as to favor good yields. In the USSR, following retarded sowings because of the late spring, drought devastated spring-sown wheat. Excessive rainfall curtailed sowings and promoted weed growth in Argentina, while the Australian crop suffered from prolonged drought.

¹ WHEAT STUDIES, September 1936, XIII, 2.

² For the scope of our totals, before and after the expansion, see *ibid.*, December 1936, XIII, 205.

³ Despite the best official efforts, crop estimates are subject to a considerable margin of error, and full comparability of estimates for successive years cannot be assumed. In our review of the crop year 1935-36 (*ibid.*, XIII, 205-07) we discussed recent revisions in official estimates for the United States. Three relevant points may be noted here.

1. A recent official publication of the Indian government (*Report on the Marketing of Wheat in India*, Marketing Series No. 1, Delhi, 1937) brings out the fact that estimates of India's crops cannot be greatly trusted, even to show actual variations in outturn from year to year.

2. Beginning with the crop of 1936, the French Wheat Board instituted new procedures for securing estimates of the French crop. Apparently the present basis yields figures appreciably lower than the former procedure would, and standing estimates for postwar years may not be revised for comparability. For the crop of 1932, we now accept a figure 30 million bushels higher than the standing official estimate.

3. Our comments on Turkey (p. 111) suggest the possibility that the distinctly higher level shown by crop estimates for 1936 and 1937 may reflect, at least in part, changes in statistical procedures or measurements of yields rather than so marked an improvement in actual outturn.

The harvest of 1936 afforded several striking illustrations of the unreliability of forecasts based on early indications, for individual countries or regions as well as in the aggregate. To a rather uncommon degree, however, the aggregate wheat production was correctly appraised by mid-September. Changes in crop estimates thereafter were for the most part small and compensating. Most striking was the revised appraisal of the Turkish crop, which formerly was not included in our totals. Apart from this increase of 58 million bushels, our present total for the world ex-Russia (3,514 million bushels) is only 1 million below the corresponding figure published in January 1937. Our summary total on the old basis (3,312 million bushels) is now only about 15 million higher than the corresponding total published in September 1936.² Favorable weather late in the growing season resulted in an Argentine outturn 33 million bushels above our September approximation. Timely rains in several states rescued the Australian crop in the critical weeks before harvest; and the latest revised figure (practically equal to our September approximation) is 16 million bushels above the first official estimate. These and a few other increases were largely offset by scattering decreases in other estimates.

Nevertheless, various changes in crop estimates within the total proved of importance with respect to the international wheat position. Decreases in early estimates for Germany, Italy, and a number of other European importing countries accounted in part for early underestimates of net imports by European net-importing countries; and these were not offset by the increase in the estimate for France. Improvement in Southern Hemisphere crops, moreover, resulted in important enlargement of the Argentine and Australian surpluses.

All told, the 1936 world crop ex-Russia was of the same order of magnitude as those of the two preceding years—a little larger than in 1934, a little smaller than in 1935. On our present basis of computation, the average annual production in 1934-36 was 300 million bushels less than the corresponding average for 1927-33.³ Between these two periods,

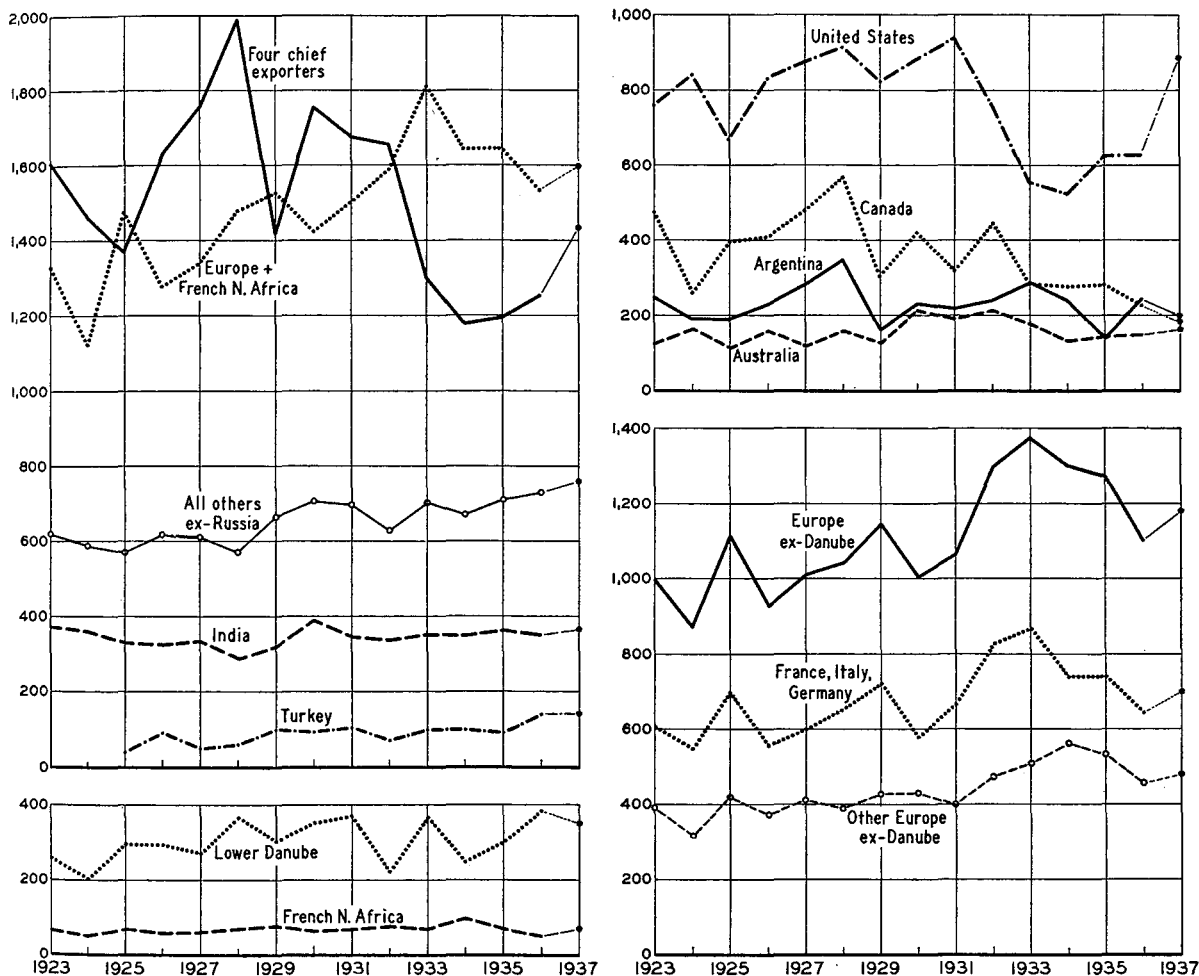
the striking net decline of 440 million bushels in the average production of the four chief exporting countries (including the United States) was partly offset by a net increase of 140 million elsewhere, chiefly in Europe.

Chart 3 shows the 1936 crops of important

to the fact that an unexpectedly good harvest in Argentina more than offset the decline in Canada's outturn to the lowest point since 1919. A substantial net reduction in Europe ex-Russia plus French North Africa occurred in spite of large production in the Lower

CHART 3.—WHEAT PRODUCTION IN MAJOR AREAS EX-RUSSIA, 1923-37*

(Million bushels)



* Data in Tables I-II; for 1937, preliminary.

wheat-producing areas ex-Russia in the perspective of a considerable span of years, with preliminary figures for 1937.¹ The moderate increase over 1935 in the combined crop of the four chief exporting countries was due

Danube countries. The crop was much reduced in Europe ex-Danube as a whole, and that of French North Africa was the smallest since 1922. The combined crop of other countries ex-Russia rose moderately above previous records, chiefly because Turkey had a bumper crop which more than offset slight net reductions in India and various other countries.

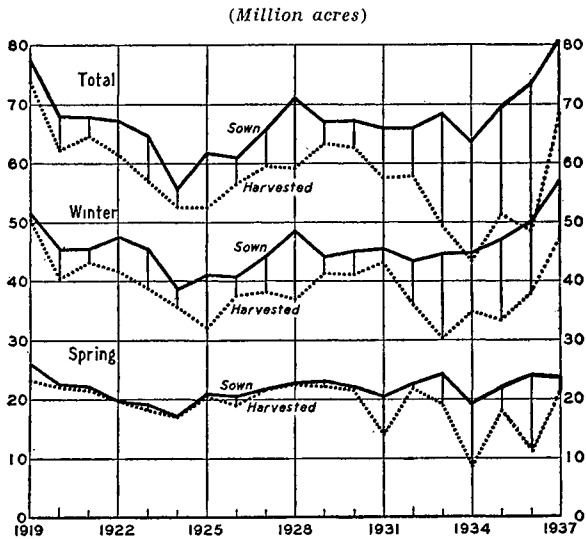
¹ The 1937 crop, it may be remarked, shows a return to the earlier level, substantially lower output in Canada being about offset by enlarged production elsewhere.

SOME SPECIFIC WHEAT CROPS

The United States had a short crop for the fourth successive year. The crops of 1926-32 averaged 861 million bushels, and each of these seven yielded a substantial surplus for export, carryover additions, and exceptional feed use. By contrast, the crops of 1933-36 averaged only 583 million bushels, practically one-third less. Each of these four crops fell below ordinary domestic requirements, and each was smaller than the short crop of 1925. As the accumulated surplus wheat was used up, imports flowed in from Canada to relieve shortages in durum and bread wheats and to help meet feed deficits (see p. 138).

As shown by Chart 4, the United States wheat acreage sown for harvest in 1936 was

CHART 4.—WHEAT ACREAGE SOWN AND HARVESTED IN THE UNITED STATES, CROPS OF 1919-37*

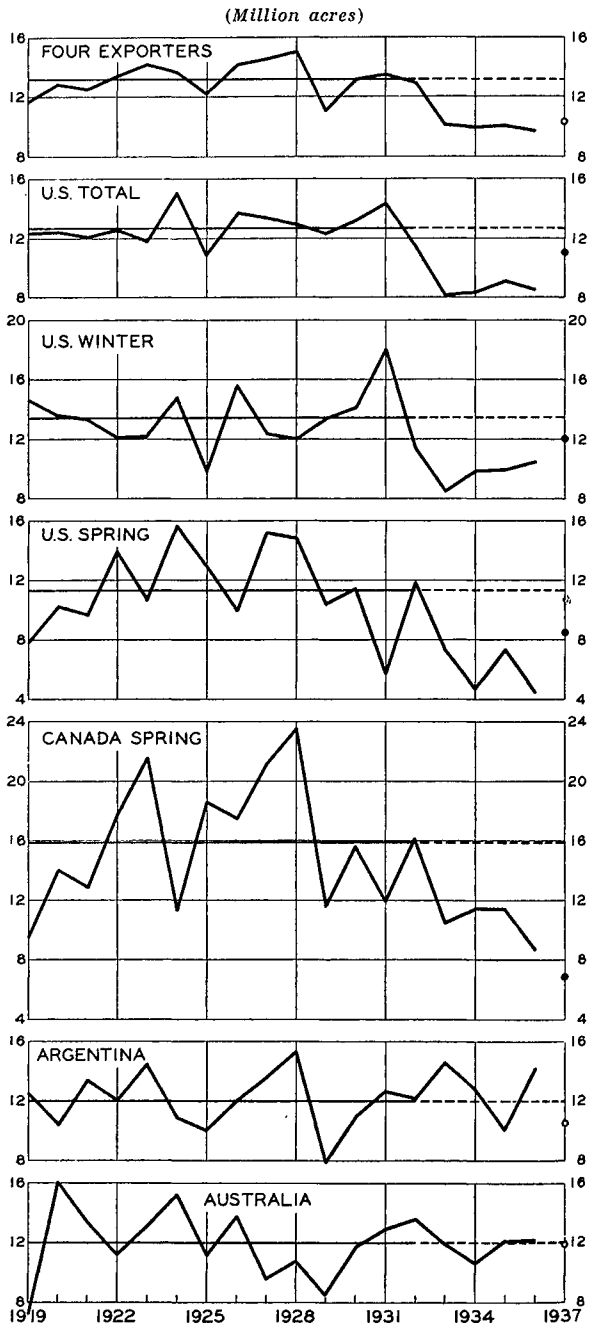


* Latest estimates of Bureau of Agricultural Economics. See Table VII, and *The Wheat Situation*, March 1937.

nearly 10 per cent above the average sown for the crops of 1926-32, and the largest since 1919, until even this record was exceeded in 1937. In both winter and spring wheats, however, abandonment was so heavy in 1936 that the harvested acreage was the smallest since the war except in 1934; and drought held down yields per acre harvested.

Chart 5 brings out some aspects of the exceptional character of the season in what may properly be called, for the period 1919-37

CHART 5.—WHEAT YIELD PER SOWN ACRE IN FOUR CHIEF EXPORTING COUNTRIES, 1919-37*



* Computed from latest official data on sown acreage (except for Canadian winter wheat) and production, such as given in Tables I-III, VII. Averages (heavy horizontal lines) are for years 1919-32. Data for 1937 are preliminary.

as a whole, the four chief exporting countries. On the basis of their aggregate production and substantially total sown acreage, the average yield per acre sown was smaller in

1936 than in any of the preceding 17 years. This was due primarily to very low yields in North America, where with average yields something like 500 million bushels more would have been harvested.

In the United States the reduction in yield per sown acre was most drastic in spring wheat. At 4.5 bushels per acre, this was the lowest in the period covered by the chart and only 40 per cent of the 1919-32 average. The corresponding figure of 10.4 for winter wheat was not so low as in 1925 and 1933-35, but only 80 per cent of the 1919-32 average. Had 1936 yields been up to that average, the total crop would have been 310 million bushels larger than it was.

In Canada the acreage sown to spring wheat in 1936 had been exceeded only in 1931-33. Compared with an average yield per sown acre of 23.5 bushels in 1928 and 15.9 in 1919-32, the average of 8.7 in 1936 seemed extremely low, until an even lower figure was recorded in 1937. At the average yield of 1919-32, the Canadian spring wheat crop of 1936 would have been at least 180 million bushels larger than it was.

In Argentina, on the other hand, the yield per sown acre was much above average and the yield per harvested acre exceptionally good. The crop was well below previous large ones only because adverse weather held down the acreage sown and was responsible for about the usual percentage of abandonment. The Australian yield was very close to the 1919-32 average, and the crop was of only moderate size because acreage was held down by effective competition from sheep-raising, with some influence from adverse weather before and during the sowing period.

The Danube basin countries all had good crops in 1936, and the aggregate production of the four countries was the largest since the war. This was due to high average yields on a large acreage. Bulgaria had a record yield per acre, and Yugoslavia, on the largest acreage since it became a separate nation, had a yield exceeded only in 1928.

In Europe ex-Danube plus French North Africa, crop reductions resulting from poor yields were largest and most significant in Italy, Spain, and France and French posses-

sions, though the change in basis of estimating the French crop leads to exaggeration of the actual reduction below normal levels there. Relative to recent averages, the reduction was most striking in French Morocco and Portugal, primarily because of extremely low yields. Among the very small wheat producers, Finland and Norway had record crops, and the Irish Free State the largest one in several decades. These were due mainly, however, to further expansion of wheat acreage under government stimuli, and the yield was exceptionally low in the Irish Free State. In Denmark, owing largely to prolonged drought during the hottest part of the summer, the grain harvest of 1936 was the smallest in 14 years and 20 per cent below that of 1935; that of wheat, however, was about equal to the average of 1928-33, prior to the recent expansion of wheat acreage.

Turkey had excellent grain crops in 1936. For wheat, rye, and barley, official statistics show yields per acre and production above previous postwar records, and the oats crop also relatively large, though its yield per acre was low.¹ In 1929-35 Turkey had six wheat crops ranging between 93 and 105 million bushels, and one short crop of 69 million in 1932 (Table II). At that level of production, she became a minor net exporter (Table XXV). The 1936 crop was eventually estimated at 138.5 million bushels.² In view of conditions exceptionally conducive to large exports in 1936-37, Turkey's net exports of 4.7 million bushels of wheat (Table XXII) seem surprisingly small. We are disposed to question whether the crop data are properly comparable, though it is reasonable to infer that domestic wheat consumption increased and it is possible that the carryover was considerably enlarged.

Iraq, for which crop statistics are available for only a few years (Table VIII), also seems to have had a bumper crop in 1936; and her net exports of 5.2 million bushels tend to confirm the broad fact, regardless of pre-

¹ See *Foreign Crops and Markets*, Oct. 2, 1937, p. 226. Standing estimates of the 1937 crop are a little larger.

² As late as December 1936 the U.S. Department of Agriculture was carrying a 1936 estimate of 80,281,000 bushels.

cise comparability of estimates. We infer that the crop of Iran (Persia) was also good, but no estimate is at hand. Syria and Lebanon, and Palestine, are reported to have produced less wheat than in 1934 and 1935, though the former territory was able to increase its net exports to 1.4 million bushels.

The USSR had short crops of grain in 1936. Though no official estimates of the crops have yet been made public,¹ there have recently appeared several statements in Soviet official periodicals, by Soviet officials, comparing the total 1937 grain crop with those of previous years. These permit one to compute that the production of all grains in 1936 is officially considered about 15 per cent smaller than that of 1935 or the average of those of 1933-35. It is reasonable to apply the same percentage in estimating the bread-grain production in 1936; hence a trade estimate of 960 million bushels of wheat,² on the basis used from 1933 to 1935, may be not far from the truth. Drought badly affected spring-sown wheat and rye, while the yield of the less important winter wheat was more satisfactory.

It seems safe to say that Soviet bread-grain crops fell considerably short of domestic requirements at the prevailing low level, and that probably considerable drafts were made upon the substantial stocks that the government had built up. Two other facts lend support to this inference: the completion of the grain collection plan for the 1936 crop was never officially announced, as had been usual in the preceding years; and by a decree of March 20, 1937, collective farms and individual farmers were relieved of arrears in the grain deliveries from the 1936 crop. Under the circumstances, Russian wheat exports were a mere trickle.³ At no time did they promise (or threaten) to be substantial, and total net exports were reported only 4.6 million bush-

els. Of the gross exports, over a third was shipped to Spain for use in the area controlled by the Loyalist Government; and the rest, mainly in the form of flour, moved chiefly to Mongolia.

In China, 1936 was a year of good crops. The wheat crop is officially estimated at 848 million bushels as compared with a 1931-34 average of 820 million and a 1935 low of 783 million (Table VIII), but was reported below average in quality. Rice, kaoliang, and millet were all abundant, and other food crops were generally above average. In Manchukuo, the 1936 wheat crop was of only moderate size, a little smaller than in 1935; but other important food crops were well above recent levels.

WHEAT TYPE AND QUALITY

In 1936-37 as in 1935-36, soft types of wheat were relatively abundant, hard bread wheats relatively scarce; and durum supplies were exceptionally short.

In the United States, crops of soft red winter and white wheats (the latter mainly soft and semi-hard) were each one-sixth above the comparable average for 1928-32; by contrast, production of hard red winter was only two-thirds, and that of hard red spring only one-third, of the corresponding average (Table VI). Almost all the reduction in the Canadian crop was in hard red spring wheats, and the carryover surplus there was also reduced. Spring wheat in the Volga region, which produces one of the hardest types, suffered most from drought. The Manchurian crop, mainly hard red spring, was again below average in size. Hard wheats figure but little in European crops; but among the Danube countries it was in Hungary, which produces the hardest types, that the outturn least exceeded the average. Fortunately for European millers, Argentine wheat became available in good volume after the turn of the year and proved very satisfactory for milling.

It is pertinent to add that government restrictions in Europe have reduced the aggregate outlet for hard wheats; and that price pressures, superadded to other stimuli, have led to improvements in milling technology such that the scarcity of strong bread wheats

¹ In March 1937 the State Crop Estimate Commission, which had been responsible for official crop estimates since 1933, was abolished. This may afford one reason for the delay in publishing the official crop statistics. It also means one more reorganization of Soviet crop statistics.

² *London Grain, Seed and Oil Reporter*, Oct. 1, 1937.

³ See Tables XX, XXII, XXIII. Broomhall's weekly data showed no shipments from South Russia.

entailed less hardship than would have been felt with the techniques of a few years ago.¹

The accompanying tabulation, in million bushels, brings out the notable shortage in

Year	United States	Canada	Morocco	Algeria	Tunis	Spain	Portugal	Italy
1934....	6.9	....	27.9	28.3	9.6	37.6	8.6	57.8
1935....	24.8	17.8 ^a	13.9	24.5	11.0	30.8	8.2	55.8
1936....	8.9	15.3	8.5	18.7	4.4	24.6	3.2	57.6
1937....	28.3	30.7	11.4	20.2	11.0	....	...	60.6
Average 1930-34.	29.7	....	20.7	22.6	9.1	31.6	6.3	58.1 ^b

^a Official approximation. For earlier years some indication of the relative size of the different crops can be gleaned from data on carloads inspected in the Western Division; but the quantities fed on farms probably vary a good deal from year to year.

^b A 1931-34 average.

the principal durum crops of 1936, as well as indications of larger outturns in 1937.²

In the United States, the 1936 durum crop was under one-sixth of the 1928-32 average. Including a carryover nearly as large as the crop, the total domestic supply was estimated at 16 million bushels, well below usual domestic requirements and little larger than in 1934-35. Again, as in the three crop years preceding, no durum was exported. Some 9 million bushels of high-priced Canadian du-

¹ See discussion of premiums on No. 1 Manitoba in Liverpool below, p. 152.

² Official data for U.S. from Bureau of Agricultural Economics, *The Wheat Situation*, February 1937, p. 15, and November 1937 crop report, and for Canada from Dominion Bureau of Statistics, *Monthly Review of the Wheat Situation*, Sept. 24, 1937, p. 4. For other countries estimates of the Foreign Agricultural Service, Bureau of Agricultural Economics, as reported in *World Wheat Prospects*, May 29, 1936, p. 14, and Aug. 31, 1936, p. 14; and *Foreign Crops and Markets*, July 19, 1937, p. 25. See also *ibid.*, Aug. 10, 1936, pp. 153-62.

³ See Tables VI, XV, XVI, and below, pp. 138, 147.

⁴ *Milling*, Dec. 5, 1936, p. 634.

⁵ Detailed data based on sample studies by the Comisión Nacional de Granos y Elevadores are reported in its Publicación no. 11: *Catálogo de los Patrones Oficiales de Trigo, Avena, Cebada, Centeno y Lino de la Cosecha 1936-37*; but these are not wholly comparable with those summarized for the four preceding crops in our last "Review," WHEAT STUDIES, December 1936, XIII, 148 n.

⁶ There are some indications that the standards were fixed too conservatively. *Commercial Intelligence Journal*, Mar. 27, 1937, p. 567.

rum were imported over the 42-cent duty,³ but hard winters replaced durum in part of the semolina production.

In Canada, where durum wheat production in Manitoba has been sizable in recent years, the 1936 crop was smaller than those of 1933 or 1935, though probably not below recent averages. In French North Africa, from which France normally draws her durum supplies and Italy frequently obtains part of hers, the durum portions of the poor 1936 wheat crops were so unusually small that French Morocco prohibited exports and Canadian durums were shipped not only to France but to Morocco and Tunis.⁴ The 1936 durum production was small in Spain, very short in Portugal, and about average only in Italy. Italian imports included 762,000 bushels of durum, obtained chiefly from Libya, Turkey, Canada, and Argentina.

Broadly speaking, good quality characterized the 1936 crops, at least outside of Europe. This was especially true of the principal export wheats.

In Canada, thanks to the hot dry weather during the growing season, the protein content of hard red spring wheats was the highest on record, on grades 1-3 Northern averaging 15 per cent; very little graded low, tough, or damp; and the proportions in the higher grades were exceptionally high (Table IX). Most of the durum graded No. 1 or No. 2 Amber, much higher than in 1935-36.

Argentine wheats were of high test weight, unusually excellent in milling quality, and appear to have contained less than the usual proportion of wheats classed as soft.⁵ Australian f.a.q. standards, based on test weight per measured bushel, were again high, though only in Western Australia were they up to the exceptional peaks of 1935-36.⁶ Danubian wheats also were considered of relatively good quality.

In Europe ex-Danube quality was variable but in general below average. There was a considerable proportion below customary milling standards in the United Kingdom, Holland, Belgium, and France. The small French crop averaged only about 72 kilograms per hectoliter, not much better than the extremely low average test weight re-

ported for the 1930 crop;¹ and the flour yield was consequently low. Both in Germany and Czechoslovakia official test-weight requirements were reduced,² reflecting inferior quality; and much of the wheat in Central Europe was not very good.

In the United States, good quality characterized most types in most regions, in sharp contrast to the very low quality of most types produced in 1935.³ Hard red winter wheat generally was of excellent quality, judged by class, grade, test weight, and protein content; but milling and baking tests revealed deficiencies in other respects, especially in portions of the Southwest. For example, most of the wheat harvested in south-central Kansas was of only average quality, while that produced in the northern and western sections was so seriously damaged by blasting heat two weeks before it ripened that flour made from it was very difficult to handle in the bakery.⁴ Such conditions and erratic local variations elsewhere, coupled with the unusual proportion of the different types of wheat, presented operative millers with exceptionally numerous milling troubles.⁵

The crop of soft red winter was generally excellent in quality as well as large in quantity. White wheats were again of high quality, and the proportion grading Hard White was relatively large. Both soft red and soft white were liberally used in milling bread flours, particularly for household use, since

¹ Official data for the crops of 1909-33 show a range from 78.99 in 1911 to 73.46 in 1931, except for one extreme low of 71.66 in 1930, and an average of 76.29. J. H. Shollenberger, *Wheat Requirements in Europe . . .* (U.S. Department of Agriculture Technical Bulletin 535, September 1936), p. 76. Early reports on the 1937 crop indicated a test weight nearly up to this average.

² *Foreign Crops and Markets*, Nov. 16, 1936, p. 580.

³ See the summary report of the Bureau of Agricultural Economics, on *Quality of the 1936 Crops—Wheat, Barley, Oats, Rye, and Grain Sorghums* (November 1936), based on inspected receipts in July-September 1936; and L. E. Leatherock, in *Southwestern Miller*, Nov. 10, 1936, p. 40.

⁴ C. O. Swanson, in *ibid.*, July 27, 1937, p. 26.

⁵ Edgar S. Miller, in *Northwestern Miller*, July 14, 1937, pp. 17, 40.

⁶ Bureau of Agricultural Economics, *The Feed Grain Situation*, Aug. 26, 1937.

⁷ Bureau of Agricultural Economics, *Quality of the 1936 Corn Crop . . .*, April 1937.

they could be effectively blended with high-protein hard red winters. Hard red spring and durum were far better than in 1935, though considerably below the high standards of the 1934 crops. With a high proportion of light-weight grain, the volume of good-quality spring wheats was exceedingly small.

CROPS OTHER THAN WHEAT

Significant influence on wheat utilization and trade was exerted in 1936-37 by the size and geographic distribution of various other food and feed crops. The outstanding facts were the small crops of corn, rye, and other feed grains in the United States; feed shortage in Canada also; good crops of all cereals in the Danube countries, Turkey, and Iraq; poor crops of rye and barley, and good crops of potatoes, in most of Europe ex-Danube; the abundance of maize in Argentina and other exporting countries exclusive of the United States; good crops generally in China and Manchukuo; and big crops of rice in India, Japan and her possessions, and most other important rice-producing areas. These factors made for heavy feed use of wheat in the United States and light feed use elsewhere, and contributed in many countries to lessen the pressure on wheat for food use; and they help to explain several peculiarities of the international wheat trade in 1936-37.

In the United States, feed-grain production in 1936 was extremely small because of drought, indeed almost as short as in the disastrous year 1934.⁶ The corn crop was little larger than in 1934 and otherwise the shortest since 1881. The amount harvested for grain was only 1,263 million bushels, hardly more than half a normal crop; but the quality was uniformly high, far better than in 1935 throughout the Corn Belt.⁷ Crops of oats, barley, and grain sorghums were all well below average, though much larger than in 1934. Crop-year supplies of feed grains, including carryover stocks, were under 72 million tons, barely two-thirds of the 1928-32 average. The average supply per grain-consuming animal unit on farms worked out to only .691 ton, barely three-fourths of the average of .913 ton following the crops of 1928-32.

The hay crop in the United States, though well below average, was not strikingly short as in 1934; and the average per hay-consuming animal unit on farms was not far below a comfortable level. Pasture conditions during June–August 1936 were farther below average, but distinctly better than in 1934. With livestock numbers only slightly larger than those to which they were reduced in the summer of 1934, these factors kept the feed shortage from being as acute as in 1934–35. Nevertheless, feed grains were imported in exceptional quantities over the tariff walls—notably maize from Argentina;¹ and price relations were such as to cause large amounts of wheat to be fed.²

In Canada also, feed was scarce.³ The 1936 outturn of feed grains was exceptionally small: total supplies (including small stocks carried over) are estimated at 8.65 million tons; and supplies per grain-consuming animal unit are computed at .64 ton. All these figures were well below recent averages and the smallest since the war. Prices of feed grains increased sharply late in 1936, continued to advance until April 1937, and remained high through July. Hay and other fodder supplies, both in total and per hay-consuming animal unit, were also below average though not so low as in 1933–34 and 1934–35. Corn imports, mainly from Argentina, were unusually heavy at 20.6 million bushels.

¹ Comparative data for July–June crop years, in thousand bushels, are as follows, with net exports shown in parentheses:

July–June	Corn	Barley	Oats
1924–29 average ..	(20,796)	(35,595)	(19,763)
1929–34 average ..	(5,649)	(9,510)	(4,216)
1934–35	18,106	14,113	14,498
1935–36	30,470	(2,041)	(1,319)
1936–37	77,421	23,488	(756)

² The official index number of prices paid by farmers for feed had ranged between 93 and 95 per cent of the 1910–14 average in January–June 1936. From 94 in June it rose to 134 in August; it remained near this level through December, rose to a peak of 153 in April–May 1937, and then declined to 141 in July. Bureau of Agricultural Economics, *The Agricultural Situation*, Sept. 1, 1937, p. 7.

³ See Dominion Bureau of Statistics release of Oct. 9, 1937.

⁴ Bureau of Agricultural Economics, *World Wheat Prospects*, September 1936, p. 7.

⁵ Summarized from October issues of International Institute of Agriculture, *Monthly Crop Report and Agricultural Statistics*.

The 1936 rye crop of Europe ex-Russia was the smallest in recent years except 1931, and far below the big crop of 1933 (Table V). Practically everywhere except in the Netherlands and Rumania the crop was below the 1931–35 average, though the reduction was not very large in Germany and Poland, the two greatest producers and consumers. Moreover, the quality of the rye produced in many sections of central and northern Europe was reported less suitable than in most seasons for use as bread grain.⁴ Both the United States and Canada had small crops, less than half as large as in 1935. Argentina too had a small crop, despite a record acreage.

International trade in rye grain was light, though larger than in 1935–36, and a severe stringency developed in the spring. Net exports of net-exporting countries, in million bushels of 56 pounds, compare as follows for recent years:⁵

1928–29 ..	44.0	1931–32 ..	74.5	1934–35 ..	46.3
1929–30 ..	49.5	1932–33 ..	33.4	1935–36 ..	29.4
1930–31 ..	52.3	1933–34 ..	46.7	1936–37 ..	33.7

Sources of net exports in 1936–37 were as follows, in the same unit:

Danube countries.	10.8	Argentina	6.1
Poland	8.2	Canada	3.6
Other Europe	2.2	USSR	2.8

Poland was the largest single net exporter, though her exports were much below average. The Danube countries combined had larger net exports than for many years. The Netherlands, usually a net importer of rye, was the largest other European net exporter. Argentine exports were above average, but had been larger in at least three earlier years. Much the same was true of Canada. The USSR, on the other hand, exported much less than on the average in recent years, though more than in 1928–29 or 1934–35.

The European barley crop of 1936 was about the same as in 1935, but 5 per cent below the average for 1931–35 and nearly as low as in 1931. It was notably small in Spain, Czechoslovakia, Italy, and Latvia, but above average in the Lower Danube states and the Netherlands, and in lesser degree in several other countries. In French Morocco, where barley is the leading cereal crop and important for food,

bumper crops of barley and maize were harvested from enlarged acreages, while the wheat crop was extremely poor and that of oats below average. Large crops were also recorded in Turkey and Iraq, while those of other countries in the Near East and Egypt were above average.

International trade in barley was around 120 million bushels, as measured by net exports of net-exporting countries. This was about the same as in 1933-34, somewhat larger than in any other of the past four years, but a good deal smaller than was common up to 1932-33. The largest exporters were Rumania, Canada, Argentina, Iraq, Poland, and Morocco. As in 1934-35, the United States was a net importer.

The European oats crop was about as large as in 1935 but otherwise the smallest since 1924. For the most part, however, the small crop was a natural result of widespread gradual contraction of acreage attending expansion of other crops and decline in the number of horses. In the United States and Canada, by contrast, adverse weather cut the outturn far below average, though not so low as in 1933 and 1934 in the United States.

International trade in oats was not much above the low level of 1935-36. As in several recent years, Argentina was the leading exporter, furnishing nearly half of the total. Canada was a poor second, and Poland and Chile ranked next.

European production of maize in 1936 was generally above average except in Spain and Portugal, and the total moderately exceeded the previous record set in 1932. Big crops were secured in Rumania, Yugoslavia, Hungary, and Italy, which are the largest producing countries and together account for about five-sixths of the European crop.

Argentine maize crops harvested in March-July 1936 and 1937 followed a bumper crop

and made a three-year total heretofore unapproached (Table V). Even after deducting record Argentine exports to the United States to supplement scarce feed supplies in this country, her exports to other countries were larger than in most years. South Africa, which usually ranks high among the secondary exporters, had a record crop in 1937. With high wheat prices restricting use of wheat feed in Europe, maize was available to fill the breach, and international shipments of maize were unprecedentedly heavy (Table XX).

Potatoes were above average in Europe as a whole, and in most individual countries except a few in Western Europe including the British Isles, France, the Netherlands, and Switzerland. Big crops were secured in Germany and Poland, the largest producers, and also in the Baltic States, Czechoslovakia, Hungary, and Italy.

Rice crops in 1935 had been below the average of the preceding five years in the world ex-China as a whole, in China, India, Japan, and particularly the Philippines, though they were above average in Java and Madura and French Indo-China and Taiwan, and close to average in Chosen and Siam. The 1936 rice crops, by contrast, were almost everywhere large, and the total for the world ex-China exceeded the record set in 1930. Japan had a rice crop second only to the record one of 1933, and the combined production of Japan, Chosen, and Taiwan practically equaled the 1933 high total.

As we have seen, the 1936 grain harvests were relatively ample in China. Manchukuo had large crops of kaoliang, millet, maize, and rice, all of which are important food crops there. The total of these four crops was above the 1927-31 average and the largest since then; and the total crop outturn was distinctly the best since 1933 in spite of only mediocre crops of soy beans and wheat.

II. UTILIZATION AND CARRYOVERS

The aggregate disappearance or utilization of wheat in the world ex-Russia in 1936-37 differed little from the levels of other recent years (Chart 1, p. 106); but the margin of error in estimates of production, stocks, and

certain categories of shipments is such that we cannot be sure whether total disappearance was slightly above or slightly below the average of the three or four preceding years. Feed use and exports to China (including Man-

churia), which had raised world utilization to peak levels in 1930-31 and 1931-32, were both much lower in 1936-37 than in those years, and somewhat lower than in 1935-36. Apparently, total utilization in 1936-37 was not significantly different from that of 1928-29, despite the growth of population in the interval; but exclusive of Turkey, the total was one of the lowest in a decade. It is clear that the pre-depression upward trend in world wheat consumption for food has not been resumed, although this trend has continued in some countries and in others some recovery has followed the decline.

Continental Europe ex-Danube, plus French North Africa, ordinarily accounts for about three-eighths of total wheat disappearance in the world ex-Russia. In this area an upward trend in wheat utilization was well marked in the first postwar decade. The 1928-29 peak has not since been surpassed, according to our estimates shown by the dotted curve in Chart 6. The drop in 1936-37, to the lowest point in a decade, is partly due to lower figures for France which are probably not fairly comparable; and such net reduction as actually occurred in this area as a whole was chiefly due to reduced feed use of wheat in a few countries. Drastic crop reduction was largely offset by drafts on stocks and increased net imports.

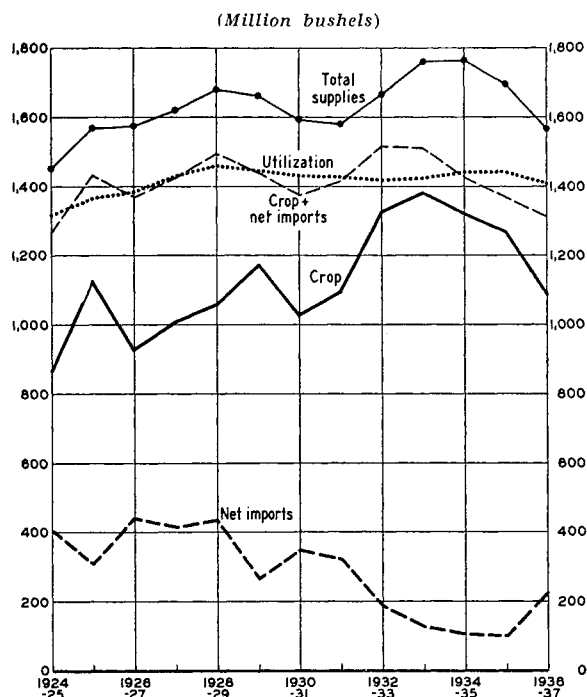
In the British Isles, wheat utilization during the crop year appears to have been 281 million bushels—rather less than in any of the five preceding years, but on much the same level as in the decade ending with 1930-31 (see below, pp. 140, 179).

In the four chief exporting countries, domestic utilization of wheat was about 950 million bushels, 50 to 60 million above the average for the three preceding years. The United States, accounting for three-fourths of the total utilization by the four exporters, was responsible for most of this increase. Here the principal factors were expanded utilization for feed and seed; but contributing factors were increased flour consumption, higher wheat requirements per barrel of flour, and possibly some slight accumulation of flour stocks.

Other significant changes in world disappearance were increased consumption in Tur-

key, reduced consumption in Manchukuo, and very small exports to China. In the USSR, wheat consumption was presumably smaller than in several recent years.

CHART 6.—WHEAT SUPPLIES AND UTILIZATION IN CONTINENTAL EUROPE EX-DANUBE AND FRENCH NORTH AFRICA, ANNUALLY FROM 1924-25*



* Summarized from data in Tables II, XXI, XXXI, XXXII. *Total supplies* include carryover, crop, and net imports of the region as a unit. *Utilization* represents crop plus net imports, adjusted for estimated changes in carryover. *Net imports* of the region here represent net imports of net-importing countries minus net exports of net-exporting countries. For major subdivisions, see Chart 23, opposite Table XXXII.

FOOD USE OF WHEAT

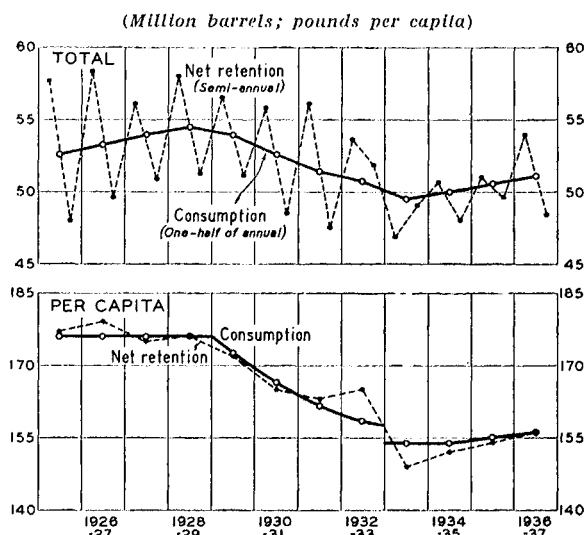
For only a few countries are data bearing on food use of wheat—by all odds the largest outlet—sufficiently extensive or reliable to warrant discussion with reference to individual years, and even these are subject to reservations and revision.

In the United States, food use of wheat and flour in 1936-37 were at about the same level as in 1923-24, and 6 or 7 per cent below the 1928-29 peak. Wheat grindings and flour production continued to increase from the low point reached in 1933-34, but remained below the levels of 1932-33 and much farther

below those characteristic of pre-depression years (Table XXVIII).

For the depressed level of flour production in 1936-37, two factors were primarily responsible: the very limited scope for commercial exports of flour, and the low level of per capita consumption shown in the lower section of Chart 7. The increase over recent

CHART 7.—FLOUR CONSUMPTION IN THE UNITED STATES, 1925-26 TO 1936-37*



* Crop-year data in Table XXVIII; and see Appendix Note.

preceding years is largely attributable to higher flour consumption; this in turn was largely due to growth of population, coupled with the arrest of the decline in per capita consumption and perhaps some slight increase.¹

¹ See Appendix Note.

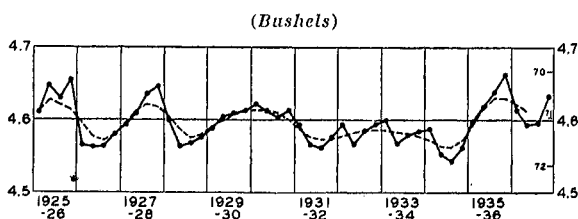
² See Table XXXI, and N. Jasny, "Wheat Problems and Policies in Germany," *WHEAT STUDIES*, November 1936, XIII, 101-08, 136-37. The return of the Saar territory to Germany on March 1, 1935, following several years in which it was treated as part of the French economy though under international administration, involves a slight change in the data on wheat utilization in these two countries. Wheat production in the Saar is only about half a million bushels, and its wheat deficit is estimated at about 3 million. *Ibid.*, pp. 113, 140, and Bureau of Agricultural Economics, *Foreign Agriculture*, June 1937, I, 267.

³ This inference is broadly supported by official data on wheat flour production in mills with a daily capacity of more than 3 tons of flour, published monthly in *Wirtschaft und Statistik*. There was probably, however, some increase in flour stocks outside reported positions.

Net exports of flour, plus shipments to possessions, were higher than in 1935-36 but about the same as in 1933-34 and 1934-35.

Despite the marked superiority in the milling quality of the 1936 crop in certain regions, as compared with that of 1935, the number of bushels ground per barrel was higher than in any of the four years preceding 1935-36. This was perhaps due partly to the milling of wheat carried over from the 1935 crop, as suggested by quarterly data shown in Chart 8; and partly to the low test weight of much of the spring wheat. Also, high prices for mill feed, which helped American millers to have a satisfactory financial year, tended to keep down rates of extraction. Thus, several motives for lower extraction account for the high ratio of bushels to barrels.

CHART 8.—WHEAT USED PER BARREL OF FLOUR IN UNITED STATES, QUARTERLY FROM 1925-26*



* Quarterly estimates underlying annual averages given in Table XXVIII. The inset scale at the right permits the plotted points to be read roughly in terms of extraction rates (per cent).

In Germany, domestic utilization of wheat appears to have risen to the highest point since 1928-29.² Since feed use was certainly lower than in 1935-36 and probably lower than in three of the four preceding years, and seed use changed but little, we infer that German food use of wheat rose well toward the pre-depression peak.³ Per capita use of wheat registered another marked advance toward the pre-depression 3-year average, but that of rye was presumably relatively low.

Among the three smaller Baltic states, poor wheat crops in 1936 apparently led to reduced domestic wheat utilization in Lithuania, but in Latvia and Estonia did not prevent advance to new high levels. In Finland, a record crop permitted consumption to expand to a new peak, while net imports continued to shrink. These are all countries in which rye strongly

predominates over wheat as a food grain, and the depression and accompanying government measures have moderated the pre-depression trend toward gradual displacement of rye by wheat.¹

In the past year, wheat utilization (primarily for food) apparently rose to new record levels in a number of other countries. In Norway and Hungary, this reflected a continuance of an upward trend which the depression retarded but scarcely interrupted. In Tunis and Brazil, it reflected sustained recovery in wheat consumption following contraction in the depression years. In Turkey, it reflected mainly the abundant crops of 1936, coupled with a broad but erratic upward trend in wheat use.

In the four Lower Danube countries, wheat consumption is fairly stable in Hungary, moderately so in Bulgaria, and highly variable in Yugoslavia and Rumania. In the first three countries, utilization in 1936-37 was close to previous high points. Our present estimates suggest that this was not true in Rumania, probably because of the abundance of other food grains and the relative dearness of wheat. For the four countries combined, wheat utilization seems to have been a good deal higher than in the two preceding years of small wheat crops, but only about as large as in 1928-29 instead of at the high level of the seasons following good crops in 1931 and 1933 (Table XXXI). In 1936-37, as in most other years, nearly all of the consumption ex-seed was for food.

Contraction of wheat consumption in 1936-37 was perhaps most marked in French Morocco, where barley served as a ready substitute, and in Manchukuo, where various other food crops were abundant and flour was relatively dear. In Japan, flour consumption appears to have fallen slightly from the 1935-36 peak. This may well be attributed to a smaller domestic wheat crop, high prices of flour in sympathy with world markets, and abundance and relative cheapness of rice; but the difference was not large. In India, abundance of other food crops permitted contraction of wheat consumption as high prices in world markets drew wheat into export; but the basic

data on crops and stocks are too unreliable to give assurance that, as our figures seem to show, wheat consumption there was the lowest since 1929-30.

SEED AND FEED USE

The volume of wheat used for seed in 1936-37 must have topped all previous records, though the increase over 1935-36 probably amounted to only 12 to 15 million bushels. In the United States, the wheat acreage sown for harvest in 1937 was the largest on record (Chart 4, p. 110). In Argentina, Australia, and Canada, seeded areas were well below records established in 1928, 1930, and 1932 respectively. Never before, however, has the combined area sown in the four chief exporting countries risen so high. Generally elsewhere 1937 wheat acreages were near or above their recent peaks, and in several instances set new records (Table III). For the world ex-Russia the seeded acreage (about 277 million acres) was certainly larger than ever before. Moreover, as compared with earlier years of high sown acreage such as 1928 and 1930, the total contained a larger proportion of areas where seed use per acre is relatively high.

In the United States, feed use absorbed an unusually large proportion of domestic wheat supplies. In the depths of the depression, high feed use was encouraged by the extreme cheapness of wheat. In 1935-36 inferior quality of much of the crop had been chiefly responsible for heavy feed use here. In 1936-37, by contrast, wheat was dear; there was little low-quality wheat except in the interior Northwest; and while a large proportion of the hard red spring wheat was light in weight, the number of bushels was small. But the feed shortage, and in particular the short crop and very high price of corn, led to heavy feed use on many wheat farms where home-grown marketable wheat was the least expensive grain to feed. According to standing official estimates, such use was larger than in any of the three preceding years (Table XXX). While direct evidence is scanty, it may be inferred that the same factors made for liberal commercial feed use of domestic wheat in various localities; and presumably most of the wheat imported at the 10 per cent rate went into feed channels.

¹ See M. K. Bennett, "World Wheat Utilization since 1885-86," *WHEAT STUDIES*, June 1936, XII, 361, 362, 377, 381, 386-87, 399, 401.

Altogether, probably 120 million bushels of wheat was fed to poultry and other livestock in the United States in 1936-37.

In Canada, feed use of wheat was certainly below the average for several recent years. Thanks to the excellent quality of the 1936 crop, unmerchantable wheat plus loss in cleaning was reported at the very low figure of 4 million bushels as compared with a high one of 14 million in 1935-36 (Table XXX). Standing estimates of home-grown merchantable wheat fed on wheat farms give 16 million bushels. That this figure (the smallest since 1929-30) was no lower must be attributed to the shortage of other feeds. In view of the high level of wheat prices and the availability of imported feed grains, it seems unlikely that commercial feed use of wheat came to much. Altogether the fraction of the Canadian crop used for domestic feed probably did not much exceed 20 million bushels, roughly 9 per cent of the crop.

In Australia, it is unlikely that feed use reached the level characteristic of recent years (officially put at 8.6 million bushels), but no close check is available. In Argentina, where feed use is never high, it must have been practically negligible in 1936-37, since the crop contained very little grain of low quality, wheat prices were high, and feed grain was abundant.

In Europe, the only other area where feed use is often considerable, such use was generally very light in 1936-37. As old stocks were cleared out, some wheat was found fit only for feed, and some wheat of the 1936 crop was unsuitable for milling. In the main, however, almost any millable wheat was relatively too expensive for feed use, and other feed-stuffs were generally available at relatively lower cost. Denaturing and subsidized diversion to feed use, to which several countries had resorted in other recent years, were not practiced. In Germany, where feed shortages had earlier led to marked expansion in feed use of wheat, in part stimulated by government subsidy, stringent regulations were adopted to check such use in 1936-37 (see p. 124). The persistent feed scarcity, and the price relationships that were fixed, presumably encouraged feeding wheat before it was

forbidden and labeled traitorous, but a reduction undoubtedly occurred. Certainly in the United Kingdom and Denmark, and probably generally throughout Northern Europe, feed use of domestic and imported wheat was curtailed a good deal.

Altogether, we hazard the guess that world feed use of wheat in 1936-37 did not much exceed the 1927-30 average that we have "guessed" at 200 million bushels.¹ It was certainly less than in 1935-36, and perhaps not much over half as large as the volume so used in such peak years as 1930-31, 1931-32, and 1934-35.

CARRYOVERS

The volume of wheat utilized in 1936-37 was maintained by drawing upon accumulated stocks. According to our standing estimates,² stocks in the area covered were nearly 250 million bushels less at the end than at the beginning of the crop year.³ The largest single reduction, some 90 million bushels, was in Canadian wheat in North America; but in Europe ex-Danube the net reduction appears to have approached 100 million, and shrinkage of stocks was almost universal (Table XII). The principal exceptions were in the Lower Danube countries, where 1937 carryovers were by no means large. Year-end visible supplies, which are this year best reflected in the data for about July 1 (Table XI), were also exceptionally low.

The period spanned by Chart 9 includes

¹ WHEAT STUDIES, December 1935, XII, 135-36, 139-40.

² For substantial revisions in our estimates for France and Czechoslovakia, see WHEAT STUDIES, September 1937, XIV, 20 n. All our estimates, however, continue subject to further revision. Conceivably some European countries may hold special or secret reserves of unstated amounts against the contingency of war; if so, we are unable to take these into our reckoning. Our assumptions as to the characteristic level of minimum working stocks, country by country, are more or less inaccurate. Margins of possible error are relatively larger when the level of stocks is as low as in 1937.

³ Concerning the principal areas not covered, we infer that grain stocks in the USSR (almost wholly in government hands) were materially depleted in 1936-37; in China and Turkey, however, the 1937 carryovers may have substantially exceeded those of 1936, and may have been liberal and large respectively.

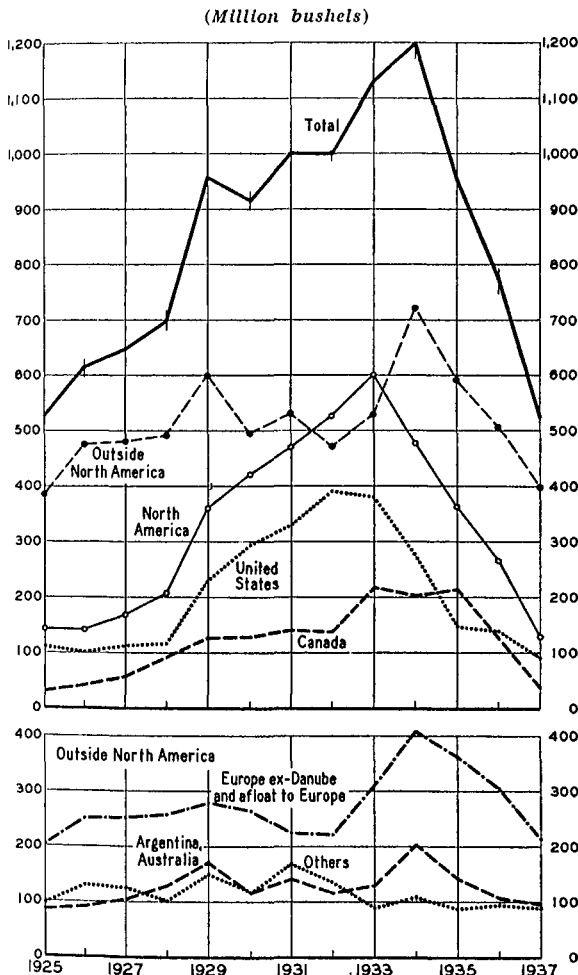
one complete cycle in world wheat carryovers. Stocks of old wheat were exceptionally low as of about August 1, 1925; they appear to have been about the same in 1937, which seems likely to mark the low point for some years to come.¹ The huge carryover surplus in 1929, a legacy from the bumper crop of 1928, ir-

below the fairly normal levels represented by averages for 1923-27, and in several instances below minima touched in that period (Table XII). The aggregate for 1937 was about 80 million bushels below that average, little over half as large as the average carryover in the seven years 1929-35, and only 44 per cent of the 1934 peak. For the first time in many years, countries with more than comfortable working stocks were fewer than those with bins uncomfortably bare, and nowhere did surplus stocks present a serious problem.

Even where government monopolies or their equivalent were in operation, carryover stocks under government control were generally small.² Wheat supplies and prices, and government finances as well, were not such as to permit building up—or, in most cases, even maintaining—reserves against the event of war; the demand for wheat was urgent enough to justify drawing upon reserves against weather-made emergencies; and wheat prices were such that agrarian interests did not urge surplus purchase for storage. Government wheat boards in Canada and Argentina, which still held considerable stocks on August 1, 1936, acquired very little wheat thereafter and disposed of their holdings within the next few months.

Official estimates of the carryover of old-crop wheat in the United States, as of July 1, 1937, are distinctive chiefly in suggesting that over half of the total was in store in city mills or elevators attached thereto, either owned by the mills or stored by them for others (Table XIII). The data are not altogether trustworthy, or fully comparable with those for earlier years; yet it seems safe to say that such mill stocks, while lower than in most years of the past decade, constituted an unprecedentedly large percentage of the total carryover. This was due in part to the early harvest and very rapid marketing of the 1937 winter-wheat crop (see p. 126), which at the same time contributed to notable reductions in

CHART 9.—WHEAT STOCKS IN IMPORTANT AREAS EX-RUSSIA, AS OF AUGUST 1, 1925-37*



* Data in Tables XII and XIII. Mainly our estimates except for the United States (as of July 1) and Canada.

regularly increased until carryovers reached in 1934 an all-time peak practically double what then seemed to be a normal level. The surplus was absorbed in the next three consecutive years of small world crops.

In 1937, carryovers were almost everywhere

¹ The 1938 carryover is practically certain to be well above the 1937 low, and may be above the 1923-27 average. As for the next few years, see discussion in WHEAT STUDIES, December 1936, XIII, 200-3.

² They were relatively largest in Czechoslovakia; see below, p. 137.

stocks of old wheat on farms, in country elevators, and in terminal elevators.¹

The United States carryover was unusual also in its distribution by types of wheat, if we may trust standing official estimates (Table XV). July 1 stocks of old-crop hard red winter constituted 50 per cent of the total. Stocks of soft red winter were exceptionally small, both absolutely and relatively. Those

of white wheat (mainly in the Pacific Northwest) were the lowest in more than a decade, yet constituted about 10 per cent of the large crop of 1936. Stocks of hard red spring and durum, though roughly a third as large as the respective crops of 1936, were most exceptionally low in absolute amounts, especially considering that spring-wheat harvesting had not yet begun.

III. MARKETING AND VISIBLE SUPPLIES

Having considered the position of wheat supplies and utilization during 1936-37 as a whole, we may now turn to developments in the course of the crop year. The next three sections are concerned with marketing and visible supplies, international trade, and prices. Preliminary to these discussions, it is pertinent to review the principal aspects of government measures, and changes therein during the year, leaving some details for mention at appropriate later points.²

¹ According to standing estimates, all of these three components were at or near their respective minima since 1919, if one allows for new-crop wheat in Bradstreet's commercial visible in 1937. In 1928 exceptionally heavy marketing in the spring, induced by high prices in April and May, had worked farm stocks down to what is now considered the lowest level since 1919. In 1937 some wheat on farms was intended for feed use before new-crop corn should become available.

² Current sources of information on this subject were reviewed in WHEAT STUDIES, December 1936, XIII, 208-09. *Foreign Agriculture*, a new monthly publication of the Bureau of Agricultural Economics, is an important addition. An extensive analytical survey by the international Wheat Advisory Committee is promised for early publication.

³ On Feb. 16, 1937 the FSCC announced uniform net prices on this seed wheat in carload lots for sale to farmers in drought areas of the interior Northwest, at \$1.60 for hard red spring and \$1.70 for durum.

⁴ Report of the FSCC for the fiscal year 1937, issued Sept. 1, 1937.

⁵ See our previous "Review," WHEAT STUDIES, December 1936, XIII, 165-70, and the first *Report of the Canadian Wheat Board*, dated Dec. 28, 1936. The latter showed that producers delivered to the board 150.7 million bushels of the 1935 wheat crop. Of this the board sold all but 2 million by July 31, 1936, and the balance prior to Nov. 21. Final accounts showed a loss of \$11,858,104.18 on the 1935 crop. From the Canadian Co-operative Wheat Producers Ltd. the board took over, in December 1935, some 205.2 million bushels, presumably chiefly in futures contracts. Of this it had sold all but 82.7 million by July 31, 1936. The board's report for 1936-37 will presumably be published soon.

GOVERNMENT OPERATIONS AND CONTROLS

In the United States and the principal exporting countries, government activities affected wheat marketing but little during 1936-37.

There were only two minor instances of government interposition in the United States. First, the variable subsidy on Pacific Northwest flour exports to the Philippines was continued (see p. 139). Second, during the latter months of 1936 the Federal Surplus Commodities Corporation purchased 1,522,459 bushels of hard red spring wheat, 364,841 bushels of durum, and quantities of oats, barley, and flaxseed, under a seed-conservation program in which the Farmers' National Grain Corporation, Central Bank for Cooperatives, and Farm Credit Administration participated. Sales for seed use in drought areas³ absorbed about 60 per cent of the wheat; and after the planting season the FSCC sold the remainder in commercial channels—420,384 bushels of hard red spring and 308,674 of durum.⁴

The Canadian Wheat Board, which had played so large a role in 1935-36, carried over 84.7 million bushels of wheat and wheat futures, which it sold without difficulty in the course of the crop year.⁵ Following a survey made in Europe in June 1936, by three representatives of the board, it appointed in October a European Commissioner with headquarters in London to carry on a campaign to encourage the use of a large percentage of Canadian wheat in the British market, and to follow up earlier efforts to cultivate the good will of British and continental millers and importers.

For 1936-37 the Canadian Wheat Board left unchanged the structure of prices at which it

guaranteed to buy wheat from farmers. But on August 28, 1936, after the market had risen well above these figures (Chart 25, p. 182), the government announced that the board would buy only if and when No. 1 Northern, basis Fort William, should close below 90 cents a bushel, 2.5 cents above the guaranteed level. This decision aroused vain protest from the central board of the three provincial pools, who strongly desired that the Wheat Board should continue active operations instead of merely guaranteeing against market collapse. It was, however, in line with the general policy of the Liberal Government to have the board sell the stocks accumulated under emergency measures and withdraw from the market when that could be done without serious disturbance. Since wheat prices did not fall below the stated level, the board's purchases of 1936 wheat amounted to only about 600,000 bushels, all tendered prior to August 28.¹

In Argentina, the market rose above the official buying price of 10 pesos per quintal in July 1936 (Chart 25, p. 182), and purchases by the Grain Regulating Board were not a factor thereafter. Presumably the board was a seller of spot wheat in the last half of 1936, but its holdings were not large enough to make its sales policy figure heavily. Before the new crop began to move, the trade made extensive advance sales for export, at distinctly higher prices. On December 2, the government announced that no minimum price was being established for the current crops of wheat and linseed, the former basis for such action having disappeared.² Late in March, after exports had been very heavy for many weeks, market reports conveyed significant hints of the possi-

bility of a wheat export embargo; but none was imposed until October 29, 1937, when it had no international significance.³

Argentina did set up, on August 1, 1936, a National Grain and Elevator Commission. This is charged with responsibilities for establishing a government-owned bulk-handling system, on which construction was begun during the year; and also for exercising various functions in connection with the seeding of different varieties, grain grading and inspection, and overseas marketing of Argentine wheat. The commission has its own representative in London, and has initiated a series of publications including a monthly review (*Boletín Informativo*). The influence of this new permanent agency, however, is in an entirely different category from that of the Grain Regulating Board, and it did not materially affect the course of marketing, exports, or prices in 1936-37.

In Australia, there was no machinery for government market interposition and no obvious need of any. Persistent agrarian agitation for the establishment of such machinery, under a board to be charged with maintaining a "home consumption price," received a setback during the year. Adverse court decisions had brought in question the constitutional authority of the Commonwealth Government to carry on such marketing controls as have been in operation with various products for several years. After long discussion, the government submitted to the electorate a constitutional amendment designed to confer such powers. Agrarian interests, the Country Party, the federal Prime Minister, and some members of the several cabinets campaigned for the proposal; but on March 7, 1937 it was defeated at the polls by a decided majority and failed to carry in any state.

In the Lower Danube countries, the control systems remained substantially unchanged. Under the conditions of large production there and higher prices on world markets, however, their operations did not so greatly affect domestic or export marketing. From all four of the countries, exports continued to be made under special trade or clearing agreements with near-by European countries, but a considerable fraction of the exports from Yugoslavia

¹ On July 23, 1937, it was officially announced that the Canadian Wheat Board minimum would not be changed for 1937-38, and that the board's recent policy would be continued until the Turgeon Commission makes its report. This virtually insured inactivity of the board during the new crop year. James R. Murray resigned as chairman; he was succeeded by George McIvor, formerly vice-chairman, the vacancy on the board being filled with the appointment of Robert Findlay, formerly treasurer.

² On Jan. 29, 1937, similar action was taken with respect to new-crop maize.

³ By this time the remaining Argentine stocks were very small, and fears of acute scarcity in world markets had subsided. The embargo was soon modified, and then canceled as of Nov. 18.

and Rumania moved in ordinary commercial channels.

In Hungary, minimum prices were fixed at much the same levels as in 1935-36, but market prices rose above them in October and continued thereafter to fluctuate above the 1935-36 average. As before, exports were directed by the Foreign Trade Department, handled by the Futura Company as agent of the government, and mostly disposed of under reciprocal agreements.

In Yugoslavia, the Privileged Export Company (*Prizad*) had for several years had a virtual export monopoly, since its purchases to cover sales under special trade agreements had forced domestic prices above commercial export parity. In 1936-37 such commitments were readily covered out of the large export surplus, export parity was attained through the rise in world prices, and private exporters were able to do a large business.

In Rumania, minimum prices for 1936-37 were raised only slightly above those for 1935-36, and advances in world markets caused domestic prices to rise above these minima. Export trade remained closely regulated, but export premiums were gradually reduced from around 20 cents a bushel in July-August 1936 to a nominal figure in January-February 1937. Processing taxes on wheat and rye flour were collected, as before, to cover export premiums. A considerable volume of wheat was exported to countries settling in "free" foreign exchange instead of under clearing agreements, and on these bills exporters obtained exchange premiums of 38 per cent, paid by importers.

In Bulgaria, the government Grain Monopoly continued in complete control of domestic and foreign trade, purchased wheat at much the same prices as in 1935-36, and maintained its selling prices for domestic use.

In most of continental Europe ex-Danube, as well as in the USSR, wheat controls generally continued much as in the previous year. In the light of current conditions, various modifications were made—some of them automatic consequences of advances in world market prices, others adaptations to meet the changed conditions. These included reductions in import duties, processing taxes, and bounties or subsidies to wheat growers, one

or more of which was to be found in the United Kingdom, Belgium, the Netherlands, Denmark, Sweden, Germany, and Italy.¹ Under the pressure of short crops and exchange difficulties, Germany and Italy even tightened their market regulations; and France, with her North African possessions, joined the group of countries with highly centralized wheat-control systems.

Germany's system, as it had evolved up to August 1936, we have recently set forth in some detail.² Within a few months the government took a number of steps to meet what was regarded as acute domestic shortage of bread grains. First, the use of wheat and rye for distilling was prohibited. By a decree of November 25, partly with a view to reducing feed use of bread grains, growers' delivery schedules were changed so as to compel more rapid movement of domestic wheat and rye, and the fixed-price schedule was altered so as to favor this (Table XXXIV). A decree of January 9, 1937 forbade the purchase and use of wheat, rye, and their derivatives for feeding livestock. Higher extraction of flour was required, first by the decree of December 19 and again by that of March 27. From March 15, millers were required to add 7 per cent corn flour to all wheat flour. Even so, substantial imports of wheat were necessary, and these were made under arrangements discussed below (p. 140).

In Italy a thoroughgoing grain monopoly was established on March 18, 1936 and organized for 1936-37 operations under a decree-law of June 15, 1936.³ It required all domestic wheat⁴ to be delivered to collective granaries.

¹ Some of these are more appropriately mentioned in connection with international trade or farm returns for wheat. The largest reductions in import duties, in Germany and Italy, signified only that the government purchasing agency had less to remit to the Treasury; and others, as in Denmark and the Irish Free State, had no particular influence on the volume of imports.

² N. Jasny, "Wheat Problems and Policies in Germany," *WHEAT STUDIES*, November 1936, XIII, 83-86.

³ See A. W. Schüttauf, "Strukturpolitik und Marktregulierungen in der italienischen Weizenwirtschaft," *Weltwirtschaftliches Archiv*, November 1936, XLIV, 530-48.

⁴ Exclusive of allowances of 3 quintals per person for use in the grower's household, and 2 quintals per hectare for seed.

There it came under the control of a central board established at the Ministry of Agriculture (*Ufficio Centrale Ammasso Grano*). With its sub-organizations in the several provinces, this body regulates the pooling of the wheat, which is handled by the executive agencies of the monopoly. The chief executive organ is the Federation of Agricultural Cooperatives. It is responsible for wheat importations, inter-regional distribution of the pooled wheat, and the supply of flour mills. Serving as local executive organs of the monopoly are various pooling bodies, mainly farmers' co-operatives, but including private granaries controlled by the state. Prices for wheat delivered to the pools were fixed for the crop year by the Permanent Wheat Committee. In July 1936 these were set at 108 and 123 lire per quintal for common wheat and durum respectively; but in August, presumably in anticipation of the currency devaluation effected early in October, these were raised respectively to 118 and 133 lire. Considering the small size of the crop, these prices seemed to growers very low, particularly following the devaluation (Table XXXIII).¹

The adoption of a thoroughgoing control system in France was influenced by dissatisfaction with the bewildering succession of previous measures; but it was primarily due to the advent in June 1936 of a "Popular Front" government headed by a Socialist, Léon Blum, whose political program included this new departure. The surplus problems created by the big crops of 1932-34 had largely been solved, partly by costly government opera-

tions in subsidizing exports and diversion to feed use, partly by small harvests in 1935 and 1936. As the crop year opened, there was no special emergency requiring strict governmental regulation. Yet on August 15, 1936 a law was passed establishing a National Wheat Board (*L'Office du Blé*) for the control of prices, production, marketing, and disposal of surplus wheat.²

This law centralized in the new board functions previously divided among various official bodies, and conferred some additional powers. Its main duty is to fix wheat prices to growers and millers, and to keep prices stable.³ It has a monopoly of imports and exports of wheat and wheat products; in the main, it exercises this by authorizations and supervision, much as had previously been done. It supervises domestic wheat marketing, with authority to regulate it in minute detail. It has authority to regulate production, through allocation of individual production quotas beginning with the 1938 crop. It has taken over the task of crop estimating.

The price-fixing provisions created difficulties under the peculiar conditions that obtained in 1936-37. Normally the Central Council of the board is charged with determining and altering the fixed prices, with reference to a "parity-price" formula on a prewar base, of which interpretations differ. The council was set up with 51 members,⁴ representing growers, merchants, millers, bakers, consumers, and the government. For major decisions of the council, as on prices, imports, and exports, a quorum of four-fifths of all the members and a three-fourths majority are required. This prevents the numerical preponderance of grower members from dictating such decisions, since 13 members represent either consumers or the government. In default of a council decision, however, the government decides; and thus far this has been the usual outcome.

Initially, 1936-37 prices were fixed at 140 francs per quintal (basis 72-kilogram wheat) as of September 1, to be raised 1 franc monthly through January and 1.50 francs monthly thereafter to the end of the crop year. This schedule was substantially higher than the prices prevailing in 1935-36, yet wheat grow-

¹ Fixed prices for the much larger 1937 crop are a little higher—125 and 140 lire respectively.

² See "The French National Wheat Board," *Foreign Crops and Markets*, Nov. 2, 1936, pp. 513-20, and L. D. Mallory, "An Appraisal of Recent French Wheat Policy," *Foreign Agriculture*, June 1937, I, 263-98. The complex system of regulations adopted is conveniently presented and indexed in J. Carret, *Manuel Pratique de la Réglementation concernant l'Office du Blé* (Beaumont, 1937).

³ From Jan. 26, 1933 to Dec. 24, 1934 a system of minimum prices had been in force, and for certain classes of wheat it was operative for some months thereafter. The new system is somewhat similar in form, but by no means identical in practice. Mallory, *op. cit.*, pp. 289-95.

⁴ Raised to 52, as of July 16, 1937, by increasing the number of producer members from 29 to 30.

ers protested that it was set illegally low. Within a few weeks, France abandoned the effort to support the franc at the gold basis that had been in force for several years. As it depreciated abroad, domestic prices and wages rose rapidly. In spite of urgent demands from growers, the fixed-price schedule was not revised. Converted at current exchange rates, the Paris price average for October-June works out to \$1.82 per bushel (Table XXXIV); but this was well below the world price plus the French import duty, and much lower than growers thought they were entitled to, especially considering the small crop.

In French North Africa somewhat similar agencies were set up. An Algerian Section of the French Wheat Board put in force a system of graduated monthly sales of specified percentages of declared stocks for domestic use and for export.¹ In French Morocco, faced with food scarcity, the government had earlier prohibited export of both durum and bread wheats, and subjected corn and barley exports to a 10 per cent ad valorem export duty.²

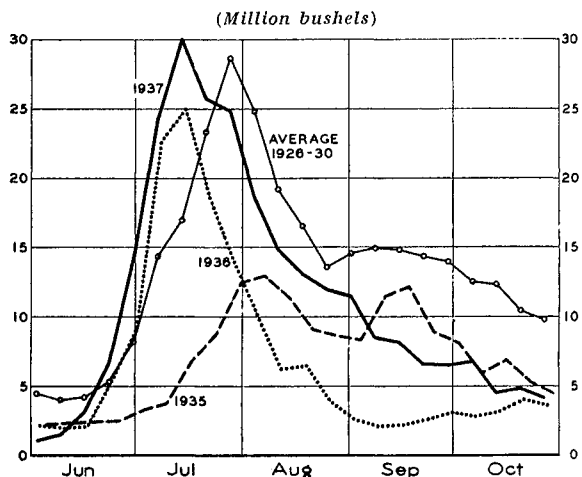
RATE OF MARKETING

Country marketing of 1936 wheat crops was unusually rapid in North America, Argentina, and apparently the Danube basin also; and the large United States winter wheat crop of 1937 moved from the farms with unprecedented promptness. Generally favorable weather and attractive market prices both contributed to these results. In Australia, however, a late harvest and rainy weather delayed marketings. In much of Europe ex-Danube the 1936-37 movement was somewhat retarded. In many countries the weather was unpropitious for prompt threshing and hauling. In some countries, notably France and Italy, the hope of upward revisions in schedules of fixed prices led farmers to delay deliveries. In Germany, as we have seen (p. 124), regulations were altered to speed the movement of domestic wheat.

The character of the 1936 movement in the United States east of the Rocky Mountains is roughly indicated by the dotted curve in

Chart 10. In 1935 the marketing of a small crop had been slowed up by bad weather. In 1936, with a total crop of the same size but with somewhat more winter wheat, the movement was far more rapid. Receipts at primary markets reached a seasonal peak not much lower than on the average in 1926-30, when crops were much larger, and about two weeks earlier. In the Pacific Northwest also, for which comparable data are not readily available, the 1936 wheat moved relatively fast, in terms of both shipments and sales.

CHART 10.—WHEAT RECEIPTS AT PRIMARY MARKETS IN THE UNITED STATES, WEEKLY, JUNE-OCTOBER, 1935 TO 1937*



* Data for the series summarized by months in Table X. All thirteen markets covered are east of the Rockies. The 1926-30 average includes Toledo also.

The 1937 crop movement also deserves mention here, because of its influence on visible supplies and prices in June-July. Much larger than in 1936, this crop even exceeded the average for 1926-30. Rapid marketing started earlier and accumulated volume more strikingly than in 1936, and the peak was higher and again two weeks earlier than on the average in 1926-30. In the Southwest in particular, the crop was harvested early, started to move promptly, and was shipped at an unprecedented rate in the early weeks. The first truckloads of new wheat reached Fort Worth, Texas, on May 25; and the first new wheat reached Kansas City on June 4, nine days earlier than in 1936 and tying the previous record. Over 100 million bushels moved

¹ *The Wheat Situation*, December 1936, p. 9.

² *World Wheat Prospects*, Aug. 31, 1936, p. 18.

from farms to terminals in July. Of this over 48 million was handled in Kansas City, the principal market. This represented about 30,000 cars, and in a single day 3,400 cars were received. Stocks in Kansas City elevators rose during July from 1¼ million bushels to over 25 million. Not only was the movement of record size for such a period, but the smoothness with which it was handled attracted wide comment.

The small 1936 crop of the Prairie Provinces of Canada was marketed early and at extraordinary speed.¹ Weather conditions were largely responsible for the shortness of the crop but favored its early harvest in fine condition. Harvesting equipment, including combines, was relatively more abundant than ever before. Elevator and railway facilities were more than ample. Farmers needed cash and found prices attractive. Rapid marketing began on August 10, six days earlier than in 1933, when the previous record in this respect was made. August country deliveries were 41 million bushels; these represented nearly one-fourth of the crop-year total, and even in absolute terms, despite the small crop, they were the largest on record. Half of the season's deliveries were completed by September 17. The "main movement" was completed October 7, the end of the last week in which deliveries exceeded 3 per cent of the seasonal total; this was three weeks earlier than in any preceding season.

It is pertinent to observe that in the last decade there has been a notable advance in the date at which new wheat crops become available for use. What Holbrook Working has shown for Canada has occurred also in the United States, especially in the Southwest and Northwest. In less striking degree it has occurred in Australia and Argentina. There are indications that the same is true in the United Kingdom and elsewhere. The chief factors responsible are somewhat wider use of

early-maturing varieties; the spread of combine harvesters and trucks for hauling; improvements in roads, country and terminal handling, and in railway shipment; and expansion in grain handling and storage facilities. Improvements in ocean shipping have permitted acceleration of sea-borne shipments when occasion arises.

In the event of shortage in a particular season, therefore, that season can in effect be shortened by several weeks; and at its statistical close, computed as of a given date, stocks can be allowed to fall lower than would have been feasible a decade ago without giving rise to important year-end price advances. Especially in 1937, the prospect of early availability of new-crop American wheat eased the tight international position even before the crop began to move in volume.

VISIBLE SUPPLIES

Visible supplies, particularly in North America, had risen abnormally during the accumulation of surplus stocks of wheat. From their highest level in 1931-32,² they gradually shrank until in December 1936, for the first time in a decade, they fell below corresponding averages for three crop years ending with 1927-28. As shown by Chart 11 (p. 128), visibles continued unusually low into July 1937.

The principal factor in this striking change was the course of Canadian stocks, which include wheat at country stations. These had reached record heights in the autumn of 1935, and from mid-December 1935 had declined without interruption until mid-August 1936. The short new crop swelled them but little. Then, with fairly heavy exports to Europe in the autumn months, they declined persistently from early in October instead of continuing to rise for two or three months more. From January onward they were well below earlier normal levels.

In the United States, commercial stocks had been small in 1935-36. In 1936-37, under the influence of heavy early marketings, rapid absorption of these, and a short crop of spring wheat, they reached a moderate peak early and shrank persistently from early October to exceptionally low levels late in June 1937. At this minimum, combined North American vis-

¹ See two studies by Holbrook Working: "The Timing of Wheat Marketing in Western Canada," *WHEAT STUDIES*, October 1936, XIII, 33-64; and "Price Effects of Canadian Wheat Marketing," *ibid.*, October 1937, XIV, 37-68.

² See corresponding charts in earlier "Reviews," especially *WHEAT STUDIES*, December 1935, XII, 162.

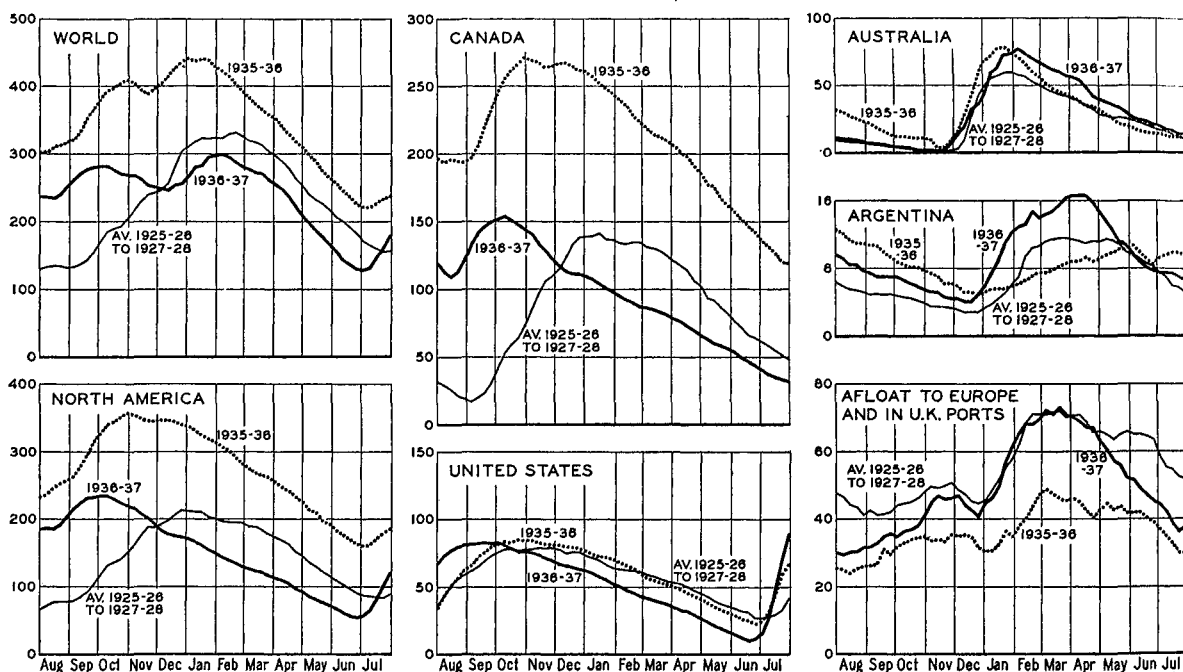
ibles fell to 55.5 million bushels, about equal to the previous low point in 1926. The striking upturn of three of the curves in Chart 11 at the end of the season reflects the extraordinarily heavy early marketings of United States winter wheat in 1937, unrelieved by any substantial flow into export. The advance in United States visibles in June-July 1937 was the sharpest on record.

tended to hold while Argentine shipments were extraordinarily heavy.

Argentine visibles would show a different course if they, like Australian, included stocks at country stations. Including only stocks at ports, they naturally ran high as wheat moved quickly to the seaboard for export. Rapid outflow prevented the season's peak from exceeding what is nowadays a moderate one.

CHART 11.—WHEAT VISIBLE SUPPLIES, WEEKLY, 1936-37, WITH COMPARISONS*

(Million bushels)



* Weekly data for certain series summarized by months in Table XI. Note that scales are not uniform throughout.

Australian visibles started upward earlier than was characteristic of the three-year period a decade ago, largely because of more extensive facilities for prompt harvesting and rapid movement to the railways. They rose more gradually than either in that earlier period or in 1935-36, owing largely to a late harvest and rainy weather in many sections where production was important. The seasonal peak was a little later than usual, because of the retardation of exports (see p. 133). It was higher than a decade ago because of the larger crop, but no higher than in 1935-36 when the crop was somewhat smaller. The decline from the peak was more gradual than in 1935-36 because Australian farmers

They began to decline sharply in mid-April, some weeks earlier than usual; and as of August 1 they were lower than in all but one year (1932) since 1928. The curve for 1936-37 is in sharp contrast with that for 1935-36, when the short crop and the guaranteed price had served to delay movement to the ports and into export, resulting in a low peak deferred until early June.

Stocks afloat to Europe and in United Kingdom ports had run low for several years, reflecting the light volume of international trade. In January-April 1937, however, they ran very close to corresponding averages for three years a decade ago. This was due mainly to heavy shipments in this period, and to the fact that

much of this wheat came from the Southern Hemisphere and was therefore longer on passage. As shipments declined in the latter part of the season, stocks afloat fell off greatly. As of August 1, however, they were above the low points of several recent years; and so were stocks in British and continental ports as well.

OTHER MARKETING NOTES

A few other points concerning wheat marketing in 1936-37 deserve brief comment.

From the Pacific Northwest the great bulk of the surplus, some 47 million bushels of wheat and flour, moved into domestic markets. Water shipments to California were unusually small, the lowest since 1928-29; but these were supplemented by rail shipments of around a million bushels during the strike. Over 40 million bushels were shipped east of the Rockies, in response to the pull exerted by shortage and high prices in almost all milling centers and consuming areas. Rail shipments east reached an extraordinary volume, estimated at 24,269,520 bushels,¹ of which about 21.5 million consisted of wheat grain. This total was nearly 50 per cent larger than in 1935-36, when the movement had probably exceeded that of any previous year since the war. The port strike which affected coastal shipping as well as export trade, and higher water rates before and after, diverted to the

¹ *Commercial Review* (Portland, Ore.), July 27, 1937.

² Comparative data from the *Commercial Review*, which converts flour at 4.5 bushels per barrel, are as follows in thousand bushels or barrels (for flour alone):

Year	Wheat and flour			Wheat grain		Flour	
	Total	Calif.	Atl.-Gulf	Calif.	Atl.-Gulf	Calif.	Atl.-Gulf
1932-33..	20.95	14.89	6.06	7.60	.14	1.62	1.32
1933-34..	24.06	10.38	14.58	3.77	5.09	1.47	2.11
1934-35..	31.73	11.88	19.85	3.47	5.78	1.87	3.13
1935-36..	25.02	8.67	16.95	2.27	3.41	1.42	3.01
1936-37..	21.90	5.76	16.14	2.72	5.11	.68	2.45
Average 1928-32..	12.59	9.46	3.13	3.02	.17	1.30	.66

³ For 1937-38, the North Pacific has set up sales offices in Portland, Seattle, and Spokane, under A. E. Sutton, formerly manager of Strauss and Company, Inc., which closed its offices in the Pacific Northwest in 1935. It proposes to sell to millers, grain dealers, and exporters, but not to go into the export trade.

⁴ See WHEAT STUDIES, December 1936, XIII, 210. The commission has held extensive hearings and is expected to report within a few months.

railways wheat and flour that would otherwise have gone by water. Nevertheless, water shipments to Atlantic and Gulf ports reached the substantial total of 16.1 million bushels, of which about 11 million was shipped as flour.² It was chiefly the heavy demand from the East that restricted shipments from the region to foreign countries and reduced the regional carryover to the lowest point in ten years or so.

The Farmers National Grain Corporation, which the Federal Farm Board had been instrumental in having set up in the fall of 1929 as an overhead farmers' grain co-operative, had another unsatisfactory year; and on May 18, 1937, its first president, C. E. Huff, resigned and was succeeded by another Kansan, W. C. Horn. North Pacific Grain Growers, Inc., one of its most successful but most independent regional units, severed connections with Farmers National late in the year, and the latter closed its offices on the Pacific Coast.³ Since the wind-up of wheat-stabilization operations in May 1934, the Corporation has been an unimportant factor in American grain marketing or storage; with short crops in most areas, its elevator properties have proved a burden; and though it has secured readjustments in its debt to the Farm Credit Administration, its dissolution is imminent.

The Canadian wheat pools were very hard hit by the financial debacle caused by the drastic price depression of 1930-34, and the succession of short crops has prevented full use of their extensive elevator facilities as the Canadian surplus melted away. Very limited amounts of wheat were handled under optional pooling arrangements available in 1931-32 to 1934-35. Contract pooling has not yet been revived. The Canadian pools have nevertheless continued to handle a large proportion of Canadian grain; and they remain in a much stronger position than the American, with far greater physical assets and farmer support. Their future policy may depend in considerable measure on the report of the Turgeon Commission⁴ and subsequent government action.

On August 31, 1936, the Chicago Board of Trade widened the limits within which daily price fluctuations were permitted from clos-

ing prices of the preceding business day. On July 28, 1933, in the midst of a speculative debacle,¹ these had been fixed at 5 cents per bushel on wheat, rye, and barley, 4 cents on corn, and 3 cents on oats. The new order raised the limits applicable to futures expiring in the current month, to 8 cents on four of the grains (and soy beans) and to 6 cents on oats.² The Winnipeg Grain Exchange continued to maintain its 5-cent limit.

In the major futures markets³ there was a large volume of trading in 1936-37, as was to be expected in view of the uncertainties re-

garding crops and trade. The trading in wheat, however, was conducted without exciting public concern or important government interposition, and was far more restrained than in 1924-25. Under the Commodity Exchange Act of June 15, 1936, which came into effect in the United States on September 13, the Grain Futures Administration was absorbed into a new Commodity Exchange Administration with a scope covering cotton and other products.⁴ Thus far, however, changes in the regulative machinery have been of slight consequence to grain futures trading.

IV. INTERNATIONAL TRADE

Government wheat policies in various countries, coupled with persistent barriers to international trade embodied in tariffs, quotas, and exchange restrictions of various sorts, continued to limit the volume of trade in wheat and flour in 1936-37 and considerably influenced the timing and direction of movement. Current scarcity of wheat in many importing countries, however, led in several instances to relaxations of specific barriers and/or to liberal purchases of foreign wheat by government agencies.

In general, it was the distribution of wheat carryovers and new crops that largely determined the year's volume of trade, and its

sources and destinations; but the peculiar distribution of crops of other grains proved a substantial factor in the international trade in wheat. Government measures and agencies in exporting countries exerted little influence on either volume or flow. The course of trade was greatly influenced by the maturing of a large wheat crop in Argentina, and by the successive waves in import purchasing that found reflection in the course of wheat prices. A rise in ocean freight rates, of special importance on the Pacific routes, was a feature of the year.

The wheat situation was so tight that much depended on the volume that a few importing countries would take; and in three of these—Italy, Germany, and France—the volume and timing of purchases and importation was determined by a government agency. Under such conditions, unusual difficulty arose from puzzling differences among the various data on trade, and their eventual irreconcilability.⁵

VOLUME AND COURSE OF TRADE

Volume.—After five years of declining international trade in wheat and flour, 1936-37 registered an increase. Broomhall's statistics by crop years since 1903-04, presented in Chart 12, shows this in historical perspective. As will be seen, the increase was in shipments to Europe; those to ex-Europe, other than the United States, were the smallest since 1920-21. Measured by aggregate net exports of net-exporting countries, as shown in Chart

¹ See J. S. Davis, *Wheat and the AAA* (Washington, 1935), pp. 205-17.

² Annual report of the Chicago Board of Trade for 1936, Regulation 1823.

³ The Budapest futures market was closed early in the crop year, but reopened toward its close.

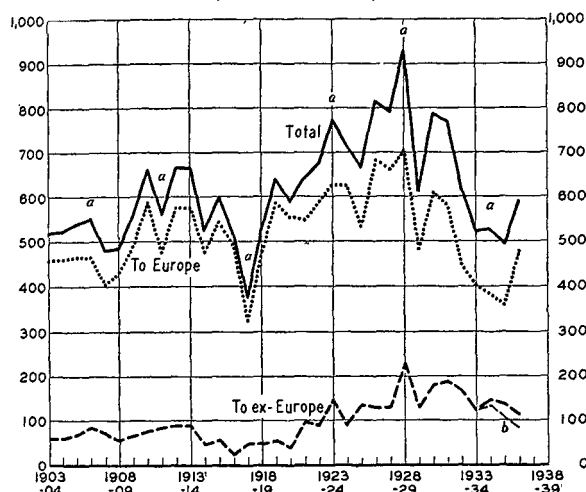
⁴ See the first annual report of the Commodity Exchange Administration, dated Sept. 18, 1937.

⁵ There are material differences in the timing of sales-and-purchases, shipments, arrivals, exports, and imports, some of which are due to more or less constant statistical practices. Those actively engaged in the trade try to keep track of sales and purchases, country by country. Broomhall reports ocean shipments and arrivals at ports, but endeavors also to take overland shipments into his reckoning. In some instances, in lieu of shipment reports, he has to use reported sales as a basis for provisional figures, which he later revises with the aid of official export data. We rely mainly on official trade statistics, which are most satisfactory for certain purposes; but they leave much to be desired and are not yet comprehensively available. In some instances, interest centers in gross movements, in others on net trade.

16, (p. 136), the total trade exceeded 600 million bushels for the first time in four years, though it was lower than in any postwar year prior to 1933-34. Net takings of Manchukuo, China, and ex-Europe as a whole were materially lower than in 1935-36, but net imports of European net-importing countries increased by about 100 million bushels.

CHART 12.—INTERNATIONAL SHIPMENTS OF WHEAT AND FLOUR, ANNUALLY FROM 1903-04*

(Million bushels)



* Based on Broomhall's data such as those in Table XX.

^a For 53 weeks.

^b Excluding reported shipments to the United States.

In several other recent years, early forecasts of the volume of trade have had to be readjusted downward. In 1936-37 the revisions were upward, and the increase over 1935-36 proved far greater than was anticipated early in the season.¹ In particular, Italy, Germany, Spain, and Greece imported more heavily than had seemed likely early in the crop year; and the aggregate increase was only slightly offset by the failure of some European countries to import quite as much as had been forecast. Successive upward revisions in trade appraisals of European import requirements exerted important influence on the course of international trade and of wheat prices during the year.

The expansion of international trade in 1936-37, from the low level of the three crop years preceding, primarily reflected increased effective demand for foreign wheat by Conti-

ental European importing countries, especially in the countries named above. Summary figures for all of Europe ex-Danube, plus French North Africa, compare as follows in million bushels:²

Area	1924-29 average	1929-33 average	1933-36 average	1936-37
British Isles	224	241	225	212
France, ^a Italy, Germany	209	94	(9) ^b	95
Other Europe ex-Danube	191	187	121	131 ^c
Total	624	522	337	438

^a Including French Morocco, Algeria, and Tunis.

^b Net exports.

^c Including our estimate of 15 million bushels for Spain.

If 1936-37 is compared with the average for five pre-depression years, marked reductions in net imports of Continental Europe are observed. If comparison is made with the average for the next four crop years, ending with 1932-33, three facts stand out. (1) The net imports of the British Isles show a considerable reduction, attributable predominantly to larger production and reduced use of wheat for feed in the United Kingdom, and to increased production and reduced food-and-feed consumption in the Irish Free State. (2) What were formerly the three major importing countries of Continental Europe had about the same volume of net imports as in the earlier

¹ Broomhall's successive forecasts and our own compare with actual results as follows, in million bushels:

Date	Broomhall			Food Research Institute			Date
	International shipments			Total net ex-ports	Net imports		
	To Europe	To ex-Europe	Total		Europe ex-Danube ^a	United States ^b	
Aug. 19..	392	120	512	520	390	25	Sept. 15
Nov. 4..	420	120	540	540	425	25	Jan. 15
Dec. 23..	448	120	568	600	450	25	May 15
May 5..	464	120	584	600	450	25	Actual
Actual 1936-37..	477	113	590	609	459	23	Actual 1936-37
Actual 1935-36..	358	136	494	523	356	28	Actual 1935-36

^a Net-importing countries only.

^b July-June, allowing for shipments to possessions.

² Summarized from data in Table XXII. Year-by-year data for the total area here covered, exclusive of the British Isles, are shown in Chart 6, p. 117, and for several countries and groups of countries in Chart 23, p. 179, in both cases in relation to crops and utilization.

four-year period, mainly because of poor yields in 1936. (3) A substantial reduction occurred in the rest of Europe ex-Danube, reflecting expansion of production and restraints on consumption in a great variety of countries, with Spain the outstanding exception for special reasons.

Canada remained pre-eminent among the exporters in 1936-37, while for the second time the United States was a substantial net importer. But on the export side the outstanding features were the recovery of Argentine exports to a level slightly above the average for nine years ending with 1935-36, and their extreme concentration in January-April; very large exports from the Lower Danube countries and exceptionally light shipments from French North Africa; the emergence of India as a substantial exporter for the first time in over a decade; and the appearance of Czechoslovakia among the net exporters.

Course.—The international flow of wheat and flour in 1936-37 is shown in Chart 13, based on Broomhall's data. The curves for the crop year display most of the broad seasonal tendencies that are manifest in 10-year average curves. The irregularities, however, were more marked than in 1935-36; and these mainly resulted from the same influences that caused pronounced waves in price movements during the year (see p. 148). Shipments in January-April, particularly to Europe, ran exceptionally heavy as compared with the level for the whole year. In the earlier and later months, shipments were relatively light; and at the end of the season they were exceptionally low, even lower than in July 1935.

The subdivisions of total shipments between European and ex-European destinations, shown in the second and third sections at the left, bring out the strong predominance of the movement to Europe except in the early months; in July-October especially, heavy Canadian shipments to the United States swelled the total to ex-Europe. In most of January-April 1937, shipments to Europe ran about as large as on the average in the corresponding period of the decade ending with 1933-34, as importing countries drew heavily upon relatively cheap Argentine wheat.

The sections in the second column, showing

shipments by major sources, are even more illuminating. In July-November 1936, shipments from North America (almost wholly from Canada) were unusually uniform. Canada was by all odds the principal source from which importers could then draw; her carry-over stocks permitted liberal shipments before new wheat was available; and the new crop was so short, and moved so early and so rapidly, that it contributed to a continuance of the earlier flow rather than the usual marked expansion. When the customary seasonal decline occurred in December, with the close of navigation on the St. Lawrence, it was from this moderate sustained level rather than a high autumnal peak. In the winter and spring, Canadian shipments were on a low level because of the limited remaining exportable supplies, and their course deviated from the 10-year average only in minor particulars.

Under the influence of stocks carried forward on August 1, 1936, Argentine shipments ran lighter than ordinarily until mid-October, and Australian shipments heavier than usual until mid-December. Probably because of the upswings in prices, neither curve dropped to its characteristic seasonal minimum in November. Most of the July-October rise in total shipments was due, in 1936-37, to an above-average seasonal increase in shipments from other countries, notably the Danube exporters with some unusual reinforcement from India.

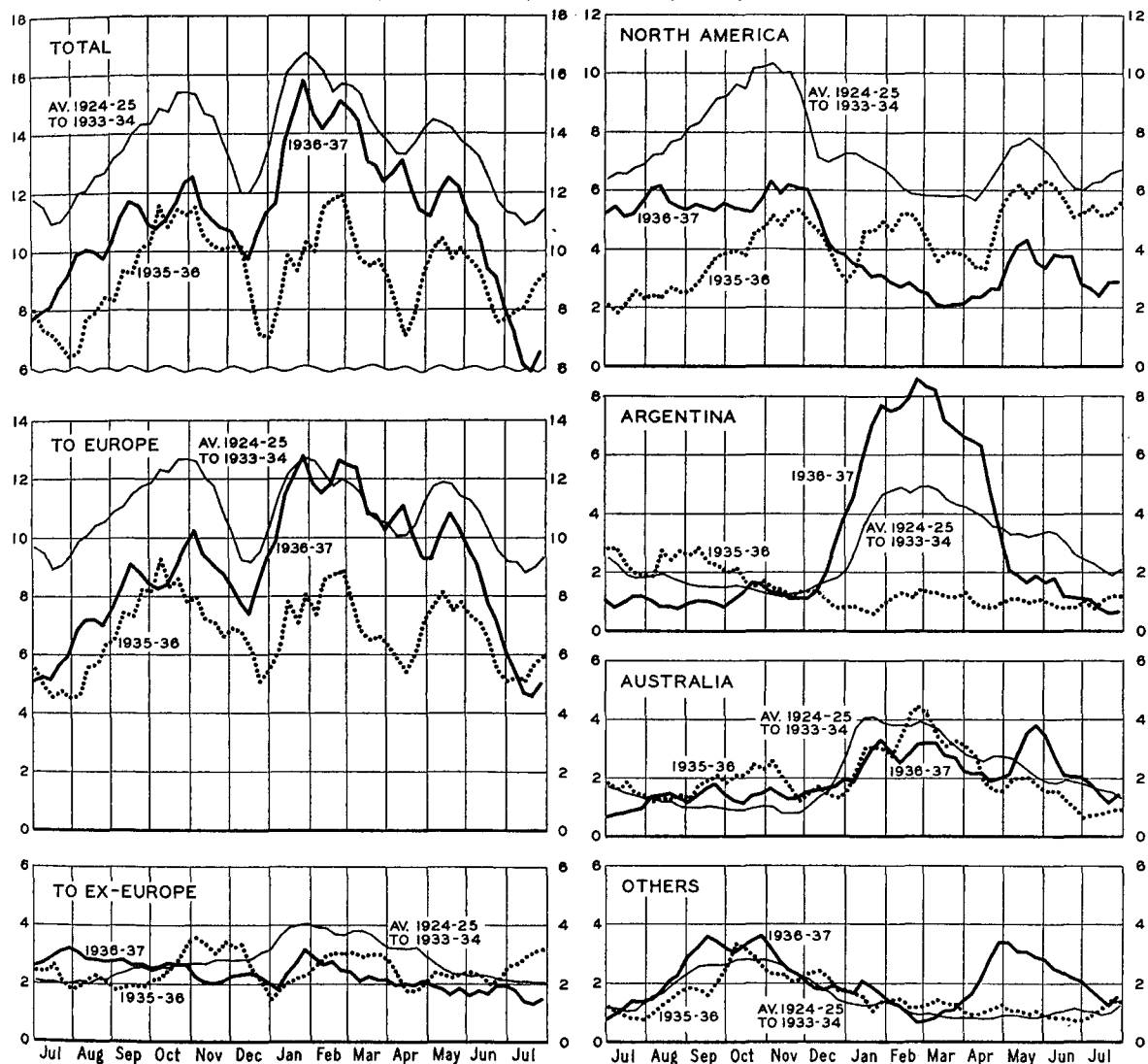
Argentine shipments were predominantly responsible for the outstanding feature of the course of trade during the year—the sharp rise in December-January and the high level maintained until mid-April. Much of this wheat had been purchased before and during the harvest. The level was above any recorded in any previous corresponding period, even following the larger crops of 1927, 1928, and 1933.¹ For nine successive weeks ending March 20, 1937, Argentine weekly shipments exceeded 7 million bushels; and in the twelve weeks ending April 10 her shipments aver-

¹ The previous record for one week's shipments from Argentina and Uruguay combined—10.3 million bushels in the week ending Mar. 9, 1929—remained unbroken. The maximum in 1937 was 9.1 million, in the week ending March 6.

aged 7.63 million per week. These exports so nearly exhausted Argentina's surplus that shipments dropped very rapidly after mid-April and were unusually light in May–July.

Even more exceptional was the pronounced spring rise in shipments from other countries, and their relatively large size even when they declined in May–July. In this movement

CHART 13.—INTERNATIONAL SHIPMENTS OF WHEAT AND FLOUR, 1936–37, WITH COMPARISONS*
(Million bushels; 3-week moving averages)



* Based on Broomhall's weekly data summarized by crop years in Table XX. Averages are for corresponding weeks in the 10-year period ending July 28, 1934. Small shipments from Uruguay are included with those of Argentina.

Australian shipments during January–April were so restrained by Argentine competition that their curve for the year shows much less than the typical seasonal variation. They rose to their peak for the year around the end of May, several months later than usual, shortly after Argentine shipments fell off sharply.

the Danube countries, Czechoslovakia, India, and various others participated. Attractive prices drew wheat from many quarters, as European demands continued heavy while only very limited supplies were available in the major exporting countries. At the hand-to-mouth levels of purchasing near the close of the season, much less than the usual pro-

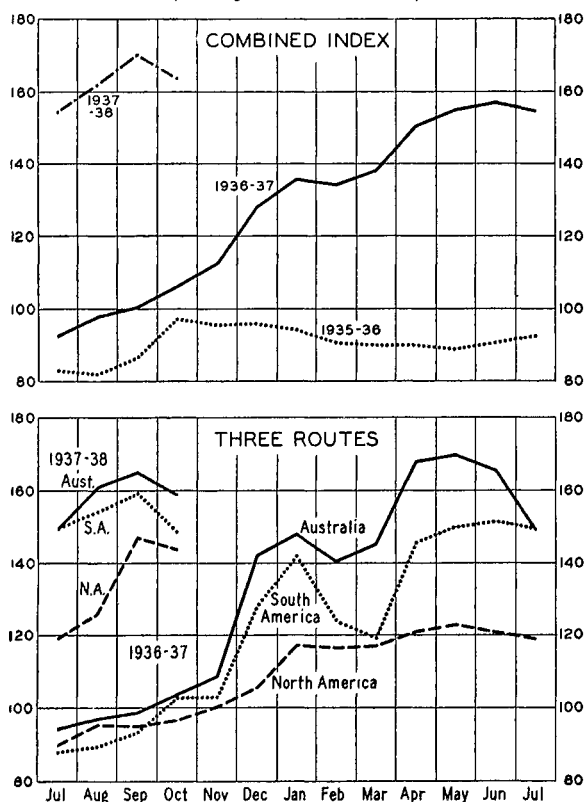
portion of shipments moved from North America and Argentina, and much more than the usual proportion from miscellaneous exporting countries.

ADVANCE IN OCEAN FREIGHTS

A striking rise in ocean freight rates took place in 1936-37 and continued into the new crop year. The London *Economist* index, shown in the upper section of Chart 14, had

CHART 14.—ECONOMIST INDEX OF OCEAN FREIGHT RATES, MONTHLY, FROM JULY 1935*

(Average 1898-1913 = 100)



* Data from *The Economist*, London.

for several years fluctuated between 80 and 100 per cent of the average in the base period 1898-1913, and mostly below 90. It rose from 90.6 and 100.3 in June and September 1936 respectively, to 157.0 and 169.8 in June and September 1937. In the year ending July 1937, its regional sub-indexes showed increases of 90 per cent in European waters, 70 per cent or more on South American, Far Eastern and Pacific, and Indian

routes, and about 58 per cent on Australian; but the moderate relative advance on North American routes held down the average increase to about 67 per cent. In June-September 1937 the most rapid percentage advances occurred on the North American, Indian, and Far Eastern and Pacific routes.¹

By and large, the striking advance in 1936-37 is attributable primarily to the rapid expansion in international trade in commodities, in a period of intensive rearmament and great business activity, following a prolonged period of light international trade and low shipping rates in which much ocean tonnage was scrapped and shipbuilding was light. Important contributing factors, however, were war risks in the Mediterranean and, in recent months, the *de facto* war in China.

On wheat in particular, ocean freight rates rose significantly in 1936-37, in degrees varying greatly on the different routes. The rates given in Table XXVI and in Chart 15 are samples from a large variety of more or less concordant evidence.²

From New York there was little movement of wheat: almost no American wheat was available for export from there or the Gulf; British customs regulations continued seriously to restrict Canadian wheat shipments to Great Britain through United States ports; and Canada's exports were no larger than her own ports could readily handle. From Eastern Canada to the United Kingdom, freight rates rose moderately in the months before St. Lawrence navigation closed, and after it reopened in the spring they were 2-3 cents per bushel higher. Rates from the Black Sea and eastern Mediterranean ports to western Europe rose several cents more, but still by no large absolute amounts.

The more spectacular advances occurred on the longer routes over which wheat moved in considerable volume. Rates from North

¹ *Economist*, Oct. 9, 1937, p. 64. The Chamber of Shipping index of freight rates, published in the London *Statist*, tells much the same story; but its index of time-charter rates shows much greater advances in 1936-37.

² Broomhall's weekly data give, for some routes, a picture somewhat different from the cargo rates given by the International Institute of Agriculture that we cite in Table XXVI.

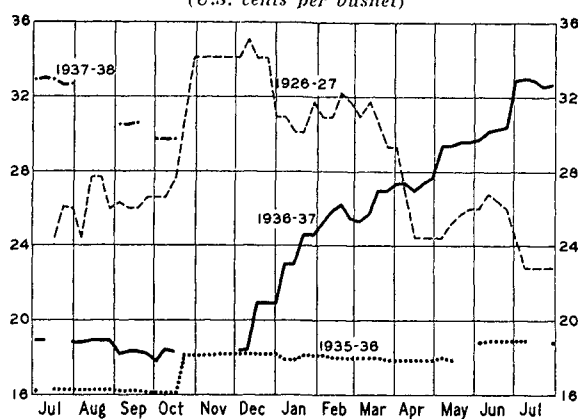
Pacific ports to the United Kingdom rose earliest, in anticipation and under the influence of the maritime strike which tied up the United States ports in November–January. A 6-cent advance occurred between August and November 1936. In May–July 1937, however, North Pacific rates were more than double the average of 12.8 cents that prevailed in July–August 1936. These advances, with the small crop in Alberta, contributed to depress Canadian shipments from Pacific ports to the smallest volume and the smallest proportion since 1924–25.¹

From Argentina to Europe the advance was of no particular consequence until late in 1936 or early in 1937. Early shipments from the big new crop of 1936, however, were made at rates well above those that had prevailed in the second half of 1935. The heavy shipments in February and March 1937 forced rates still higher, and they remained firm in May–July. Between July 1936 and March 1937, cargo rates from La Plata down river to Europe advanced by 7 cents per bushel. Yet the advance appears relatively small considering the huge volume of tonnage that was drawn into the Plate trade in the early months of 1937, and the rise in rates was small compared with that in the latter part of 1926.²

The rate increase was especially significant on the route from Australia to the United Kingdom. The increase in cargo rates shown in Chart 15 was more gradual but quite as striking as that in 1926–27, and at the end of the crop year they were at the highest point since December 1926. Between July 1936 and July 1937 the increase was around 14 cents per bushel; and the spread between Australian prices and European prices of Australian wheat widened by nearly this much during the year. The course of parcels rates was somewhat different.³ In July–November 1936, these rates were somewhat above the levels that had prevailed for several years. When

new-crop wheat began to move in December, they rose to substantially higher levels, and further advances followed in March and April 1937. In April–July 1937 parcels rates were

CHART 15.—CARGO RATES ON WHEAT FROM AUSTRALIA TO THE UNITED KINGDOM, WEEKLY, 1936–37, WITH COMPARISONS*
(U.S. cents per bushel)



* Weekly data from source used for Table XXVI.

45s. (sterling) per ton weight. This was more than double the corresponding figure of March–June 1933 (20s.), and it represented an advance of 50 per cent from the peak of July 1936, which had not been approached for several years.

TRADE OF NET-EXPORTING COUNTRIES

The major sources of net exports in 1936–37 are shown in Chart 16 (p. 136), in the perspective of a dozen years. Most exceptionally, as in 1934–35, the combined net exports of Argentina and Australia substantially exceeded net exports from North America. Net exports of all other countries combined were larger than in any other postwar year except two, when the USSR was a major exporter. Combined net exports of the Danube basin exporters exceeded the previous postwar peak. Of the three French possessions in North Africa, all normally net exporters, Algeria alone had an excess of exports, and the combined net exports of the three were under 4 million bushels as compared with the peak of 26 million in 1934–35. India, whose net imports had balanced net exports in the eleven years ending with 1935–36, became again an important minor exporter. Net exports of miscellaneous

¹ Compare Table XIX in this and earlier "Reviews."

² See our earlier discussions of the 1926–27 advance, in *WHEAT STUDIES*, III, 92–93, 152–56, 271–72, and IV, 16–17, 56.

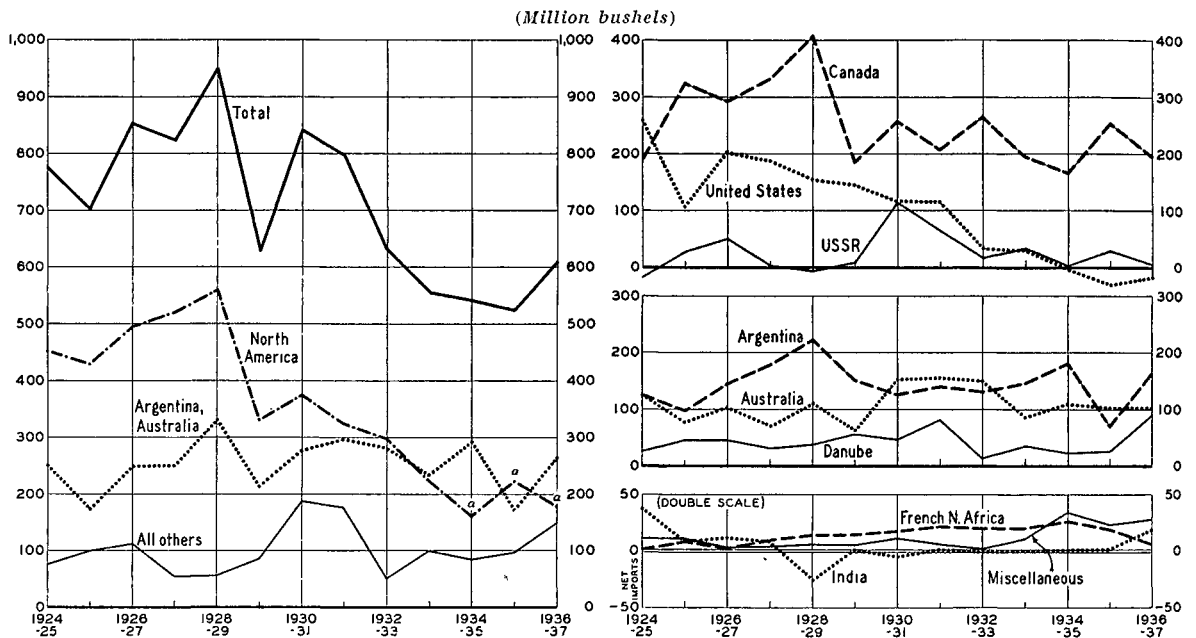
³ See monthly series given in the Commonwealth Bureau of Census and Statistics, *Monthly Summary of the Wheat Situation in Australia*.

countries were not up to those of 1934-35, when France accounted for nearly half of the record total, but they were otherwise the largest since the war. Prominent among these net exporters were Czechoslovakia, formerly a typical net importer, and Poland, Turkey, and Iraq, which exported modest but record or near-record quantities.

For the first time in over a decade, the

dom and nearly one-fourth to the United States.¹ In each month from May 1936 to January 1937, indeed, Canadian wheat accounted for more than half of British imports of wheat grain. Of the Argentine exports, Brazil and the United Kingdom took the largest shares, but important quantities moved to Italy, Germany, and other European countries. Australia shipped mainly to Europe.

CHART 16.—NET EXPORTS OF WHEAT AND FLOUR, BY EXPORT AREAS, ANNUALLY FROM 1924-25*



* Data in Table XXI.

^a Net exports of Canada *minus* net imports of the United States.

three major exporting countries well-nigh exhausted their exportable surpluses by the end of the international crop year. Canada's carryover was down to the lowest since 1925, when it was presumably below the previous average for July 31. Argentina's export surplus on August 1, 1937 seems to have been lower than in any of a longer period of years extending farther back than our carryover estimates go. Australia's corresponding balance was probably less than in any year since 1928, when the preceding crop had been short. Broomhall estimated world stocks of exportable old-crop wheat as of August 1, 1937 at only 45 to 50 million bushels.

Of total Canadian net exports of 195 million bushels, about half moved to the United King-

dom. Though the United Kingdom took nearly half of her total, substantial exports were made to Italy and some to Germany (see p. 140), which ordinarily have not used much Australian wheat. Australia exported much less wheat and flour to the Orient than for several years. Jointly responsible were large crops in China, trade restrictions by Japan and Manchukuo, and high prices restricting flour consumption in China, Manchukuo, and Japan.

Net exports from the four countries of the Lower Danube totaled 88.8 million bushels, topping the previous postwar record of 81.8

¹ Available Canadian statistics on this point are not trustworthy, and a wholly satisfactory basis for the statement is lacking.

million in 1931-32. Each of the four countries exported liberally, and Rumania slightly exceeded her previous postwar record. Wheat exports from the region were favored by sizable crops of rye, corn, and barley as well as of wheat, the good quality of both wheat and rye, attractive wheat prices in open world markets, the lack of Russian competition, and urgent needs in several importing countries which had special trade agreements with one or more of the Danube states. A large part of the exports were sold outside of such agreements and paid for in "free" currencies.

India, for the first time in a decade, was a considerable exporter in 1936-37 (Tables XXI-XXIII). Indeed, not since 1924-25 have Indian net exports exceeded the 18.6 million bushels reported for 1936-37. Judging from official estimates, the accuracy of which is open to serious question, India's wheat crops of 1936 and 1937 were no larger than in the three preceding years; but the rice crop was very good, and attractive prices in world markets drew wheat from India as often before.¹ Exports were relatively large in September-January, contrary to characteristic seasonal tendencies, and those of new-crop wheat in June-July 1937 were especially heavy.²

Poland, like Rumania, took advantage of the improvement in world grain prices to reduce export premiums. That on wheat was lowered from 6 to 5 zloty per quintal, effective July 1, 1936, and on March 15 export premiums were abolished for all grains and grain products except barley. During the win-

ter and spring, Poland adopted several other measures to check the advance in food prices. In January 1937, rye exportation was temporarily forbidden, with certain exceptions. On April 7 all bread-grain export was prohibited for the rest of the season; milling extraction rates were fixed at 70 per cent for rye and 65 per cent for wheat; and provision was made for imports of feedstuffs to discourage feeding of bread grain, and for raising import quotas for various foodstuffs and reducing import charges thereon.³

In July 1936, the two-year-old grain monopoly in Czechoslovakia was prolonged to June 30, 1940. The 1936 crop, though by no means as large as those of 1933 and 1935, was about up to the level to which domestic utilization had fallen under the monopoly regime; and the burdensome carryover surplus was reduced to more manageable dimensions by net exports totaling 9.2 million bushels⁴ (gross, 9.5 million). According to Broomhall's reports, the monopoly lost about £608,000 on its wheat exports during the year.⁵ This was despite the marked advance in wheat prices, of which the monopoly took considerable advantage by exporting most heavily in the winter and spring. To cover losses on exports and costs of storing surplus stocks, taxes were imposed on grain producers, at rates considerably higher on wheat than on rye and other grains. Hence, while wheat prices to growers were fixed at about the same level as in 1935-36, their net return per unit of the 1936 crop was less than for that of 1935.

Turkey and Iraq each had net exports of about 5 million bushels, Syria and Lebanon of about 1.4 million, and Iran (Persia) of around a million bushels. Uruguay had net exports of 3.7 million, and late in the crop year prohibited further exports.

Egypt, for the first time in at least twenty-one years, was a small net exporter in 1936-37. In the ten years ending with 1931-32 she imported, net, an average of 9.7 million bushels a year. In the last three years of this period, her domestic utilization had risen to an average of about 53.6 million bushels. Sharp curtailment of consumption followed, and in the next four years net imports were very small.⁶ In 1936-37, with consumption

¹ See the official *Report on the Marketing of Wheat in India* (Marketing Series No. 1, Delhi, 1937), pp. 9, 46; and C. P. Wright and J. S. Davis, "India as a Producer and Exporter of Wheat," *WHEAT STUDIES*, July 1927, III, 368. The 1937 crop is put at 366 million bushels.

² The latter is in accord with the seasonal tendency characteristic of years of large or considerable exports. Wright and Davis, *op. cit.*, pp. 367-71. Taking April-March crop years, net exports in 1936-37 were 9.88 million bushels, the largest since 1927-28.

³ *Foreign Agriculture*, May 1937, I, 259.

⁴ See Tables II, XXII, XXIII, XXXI. The monopoly planned for 1937 a 20-25 per cent reduction in wheat acreage. *World Wheat Prospects*, October 1936, p. 13. The actual reduction appears to have been under 10 per cent (Table III).

⁵ *Corn Trade News*, Oct. 27, 1937.

⁶ See chart and discussion in *WHEAT STUDIES*, December 1935, XII, 131-32.

still restricted, a crop estimated at 45.7 million bushels permitted net exports of 554,000 bushels.¹ Had per capita domestic utilization been at the levels that obtained six or eight years ago, Egypt would have been a net importer to the extent of over 10 million bushels in 1936-37.

The Union of South Africa, with a large carryover from the bumper crop of 1935 and a 1936 crop second only to it, continued to face wheat surplus problems.² Part of the surplus was exported, at some loss, and the country became a net exporter of wheat, for the first time on the basis of August-July data.

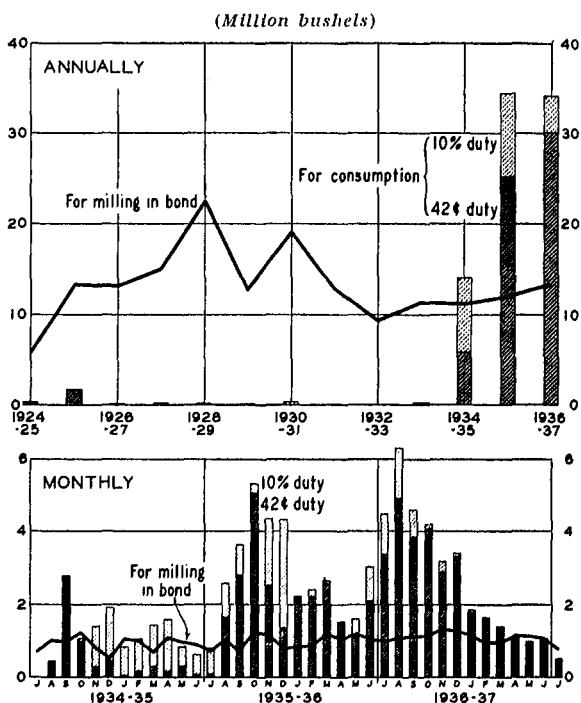
THE UNITED STATES AS A NET IMPORTER

For the third crop year in succession, wheat imported into the United States exceeded her exports of wheat and flour plus shipments to possessions (Table XXII). Early in June 1936 the United States was expected to have a surplus for export. But drought so devastated the crops of durum and hard red spring wheat, and of corn and other feed grains as well, that export prospects dwindled drastically while importations rose to a new high point in August 1936. As shown by Chart 17, duty-paid imports continued through July 1937, though from May onward imports were exceeded by exports plus shipments to possessions (Table XXIII). On an August-July basis, net imports for the year (adjusted for shipments to possessions) came to 17.1 million bushels, 14 million less than in the corresponding period of 1935-36. Here it is more appropriate to discuss imports and exports with reference to the American crop year, July-June, for which adjusted net imports were 26 million bushels as compared with 31 million in 1935-36.

Duty-paid imports in July-June 1936-37 slightly exceeded 34 million bushels, almost equaling the record total of 1935-36 (Table XVIII). Partly because Canada had little low-

grade wheat in her 1936 crop, imports at the 10 per cent rate were only 4.1 million bushels, and most of this was imported in July-September. Of the 30 million paying full duty, about 9 million consisted of durum, which was in special demand to supplement very short domestic supplies of that type.

CHART 17.—UNITED STATES WHEAT GRAIN IMPORTS, ANNUALLY FROM 1924-25 AND MONTHLY FROM JULY 1934*



* Annual data such as in Table XVIII; monthly data from *Foreign Crops and Markets*.

Imports of bread wheats for milling were slightly larger than in 1935-36. Canadian hard red spring of high quality was imported because American millers were willing to pay prevailing premiums rather than use inferior domestic wheats or those less readily available geographically; and these latter moved extensively into feed use. Had Canadian supplies not been readily available, at a price, the imports would have been much smaller, larger quantities of inferior domestic wheats would have been milled, the feed scarcity would have been moderately increased, and only in durum would the stringency have been acutely felt.

Imports of Canadian wheat for milling in bond rose to 13.5 million bushels, the largest

¹ Trade reports indicate that another crop of about the same size is presenting surplus problems this year. See *Commercial Intelligence Journal*, Oct. 30, 1937, p. 772.

² See *WHEAT STUDIES*, December 1936, XIII, 147, and A. T. Murray, "South African Agricultural Policy," *Foreign Agriculture*, February 1937, I, 67-85.

since Farm Board stabilization operations served to swell these imports in 1930-31. In some degree, however, this increase reflected success by American millers in competing with Canadian, Australian, and Argentine millers in a number of scattered markets, together with some expansion of purchases in certain of these countries as a result of economic recovery there.

United States exports of domestic wheat grain amounted to only 3.2 million bushels. Nearly all of this was from the Pacific Northwest, and most of it went to Europe. Although some sales of new-crop hard winters were effected in May-June 1937, very little wheat from the Southwest was actually exported before July 1.

United States exports of flour included, beyond that milled in bond, the equivalent of only about 6 million bushels of domestic wheat. This was over 50 per cent more than in 1935-36, but probably less than in any other year in the memory of living men. Of this total, over one-third moved from the Pacific Northwest; and the greater part of this was sold under the AAA program, initiated in March 1936, of subsidizing Pacific Northwest flour exports to the Philippine Islands.¹ Sales under this program in July-June 1936-37, which considerably exceeded exports during the period, came to 426,219 barrels, representing 74 per cent of the authorized maximum of 575,300 barrels. The "indemnities" paid per barrel of flour varied from 5 cents to \$1.20, and averaged 54.4 cents. The "indemnity obligation," \$231,861.26, was paid out of the customs-revenue fund at the disposal of the Secretary of Agriculture under Section 32 of amendments to the Agricultural Adjustment Act approved August 24, 1935.² The Pacific Northwest exported flour also to numerous other foreign markets.

Shipments to United States possessions, chiefly of flour, were the equivalent of about 3 million bushels, much the same as in other recent years. Over one-fourth of this originated in the Pacific Northwest.

Altogether, wheat and flour exports from the Pacific Northwest, plus shipments to Alaska and Hawaii, totaled about 5.75 million

bushels—except in 1935-36 the lowest in many years.³ The exports would have been somewhat larger if shipments had not been interrupted by the extended strike that tied up American Pacific Coast ports from October 29 to early in February, and restricted sales and shipments for some weeks before and after.⁴ This paralyzed coastal and inter-coastal as well as foreign trade, and was probably "the longest and most costly industrial controversy in the history of American shipping." When this dispute was settled, higher freight rates due to other causes (see p. 134) tended further to check exports from the Pacific Northwest. The outstanding factor accounting for light exports from the region, however, was the shortage east of the Rockies. This led to an extraordinary domestic movement which absorbed most of the Pacific Northwest surplus, and forced wheat and flour prices in the region above an export basis through most of the crop year.⁵

¹ See WHEAT STUDIES, December 1936, XIII, 180, 186. The daily "indemnity" rate is based on the difference between the computed cost of a barrel of export straight soft wheat flour, c.i.f. Manila, and reported quotations on competitive flour of comparable quality from other exporting countries, c.i.f. Manila, duty paid.

² Data from the Agricultural Adjustment Administration. Comparable data for the preceding fiscal year were: sales, 193,931 barrels; indemnity range, 45 cents to \$1.10, averaging 82.2 cents; indemnity obligation, \$159,464.27. The program has been extended to the current crop year, subject, as heretofore, to termination by the Secretary of Agriculture on five days' notice.

³ Based on data in *Commercial Review* (Portland, Ore.), continuing table in WHEAT STUDIES, August 1934, X, 421.

⁴ According to the *Commercial Review*, Mar. 30, 1937, the first export business since autumn was put through in the last week of March.

⁵ See above, p. 129, and below, p. 154. In an address on "The Pacific Northwest Wheat Export Problem" (*Northwestern Miller*, Nov. 5, 1936, p. 493), A. E. Mallon stated late in 1936: ". . . If the Chinese duty on wheat flour were now reduced to 1½ times the duty on wheat, which is the comparable rate of duty, there is no doubt that well-known American brands of flour would again be moving to China and the acute wheat surplus situation in the Pacific Northwest be that much reduced. When the Pacific export flour problem is solved, the export wheat problem will also largely be solved."

There is doubtless an element of truth in this statement; but in our judgment, China's duty on flour must be accorded very little weight among the factors restricting exports from the Pacific Northwest, either in 1936-37 or in other recent years.

OTHER NET-IMPORTING COUNTRIES

Europe.—Net imports of the British Isles were the smallest since 1922-23, except for 1925-26, when drafts upon stocks were much heavier. Four factors contributed to this result. Wheat production in 1936, though reduced by adverse weather below any of the three preceding crops, was larger than in most earlier postwar years because new public policies have stimulated acreage expansion since 1932. The downward drift of per capita food consumption, due largely to other influences (except perhaps in the Irish Free State), has not been reversed significantly if at all.¹ Feed use of wheat, domestic and imported, was low in 1936-37.² Stocks were reduced during the year. As compared with 1935-36, the reduction of 8.6 million bushels in net imports occurred in the face of a combined crop 9 million bushels less. We infer that the dominant factors were material drafts upon stocks and substantial reductions in feed use of wheat.

United Kingdom imports of wheat grain came predominantly from Canada (47 per cent), Australia, and Argentina. Of the 16 per cent supplied by all other countries, India furnished 10.7 million bushels and Rumania 8.4 million (Table XXIV). Because British exports of flour were the smallest in many years (see p. 145), net imports of flour were higher than in the majority of recent years. About 75 per cent of the wheat grain and flour combined came from within the British Empire—a proportion not hitherto reached or likely to be soon repeated.

Wheat acreage in the Irish Free State, which had declined almost to the vanishing point of 21,000 acres in 1931 and 1932, has risen under the influence of fixed minimum prices, reinforced by other measures, to 94,000 acres in

¹ British millers appear to be satisfied with the results of their large-scale educational campaign, initiated early in 1935, to check the decline in bread consumption, but they admit that statistical evidence on the point is not available. See review by Sir Norman Vernon, in *Milling*, Oct. 23, 1937, pp. 470, 472. Bread prices were raised during the year to the highest point since the autumn of 1927: in London per 4-pound loaf, from 8.5*d.* to 9*d.* on Dec. 28, and to 9.6*d.* in April 1937; in the Irish Free State to 10.5*d.* in the autumn of 1936, and to 11.5*d.* in April 1937.

² See p. 120, and C. F. G. Raikes, in *Northwestern Miller*, June 30, 1937, p. 28.

1934, 163,000 in 1935, and 255,000 in 1936 (Table III)—the largest wheat area in Ireland since 1870. The government seeks to have the area progressively increased until self-sufficiency is attained. Although yields per acre in 1936 were about one-fourth below normal, the crop was ten times as large as that of 1931. Net imports have shrunk roughly *pari passu* with the increase in the domestic crop. At 12.5 million bushels in 1936-37, they were by all odds the lowest since the Irish Free State was established in 1923, and nearly 8 million below the peak of 1931-32.

Italy ranked second to the United Kingdom as a net importer in 1936-37, drawing from abroad enough wheat to supplement her short crop and about maintain consumption at the moderate level of recent years. Her government purchasing was an important factor in international trade almost throughout the season, but over half of the imports were recorded in March-June, with May the outstanding month (Table XXIII). Gross imports amounted to 68 million bushels, and net to 57.5 million. Argentina and the Danube states furnished the principal supplies, but sizable amounts were obtained from Australia, Canada, and miscellaneous countries. The sources of Italian and German wheat grain imports in 1936-37 are indicated by the following figures, in thousand bushels:

Source	Italian imports	German imports
Canada, U.S. ^a	4,339	2,994
Argentina	28,136	17,371
Australia	9,665	2,161
Hungary	7,687	....
Yugoslavia	3,025	2,518
Rumania	10,410	814
Bulgaria	2,411	...
Czechoslovakia	1,696	939
Turkey	230	2,144
Others	376 ^b	2,075 ^c

^a We infer that much of the wheat recorded as imported from the United States was Canadian wheat imported through the United States.

^b Including 298 from Libya.

^c Including 925 from India and 777 from Iran (Persia).

Germany imported 31.8 million bushels net, the largest quantity since 1929-30. Gross imports of wheat grain were 31 million. Here too the purchasing was done through a government agency, and there was great uncertainty as to how much the government would find it financially feasible to import. To a quite un-

usual degree, and perhaps at heavy cost, importations were postponed until late in the crop year; nearly 90 per cent of the total were recorded in May–July 1937.¹ Purchases, however, were made well in advance of importations, and the import statistics by months may not correctly indicate the course of actual receipts of the grain. A sizable proportion was obtained through trade or clearing agreements, but a good deal had to be paid for otherwise. Under an agreement concluded October 22, 1936, and effective for a minimum of one year from November 15, 1936, Germany agreed to devote to the purchase of Canadian wheat 35 per cent of the foreign exchange accruing from

¹ See Table XXIII, and Jasny, *op. cit.*, p. 122.

² See *Commercial Intelligence Journal*, Oct. 31, 1936, pp. 801–04, and the article based on reports by L. V. Steere in *Foreign Agriculture*, January 1937, I, 43–47. Under the drastic control of foreign exchange in force in Germany since September 1934, wheat imports from Canada had been negligible.

³ There is some question regarding the best figures to use, and the comparability of any set chosen. The following data in million bushels (1936–37 provisional) are based on official statistics of *commerce général*:

Item and year	Imports			Ex-ports total	Net im-ports	Net ex-ports
	North Africa	Other sources	Total			
Total.....1934-35..	21.08	10.59	31.67	48.26	....	16.59
1935-36..	20.54	9.62	30.16	22.19	7.97	....
1936-37..	9.46	11.71	21.17	9.07	12.10	....
Durum.....1934-35..	7.60	1.77	9.37	.03	9.34	....
1935-36..	7.95	2.06	10.01	.02	9.99	....
1936-37..	5.24	2.27	7.51	.10	7.41	....
Other wheat..1934-35..	9.85	8.76	18.61	38.08	....	19.47
1935-36..	9.74	7.49	17.23	14.55	2.68	....
1936-37..	2.28	9.37	11.65	2.20	9.45	....
Flour.....1934-35..	3.63	.06	3.69	10.15	....	6.46
1935-36..	2.85	.07	2.92	7.62	....	4.70
1936-37..	1.94	.08	2.02	6.78	....	4.76

⁴ The French Wheat Board authorized no imports of foreign bread wheat in 1936–37, except to offset exports of flour and domestic wheat. A tariff rebate of 30 francs per quintal on foreign durum, coupled with a minimum milling percentage of 25 per cent North African, were insufficient to permit liberal imports of durum.

⁵ Since this interrupted the flow of Spanish official statistics, comparable data for the duration of hostilities may never be available. Broomhall's statistics of "arrivals" in Spanish ports in 1936–37 totaled 10,544,000 bushels. In 1928–29 and 1931–32, the only other recent years of substantial imports, "arrivals" ran something like 70 per cent of net imports as officially reported. Actual net imports were certainly not less than 10 million bushels, and more probably 12–17 million.

German exports to Canada.² Despite this, wheat imports from Canada were under 10 per cent of the total.

France had only a small net balance of imports. Our tabulations indicate a figure of 12 million bushels, which is 50 per cent larger than in 1935–36 and compares with net *exports* of 16.6 million in 1934–35.³ Considerable stocks of old wheat were on hand to supplement the poor crop of 1936, which was probably understated as compared with earlier years. Domestic utilization apparently sank to a new low level, and imports were strictly controlled. Total imports and durum imports were both unusually small.⁴ Wheat grain imports from foreign sources were slightly larger than in 1934–35 or 1935–36, but much less than usual was secured from North Africa. In contrast with the two preceding years, very little French wheat was exported, and flour exports were the smallest in at least a decade.

The law establishing the French Wheat Board abolished the former system of "temporary admission." Under the system set up by decree of October 29, 1936, millers wishing to import foreign grain to offset exports were required first to export wheat, wheat flour, or by-products in amounts officially accepted as equivalent to the proposed imports. On such imports the duty must be paid, but on export of the products the board grants a drawback which was fixed, on November 7, 1936, at approximately the amount of the duty.

In Spain, net imports of perhaps 15 million bushels were largely the result of the civil war.⁵ Under peace-time conditions, the substantial 1936 carryover might have sufficed to supplement the small harvest. Military operations and other conditions accompanying the civil war, however, tended somewhat to reduce the harvested crop, to increase consumption needs in certain directions, and to prevent the normal flow between surplus and deficit areas. Additional wheat was needed by the region that remained under control of the Loyalist Government, and it was able to obtain imports from various sources including the USSR, a friendly power. Russian exports to Spain during the year were officially put at 1,634,000 bushels, but some other Russian cargoes may have been directed there. Some

of Italy's purchases may have been shipped to Spain for the Italian "volunteer" forces and perhaps the insurgent government whose cause they supported.

Net imports of Denmark were strikingly small in 1936-37—the smallest, indeed, since 1925-26, and only one-third of the peak net imports of 1934-35. The yield per acre was relatively poor in 1936, and the crop smaller than in any of the three preceding years; yet it was *quantitatively* ample for domestic seed and food use at the prevailing consumption level. Net imports of 6.36 million bushels included about 6 million of wheat grain; we infer that this went largely into Danish mills, permitting over two-thirds of the domestic crop, as usual, to be fed to livestock. In most other recent years, Denmark has imported substantial amounts of wheat for feed use. The relative cheapness of other feedstuffs, and the limited supplies of feed-quality wheat available for international shipment, adequately account for small total imports of wheat in 1936-37. Very slight influence was exerted by the virtual return to unhampered importation of wheat during the year.¹

Sweden, with a reduced crop in 1936 due to subnormal yields on a moderate acreage, drew upon reserve stocks and imported slightly more than enough to counterbalance early-season exports. Up to 1931-32 Sweden ordinarily imported about one-third of her wheat requirements. In the three calendar years 1934 to 1936, she exported nearly 9 million bushels of wheat, mostly to Great Britain, Denmark, and the Netherlands.² In July-August

¹ With the rise in wheat prices, the small sliding-scale duty on soft wheat disappeared in the spring of 1936. The minimum "surtax" on hard wheat (3 kronen per quintal) was abolished Jan. 30, 1937. From May 7, advance application to the Exchange Office for permits to import wheat was no longer required. Though controls may be readily reimposed if occasion arises, there remain only insignificant limitations on the current freedom to import.

² *Commercial Intelligence Journal*, Oct. 23, 1937, p. 729.

³ These percentages have been in force since Sept. 1, 1935. Mills may use 20 per cent of foreign wheat in any particular grist, but must not exceed 10 per cent in their annual total.

⁴ See chart and discussion in *WHEAT STUDIES*, December 1935, XII, 131-32, and Tables VIII, XXII, and XXV herein.

1934, and in most months from March 1935 to October 1936, she was a small net exporter. At current levels, production and consumption are fairly well balanced, with some tendency to surplus, but milling regulations permit the use of 10-20 per cent of foreign wheat for blending.³

In several recent years the four Baltic states, taken together, have reduced their net imports. Finland, the largest net importer, has supplied an increasing proportion of her wheat requirements from expanded domestic production; her good crop of 1936 was six times as large as the average in 1924-30, before she embarked on her policy of stimulating wheat production. Lithuania had been a small net exporter for several years. Latvia and Estonia had had no appreciable net imports since 1932-33, and in one or two years were small net exporters. In 1936-37, however, none of the four was a net exporter, and the combined net imports of the three net importers came close to 5 million bushels. This is the largest since 1931-32, but less than half the peak of net imports of 1928-29. The enlargement in 1936-37 was due primarily to expanding domestic utilization of wheat in Finland, and to poor crops caused by low yields in the other three countries.

Ex-Europe.—Brazil apparently had the unique distinction of showing record net imports in 1936-37. This was perhaps facilitated by a substantial two-year reduction in import duties on wheat flour, effective August 12, 1936, to meet complaints of the rising cost of flour and bread. Almost all of the imports came from Argentina, and flour represented less than 10 per cent of the total. In 1935-36, the net imports of 36.4 million bushels were nearly up to the record established in 1928-29, and Brazil ranked third only to the United Kingdom and Belgium-Luxemburg among net importers. In 1936-37 Italy ranked second, but Brazil outranked Belgium-Luxemburg for third place. From the slump in Brazilian wheat utilization that occurred between 1928 and 1932, the subsequent recovery has carried it to new high points in the past two or three years; and since domestic production has risen but little, net imports have resumed their upward trend.⁴

How long this will continue is doubtful, for Brazil has embarked on a new wheat policy. From January 1, 1937, milling quotas have been in force. The quota first established was insignificant; but from August 20, 1937, millers were required to use 5 per cent of domestic wheat, provided this could be had as cheaply as foreign wheat. The same law of August 9 imposed a tax on imported flour and flour milled in Brazil from imported wheat, authorized the Ministry of Agriculture to adjust the milling quota from year to year, and empowered the executive to shorten the period for which the import duty on flour had been lowered. Tendencies to shift to cotton and wheat may be affected by the government decision, announced on November 2, 1937, to abandon the coffee-price stabilization policy that has been in operation for many years, and that has involved heavy costs as well as the destruction of 50 million bags of coffee since 1931. But what the new dictatorship may bring forth it is too early to say.

Chile, which more commonly has a small wheat surplus for export, was a small net importer in 1936-37.¹ The 1935 crop turned out well below early official estimates. Prices rose when this was realized, and from May 19, 1936 exports were prohibited. The 1936 harvest, owing to partial failure in important southern districts, proved the smallest since 1932, and the wheat had the highest moisture

content in many years. To meet resulting acute shortage, the government fixed the standard extraction rate at 85 per cent, and permitted some importation from Argentina. High prices and reduced quality of flour contributed to restrict consumption materially.²

Japan remained a small net importer on the basis of official statistics (Table XXII), but was probably a small net exporter if trade with her possessions could be included in the reckoning. The domestic crop, though somewhat reduced by unfavorable weather, was practically adequate for home consumption; flour exports, mostly to Manchukuo, shrank further below their peak in 1934-35 (see p. 144); and wheat grain imports were accordingly the lightest in many years. By countries of origin,³ wheat imports from Australia were most strikingly reduced; this was due in part to the virtual embargo on Australian wheat from June 25, 1936 to the end of 1936, when the trade dispute was settled.⁴ Canada furnished practically as much as Australia, for the first time since 1929-30. Still more exceptionally, China took third place, followed by Manchukuo and Argentina. Imports from the United States would have been larger if the port tie-up in the Pacific Northwest had not led to cancellation of considerable purchases on Japanese account.

China's net imports of wheat and flour were reduced to the lowest point in many years. Jointly responsible were China's unusually good crops of 1936 and the high prices that prevailed in export markets. Imports were partly offset by wheat exports of about 1.2 million bushels to Japan and probably Manchukuo, mostly in the summer and fall of 1936, and by much enlarged flour exports to Manchukuo until that government prohibited these imports to protect her own milling industry. During the winter, however, adverse conditions for China's winter wheat led to fears for the next harvest, and the export movement stopped. When the poor prospects had matured, the Chinese Ministry of Industries on July 6, 1937 forbade wheat exports until June 1938, fixed maximum prices on futures contracts on the Shanghai exchange (as of July 3), and imposed stringent regulations on the futures market.⁵ The combined net imports of

¹ Calendar-year data given in Table XXV somewhat misrepresent the picture for years ending July 31, and data are not yet available for 1937.

² See *Northwestern Miller*, Aug. 4, 1937, p. 53.

³ Comparative official data are as follows, in thousand bushels:

Aug.-July	Total	Australia	Canada	United States	Argentina ^a	Manchukuo	China	Others
1931-32..	28,461	22,148	5,301	995	...	0	0	7
1932-33..	19,446	15,778	3,527	140	...	0	0	1
1933-34..	16,351	8,597	3,466	4,110	...	3	4	171
1934-35..	18,128	13,352	2,990	853	751	0	35	147
1935-36..	14,000	10,214	2,211	93	303	876	27	276
1936-37..	7,213	2,312	2,301	131	461	637	741	630

^a Separately available only from January 1935, but unimportant prior to 1934.

For calendar-year data 1922 to 1934, see *WHEAT STUDIES*, November 1935, XII, 100.

⁴ See *ibid.*, December 1936, XIII, 176, and *Commercial Intelligence Journal*, Jan. 16, 1937, p. 90.

⁵ *Foreign Crops and Markets*, July 26, 1937, pp. 44-45.

China and Manchukuo in 1936-37 were only 6.1 million bushels, which is smaller than the comparable figure for the calendar year 1925 and probably not very different from net imports of the same area in 1924-25.¹

THE FLOUR TRADE

International trade in flour continued in 1936-37 the shrinkage that has now been in progress for eight years with but a single interruption. Aggregate net exports of countries that were net exporters of flour have run about as follows,¹ in million barrels:

1928-29	42.0	1933-34	27.2
1929-30	35.3	1934-35	26.4
1930-31	34.5	1935-36	24.1
1931-32	29.4	1936-37	22.2
1932-33	26.6		

The latest total marks a new postwar low; it is less than half as large as the record total of 1923-24.

The net reduction in the world total for 1936-37 is fully accounted for by a further reduction in net imports of Manchukuo. From a peak of 6,655,000 barrels in 1934-35, following a very short crop, these fell to 1,205,000 in 1936-37. The temporary rise and decline of Manchukuo as a large flour importer has served to modify the trend of international trade in flour in the last few years. For most countries, the greater part of the decline had taken place earlier in the depression, if not before it came. This is illustrated by the following comparisons of net imports, in thousand barrels, for ten countries that were formerly major net importers:

Importing country	1926-31 average	1932-36 average	1936-37
Irish Free State	1,828	451	71
Czechoslovakia	1,741	61	(173)
Netherlands	1,721	495	504
Austria	1,692	394	236
Finland	1,248	500	245
Denmark	761	255	74
Norway	747	501	465
Greece	505	11	8
Egypt	2,039	58	12
Brazil	1,970	627	536
Ten countries	14,252	3,353	1,978

The underlying causes of the decline are, of course, the still expanding vogue of national-

istic policies, which have reduced the trade in flour even more than that of wheat. Important special factors operating in 1936-37 were the relatively high prices of wheat available to millers in the leading flour-exporting countries. For the second time since 1909-10, total net exports of the United States, Canada, Australia, and Argentina fell below 16 million barrels.

Australia retained the leading position among flour exporters, but her net exports fell considerably below those of 1935-36 and the even higher average of the four preceding years (Table XXVII). Her flour exports to the United Kingdom increased, but much less moved to the Far East. Primarily responsible for that shrinkage were the good crop in China, flour shipments from Shanghai to Manchukuo, and reduced flour consumption in the latter country. Contributing factors were a virtual embargo on Japanese imports from Australia in July-December 1936, and Manchukuo's import restrictions imposed under an ordinance of August 15, 1936.

United States flour exports, including shipments to possessions, rose from the long-time low of 1935-36 to the only slightly higher level of the three preceding years (see p. 139). Probably two-thirds of the total was milled in bond from Canadian wheat. Canadian flour exports declined to the lowest level in many years. Argentine exports, while less than in 1933-34, were larger than in any other crop year since 1929-30.

In recent years Japan has ranked as the fourth largest exporter of flour. In 1936-37, however, her exports suffered a further substantial shrinkage. Even if her shipments to her possessions are included in the reckoning, she ranked as a poor fifth. With these excluded, gross exports were only about a million barrels, less than a third of the average in the peak three-year period ending with 1934-35. With some increase registered in flour imports (due partly to a change in meth-

¹ See Tables XXII and XXV, and WHEAT STUDIES, December 1931, VIII, 187.

² These figures, summarized mainly from Table XXVII, somewhat understate the true totals, most particularly because shipments from Japan to her possessions (chiefly Chosen and Taiwan) cannot be included on a crop-year basis.

ods of recording), reported net exports of flour were the smallest in ten years. This reduction was due in part to very limited exports to China proper, where the 1936 crop was large. Much more largely it was due to further substantial reductions in exports to Manchukuo. There the crop was smaller than in 1935, but flour consumption was reduced (see p. 119); and for several weeks, until Manchukuo shut out Shanghai flour, this furnished severe competition to exporting millers in Japan. Flour exports so greatly disappointed expectations that Japan's carryover of wheat increased by about a million bushels.¹

Italy in 1936-37 displaced Japan as the fourth largest net exporter of flour. As in 1935-36, Italian net exports (mainly to her own African possessions) exceeded 2.2 million barrels. This record total was more than twice as large as that of France, Italy's nearest European competitor as a flour exporter.

Hungary, which before the depression had competed with France for first rank among European net exporters of flour, remained a poor third. Most of Hungary's trade agreements have favored exports of wheat rather than of flour. In 1936-37 Austria bought only 40 per cent of the 560,000 barrels she had agreed to import from Hungary under the pact of Rome, since Austrian millers found themselves able to buy Hungarian wheat cheaper than Hungarian millers could, and cheap Czechoslovakian flour was available.² Sweden again, and Syria and Lebanon for the first time, had a small balance of flour exports. Germany was a small net importer of flour for the first time in five years. New Zealand, under the new agricultural policy adopted by the Labour Government, practically excludes flour imports; but she continues to import some Canadian wheat for blending and some Australian for biscuit flour.

¹ *Northwestern Miller*, Nov. 18, 1936, p. 443; *Foreign Crops and Markets*, July 26, 1937, p. 45.

² *Northwestern Miller*, July 28, 1937, p. 25. It is reported that some of the surplus Hungarian mills have been sold to be moved to Ethiopia. *Ibid.*, Nov. 25, 1936, p. 506.

³ *Milling*, Oct. 23, 1937, p. 459.

⁴ See chart in *WHEAT STUDIES*, December 1936, XIII, 187. The unit for that chart, incorrectly stated as million barrels, was thousand barrels.

The United Kingdom, though as usual the largest net importer of flour, suffered another marked reduction in her flour exports. The trade with the Irish Free State, of major importance as late as 1931-32, has vanished for an indefinite period; and other outlets were reduced. Even so, British exports of flour were over a million barrels. Until 1931-32 up to 50 per cent of the Irish imports consisted of flour, much of it the product of British mills. Under the influence of government measures in support of Irish mills, including restriction of flour imports by license, flour imports have dwindled to negligible amounts. Nowadays they consist almost entirely of special grades required by biscuit manufacturers.³ British flour imports were not unusually large or small (Table XXIV). The largest proportion came from Canada, as usual, but Australia furnished a larger volume than in any recent year and 36 per cent of the total. From France, the third largest source, flour imports were smaller than for several years. Argentina ranked fourth, with a larger volume than in any year since 1931-32 but less than 5 per cent of the total. All other countries combined, including the United States, furnished about as much flour as Argentina.

Czechoslovakia succeeded in exporting a small part of her surplus wheat in the form of flour, and became a net exporter of flour as well as wheat for the first time. Poland's exports of flour, though not so large as in 1935-36, were larger than in any other year, and again represented over 60 per cent of her total wheat and flour exports.

Contrary to the general trend, Philippine flour imports reached a new high level in July-June 1936-37, at 1,034,565 barrels. This was some 32 per cent above the four-year average for 1932 to 1935, and 16.4 per cent above the previous peak in the calendar year 1931.⁴ Important contributing factors were, first, improved economic conditions in the Islands, aided by public works expenditures; and second, a very short domestic rice crop late in 1935, and consequent high prices of rice. These resulted in increasing flour consumption throughout the calendar year 1936, and it was well maintained under broadly similar conditions in 1937.

V. PRICES AND PRICE RELATIONS

Price advances were a notable feature of the crop year 1936-37 in the United States and in world markets generally. World wheat prices continued the rise from the historic lows of 1933-34,¹ and the advance in 1936-37 was the sharpest of all. This was due, of course, to the facts that the absorption of surplus stocks was in process of being completed and that the international wheat position manifested a tightness greater than for a decade or more. The true degree of tightness, moreover, was only gradually realized. Hence 1936-37, unlike several previous years, was notable for successive waves of price advances which culminated late in the crop year.

WHEAT PRICE LEVELS

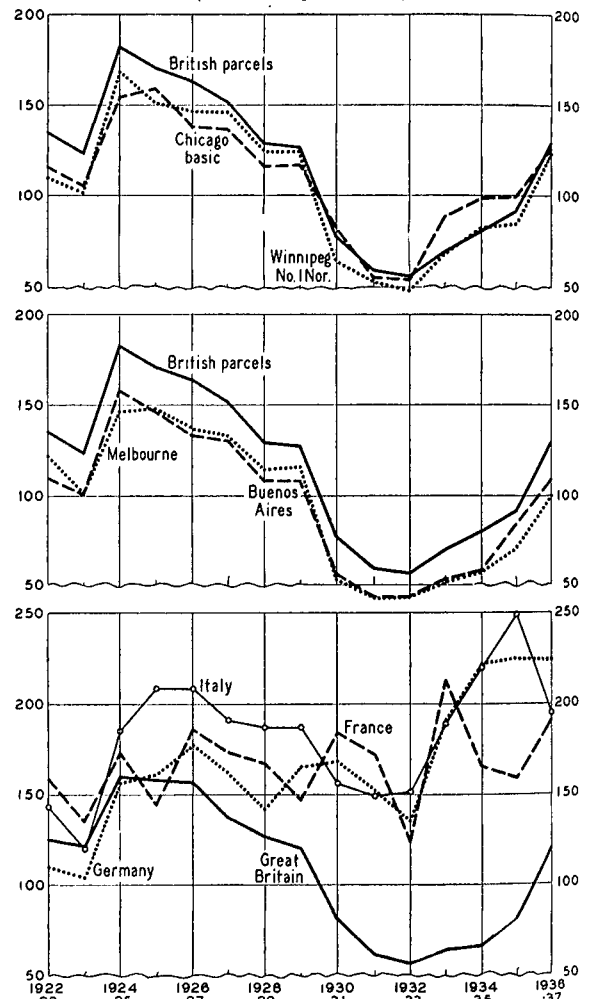
Currency readjustments during the year, together with those made some years earlier in the depths of the depression, render it impossible to make fully appropriate comparisons among the different series over a period of years. The crop-year averages presented in Chart 18, in United States currency, are nevertheless serviceable for a general view. All but three of the curves reveal the same broad pattern, which is not obscured by their deviations one from another. Those for Italy, France, and Germany, on the other hand, represent countries which have taken effective measures to immunize their wheat markets from international influences on prices. Hence the variations which they show reflect a complex series of factors, including variations in domestic supplies, changes in government policy, official depreciation of the dollar, and recent depreciation of the franc and the lira.

Both in the United States and in open world markets generally, wheat prices rose in 1936-37 to levels not recorded since 1929-30 or earlier. In cents per bushel, average prices for the year were almost identical with those for 1929-30 in Great Britain, Winnipeg, and Buenos Aires. In the United States, wheat prices averaged higher than since 1927-28, primarily because the country was on a tariff-effective import basis as it was not prior to

¹ While prices in terms of sterling and gold were lowest in 1933-34, prices in United States currency were lowest in 1932-33.

1934-35. For Melbourne, Australia, the 1936-37 average was 15 cents under the 1929-30 average, chiefly because the sharp rise in ocean freight rates in 1936-37 seriously restricted the price advance there. In Hungary and probably the other Lower Danube countries, where

CHART 18.—SIGNIFICANT CASH PRICE SERIES, CROP-YEAR AVERAGES FROM 1922-23*
(U.S. cents per bushel)



* Data mainly in Tables XXXIII and XXXIV. For some weeks in March-May 1935, parcels of French denatured wheat were excluded in computing average prices of British parcels.

crops were much larger in 1936 than in 1929, prices in terms of United States currency were not quite up to corresponding averages for 1929-30.

In Germany, Italy, and France, with strict

control over wheat marketing and prices in full force in 1936-37, central market prices in terms of American cents were higher than in 1929-30. The net advance was greatest in Germany, where prices were fixed at high levels in German currency and open devaluation has still been avoided. It was least in Italy, where fixed prices in Italian currency were not materially raised in spite of the short crop of 1936 and the devaluation of the lira that was effected in October. This explains why, in dollar equivalent, Italian prices averaged lower in 1936-37 than in the preceding year, whereas in France prices in francs were fixed high enough to overcompensate for currency depreciation if not high enough to satisfy growers.

Of prices not shown on Chart 18, a few deserve special comment (see Table XXXIII). Durum wheat, extremely scarce, was uniquely dear. In Minneapolis, No. 2 Amber Durum averaged not only above No. 1 Dark Northern (which also was very high), but nearly as high as in 1924-25 and 1926-27; indeed, for five months in the middle of the crop year the monthly averages ran above these earlier annual averages. In Winnipeg, No. 1 Amber Durum sold at substantial premiums over No. 1 Manitoba Northern from July 1936 through March 1937, for several weeks in the middle of the crop year at 25-30 cents premium; this reflected an extraordinary valuation on what is commonly a discount wheat there.¹

The 41-cent advance in the crop-year average for No. 2 Amber Durum in Minneapolis, however, was equaled by the rise in No. 3 Manitoba at Winnipeg. More striking still, the weighted average price of all sales at Winnipeg was 47 cents above the average for 1935-36, and only 2 cents below the average for No. 1 Manitoba Northern. This resulted partly from the premium on durum, but more largely from the fact that Canadian wheat graded exceptionally high (see p. 113).

¹ See chart in Dominion Bureau of Statistics, *Monthly Review of the Wheat Situation*, Sept. 24, 1937, p. 5. This helps to explain the striking increase in Canadian durum production in 1937, indicated on p. 113.

² See WHEAT STUDIES, December 1935, XII, 144-45.

In general, averages rose less on United States and Argentine wheats than on most others because the former were already at high levels in 1935-36. The lowest advances between 1935-36 and 1936-37 were registered in United States hard red winter wheats; thus for No. 2 Hard Winter the averages were \$1.07 and \$1.28. This resulted from the relative abundance of this type and the virtual absence of premiums for protein content.

While prices in 1936-37 were correctly regarded as high, they were not high compared either with pre-depression levels or with standards officially recognized in a few countries.

Considering the tightness of the world wheat situation in 1936-37, comparisons with 1924-25 or 1925-26 would seem appropriate. Wheat price levels of these earlier years have not been approached, except in such countries as Germany, Italy, and France. For the first time since 1930-31, British parcels prices ran consistently above the currency equivalent of 63.02 pre-devaluation gold cents per bushel, which was named in the International Wheat Agreement of August 1933 as the minimum to be reached under surplus conditions through that overambitious compact.² But in these terms the average price of British import wheat in 1936-37 was only 75 cents a bushel, less than half the corresponding averages in the four crop years beginning with 1924-25. Whatever their contributions to financial and economic readjustment, national currency devaluations have thus far failed to raise prices of basic commodities to levels characteristic of the 1920's.

In Great Britain, the standard price of home-grown millable wheat was fixed at 10s. per hundredweight in the Wheat Act, 1932. The "ascertained average price" on farmers' sales in 1936-37 was slightly under 8s. 10d.

The "parity price" standard set up in the United States, in which indexes of prices farmers pay for commodities bought is used as an adjusting figure, continues to appear excessive. Despite conditions exceptionally favorable to high wheat prices, the weighted average price received by farmers in 1936-37 is provisionally estimated at only 99.7 cents. Even the simple average of monthly average farm prices for July-June, \$1.13, was hardly

up to the "fair exchange value" computed according to the original terms of the Agricultural Adjustment Act of May 1933, and certainly below the higher "parity" computed on the revised basis established in August 1935.¹

If, however, one considers wheat prices in relation to the general price level, and also takes into account an apparent long-time downward drift in the purchasing power of wheat over other commodities, 1936-37 ranks with other years of shortage as shown by "deflated" prices. In dollars of prewar purchasing power, the average price of British import wheat works out to \$1.03. Though only about the same as in 1929-30, this was the first annual average since then to be reckoned as high in the perspective of a long period of years (see Chart 24, p. 181); and it was about as far above the declining "drift" zone as it had been in the three years beginning with 1924-25.

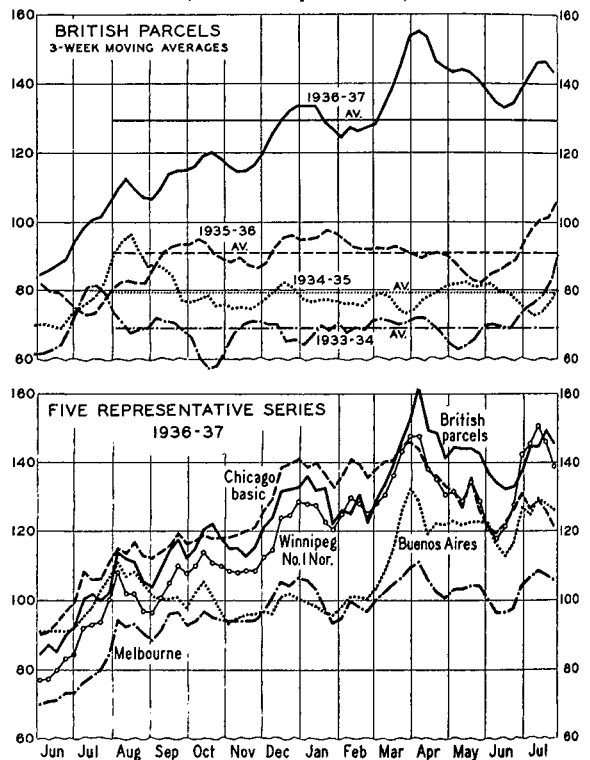
THE COURSE OF PRICES

To an unusual degree, but much as in 1924-25, comparison of annual average prices for 1936-37 with averages for the previous year gives an inadequate impression of the price movement during the year. The adjustment to a higher level was not promptly made, or overdone early in the season as in 1929-30, 1934-35, and 1935-36. Instead, recurrent advances brought prices to peaks in late March or early April, and the levels then reached were approached or exceeded in most markets in July 1937. This is brought out in Chart 19. In the upper section, the contrast with the three preceding crop years is shown by roughly comparable 3-week moving averages of British parcels prices. In the lower section, five representative cash price series are plotted by weeks from June 1936 through July 1937.

On the whole, Chicago prices remained above British parcels until late in March. They rose only slightly in that month while British par-

cels and Winnipeg and Buenos Aires prices advanced sharply, and for the rest of the crop year Chicago prices fluctuated well below Liverpool prices. Winnipeg prices rose gradually in relation to British parcels from September to late February, and in April-May declined relative to the average of British parcels prices. From late March to late June, Winnipeg and Chicago prices ran close together. In the closing weeks of the season,

CHART 19.—SIGNIFICANT CASH PRICE SERIES, WEEKLY, 1936-37, WITH COMPARISONS*
(U.S. cents per bushel)



* Data averaged monthly in Tables XXXIII and XXXIV. In the upper section, 3-week moving averages are used to facilitate comparison of the smoother curves that result.

¹ An AAA informational leaflet issued in August 1937 (G-72) says: "In 1937, farmers have found themselves with a fair-sized crop and high prices." This is strictly true. But it should be observed that the average farm price on August 15, which is not likely to be below the weighted average for the season, was only about 85 per cent of the "parity price" for that date as computed on the basis set forth in the original Agricultural Adjustment Act.

as Canadian crop prospects deteriorated alarmingly, Winnipeg prices rose most sharply. Buenos Aires prices on the whole declined from early August to early November and remained low through February. The March advance, however, was steepest in Buenos Aires, and even after the April recession Argentine wheat continued relatively dear. Melbourne prices were most nearly stable, with only a moderate upward drift through the year; for these alone the annual average (of

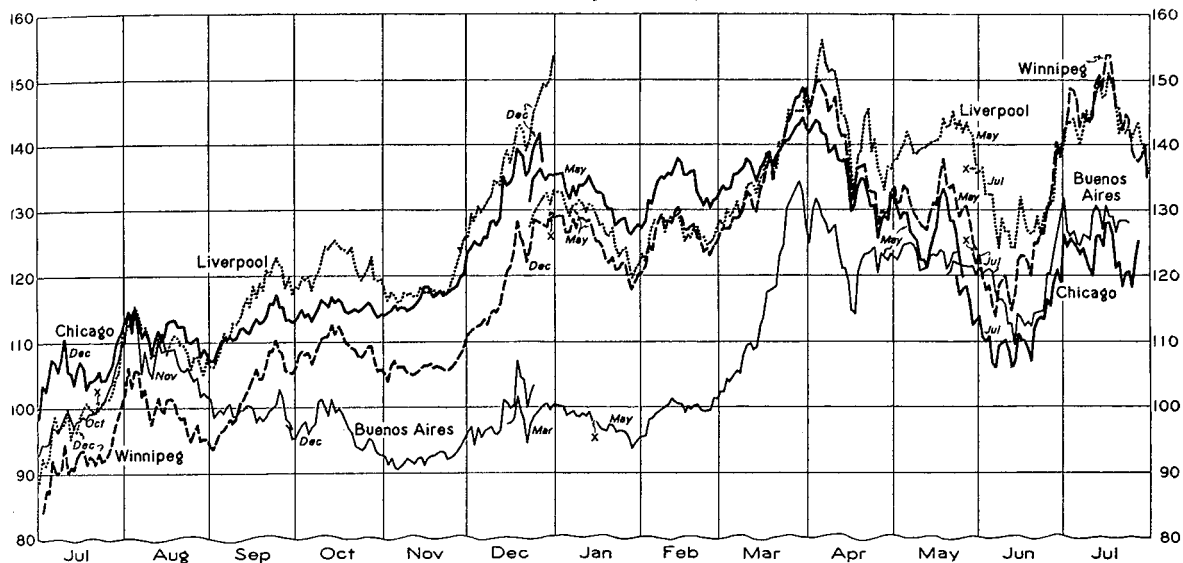
about \$1.00 per bushel) was reasonably representative.

Chart 20 shows the year's price movements in greater detail, by selected daily futures prices reduced to United States cents per bushel; and they are still more fully revealed in daily futures prices in the several national currencies, shown in Chart 25 (p. 182).¹

was canceled. This was accompanied by heavy early marketings and liberal offers for export in Canada and the Lower Danube countries, while importers temporarily slackened purchases in hopes of a lower level of prices.

Instead, prices advanced again through most of September. Drought in Australia, wet harvests in northwestern Europe, and the slowing

CHART 20.—DAILY CLOSING PRICES OF SELECTED WHEAT FUTURES IN LEADING MARKETS, 1936-37*
(U.S. cents per bushel)



* Based on trade quotations in sources cited under Chart 25, p. 182. A cross indicates a break between two succeeding futures in the same market where an overlap could not be shown without confusion.

The sensational advance from low points late in May 1936, as the crop catastrophe in the North American spring-wheat belt transformed prospects for ample supplies into assurance of scarcity, culminated early in August. The last of three main up-surges in this advance, from July 25 to August 6, rested less on wheat crop developments than on bullish sentiment engendered by marked advances in feed-grain prices induced by severe damage to the United States corn crop. In terms of September or October futures, this ten-weeks' gain was about 45 cents in Minneapolis, 35 in Liverpool, 33 in Winnipeg, over 29 in Chicago, and 26 in Buenos Aires.

Then ensued about four weeks of downward drift in which a part of the last up-surge

down of Canadian marketings all figured somewhat in this advance; but the outstanding factors seem to have been heavier import purchases and crystallized convictions that European imports for the year would be higher than previously expected. In all but one of the principal futures markets, gains of 11-17 cents a bushel were registered. Buenos Aires prices alone failed to share in this advance, and sellers' quotations on Argentine wheat for forward shipment tended to come into line with the Liverpool March future.

Late in November, after several weeks of fluctuation within a moderate range, another steep advance began from levels within a few cents of the peak two months earlier. In five weeks the Liverpool December future rose 36 cents, reflecting extreme tightness in the cash position there. Other December and May futures rose by 20-25 cents except in Buenos Aires, where the readjustment to a

¹ For somewhat fuller discussion of these, see our successive "Survey and Outlook" issues: WHEAT STUDIES, XIII, 6-12, 22-25, 245-50, 255-59, 385-93, 398-400; XIV, 12-19.

liberal export basis permitted only a moderate advance. Primarily responsible for this important advance was "active import purchasing within the framework of a recognized tight supply position and a tense European political situation." Large Italian purchases, reports that Germany needed large imports, and rumors that even Britain would lay in war stocks, stimulated British purchases on an extensive scale, including some for shipment in the spring from Canada and India. Speculative trading was unimportant in this advance, though speculative transactions in North American markets were heavy in the latter part of December, when Chicago and Winnipeg took over the leadership that Liverpool had previously held.

From late December until late in February futures prices responded with unusual strength to swings in purchasing activity and market sentiment that arose from changing views of the degree of tightness in the wheat position, and extensive speculation in numerous commodities and in stocks. A recession, a recovery, and a second recession brought prices late in February (except in Buenos Aires) some 6-9 cents below the peaks around December 31. To this recession the flood of Argentine exports presumably contributed.

In the next four or five weeks, however, there occurred another sharp advance that culminated in late March and early April. This was accompanied, and indeed slightly preceded, by a substantial rise in the index of prices of sensitive commodities, many of which shared in it though in response to varied causes and with different timing and culmination dates. The advances in other prices perhaps gave the wheat price rise an earlier start, but probably contributed little to its extent. In mid-March, increasing evidence of heavy import requirements, with the approaching exhaustion of the Argentine surplus, became a major market factor. In all markets, May futures stood at appreciable premiums over more distant futures, reflecting the tight cash position.

This last advance was followed by a recession, more severe than any earlier in the year, which lasted through most of April. Similar declines occurred in prices of most

other sensitive commodities and in securities, beginning in many instances two or three weeks earlier than the decline in wheat prices. The declines in most instances may be regarded as natural reactions from advances which had gone too far; but because the tendency to price recession was so widespread, prices of a number of commodities declined excessively. After late April, prices of some commodities declined further, while prices of others recovered. Wheat prices were among those that tended generally to hold their position or to advance through most of May.

From late April wheat prices came increasingly under the influence of crop developments in North America. These induced fairly large price swings in North American markets in May, contributed to a sharp price decline from late May to mid-June, and were chiefly responsible for the extreme price advance of June-July. The decline to mid-June resulted in considerable part from easing of the immediate supply situation, as it became apparent that high prices had brought forward supplies sufficient to meet the needs of importers through the remainder of the season.

FUTURES PRICE SPREADS

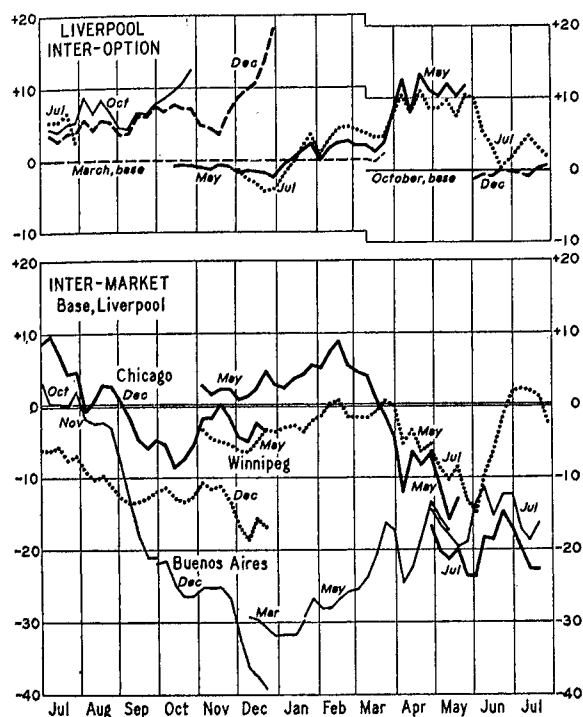
Inter-option.—Inter-option spreads at Liverpool throw important light on some features of general price behavior during the season. The upper section of Chart 21 shows the relations among Liverpool futures in terms of spreads from the March future during July-February 1936-37, and spreads from the October future during March-July. During July-December the nearer futures were at large premiums over the March, reflecting tight holding of available supplies of wheat and anticipation that the international supply position would be considerably eased on arrival of new wheat from the Southern Hemisphere. In this expectation, purchases were deferred to such an extent that severe shortage developed at Liverpool in October and in December, with sharp relative price advances in these futures during the months in which they expired.

Under these circumstances, forward pur-

chases of Argentine wheat for early shipment were made in such volume that in January the system of inter-option price relations was reversed and the nearer futures went to discounts under the more distant. Nevertheless,

CHART 21.—SIGNIFICANT SPREADS AMONG WHEAT FUTURES PRICES, WEEKLY, 1936-37*

(U.S. cents per bushel)



* Computed from weekly averages of data such as are plotted in Chart 20.

the October future, reflecting expected effects of appearance of new supplies from the Northern Hemisphere, was priced below the nearer futures from the beginning of trading in that future. The appearance of relative ease in the supply position which had developed in January proved short-lived. With approaching exhaustion of the Argentine surplus and import buying in excess of expectations, the nearer futures again rose to premiums over the distant future. These premiums were held through April, despite the general decline in wheat prices, and increased somewhat during May. Finally, in June, the development of reasonable assurance of adequate supplies for the remainder of the season brought a rapid decline in premiums on the near futures.

At Winnipeg, the May option was generally at a small premium over nearer futures, influenced by the liberal carryover at the beginning of the year and the necessity of deferring a considerable portion of Canadian exports until spring and early summer. The 1937 October future (from early January) was generally at a discount of 12-16 cents under the May, reflecting a view held more consistently in Winnipeg than in Liverpool that current high prices rested on a shortage of wheat supplies for 1936-37. At the price peak of early April, the Winnipeg October reached a discount of more than 21 cents under the May.

Chicago inter-option relations reflected more particularly the domestic situation, although they were not without effect from the international wheat position. Near futures tended to carry premiums over the May, somewhat as the near futures in Liverpool carried premiums over the March. In Chicago there was no expectation of new supplies to be available in the more distant delivery month (May). The premiums reflected clearly a relatively stronger anticipation of price advance among holders of cash wheat than among traders in futures, such as was doubtless an important factor in Liverpool inter-option relations also. The new-crop futures at Chicago were consistently at large discounts under the May, as was the new-crop future at Winnipeg; but in Chicago the discounts were at or near their maximum in early March rather than in early April. With supplies of old wheat in the United States declining to a total of only about 91 million bushels on July 1, however, prices of the cheapest contract wheat at Chicago retained premiums generally in excess of 12 cents until the beginning of July.

Inter-market.—The most striking feature of inter-market spreads of futures prices is shown by the Buenos Aires curve shown in the lower section of Chart 21. From mid-December 1935 through August 1936, Buenos Aires futures fluctuated not far above and below Liverpool futures. As world market prices rose above equivalents of the Argentine board's fixed buying price, and as prospects for the new Argentine crop improved, Buenos Aires prices so far failed to follow the suc-

cessive advances that the discount widened. The widening beyond 30 cents in the spread between December futures in December was mainly a reflection of the extreme advance in the Liverpool future as the month wore out. More significant was the spread of 25-32 cents a bushel that ruled from mid-October to early March. In this period were effected the huge sales that resulted in record shipments from Argentina in January-April (p. 132). The approaching exhaustion of the Argentine surplus, recognized somewhat belatedly in March, caused the spread to narrow greatly in that month. For the rest of the season the spread was too narrow to permit important further shipments to Europe at the higher ocean freight rates then prevailing.

Especially notable also was the relatively high position of Chicago prices through most of the season and their rapid relative decline during February-May. Through most of the two preceding years, prices of near futures at Chicago had ruled above corresponding Liverpool futures. In early July 1936 Chicago reached an extreme spread over Liverpool, incident on its stronger early price response to spring-wheat crop damage in North America. This spread was cut down during July as Liverpool prices continued to advance. In September and October renewed advances at Liverpool, especially in the nearer futures, found only moderate response in Chicago, and these futures went to premiums over the Chicago futures. Thereafter Chicago prices tended to advance relative to Liverpool until mid-February. From that peak Chicago May futures fell in relation to Liverpool futures, as prospects for a big harvest of winter wheat matured; and July futures in May-July showed Chicago farther below Liverpool than in any year since 1926-27. Even then, however, the spread was not wide enough to permit extensive export sales even for shipment from the new crop.

Winnipeg futures were below corresponding Liverpool prices through most of the year, though they were relatively firm in February-March. The spread was narrower on the May futures than on the December since the Liverpool May was in part a new-crop future; and for some weeks in February-March, when

Southern Hemisphere wheat predominated on British markets, the two were fairly close together. In the spring the spread widened notably until June. Then the sharp reversal of prospects for the new Canadian crop forced Winnipeg July up to around the Liverpool level in July. In the closing months of the year Winnipeg July was strikingly above Chicago July, whereas in the preceding year Winnipeg had been much below Chicago.

CASH PRICE RELATIONS

Liverpool.—Until new-crop wheat from the Southern Hemisphere reached the British market, prices of hard and of soft wheats comparable otherwise in milling value were close together. In late August and early September, indeed, No. 1 Manitoba was about 8 cents a bushel cheaper than Australian wheat. Argentine wheat had been absent from the British market for many months.

Prices of Rosafé wheat, c.i.f., for shipment from the new crop fell in early October to about 20 cents a bushel under No. 1 Manitoba for prompt shipment. Allowing for the duty of 2s. a quarter on Argentine wheat, the price difference to British millers amounted to about 14 cents. This price difference fluctuated moderately until early in December. It then increased until, in early January, when the new Argentine wheat was beginning to reach the British market, No. 1 Manitoba was more than 20 cents above Rosafé wheat, duty-paid. In February the difference approached 30 cents a bushel. During January and February, prices of Australian and Karachi wheats in near positions were generally some 6-11 cents above Rosafé, duty-paid, but still far below Manitobas. Thus, the appearance of new Southern Hemisphere supplies on the market changed the system of price relations among cash wheats from one of unusually small price differences to one of uncommonly large price differences.¹

¹ Price relations among c.i.f. quotations were unusually complex during much of 1936-37 owing to simultaneous occurrence of large differences according to quality and, for wheats of the same quality, large differences according to expected time of arrival. The time premiums, moreover, were different for different wheats. In much of February and throughout March, deferred shipments of Argentine wheat were quoted

In March, prices of Rosafé wheat began to advance rapidly relative to Australian and Karachi, and in April, prices of Manitobas began to decline relatively. During May, price differences among the various wheats in the British market were not so narrow as they had been early in the season, but were nevertheless quite moderate. In June, however, as Indian wheat from the new crop began to arrive in volume and crop damage in Canada raised prices of Canadian wheat, wide price differences developed again. During most of July, No. 1 Manitoba sold at about 25 cents over Choice White Karachi, a difference greater than had prevailed under the extreme price disparities of the previous February.

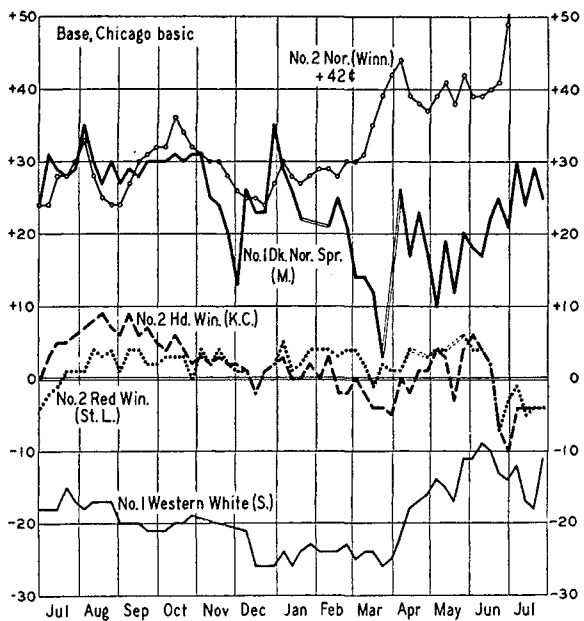
United States.—Price spreads between some cash wheats in the United States also were extreme and showed some notable changes during 1936–37. As the spring wheat crop deteriorated during the early summer of 1936, prices of hard red spring wheat rose sharply. The severity of the crop damage soon created an active demand for hard red winter wheat to supply much of the deficiency in the spring wheat crop; and by mid-August the weighted average price of No. 2 Hard Red Winter in Kansas City had risen to nearly 10 cents above the price of basic cash wheat (No. 2 Soft Red Winter) at Chicago. Except in 1935, under similar conditions, such a spread had not been witnessed since early in 1920; normally the Kansas City weighted average is below the Chicago price.

Premiums on the better qualities of hard red winter wheat declined gradually during September–December. Hard red springs held their premiums well until about November, when they also declined. From late October

through November, prices of futures and basic cash wheat at Chicago strengthened relative to Winnipeg prices; but the higher-quality hard wheats in the United States, already competing directly with imported Canadian wheat, could not advance relative to Winnipeg prices. In February and March, premiums on hard wheats in the United States declined again, but under quite different circumstances. Wheat prices in United States markets generally were then weakening relative to prices in foreign markets, and premium wheats weakened more than others.

The price averages for No. 1 Dark Northern Spring at Minneapolis (Chart 22) are unsatisfactory because reported sales were few and

CHART 22.—CASH WHEAT SPREADS IN UNITED STATES MARKETS, WEEKLY, 1936–37*
(Cents per bushel)



* Computed from weekly data mostly given in our "Survey" issues covering the period, corresponding to monthly averages in Table XXXIII.

at substantial premiums over Argentine wheat afloat, while on other wheats the deferred shipments sold simultaneously at large discounts under afloat parcels and cargoes. A chart showing these facts graphically for the season as a whole would be forbiddingly complex. The relationships in detail are adequately presented in charts in successive "Survey and Outlook" issues of WHEAT STUDIES.

¹ The nominal closing quotations issued daily by the Minneapolis Chamber of Commerce indicate a smaller range, but a number of individual cars of wheat were sold at premiums over the future considerably greater than the maximum premiums reflected in the top nominal quotations.

often not representative, since the price range according to quality within this one grade approximated 20 cents.¹ Comparison of these prices with the price of No. 2 Manitoba Northern at Winnipeg, plus duty, affords only a rough indication of the competitive position of domestic hard spring wheats in relation to

imported Canadian wheat. It seems clear, nevertheless, that from about the first of March at least, importation of Canadian bread wheat for milling for consumption in the United States was generally unprofitable. Durum wheat continued to be imported thereafter, and perhaps some bread wheats of special quality.

While hard wheats were at unusually high prices relative to futures and basic cash wheat at Chicago during most of 1936-37, soft wheats on the Pacific Coast were at unusual discounts below the Chicago prices. During the late summer and autumn there was prospect that surplus wheat from the Pacific Northwest could be moved into export, and a few export sales were made; but holders were unwilling to accept prices low enough, relative to the high level at Chicago, to permit an active export movement. With No. 1 Western White wheat at Seattle about 20 cents under basic cash wheat at Chicago and nearly 25 cents under No. 2 Soft Red Winter at St. Louis during September-November, however, wheat and flour from the Pacific Northwest moved in considerable volume to the eastern United States.

Through November-January, the port tie-up prevented either exports or water shipments to other United States ports. As wheat prices elsewhere rose in December, prices on the Pacific Coast lagged until No. 1 Western White wheat fell to the extraordinary discount of over 25 cents under Chicago basic cash. A spread of about this magnitude pre-

vailed until the end of March and permitted an unusually heavy flow of wheat eastward by rail, and after the ports opened again in early February, by water. With soft wheats relatively cheap in the international market, however, export sales from the Pacific Coast were not possible until late March. By the end of March, Seattle prices, declining with Chicago relative to international markets, had reached a basis for fairly active exports. The further relative decline in Chicago prices was not followed by Seattle, and in early June, basic cash wheat at Chicago was within 10 cents of the Seattle price.

Chicago quotations on the cheapest No. 2 Hard Red Winter, even in August and September 1936, reflected only in slight degree the premiums enjoyed by hard wheats generally, for the lowest qualities of wheat within the grade carried little premium over soft wheats of comparable grade. From early December to mid-February, minimum quoted prices on No. 2 Hard Winter and No. 2 Red Winter at Chicago were generally identical; and after the middle of February there were several short periods in which the hard winter quotation fell slightly below the soft winter, alternating with others in which the hard winter was the higher priced. Deliveries on May contracts were finally made chiefly in minimum quality No. 2 Dark Hard Winter wheat (tenderable at a premium of $\frac{1}{2}$ cent over contract price), which was assembled and moved to Chicago in large volume specifically to satisfy futures contracts.

VI. CONCLUDING OBSERVATIONS

RETURNS TO WHEAT GROWERS

By and large, wheat producers found the season 1936-37 financially the best since 1929-30. There were exceptions, chiefly where price advances were more than offset by very poor yields; but substantially improved financial returns were the rule, and there were even a few countries in which wheat growers were satisfied to count the year prosperous.

Argentina and Australia enjoyed an exceptionally favorable position. Their costs per sown acre were moderate, their yields above

average, and their wheat of good quality. Moreover, before their crops matured, world wheat prices had risen in consequence of crop disaster to North American spring wheat and mediocre yields in much of Europe. In Argentina, advance sales of considerable volume before harvest must have kept many growers from profiting to the full extent; and in Australia, where there was very little advance selling, the rise in ocean freights limited the improvements in Australian prices. Even so, growers in both countries enjoyed an unusually high net income from wheat.

In Argentina, 10 pesos per quintal, port basis, was regarded as a satisfactory price for the very short crop of 1935. The weighted average price of the large crop of 1936 must have been over 11 pesos, though it was by no means so high as a simple average of monthly prices from December 1936.

For Australia the best cash price series in Australian currency¹ ranged mostly between 2s. and 2s. 4d. per bushel at its lowest in 1931. The average for 1932 was slightly over 3s., and this annual average was not again exceeded until 1935. In the five years ending September 1935, no monthly average exceeded 3s. 4d.; and for the year ending July 1936 the average was only slightly over 3s. 6d. In August–July 1936–37 the corresponding average was slightly over 5s., and from December 1936 onward no monthly average was appreciably below this figure.² The spread between port prices and farmers' prices averages about 8d. per bushel. It seems safe to say that Australian growers realized the extremely profitable price of over 4s. 8d. for their 1936 crop, as compared with not much over 3s. for the crop of 1935 and not much over 1s. 6d. for the big crop of 1930.

In the United States, totals and averages tend to obscure the poor returns to wheat growers in the northern Great Plains, for whom high prices were no great boon when they had so little wheat to sell. Almost all

¹ "Weighted average of shippers' limits for growers' bagged lots, Sydney, Melbourne and Adelaide," available in monthly averages of daily quotations in Commonwealth Bureau of Census and Statistics, *Monthly Summary of the Wheat Situation in Australia*, from January 1930.

² The Australian Royal Commission on the Wheat, Flour and Bread Industries, in its *Second Report* issued Feb. 2, 1935, found "that about half the wheat-growers of the Commonwealth were producing the grain at a cost of 3s. 6d. per bushel on an f.o.r. ports basis, including interest, in June 1934" (Sec. 621); and that about 40 per cent of the growers could "pay their working expenses and meet their present interest charges when wheat is at 3s. per bushel f.o.r. ports," while about 34 per cent could not produce wheat at this price "even if they were free from all interest" (Secs. 645, 646).

³ Published official data do not yet permit more precise statement or comparisons.

⁴ Bureau of Agricultural Economics, *Demand, Credit and Prices, 1938: Agricultural Outlook Charts*, October 1937, pp. 1–2.

other wheat sections did well, and some very well. The aggregate farm value of the small United States crop was the largest since 1929–30, and growers received substantial additional sums for co-operating in the official soil-conservation program.³ The gross income in dollars did not reach pre-depression levels; but costs and fixed charges were generally lower than in the earlier period, prices of goods farmers buy were generally not so high, and real net income was consequently fairly satisfactory. Gross farm income in the United States for 1936, including government payments, is officially calculated at 82 per cent of the 1924–29 average; but lessened production expenses and additions from the federal Treasury raised the farm cash income to within the range shown for these six pre-depression years.⁴

In Canada the disaster to the spring-wheat crop was not so great as it was south of the boundary, but winter wheat is so insignificant that the total crop was farther below normal than in the United States. Partly because of the exceptionally high quality of the grain, the average farm price of wheat in Canada was nearly 50 per cent higher than in 1934–35 or 1935–36; and farm returns from the small crop exceeded 200 million dollars for the first year since 1930–31. The farm value of all the principal field crops was about 620 million dollars, also the largest since 1930–31, but only 56.5 per cent of the 1924–29 average.

In the United States and Canada, wheat growers lost somewhat by selling freely early in the season. Prices looked very good, compared with previous years, and the grain could most economically be moved promptly. As it turned out, the average grower thus failed to reap the advantages of later price advances. This, however, was an unforeseeable accident. In the United States, whereas the July–June monthly average farm price was \$1.13, the weighted average price was only about \$1.00 a bushel. The story will be quite different in 1937–38, when prompt selling enabled growers (if they chose, as many did not choose) to take advantage of the tight situation and high prices early in the season.

In the United Kingdom, wheat growers' sales yielded more than for many years, as the "ascertained average price" of certified

sales of millable wheat approached the standard price of 10s. per hundredweight. Growers received the "deficiency payment" on their total sales; this had not been the case in three preceding years, when such sales annually exceeded the limit of 27 million hundredweight on which the deficiency payment figure has been computed.¹ Yet total returns to wheat growers were not so high as in the two crop years preceding, for the merchantable crop was small and the Treasury subsidy materially reduced. As wheat prices rose, the flour levy which finances deficiency payments was successively lowered until it was suspended on April 18, 1937.²

For other countries, less need be said here. There is no doubt that wheat growers (as indeed farmers in general) fared well in the Lower Danube countries, where crops were large and prices as good as or better than in other recent years. In French North Africa, particularly in Morocco, very low yields made returns low in spite of some price improvement. In France and Italy, despite fairly high prices fixed, growers were dissatisfied with their returns in view of the small crops and higher prices for goods purchased. Elsewhere in Continental Europe, outside the Iberian peninsula, conditions varied less strikingly.

In Turkey, 1936-37 was probably a banner year for farmers. In Japan, where agrarian distress has been extreme, financial conditions among farmers were vastly improved. Much the same was true in China and Manchukuo. In all these countries the advance in wheat prices was an important factor, and in all except Manchukuo good wheat crops were important also.

WHEAT AND WAR

Earlier in this study we have referred to influences on world wheat developments in

¹ Before wheat was planted for harvest in 1938, Parliament raised this limit to 36 million cwt. For an analysis and forecast of the effects of recent policy changes on farm returns, see Ruth L. Cohen's paper in *The Farm Economist* (Oxford), July 1937, II, 117-20. There is official prospect that arrangements will be made for recurrent consideration of the standard price.

² This suspension lasted for five months. On Sept. 19 the processing tax was reimposed at 6d. per sack of 280 lbs., the rate which had been effective from Jan. 27 to Apr. 17.

1936-37 that were exerted by wars and threats of war. All told, those influences were relatively slight, as they were also in 1935-36. Here we venture a few observations from somewhat broader viewpoints.

It will be recalled that the Ethiopian campaign was embarked upon in the fall of 1935, after Italy had harvested a crop of wheat ample for domestic needs. The civil war in Spain was launched in July 1936, when the domestic wheat carryover was fairly large but the wheat crop was poor in the territory most strongly held by the Loyalist Government. Poor grain crops in Soviet Russia, Germany, Italy, and Portugal in 1936 may not have restrained the more or less open participation of their governments in the Spanish contest; but they may well have helped to influence these governments to avoid entanglement in a more comprehensive struggle. The present Japanese campaign in China was launched not when China had good crops, as in 1936, but after poor crops were certain in 1937. In both years Japan had ample supplies of foodstuffs for her own use.

Without drawing exaggerated inferences, it seems fair to say that in various ways the wheat situation may figure among the numerous factors that nowadays determine the outbreak of *de facto* wars; and that strength or weakness in wheat supplies, on the part of aggressor or victim, is among the elements that need to be taken into the reckoning.

More important is another observation. Fear of major war, and desire to prepare against that contingency, is prominent among the motives responsible for many of the economic controls that so widely prevail in Europe. Before the depression, this fear was merely one among many factors and, except in rare instances, by no means a powerful one. In the ensuing years of recession in commodity prices and business activity, it was surely secondary to the desire to keep farmers from being overwhelmed by financial catastrophe. Within the past three or four years, however, defense considerations have loomed much larger in the complex motives behind the tightening controls in many countries.

Beyond a doubt, the multifarious wheat policies of nations constitute today the out-

standing barriers to the solution of the world wheat problem in its long-run sense. They continue to promote uneconomic wheat production, to limit wheat consumption for food and feed, to prevent the ready flow from surplus to deficit areas across national boundaries, and thereby to depress the general level of wheat prices.¹ Today, however, these policies rest heavily on fear of war, and determination to approach or attain national self-sufficiency in wheat against the event of war. It is too much to expect this grave hazard to be eliminated in the near future; but on the diminution of the danger must rest much of the hope for solving the world wheat problem of the next decade. With sown wheat acreage anywhere near current levels, only important resumption of the upward trend in wheat utilization can be expected to prevent a recurrence, sooner or later, of price-depressing surpluses.

For the not distant future, assuming that the world will not be engulfed in a great war in the next two or three years, one prospect deserves mention. The world wheat crops of 1937 will evidently suffice for 1937-38 needs but permit only moderate replenishment of depleted stocks. If 1938 should bring bumper harvests, and the danger of war still appear serious, various countries are not unlikely to take advantage of price recessions to lay in "security stocks," for which storage space will have been provided. The aggregate volume of the stocks so acquired in a single year could be only a small fraction of world wheat production; yet such acquisition may easily afford some "cushion" for price declines that large crops tend to bring.

This influence might be very considerable

¹ See J. S. Davis, "The World Wheat Problem," *WHEAT STUDIES*, July 1932, VIII, 409-44.

² *Economist* (London), Oct. 2, 1937, pp. 12-16. Sir Arthur is now professor of political science in Oxford University and holds a University seat in the House of Commons. During the war he held a leading position in the British Ministry of Shipping and was chief executive of the Allied Maritime Transport Council. For some years after the war he was an eminent "social engineer" specializing in international relations, first with the Reparations Commission and then with the League of Nations.

if the British government should embark on such a policy, and this is under consideration. In March 1936, Sir Thomas Inskip was appointed Minister of the Coordination of Defence. In May, Sir William Beveridge was made Chairman of a Sub-Committee on Food Supplies for the Civil Population. Early in December 1936, Mr. H. L. French was appointed director of a newly created Food (Defence Plans) Department in the Board of Trade. In October 1937, Sir Arthur Salter publicly urged the advisability of accumulating reserves of foodstuffs equivalent to a year's wheat requirements.² No plans have been officially announced, but the view is plausibly urged that, in this respect as in others, a substantial defense measure would tend also to increase the assurance of continued peace.

In Canada and the United States, where fears of another world war in the near future are perhaps entertained more widely than in Europe, these have apparently not exerted appreciable influence on wheat policy reformulation. New action by the Dominion Government in Canada will presumably be considered after the Turgeon Commission has rendered its report. The American Congress, called in special session, is now struggling with bills designed to substitute a new and permanent Agricultural Adjustment Act for the emergency act of 1933 that was crippled by the Supreme Court decision, and to launch a government experiment with crop-yield insurance for wheat growers. The "ever-normal granary" features of these bills are ostensibly designed to safeguard consumers against shortages caused by a succession of poor yields, and to reduce year-to-year fluctuations in farmers' income. Yet the proposed powers of the Secretary of Agriculture, for "control" over production and marketing of wheat and other staple crops, considerably exceed those hitherto granted. Moreover, despite the notable increase in returns to wheat growers in 1937, they contemplate indefinite continuation of subsidies such as previously were supported on the ground that extreme farm distress must be relieved.

The author is greatly indebted to Helen C. Farnsworth, V. P. Timoshenko, and Holbrook Working for essential aid on special portions of this Review, and to P. Stanley King, Rosamond H. Peirce, and Elizabeth Brand Taylor for assistance throughout

APPENDIX NOTE

WHEAT MILLED AND FLOUR PRODUCTION IN THE UNITED STATES, 1931 to 1937

For several years considerable uncertainty has existed regarding the actual total quantities of flour produced and of wheat milled annually in the United States. No substantially complete statistics of flour production had been available since those from the census of manufactures of 1931. In 1936, with assistance from the Wheat Flour Institute of the Millers' National Federation and with the aid of the Bureau of the Census, we completed a study that narrowed the range of uncertainty.¹

Statistics of the census of manufactures of 1935, released early in 1937, showed a total flour production 1 per cent over our standing estimate of the total for that year. Production shown by the census of manufactures is not always closely comparable with statistics and estimates made strictly for the calendar year, because a considerable proportion of the production reported in the census of manufactures may be for fiscal years other than the calendar year. To afford an accurate basis for estimating total flour production, the

By this method of tabulation, assurance is obtained that the reports for mills accounting for about 95 per cent of the total production reported are for the calendar year. Moreover, chances of duplication or omission in connection with the separate reporting of prepared flour in the census of manufactures are avoided. As an aid to maintaining a continuous series of estimates of monthly flour production, this special census tabulation gives the data separately by output classes. The statistics of numbers of mills and their production of wheat flour, in barrels, by output classes in 1935 are shown in the tabulation on this page.

This tabulation, it will be noted, provides statistics separately for mills reporting 100,000-499,999 barrels and mills reporting 500,000 barrels or more, instead of combining into a single classification all mills reporting 100,000 barrels or more. The usefulness of this improvement in classification has been increased through provision by the Bureau of the Census of compar-

Output class	All reporting mills		Mills reporting monthly for 12 months ^a		"Other" mills reporting quarterly for 12 months ^b		Mills not reporting monthly or quarterly ^c	
	Number	Production	Number	Production	Number	Production	Number	Census of Manufactures Production
United States total..	2,767	102,418,474	912	96,163,551	702	1,052,748	1,153	5,202,175
Under 1,000	821	431,635	25	13,722	358	157,338	438	260,575
1,000-4,999	1,003	2,844,034	141	438,902	321	727,399	541	1,677,733
5,000-19,999	447	4,457,078	284	3,008,243	22	138,688	141	1,310,147
20,000-99,999	271	13,129,373	241	12,025,715	1	29,323	29	1,074,335
100,000-499,999	185	42,916,670	181	42,037,285	..	.....	4	879,385
500,000 or more	40	38,639,684	40	38,639,684	..	.....	..	.....

^a Including mills that reported quarterly for part of the year and monthly for the remainder of the year.

^b Excluding mills that reported monthly for part of the year.

^c Including mills which reported monthly or quarterly for less than 12 months.

Bureau of the Census made available about September 1, 1937 a special tabulation of flour production in 1935 based chiefly on the statistics reported monthly or quarterly. Statistics reported in the census of manufactures, perhaps partly for fiscal years, are employed in this tabulation only for the small volume of production by mills not reporting monthly or quarterly throughout the year.

ive data for three previous censuses for which the records are available for retabulation. These supplementary statistics² are shown in the tabulation on the following page.

All the information at hand indicates that the statistics of flour production thus compiled for 1935 by the Bureau of the Census are highly reliable and come unusually near to completeness. Because the census of manufactures undertakes to canvass only establishments having a value of products of \$5,000 or more, a large proportion of the mills which produced under 1,000 barrels of flour during 1935 are omitted in its tabulation. The number of such mills included in the 1935 tabulation, 821, is larger than in any census of manufactures since that of 1921, despite the fact that the total number of such mills in operation

¹ Holbrook Working, "New Data on United States Flour Production Since 1899," *WHEAT STUDIES*, April 1936, XII, 273-312.

² For similar statistics of numbers and production of mills reporting less than 100,000 barrels, but output classes, see *ibid.*, XII, 311.

in 1935 was probably about 40 per cent less than in 1921. This reflects special care taken by the Bureau of the Census in 1935 to avoid omitting small mills properly to be included in the census. We estimate the production of omitted mills producing under 1,000 barrels each at a total of 500,000 barrels, and their number at about 1,380.

of manufactures of 1933 omitted a few mills which produced slightly over 20,000 barrels in that year. These considerations lead to a net increase of 695,000 barrels in our estimate of total flour production in 1933, bringing the figure to 103,288,000 barrels.

These changes in census-year production esti-

Output class	All reporting mills		Mills reporting monthly for 12 months		Mills not reporting monthly		Mills reporting monthly for part of the year	
	Number	Production	Number	Production	Number	Production	Number	Production
	1929							
100,000-499,999	216	47,626,982	213	47,260,740	2	257,236	1	109,006
500,000 or more	51	50,078,700	51	50,078,700	..	.....	..	.....
	1931							
100,000-499,999	205	46,440,164	201	45,659,870	4	780,294	..	.....
500,000 or more	46	44,267,940	46	44,267,940	..	.....	..	.....
	1933							
100,000-499,999	187	42,170,689	185	41,661,748	2	508,941	..	.....
500,000 or more	41	38,925,832	41	38,925,832	..	.....	..	.....

Total flour production in 1935 is thus indicated as about 102,918,000 barrels. Based on the flour production reported monthly, and estimates of non-reported production, we had previously used a total of 101,300,000 barrels. This discrepancy of 1,618,000 barrels arises chiefly from an increase in the number of fairly large mills failing to report monthly, whereas we had counted on some decrease in the number of such mills failing to report monthly.

Analysis of the new statistics by output classes indicates need for slight revisions in our earlier estimates of flour production in 1933. Among mills producing 1,000-4,999 barrels and 5,000-19,999 barrels annually, the average output per mill was probably slightly above our earlier estimates; and it now appears probable that the cen-

mates call for slightly raising our monthly estimates of flour production beginning with January 1932.¹ In a chart of monthly flour production the changes are scarcely perceptible. They are of interest chiefly as they affect the indications of changes in flour consumption in the United States. Our previous estimates have indicated that consumption of flour has been about 152 pounds per capita since the latter half of 1933—a decline from 176 pounds prior to the depression. It now appears that flour consumption fell to about 154 pounds per capita in the latter half of 1933 and has since recovered to about 156 pounds per capita (Table XXVIII).

¹ Published in WHEAT STUDIES, September 1937, XIV, 33; and from July 1932 in Table XXIX below.

APPENDIX TABLES

TABLE I.—WHEAT PRODUCTION, ACREAGE, AND YIELD PER ACRE IN PRINCIPAL PRODUCING AREAS, 1925-36*

Year	World ex-Russia ^a			Four chief exporters				Europe ex-Russia			French North Africa ^c	India	Others ex-Russia ^a	USSR	
	Total	Northern Hemisphere	Southern Hemisphere	United States	Canada	Australia	Argentina	Total	Total	Lower Danube ^b					Other Europe
A. PRODUCTION (Million bushels)															
1925.....	3,415	3,050	365	669	395	115	191	1,370	1,409	296	1,113	68	331	237	764
1926.....	3,523	3,075	448	832	407	161	230	1,630	1,220	294	926	57	325	291	898
1927.....	3,705	3,236	469	875	480	118	282	1,755	1,280	272	1,008	60	335	275	792
1928.....	4,037	3,463	574	914	567	160	349	1,990	1,408	367	1,041	69	291	279	807
1929.....	3,607	3,242	365	823	305	127	163	1,418	1,449	303	1,146	77	321	342	694
1930.....	3,881	3,380	501	886	421	214	232	1,753	1,359	353	1,006	64	391	314	989
1931.....	3,873	3,400	473	942	321	191	220	1,674	1,434	370	1,064	69	347	349	753
1932.....	3,874	3,355	519	757	443	214	241	1,655	1,518	222	1,296	75	337	289	744
1933.....	3,810	3,268	542	552	282	177	286	1,297	1,742	367	1,375	70	353	348	1,019 ^d
1934.....	3,490	3,046	444	526	276	133	241	1,176	1,546	249	1,297	97	350	321	1,117 ^d
1935.....	3,553	3,184	369	626	282	144	141	1,193	1,575	302	1,273	70	363	352	1,133 ^d
1936.....	3,514	3,044	470	626	229	150	249	1,254	1,480	383	1,097	50	352	378	960 ^d
Average 1928-32..	3,854	3,368	486	864	411	181	241	1,697	1,434	323	1,111	71	337	315	797
B. ACREAGE (Million acres)															
1925.....	229.9	198.1	31.8	52.4	20.8	10.2	17.6	101.0	69.6	18.5	51.1	7.9	31.8	19.7	61.5
1926.....	239.7	205.0	34.7	56.6	22.9	11.7	19.0	110.2	70.0	18.7	51.3	8.1	30.5	20.9	73.9
1927.....	243.6	206.5	37.1	59.6	22.5	12.3	20.2	114.6	71.3	18.9	52.4	7.1	31.3	19.3	77.4
1928.....	254.0	212.2	41.8	59.2	24.1	14.8	22.4	120.5	71.4	19.6	51.8	8.3	32.2	21.6	68.5
1929.....	251.0	215.3	35.7	63.3	25.3	15.0	15.9	119.5	70.0	18.3	51.7	8.5	32.0	21.0	73.5
1930.....	260.5	218.0	42.5	62.6	24.9	18.2	19.5	125.2	73.6	20.0	53.6	8.9	31.7	21.1	83.5
1931.....	256.2	220.2	36.0	57.7	26.4	14.7	16.0	114.8	75.9	20.9	55.0	8.2	32.2	25.1	91.1
1932.....	260.1	221.6	38.5	57.8	27.2	15.8	17.8	118.6	75.2	18.8	56.4	8.8	33.8	23.7	85.3
1933.....	250.1	211.7	38.4	49.4	26.0	14.9	18.0	108.3	77.8	19.9	57.9	9.0	33.0	22.0	82.0
1934.....	242.4	206.8	35.6	43.4	24.0	12.5	17.2	97.1	77.6	19.5	58.1	9.0	36.1	22.6	87.1
1935.....	246.6	216.4	30.2	51.2	24.1	12.0	11.7	99.0	78.9	20.7	58.2	9.7	34.5	24.5	91.6
1936.....	247.1	213.0	34.1	48.8	25.3	12.3	15.9	102.3	77.9	20.8	57.1	8.7	33.6	24.6	91.6
Average 1928-32..	256.4	217.5	38.9	60.1	25.6	15.7	18.3	119.7	73.2	19.5	53.7	8.5	32.4	22.6	80.4
C. YIELD PER ACRE (Bushels)															
1925.....	14.9	15.4	11.5	12.8	19.0	11.2	10.8	13.6	20.2	16.0	21.8	8.7	10.4	12.0	12.4
1926.....	14.7	15.0	12.9	14.7	17.8	13.8	12.1	14.8	17.4	15.7	18.0	7.0	10.7	13.9	12.2
1927.....	15.2	15.7	12.6	14.7	21.4	9.6	14.0	15.3	18.0	14.4	19.2	8.5	10.7	14.2	10.2
1928.....	15.9	16.3	13.7	15.4	23.5	10.8	15.6	16.5	19.7	18.8	20.1	8.3	9.0	12.9	11.8
1929.....	14.4	15.1	10.2	13.0	12.1	8.5	10.2	11.9	20.7	16.6	22.2	9.1	10.0	16.3	9.4
1930.....	14.9	15.5	11.8	14.2	16.9	11.8	11.9	14.0	18.5	17.6	18.8	7.2	12.3	14.9	11.8
1931.....	15.1	15.4	13.1	16.3	12.2	12.9	13.7	14.6	18.9	17.7	19.3	8.4	10.8	13.9	8.3
1932.....	14.9	15.1	13.5	13.1	16.3	13.6	13.5	14.0	20.2	11.8	23.0	8.5	10.0	12.2	8.7
1933.....	15.2	15.4	14.1	11.2	10.8	11.9	15.9	12.0	22.4	18.4	23.7	7.8	10.7	15.8	12.4
1934.....	14.4	14.7	12.5	12.1	11.5	10.6	14.0	12.1	19.9	12.8	22.3	10.8	9.7	14.2	12.8
1935.....	14.4	14.7	12.2	12.2	11.7	12.1	12.1	12.1	20.0	14.6	21.9	7.2	10.5	14.4	12.4
1936.....	14.2	14.3	13.8	12.8	9.1	12.2	15.7	12.3	19.0	18.4	19.2	5.7	10.5	15.4	10.5
Average 1928-32..	15.0	15.5	12.5	14.4	16.1	11.5	13.2	14.2	19.6	16.6	20.7	8.4	10.4	13.9	9.9
1926-35..	14.9	15.3	12.7	13.8	15.3	11.6	13.4	13.8	19.6	15.9	20.9	8.3	10.4	14.2	11.0

* Data summarized from Tables II and III (except for India and USSR), with yields computed throughout from production and acreage; and with corresponding data for Brazil and Peru included in appropriate totals.

^a Excludes USSR, China, Iran, Iraq, and various areas producing under 1 million bushels a year.

^c Morocco, Algeria, Tunis.

^d Not fairly comparable with other production data; see above p. 112, and WHEAT STUDIES, XIII, 150.

^b Hungary, Yugoslavia, Rumania, Bulgaria.

TABLE II.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING COUNTRIES, 1925-37*

(Million bushels)

Year	U.S. total	U.S. winter	U.S. spring	Canada	Australia	Argentina	Uruguay	Chile	Hungary	Yugoslavia	Rumania	Bulgaria	Morocco	Algeria	Tunisia
1925.....	668.7	400.6	268.1	395.5	114.5	191.1	10.0	26.7	71.7	78.6	104.7	41.4	23.9	32.7	11.8
1926.....	832.2	631.6	200.6	407.1	160.8	230.1	10.2	23.3	74.9	71.4	110.9	36.5	20.6	23.6	13.0
1927.....	875.1	548.2	326.9	479.7	118.2	282.3	15.4	30.6	76.9	56.6	96.7	42.1	23.5	28.3	8.1
1928.....	914.4	579.1	335.3	566.7	159.7	349.1	12.3	29.7	99.2	103.3	115.5	49.2	24.7	30.3	13.7
1929.....	823.2	586.2	237.0	304.5	126.9	162.6	13.2	33.5	75.0	95.0	99.8	33.2	31.8	33.3	12.3
1930.....	886.5	633.6	252.9	420.7	213.6	232.3	7.4	21.2	84.3	80.3	130.8	57.3	21.3	32.4	10.4
1931.....	941.7	825.4	116.3	321.3	190.6	219.7	11.3	21.2	72.6	98.8	135.3	63.8	29.8	25.6	14.0
1932.....	756.9	491.8	265.1	443.1	213.9	240.9	5.4	28.7	64.5	53.4	55.5	48.1	28.0	29.2	17.5
1933.....	551.7	376.5	175.2	281.9	177.3	286.1	14.7	35.3	96.4	96.6	119.1	55.5	28.9	32.0	9.2
1934.....	526.4	438.0	88.4	275.8	133.4	240.7	10.7	30.1	64.8	68.3	76.6	39.6	39.6	43.5	13.8
1935.....	626.3	465.3	161.0	281.9	144.2	141.5	15.1	31.9	84.2	73.1	96.4	47.9	20.0	33.5	16.9
1936.....	626.5	519.0	107.4	229.2	150.5	249.2	10.5	28.6	87.8	107.4	128.7	59.3	12.2	29.8	8.1
1937.....	886.9	688.1	198.8	182.5	163.0	200.0	....	....	70.0	86.2	136.0	56.5	18.4	34.0	18.4
Average 1931-35...	680.6	519.4	161.2	320.8	171.9	225.8	11.4	29.4	76.5	78.0	96.6	51.0	29.3	32.8	14.3

Year	United Kingdom	Irish F.S.	France	Italy	Germany	Czechoslovakia	Austria	Switzerland	Belgium ^a	Netherlands	Denmark	Norway	Sweden	Spain	Portugal
1925.....	52.9	.75	330.3	240.8	124.1 ^b	46.0 ^c	10.7	3.76	15.0	5.6	9.7	.49	13.4	162.6	12.5
1926.....	51.0	1.16	231.8	220.6	100.2 ^b	39.9	9.4	4.04	13.4	5.5	8.8	.59	12.2	146.6	8.6
1927.....	55.8	1.42	276.1	195.8	126.5 ^b	47.2	12.0	4.12	17.0	6.2	9.4	.60	15.3	144.8	11.4
1928.....	49.8	1.19	281.3	228.6	141.6	51.5 ^c	12.9	4.24	17.9	7.3	12.2	.80	18.3	122.6	7.5
1929.....	49.8	1.18	337.3	260.1	123.1	52.9	11.6	4.21	13.5	5.5	11.8	.75	19.0	154.2	10.6
1930.....	42.2	1.09	228.1	210.1	139.2	50.6	12.0	3.60	13.7	6.1	10.2	.72	20.8	146.7	13.5
1931.....	37.8	.78	264.1	244.4	155.5	41.2	11.0	4.04	14.2	6.8	10.1	.59	17.0	134.4	13.0
1932.....	43.6	.83	363.8 ^d	276.9	183.8	53.7	12.2	4.00	16.1	12.8	11.0	.75	24.1	184.2	23.8
1933.....	62.4	1.98	362.3	298.5	205.9	72.9	14.6	4.96	16.1	15.3	11.5	.76	26.3	138.2	15.1
1934.....	69.8	3.80	338.5	233.1	166.5	50.0	13.3	5.52	17.9	13.0	12.8	1.20	27.8	186.8	24.7
1935.....	65.4	6.69	285.0	282.8	171.5	62.1	15.5	5.99	17.1	16.7	14.7	1.77	23.6	158.0	22.1
1936.....	55.3	7.84	255.9	224.6	162.1	55.6	14.0	4.47	17.2	15.6	11.3	2.38	21.5	121.5	8.7
1937.....	53.3	7.20	246.2	296.0	160.7	51.3	14.5	6.16	15.9	13.0	11.9	2.54	26.5	135.0	14.5
Average 1931-35...	55.8	2.82	322.7	267.1	176.6	56.0	13.3	4.90	16.3	13.9	12.0	1.01	23.8	160.3	19.7

Year	Poland	Lithuania	Latvia	Estonia	Finland	Greece	Turkey	Other Near East ^c	Egypt	Japan	Chosen	Manchukuo	Mexico	South Africa	New Zealand
1925.....	63.9	5.3	2.16	.79	.93	11.2	39.5	16.5	36.2	29.5	10.5	35.3	9.2	9.2	4.62
1926.....	52.5	4.2	1.86	.88	.92	12.4	90.7	19.2	37.2	29.7	10.2	35.6	10.3	8.3	7.95
1927.....	61.1	5.2	2.64	1.08	1.06	13.0	49.0	20.3	44.3	30.5	9.0	41.0	11.9	5.7	9.54
1928.....	59.2	6.3	2.50	1.04	1.00	13.1	59.2	10.7	37.3	32.2	8.6	54.5	11.0	7.2	8.83
1929.....	65.9	9.3	2.34	1.26	.76	11.4	99.9	22.3	45.2	31.9	8.3	47.8	11.3	10.6	7.24
1930.....	82.3	9.0	4.06	1.64	.87	9.7	93.9	24.5	39.8	30.1	9.4	49.8	11.4	9.3	7.58
1931.....	83.2	8.3	3.39	1.74	1.12	11.2	104.9	18.8	46.1	32.3	8.7	58.4	16.2	13.7	6.58
1932.....	49.5	9.4	5.29	2.08	1.48	17.1	69.0	12.9	52.6	32.8	9.0	39.4	9.7	10.6	11.06
1933.....	79.9	8.2	6.72	2.45	2.46	28.4	98.2	16.7	40.0	40.4	8.9	52.5	12.1	11.5	9.04
1934.....	76.4	10.5	8.05	3.11	3.28	25.7	99.7	21.5	37.3	47.7	9.3	23.9	11.0	16.4	5.93
1935.....	73.9	10.1	6.52	2.27	4.23	27.2	92.6	24.8	43.2	48.7	9.7	37.3	10.7	20.2	8.86
1936.....	78.4	7.9	5.27	2.43	5.26	19.5	138.5	20.3	45.7	45.2	8.1	35.2	13.6	16.2	7.15
1937.....	67.6	8.0	6.74	2.77	6.02	32.7	140.3	...	45.4	50.4	11.0	38.4	11.2	10.9	...
Average 1931-35...	72.6	9.3	5.99	2.33	2.51	21.9	92.9	18.9	43.8	40.4	9.1	42.3	11.9	14.5	8.29

* Data of U.S. Department of Agriculture and International Institute of Agriculture. Figures for 1937 are preliminary; those in italics unofficial. Dots (...) indicate that comparable data are not available. See also Table VIII. For 1909-13 averages, so far as available, see WHEAT STUDIES, XII, 162-64.

^a Including Luxemburg.

^b Adjusted data; see WHEAT STUDIES, XIII, 128, 136.

^c Adjusted data; see *ibid.*, September, 1937, XIV, 20.

^d Adjusted data; see above, p. 108 n.

^e Syria and Lebanon, Palestine, Cyprus.

TABLE III.—WHEAT ACREAGE IN PRINCIPAL PRODUCING COUNTRIES, 1925-37*

(Million acres)

Year	U.S. total	U.S. winter	U.S. spring	Canada ^a	Australia	Argentina	Uruguay	Chile	Hungary	Yugoslavia	Rumania	Bulgaria	Morocco	Algeria	Tunls
1925.....	52.44	31.96	20.48	20.79	10.20	17.62	.96	1.45	3.52	4.31	8.16	2.55	2.62	3.61	1.62
1926.....	56.62	37.60	19.02	22.90	11.69	18.95	.99	1.48	3.71	4.18	8.22	2.62	2.56	3.74	1.84
1927.....	59.63	38.20	21.43	22.46	12.28	20.20	1.15	1.84	4.02	4.52	7.66	2.67	2.30	3.47	1.38
1928.....	59.23	36.85	22.38	24.12	14.84	22.43	1.08	1.72	4.14	4.68	7.92	2.81	2.66	3.66	2.02
1929.....	63.33	41.19	22.14	25.26	14.98	15.90	1.10	1.72	3.71	5.21	6.76	2.66	3.01	3.80	1.73
1930.....	62.61	41.07	21.54	24.90	18.16	19.53	.96	1.61	4.19	5.25	7.55	3.01	2.96	4.03	1.90
1931.....	57.68	43.45	14.23	26.36	14.74	16.03	1.08	1.52	4.01	5.29	8.57	3.05	2.54	3.64	1.98
1932.....	57.84	36.06	21.78	27.18	15.77	17.79	.95	1.47	3.79	4.82	7.09	3.12	2.71	3.74	2.39
1933.....	49.44	30.27	19.17	25.99	14.90	18.04	1.19	2.10	3.92	5.14	7.70	3.10	3.21	3.99	1.75
1934.....	43.40	34.64	8.76	23.98	12.54	17.15	1.10	2.12	3.80	5.00	7.61	3.11	3.02	4.07	1.95
1935.....	51.23	33.40	17.83	24.12	11.69	11.69	1.27	1.92	4.14	5.31	8.50	2.73	3.62	4.10	2.03
1936.....	48.82	37.61	11.21	25.29	12.34	15.86	.99	1.92	4.03	5.46	8.48	2.82	3.19	4.29	1.22
1937.....	68.20	47.08	21.12	25.57	13.74	.....	1.24	1.90	3.78	....	8.15	2.86	2.74	4.06	2.22
Average 1931-35..	51.92	35.56	16.35	25.53	13.98	16.14	1.12	1.83	3.93	5.11	7.89	3.02	3.02	3.91	2.02

Year	United Kingdom	Irish F.S.	France	Italy	Germany	Czechoslovakia	Austria	Switzerland	Belgium ^b	Netherlands	Denmark	Norway	Sweden	Spain	Portugal
1925.....	1.55	.022	13.87	11.67	3.84	1.79	.484	.112	.392	.132	.199	.022	.363	10.72	1.05
1926.....	1.65	.029	12.97	12.14	3.96	1.80	.500	.127	.386	.132	.252	.022	.381	10.78	1.06
1927.....	1.71	.034	13.06	12.30	4.32	1.85	.505	.127	.427	.153	.274	.025	.561	10.83	1.06
1928.....	1.46	.031	12.96	12.26	4.27	1.87	.514	.127	.445	.148	.252	.028	.561	10.57	1.10
1929.....	1.38	.029	13.34	11.79	3.96	2.02	.515	.129	.377	.112	.260	.030	.574	10.62	1.08
1930.....	1.40	.027	13.28	11.92	4.40	1.96	.508	.134	.436	.142	.249	.030	.647	11.13	1.10
1931.....	1.25	.021	12.84	11.88	5.36	2.05	.517	.134	.404	.192	.259	.029	.633	11.24	1.27
1932.....	1.34	.021	13.43	12.18	5.64	2.06	.534	.137	.417	.297	.245	.028	.688	11.25	1.46
1933.....	1.74	.050	13.50	12.59	5.73	2.27	.543	.140	.406	.338	.261	.028	.748	11.17	1.42
1934.....	1.87	.094	13.35	12.27	5.43	2.30	.573	.165	.429	.366	.280	.046	.718	11.39	1.34
1935.....	1.88	.163	13.25	12.37	5.20	2.38	.601	.168	.468	.380	.312	.059	.674	11.25	1.38
1936.....	1.80	.255	12.71	12.69	5.13	2.30	.624	.171	.469	.374	.296	.079	.694	10.77	1.16
1937.....	1.83	.224	12.10	12.82	4.85	1.98	.642	.174	.468	.320	.319	.079	.722	9.90	1.09
Average 1931-35..	1.62	.070	13.27	12.26	5.47	2.21	.554	.149	.425	.315	.271	.038	.702	11.26	1.37

Year	Poland	Lithuania	Latvia	Estonia	Finland	Greece	Turkey	Other Near East ^c	Egypt	Japan	Chosen	Manchukuo	Mexico	South Africa	New Zealand
1925.....	3.20	.277	.119	.051	.038	1.15	7.06	1.89	1.38	1.15	.887	2.17	1.13	.97	.152
1926.....	3.25	.303	.122	.059	.039	1.30	7.99	1.87	1.53	1.15	.895	2.21	1.29	.88	.220
1927.....	3.36	.297	.145	.067	.044	1.23	5.05	1.86	1.66	1.16	.897	2.81	1.31	.77	.261
1928.....	3.19	.393	.164	.070	.046	1.33	7.06	1.67	1.59	1.20	.896	3.25	1.28	.82	.255
1929.....	3.53	.488	.145	.082	.034	1.24	6.36	1.59	1.61	1.21	.874	3.18	1.29	1.08	.236
1930.....	4.07	.415	.179	.090	.035	1.40	6.39	1.84	1.52	1.20	.848	3.39	1.22	1.27	.249
1931.....	4.50	.478	.215	.099	.045	1.50	8.77	2.04	1.65	1.23	.817	3.92	1.50	1.74	.269
1932.....	4.26	.509	.255	.128	.059	1.50	8.56	1.71	1.76	1.25	.793	3.45	1.10	1.53	.303
1933.....	4.19	.499	.309	.155	.091	1.71	6.49	1.80	1.43	1.51	.790	3.40	1.17	1.19	.286
1934.....	4.38	.514	.351	.161	.125	1.96	7.62	1.92	1.44	1.59	.798	2.04	1.22	1.86	.225
1935.....	4.33	.536	.347	.155	.174	2.09	8.47	2.04	1.46	1.63	.800	2.42	1.14	2.50	.249
1936.....	4.30	.485	.319	.162	.215	2.11	8.84	1.96	1.46	1.69	.818	2.68	1.26	2.13	.222
1937.....	4.18	.523	.339	.167	.242	2.12	8.32	....	1.42	1.77	.839	....	....	....	....
Average 1931-35..	4.33	.507	.295	.139	.099	1.75	7.98	1.90	1.55	1.44	.800	3.05	1.23	1.76	.266

* For general notes see Table II. Mainly harvested acreage, but see note a. See also Table VII.

^a Including sown acreage for spring wheat.^b Including Luxemburg.^c Syria and Lebanon, Palestine, Cyprus. Prior to 1931 our rough approximations for Palestine.

TABLE IV.—WHEAT YIELD PER ACRE IN PRINCIPAL PRODUCING COUNTRIES, 1925-37*

(Bushels of 60 pounds)

Year	U.S. total	U.S. winter	U.S. spring	Canada	Australia	Argentina	Uruguay	Chile	Hungary	Yugoslavia	Rumania	Bulgaria	Morocco	Algeria	Tunis
1925.....	12.8	12.5	13.1	19.0	11.2	10.8	10.5	18.4	20.3	18.3	12.8	16.2	9.1	9.1	7.2
1926.....	14.7	16.8	10.5	17.8	13.8	12.1	10.4	15.7	20.2	17.1	13.5	14.0	8.0	6.3	7.1
1927.....	14.7	14.4	15.3	21.4	9.6	14.0	13.4	16.6	19.1	12.5	12.6	15.8	10.2	8.2	5.8
1928.....	15.4	15.7	15.0	23.5	10.8	15.6	11.3	17.3	23.9	22.1	14.6	17.5	9.3	8.3	6.8
1929.....	13.0	14.2	10.7	12.1	8.5	10.2	12.0	19.4	20.2	18.2	14.7	12.5	10.6	8.8	7.1
1930.....	14.2	15.4	11.7	16.9	11.8	11.9	7.7	13.2	20.1	15.3	17.3	19.1	7.2	8.1	5.5
1931.....	16.3	19.0	8.2	12.2	12.9	13.7	10.4	14.0	18.1	18.7	15.8	20.9	11.7	7.0	7.1
1932.....	13.1	13.6	12.2	16.3	13.6	13.5	5.7	19.5	17.0	11.1	7.8	15.4	10.3	7.8	7.3
1933.....	11.2	12.4	9.1	10.8	11.9	15.9	12.4	16.8	24.6	18.8	15.5	17.9	9.0	8.0	5.3
1934.....	12.1	12.6	10.1	11.5	10.6	14.0	9.7	14.1	17.0	13.6	10.0	12.7	13.1	10.6	7.1
1935.....	12.2	13.9	9.0	11.7	12.1	12.1	11.9	16.6	20.3	13.8	11.3	17.5	5.5	8.2	8.3
1936.....	12.8	13.8	9.6	9.1	12.2	15.7	10.6	14.9	21.8	19.7	15.2	21.0	3.8	6.9	6.6
1937.....	13.0	14.6	9.4	7.1	11.9	....	....	....	18.5	....	16.7	19.8	6.7	8.4	8.3
Average 1926-35..	13.8	15.0	11.5	15.3	11.6	13.4	10.6	16.3	20.1	16.1	13.4	16.4	9.4	8.2	6.8

Year	United Kingdom	Irish F.S.	France	Italy	Germany	Czechoslovakia	Austria	Switzerland	Belgium ^a	Netherlands	Denmark	Norway	Sweden	Spain	Portugal
1925.....	34.1	34.1	23.8	20.6	32.3 ^b	25.7	22.0	33.6	38.3	42.4	49.0	22.3	36.8	15.2	11.9
1926.....	30.9	40.0	17.9	18.2	25.3 ^b	22.2	18.9	31.9	34.8	41.6	34.8	26.6	31.9	13.6	8.1
1927.....	32.6	41.8	21.1	15.9	29.3 ^b	25.5	23.7	32.5	39.8	40.2	34.3	24.2	27.3	13.4	10.8
1928.....	34.1	38.4	21.7	18.6	33.2	27.6	25.1	33.4	40.3	49.6	48.5	28.5	32.7	11.6	6.8
1929.....	36.1	40.7	25.3	22.1	31.1	26.2	22.4	32.6	35.8	48.8	45.3	25.0	33.1	14.5	9.9
1930.....	30.1	40.4	17.2	17.6	31.6	25.8	23.6	26.9	31.4	42.6	41.0	24.0	32.2	13.2	12.3
1931.....	30.2	37.1	20.6	20.6	29.0	20.1	21.3	30.1	35.2	35.2	38.8	20.4	24.9	12.0	10.2
1932.....	32.5	39.5	27.1	22.7	32.6	26.1	22.8	29.2	38.6	43.1	44.9	26.8	35.0	16.4	16.3
1933.....	35.9	39.6	26.8	23.7	35.9	32.1	26.9	35.4	39.7	45.3	44.1	27.1	35.2	12.4	10.6
1934.....	37.3	40.4	25.3	19.0	30.6	21.7	23.2	33.5	41.7	49.1	45.7	26.1	38.7	16.4	18.4
1935.....	34.8	41.0	21.5	22.9	33.0	26.1	25.8	35.7	36.5	43.9	47.1	30.0	35.0	14.0	16.0
1936.....	30.7	30.7	20.1	17.7	31.6	24.2	22.4	26.1	36.7	41.7	38.2	30.1	31.0	11.3	7.5
1937.....	29.1	32.1	20.3	23.1	33.1	25.9	22.6	35.4	34.0	40.6	37.3	32.2	36.7	13.6	13.3
Average 1926-35..	33.6	40.2	22.5	20.1	31.4	25.3	23.4	32.2	37.4	44.2	42.4	26.6	32.7	13.8	12.2

Year	Poland	Lithuania	Latvia	Estonia	Finland	Greece	Turkey	Other Near East ^c	Egypt	Japan	Chosen	Manchukuo	Mexico	South Africa	New Zealand
1925.....	19.9	19.1	18.2	15.5	24.5	9.8	5.6	8.7	26.2	25.7	11.8	16.3	8.2	9.5	30.4
1926.....	16.2	13.9	15.2	14.9	23.6	9.5	11.4	10.3	24.3	25.8	11.4	16.1	8.0	9.4	36.1
1927.....	18.2	17.5	18.2	16.1	24.1	10.5	9.7	10.9	26.8	26.3	10.0	14.6	9.1	7.3	36.6
1928.....	18.6	16.0	15.2	14.8	21.7	9.8	8.4	6.4	23.5	26.8	9.6	16.8	8.6	8.8	34.6
1929.....	18.7	19.1	16.1	15.4	22.4	9.2	15.7	14.0	28.0	26.4	9.5	15.0	8.8	9.8	30.7
1930.....	20.2	21.7	22.7	18.2	24.7	6.9	14.7	13.3	26.1	25.1	11.4	14.7	9.4	7.3	30.4
1931.....	18.5	17.4	15.8	17.6	24.9	7.5	12.0	9.2	27.9	26.3	10.6	14.9	10.8	7.9	24.5
1932.....	11.6	18.5	20.7	16.2	25.1	11.4	8.1	7.5	29.9	26.2	11.3	11.4	8.8	6.9	36.5
1933.....	19.1	16.4	21.7	15.8	27.0	16.6	15.1	9.3	28.0	26.8	11.3	15.4	10.3	9.7	31.6
1934.....	17.4	20.4	22.9	19.3	26.2	13.1	13.1	11.2	25.9	30.0	11.7	11.7	9.0	8.8	26.4
1935.....	17.1	18.8	18.8	14.6	24.3	13.0	10.9	12.2	29.6	29.9	12.1	15.4	9.4	8.1	35.6
1936.....	18.2	16.3	16.5	15.0	24.5	9.2	15.7	10.4	31.3	26.7	9.9	13.1	10.8	7.6	32.2
1937.....	16.2	15.3	19.9	16.6	24.9	15.4	16.9	....	32.0	28.5	13.1	....	....	....	....
Average 1926-35..	17.5	18.1	19.5	16.6	24.9	11.0	11.8	10.5	27.1	27.2	10.8	14.6	9.3	8.4	32.4

* Computed from data in Tables II and III. Averages for 1926-35 are computed from average production and acreage.

^a Including Luxemburg.^b See Table II, footnote b.^c Syria and Lebanon, Palestine, Cyprus.

TABLE V.—PRODUCTION OF OTHER GRAINS AND POTATOES IN PRINCIPAL PRODUCING AREAS, 1931-37*
(Million bushels)

Year	RYE												
	Europe ex-Russia	Germany	Poland	Czechoslovakia	Austria	France	Spain	Lower Danube	Baltic States	Scandinavia	Netherlands	Belgium ^a	United States
1931....	775	263.0	224.5	54.6	18.9	29.5	21.1	53.9	40.1	19.9	14.2	20.8	33.4
1932....	931	329.3	240.6	85.7	24.2	33.9	25.9	58.2	54.4	26.3	13.9	24.2	39.4
1933....	1,003	343.6	278.5	82.1	27.0	35.3	20.7	74.6	59.1	28.6	15.6	22.9	21.4
1934....	886	299.5	254.5	60.0	22.6	33.0	21.6	46.8	67.1	31.5	19.8	15.8	17.1
1935....	884	294.4	260.5	64.5	24.4	29.4	19.2	56.9	60.1	28.6	18.3	13.4	58.6
1936....	843	290.8	250.5	56.5	18.6	28.2	18.1	61.9	50.8	22.6	19.1	14.5	25.6
1937....	813	266.2	229.5	58.5	16.8	29.2	19.7	57.4	64.0	27.1	19.5	13.3	51.9

Year	CORN (Maize)						BARLEY						
	Europe ex-Russia	Rumania	Yugoslavia	Hungary	Italy	United States	Argentina ^b	South Africa ^b	Europe ex-Russia	Germany	Lower Danube	Canada	United States
1931....	629	239	126	60	77	2,576	299	68	690	139	121	67	199
1932....	762	236	189	96	119	2,931	268	30	777	148	132	81	298
1933....	610	179	141	71	102	2,400	257	86	775	159	163	63	154
1934....	724	191	203	83	126	1,461	452	66	714	147	92	64	117
1935....	611	212	119	56	98	2,304	398	53	697	156	98	84	286
1936....	779	221	204	102	120	1,529	360	93	699	156	139	72	147
1937....	...	167	210	107	118	2,651	...	..	...	163	93	86	233

Year	OATS						POTATOES						
	Europe ex-Russia	Germany	France	Poland	Scandinavia	United States	Europe ex-Russia	Germany	Poland	Czechoslovakia	France	British Isles	United States
1931....	1,695	427	316	159	142	1,124	5,027	1,612	1,139	357	599	216	384
1932....	1,855	458	332	165	172	1,251	5,350	1,728	1,101	341	606	321	376
1933....	1,940	479	391	185	157	733	4,998	1,619	1,041	301	545	299	342
1934....	1,682	376	302	176	165	542	5,468	1,719	1,230	352	612	296	406
1935....	1,652	371	307	179	170	1,195	4,903	1,507	1,194	282	526	270	386
1936....	1,655	387	290	182	155	789	5,408	1,702	1,260	393	560	262	330
1937....	.....	404	314	166	...	1,152	.....	1,930	1,389	397	...	...	392

* For general note see Table II. Totals for 1936, for corn and potatoes, include our "guestimates" for Spain and Portugal.

^a Including Luxemburg.^b Crops harvested in March-July of the following year.TABLE VI.—UNITED STATES WHEAT PRODUCTION BY CLASSES, 1929-37*
(Million bushels)

Crop of	Hard red winter	Soft red winter	White	Hard red spring	Durum	Total
1929.....	371	164	85	146	57	823
1930.....	404	180	86	157	59	886
1931.....	514	262	71	73	22	942
1932.....	281	159	85	190	42	757
1933.....	177	162	88	107	18	552
1934.....	208	188	70	53	7	526
1935.....	203	204	86	108	25	626
1936.....	260	207	98	52	9	626
1937.....	375	258	110	114	30	887
Average 1928-32...	393	178	84	154	56	865
1933-35...	196	185	81	89	17	568

* Latest estimates of U.S. Department of Agriculture; for 1919-28, see *The Wheat Situation*, February 1937, p. 15.TABLE VII.—WHEAT ACREAGE IN THE UNITED STATES AND ARGENTINA, 1929-37*
(Million acres)

Harvest year	U.S. total		U.S. winter		U.S. spring		Argentina	
	Sown	Harvested	Sown	Harvested	Sown	Harvested	Sown	Harvested
1929...	66.9	63.3	44.0	41.2	22.9	22.1	20.5	15.9
1930...	67.1	62.6	45.0	41.1	22.1	21.5	21.3	19.5
1931...	66.0	57.6	45.6	43.4	20.4	14.2	17.3	16.0
1932...	65.9	57.8	43.4	36.0	22.5	21.8	19.8	17.8
1933...	68.4	49.4	44.4	30.3	24.0	19.1	19.7	18.0
1934...	63.6	43.4	44.6	34.6	19.0	8.8	18.8	17.2
1935...	69.2	51.2	47.1	33.4	22.1	17.8	14.2	11.7
1936...	73.6	48.8	49.7	37.6	23.9	11.2	17.5	15.9
1937...	80.6	68.2	57.2	47.1	23.4	21.1	18.9	....
Average 1928-32	67.4	60.1	45.3	39.7	22.1	20.4	20.3	18.3
1933-35	67.1	48.0	45.4	32.8	21.7	15.2	17.6	15.7

* Latest official data. See Chart 4, p. 110.

TABLE VIII.—WHEAT PRODUCTION IN MISCELLANEOUS COUNTRIES, 1925-36*

(Million bushels)

Year	China	Iran (Persia)	Iraq	Syria, Lebanon	Palestine	Cyprus	Brazil	Peru
1925...	...	....	....	10.7	3.71	2.08	5.67	3.18
1926...	...	....	....	13.9	3.64	1.62	4.96	2.67
1927...	...	....	....	14.8	3.65	1.87	4.64	3.15
1928...	...	....	....	6.7	2.40	1.56	4.63	3.08
1929...	...	....	....	16.8	3.23	2.20	6.27	4.47
1930...	...	....	....	19.4	3.21	1.87	5.20	4.52
1931...	794	44.1	....	14.2	2.93	1.68	6.04	3.48
1932...	835	50.9	....	9.8	1.88	1.18	5.74	3.12
1933...	828	68.0	12.4	13.5	1.63	1.64	5.31	2.67
1934...	825	70.9	13.8	16.3	3.04	2.20	5.37	1.76
1935...	783	....	11.0	18.5	3.83	2.50	5.25	2.13
1936...	848	....	19.7	15.7	2.80	1.84	....	....
Average 1931-34	820	58.5	....	13.4	2.37	1.65	5.62	2.76

* For general note see Table II. Official data for China, exclusive of the provinces now in fact included in Manchukuo, from *Crop Reports* of the National Agricultural Research Bureau. On the work of this bureau, see *Commercial Intelligence Journal*, Dec. 5, 1936, pp. 1034 ff.

TABLE IX.—PROTEIN CONTENT AND GRADINGS OF CANADIAN HARD RED SPRING WHEAT, 1928-37*

Aug.-July	Protein content ^a	Percentage of inspections grading						
		No. 1 ^b	No. 2	Nos. 1-3	Nos. 4-5	No. 6, feed	Tough and damp ^c	Other ^d
1928-29..	12.3	1.3	12.4	35.0	40.1	22.6	1.6	.7
1929-30..	13.3	41.3	39.2	93.5	2.9	.4	1.5	1.7
1930-31..	13.1	42.3	22.5	70.3	2.1	.1	25.3	2.2
1931-32..	13.7	34.5	35.9	81.4	4.1	1.0	12.3	1.2
1932-33..	14.0	57.5	30.8	92.0	2.7	.3	4.1	.9
1933-34..	13.9	48.3	30.5	83.5	4.2	.8	10.8	.7
1934-35..	14.1	43.1	24.5	74.8	11.9	2.4	10.2	.7
1935-36..	14.2	24.5	14.1	53.0	20.5	12.7	5.2	8.6
1936-37..	15.0	50.8	21.6	91.0	3.0	.8	3.6	1.6

* Data from *Tenth Annual Report of Dominion Grain Research Laboratory*, p. 14, and *Canadian Grain Statistics*. Exclusive of durum, white spring, winter, and, from 1935-36, Garnet.

^a Average (by weight) of samples of No. 1 Hard to No. 3 Manitoba Northern, 13.5 per cent moisture basis.

^b Including No. 1 Hard and No. 1 Northern.

^c Wheat of straight grades, but with higher moisture content. Before 1930-31 called "No grade."

^d Including "smutty," "rejected," "condemned," "sample."

TABLE X.—WHEAT MARKETINGS IN NORTH AMERICA, MONTHLY, FROM 1932-33

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
UNITED STATES: PERCENTAGE MARKETED BY FARMERS ^a															
1932-33...	4.8	18.7	19.6	14.0	7.8	5.5	4.8	3.6	3.4	3.4	4.3	5.4	4.7	...	100
1933-34...	9.0	21.5	20.4	13.8	7.0	5.0	3.6	3.6	3.3	3.4	2.7	3.0	3.7	...	100
1934-35...	12.2	29.6	15.4	9.5	5.3	4.3	4.5	2.9	3.5	2.9	4.4	3.5	2.0	...	100
1935-36...	2.4	19.3	25.9	17.6	9.7	4.4	3.8	3.7	2.5	3.4	2.6	2.2	2.5	...	100
1936-37...	5.8	35.6	15.8	8.6	6.7	4.3	5.5	3.1	3.4	3.8	2.7	2.9	1.8	...	100
Average 1924-34...	3.9	20.1	19.8	15.0	9.7	6.2	5.1	4.2	4.1	3.3	2.9	3.4	2.3	...	100
UNITED STATES: RECEIPTS AT THIRTEEN PRIMARY MARKETS ^b (Million bushels)															
1932-33...	....	41.0	40.7	38.4	27.2	17.6	13.9	12.8	9.9	12.7	15.8	23.3	28.6	...	282
1933-34...	....	37.2	26.7	22.6	17.6	11.6	11.2	8.7	10.0	9.1	8.4	12.5	23.4	...	199
1934-35...	....	49.7	23.0	19.1	12.9	9.2	7.8	5.1	3.8	4.7	6.4	8.3	10.0	...	160
1935-36...	....	28.9	48.2	42.3	27.9	14.5	9.9	9.3	5.5	9.8	7.4	11.1	14.8	...	230
1936-37...	....	84.2	29.5	10.6	15.2	10.7	10.4	7.8	6.1	7.6	8.9	7.6	19.4	...	218
CANADA: RECEIPTS AT COUNTRY ELEVATORS AND PLATFORM LOADINGS ^c (Million bushels)															
1932-33...	....	....	17.6	120.5	81.0	38.1	18.5	11.3	11.5	20.8	10.3	10.8	19.5	10.5	371
1933-34...	....	....	25.6	55.6	46.4	23.0	10.3	10.4	8.3	9.1	7.3	8.3	12.3	10.9	228
1934-35...	....	....	30.8	55.6	50.8	23.6	12.5	3.9	8.8	8.1	6.6	5.6	9.3	12.6	228
1935-36...	....	....	13.3	73.2	60.0	21.0	14.2	3.2	2.1	7.2	4.6	5.5	8.7	4.0	217
1936-37...	....	....	40.8	57.7	22.6	9.0	8.0	3.2	3.2	5.9	4.2	4.2	3.6	3.4	166

^a Estimates of Bureau of Agricultural Economics on the basis of reports from about 3,500 mills and elevators. Based on June-May for Kansas, Oklahoma, Texas, New Mexico, Arizona, and California; on July-June for other states. See *Agriculture Yearbook, 1935*, p. 359, and official releases.

^b Trade data, here compiled from *Survey of Current Business*. Includes Chicago, Detroit, Duluth, Indianapolis,

Kansas City, Milwaukee, Minneapolis, Omaha, Peoria, Sioux City, St. Joseph, St. Louis, Wichita; also Toledo for 1932-33.

^c Data for Prairie Provinces only, computed from official figures given in *Canadian Grain Statistics*. For corresponding data for 1921-22 to 1931-32, see "The Timing of Wheat Marketing in Western Canada," *WHEAT STUDIES*, October 1936, XIII, 62.

TABLE XI.—WORLD WHEAT VISIBLE SUPPLIES, JULY 1, 1926-37, AND MONTHLY, 1936-37*

(Million bushels)

Date	Total ^a	United States grain		Canadian grain		Total North America	Afloat to Europe	U.K. ports	Total U.K. and afloat	Australia	Argentina
		United States	Canada	Canada ^b	United States ^c						
July 1											
1926.....	125.0	16.5 ^a	1.0	34.2	5.8	57.5	49.1	4.2	53.3	9.0	5.2
1927.....	160.3	21.0	1.4	39.6	7.0	69.0	50.9	8.4	59.3	22.5	9.5
1928.....	226.1	38.6	2.5	86.4	11.1	138.6	50.2	10.4	60.6	19.2	7.7
1929.....	322.9	90.4	3.3	97.9	22.6	214.2	53.2	10.1	63.3	30.0	15.4
1930.....	339.6	109.3	4.8	115.3	16.4	245.8	37.8	6.8	44.6	42.5	6.7
1931.....	434.7	204.0	15.3	110.9	6.0	336.2	49.8	8.0	57.8	34.0	6.7
1932.....	432.6	168.4	15.9	135.1	4.5	323.9	45.2	11.0	56.2	41.5	11.0
1933.....	427.8	123.7	4.1	195.0	4.3	327.1	31.7	12.3	44.0	42.0	14.7
1934.....	406.8	80.5	.0	181.6	10.1	272.2	33.2	14.0	47.2	66.8	20.6
1935.....	312.9	22.0	.0	189.0	9.3	220.3	27.5	9.8	37.3	41.0	14.3
1936.....	221.0	25.2	.0	120.2	15.3	160.7	26.7	9.9	36.6	14.5	9.2
1937.....	128.5	16.2	.1	35.0	5.3	56.6	34.2	10.3	44.5	20.0	7.4
1936-37....											
Aug. 1...	237.5	67.3	.0	99.5	19.3	186.1	20.6	9.7	30.3	11.5	9.6
Sept. 1...	250.8	81.0	.0	104.1	18.3	203.4	23.7	8.0	31.7	8.0	7.7
Oct. 1...	281.8	82.8	.0	133.4	19.0	235.2	29.0	6.1	35.1	4.5	7.0
Nov. 1...	268.9	76.4	.0	121.7	22.3	220.4	34.0	7.2	41.2	1.8	5.5
Dec. 1...	250.8	70.3	.0	99.2	24.0	193.5	38.8	7.4	46.2	6.7	4.4
Jan. 1...	267.1	62.4	.0	81.6	27.8	171.8	35.9	9.0	44.9	44.5	5.9
Feb. 1...	297.5	52.3	.0	74.7	23.6	150.6	54.2	7.6	61.8	73.0	12.1
Mar. 1...	280.7	42.7	.0	68.0	19.1	129.8	58.7	10.7	69.4	67.5	14.0
Apr. 1...	254.5	34.7	.0	63.6	14.2	112.5	57.2	12.7	69.9	55.5	16.6
May 1...	210.0	26.3	.0	55.9	10.3	92.5	51.0	12.3	63.3	39.5	14.7
June 1...	165.9	17.1	.0	48.7	7.3	73.1	41.1	11.0	52.1	30.0	10.7
July 1...	128.5	16.2	.1	35.0	5.3	56.6	34.2	10.3	44.5	20.0	7.4
Aug. 1...	180.1	89.4	.1	27.8	4.1	121.4	25.6	12.0	37.6	14.5	6.6

* Selected, for dates nearest the first of each month, from weekly data in *Commercial Stocks of Grain in Store in Principal U.S. Markets, Canadian Grain Statistics*, and (for stocks outside North America) *Broomhall's Corn Trade News*.

^a Stocks at country stations are included in the data for Canada and Australia but not in those for the United States and Argentina. Corresponding data are not regularly available for most other countries and positions.

^b Excluding, for comparability, stocks in transit by rail which are now included in published totals.

^c In bond for transit through, or use in, the United States.

^d Bradstreet's visible.

TABLE XII.—WORLD WHEAT STOCKS EX-RUSSIA (APPROXIMATE), ABOUT AUGUST 1, 1924-37*

(Million bushels)

Year	Total	Four chief ex-ports	Total North America ^a	United States grain ^a	Canadian grain	Australia	Argentina	Lower Danube ^b	French North Africa ^c	Europe ex-Danube	Afloat to Europe	Afloat to ex-Europe	Japan, Egypt	India
1924.....	683	285	185	137	48	34	66	45	10	219	42	8	18	56
1925.....	528	228	142	111	31	28	58	20	11	170	33	6	9	51
1926.....	615	232	141	101	40	24	67	40	18	213	39	7	17	49
1927.....	647	271	167	111	56	35	69	46	21	206	46	9	12	36
1928.....	697	337	206	115	91	36	95	25	16	214	44	13	13	35
1929.....	957	530	359	232	127	41	130	75	15	241	38	16	13	29
1930.....	915	535	421	294	127	49	65	44	22	225	39	7	14	29
1931.....	1,000	608	468	329	139	60	80	57	14	186	38	14	12	71
1932.....	999	642	527	391	136	50	65	49	7	191	31	10	18	51
1933.....	1,130	730	600	382	219	55	75	27	7	279	32	11	15	29
1934.....	1,199	680	477	274	203	85	118	54	6	375	35	11	9	29
1935.....	952	504	362	148	214	57	85	20	18	344	17	11	9	29
1936.....	772	373	265	138	127	43	65	25	13	283	21	11	10	36
1937.....	521	218	128	91	37	40	50	35	6	187	26	8	12	29
Average 1923-27..	605	256	160	119	41	31	65	37	13	193	40	7	13	46

* Our latest revised estimates, based so far as possible upon stocks of old-crop wheat reported either officially (e.g., North America) or unofficially (e.g., afloat to Europe); see Tables XI, XIII, XXX, and above, p. 120 n.

^a United States data as of July 1.

^b Hungary, Yugoslavia, Rumania, Bulgaria.

^c Morocco, Algeria, Tunis.

TABLE XIII.—WHEAT CARRYOVERS IN THE UNITED STATES AND CANADA, 1925-37*

(Million bushels)

Year	United States (July 1)						Canada (July 31)						
	On farms	In country mills and elevators	Commercial stocks	In city mills ^a	Total in four positions	U.S. grain in Canada	On farms	In country mills and elevators ^b	In terminal elevators	In transit	In flour mills ^c	Total in five positions	Canadian grain in U.S. ^d
1925.....	28.6	25.3	28.9 ^e	25.6	108.4	2.7	2.7	2.7	15.2	3.9	3.2	27.7	3.0
1926.....	27.1	29.5	16.1 ^e	27.5	100.2	1.0	4.0	1.3	24.1	3.2	3.9	36.5	3.7
1927.....	26.6	21.8	21.1	40.0	109.5	1.4	4.3	1.5	35.6	5.2	4.2	50.8	4.8
1928.....	19.6	19.3	38.6	34.9	112.4	2.5	4.2	4.7	48.8	13.7	6.1	77.5	13.6
1929.....	45.1	41.6	90.4	51.3	228.4	3.3	5.6	6.3	76.2	8.7	7.5	104.3	22.9
1930.....	60.2	60.2	109.3	59.2	288.9	4.7	5.3	16.8	69.0	12.8	6.6	110.5	16.1
1931.....	37.9	30.2	204.0	41.2	313.3	15.3	19.5	34.1	70.7	7.3	1.4	133.1	5.5
1932.....	93.8	41.6	168.4	71.7	375.5	15.9	7.5	33.5	77.1	9.3	2.7	130.1	5.9
1933.....	82.9	64.3	123.7	107.0	377.9	4.1	12.3	77.8	107.9	9.0	2.8	210.0	7.7
1934.....	62.5	48.2	80.5	83.1	274.3	.0	8.7	70.4	104.0	7.7	2.1	192.9	10.0
1935.....	44.3	31.8	22.0	49.5	147.6	.0	7.9	53.8	126.6	12.9	.9	202.1	11.7
1936.....	44.0	22.5	20.6 ^f	50.6	137.7 ^f	.0	5.5	36.2	59.7	5.0	1.7	108.1	19.3
1937.....	21.9	12.3	9.0 ^f	47.9 ^f	91.1 ^f	.1	4.0	7.4	17.7	2.8	.8	32.7	4.1
Average													
1923-27..	29.4	30.1	26.6	31.4	117.5	1.3	...	...	....	...	...	....	3.0
1930-34..	67.5	48.9	137.2	72.4	326.0	8.0	10.7	46.5	85.7	9.2	3.1	155.3	9.0

* Official data of U.S. Department of Agriculture and Dominion Bureau of Statistics.

^a Estimates of U.S. Department of Agriculture, based on wheat reported held in city mills (Table XIV); including amounts "stored for others," which prior to 1931 are as estimated by the Bureau of Agricultural Economics.^b Strictly "in country, private, and mill elevators in the Western Division"; but from 1931 including stocks in flour mills in the Western Division.^c From 1931, in the Eastern Division only.^d In bond, usually chiefly for export as wheat, exclusive of some bonded wheat in transit by rail.^e Bradstreet's visible, excluding country elevator stocks.^f Excluding new-crop wheat, as estimated by the Bureau of Agricultural Economics. Corresponding readjustments for years prior to 1936 have not yet been made, but would be less important except perhaps in 1934 commercial stocks.

TABLE XIV.—CITY MILL STOCKS IN THE UNITED STATES, JUNE 30, 1931-37*

Year	Wheat in mills ^a			Other wheat owned by mills				Total wheat owned by mills ^d	Flour as wheat ^e	Percentage of census flour output represented ^f
	Total	Owned	Stored for others ^b	Private terminals ^c	Public terminals	Transit to mills	Country elevators			
1931.....	38.73	21.00	17.73	1.85	1.48	11.74	2.70	38.77	13.30	96.3
1932.....	67.06	60.33	6.73	3.30	2.33	9.43	2.55	77.94	15.00	93.5
1933.....	100.63	91.13	9.50	10.61	8.12	15.08	6.91	131.85	14.07	95.5
1934.....	76.97	70.06	6.91	9.70	5.22	13.02	4.97	102.97	18.40	92.6
1935.....	46.01	42.64	3.37	3.59	3.53	6.64	2.30	58.70	17.10	96.8
1936.....	47.10	40.94	6.16	2.47	3.26	13.28	2.69	62.64	20.00	97.0
1937.....	49.35	42.20	7.15	2.14	2.03	18.97	2.53	67.87	17.73	93.3
Average										
1926-30..	.....	35.21	....	1.45	4.54	11.30	2.80	55.30	16.62	90.7

* As reported to Bureau of the Census, here compiled from press releases of U.S. Department of Commerce. Available for Dec. 31, 1925, and quarterly from June 30, 1926. See WHEAT STUDIES, December 1931, VIII, 193.

^a And in elevators attached to mills.^b Apparently first reported for 1930, and exceptionally large in 1931 because of stabilization operations.^c Private terminal elevators not attached to mills.^d Excluding wheat "stored for others."^e Taking 1 bbl. = 4.7 bu.; but see Table XXVIII.^f Percentage of flour output reported in Census of Manufactures for the second or third calendar year preceding. The percentages for 1935 and 1936 would be about 5 per cent lower if the census of the 1933 had been as complete as earlier censuses. See WHEAT STUDIES, April 1936, XII, 275.

TABLE XV.—WHEAT CARRYOVERS IN THE UNITED STATES, BY CLASSES OF WHEAT, 1929-37*

(Million bushels)

July 1	Hard red winter	Soft red winter	White	Hard red spring	Durum	Total
1929.....	94	20	14	73	27	228
1930.....	120	26	22	89	32	289
1931.....	153	23	22	85	30	313
1932.....	238	59	15	49	14	375
1933.....	201	31	32	98	16	378
1934.....	126	36	30	74	8	274
1935.....	68	32	17	26	5	148
1936.....	53 ^a	27	17	34	7	138 ^a
1937.....	45 ^a	15	10	18	3	91 ^a

* Revised estimates of U.S. Department of Agriculture, from *Wheat and Rye Agricultural Outlook Charts*, October 1937.

^a Exclusive of 4 and 12 million bushels of new-crop wheat in 1936 and 1937, respectively.

TABLE XVI.—UNITED STATES WHEAT EXPORTS, BY CLASSES, ANNUALLY FROM 1929-30*

(Million bushels)

July-June	Hard red winter	Soft red winter	White	Hard red spring	Durum	Total
1929-30..	82	4	38	3	16	143
1930-31..	65	4	32	1	13	115
1931-32..	85	3	33	0	5	126
1932-33..	22	0	11	0	2	35
1933-34..	4	0	25	0	0	29
1934-35..	3	0	10	0	0	13
1935-36..	2	0	5	0	0	7
1936-37..	3	0	9	0	0	12

* Recent estimates of U.S. Department of Agriculture, given in source cited for Table XV. Unlike former estimates, these include flour milled from domestic wheat and shipments to possessions. Compare corresponding table in *WHEAT STUDIES*, December 1936, XIII, 219.

TABLE XVII.—UNITED STATES TRADE IN WHEAT AND FLOUR WITH FOREIGN COUNTRIES AND ALASKA, HAWAII, AND PUERTO RICO, ANNUALLY FROM 1931-32*

(Thousand bushels)

July-June	Wheat grain				Flour as wheat		Wheat and flour as wheat				
	Exports	Imports	Re-exports	Net exports	Exports	Net exports	Exports	Imports less re-exports	Net exports	Shipments to possessions	Net exports plus shipments
1931-32....	96,519 ^a	12,885	863	84,497 ^a	39,276	39,275	135,795 ^a	12,022	123,772 ^a	2,797	126,569 ^a
1932-33....	20,889	9,379	1,606	13,116	20,337	20,337	41,226	7,773	33,453	3,024	36,477
1933-34....	18,799	11,585	21	7,235	18,204	18,200	37,003	11,568	25,435	2,779	28,214
1934-35....	3,019	25,777	184	(22,574)	18,513	18,497	21,532	25,609	(4,077)	2,783	(1,294)
1935-36....	311	47,452	330	(46,811)	15,619	15,455	15,930	47,286	(31,356)	2,891	(28,465)
1936-37....	3,168	48,017	467	(44,382)	18,416	18,234	21,584	48,732	(26,148)	3,011	(23,137)

* Data from *Monthly Summary of Foreign Commerce*, and "general imports," since 1933-34, direct from U.S. Department of Commerce. Figures in parentheses are net imports. Flour converted to wheat equivalent at 4.7 bushels per barrel; this rate is somewhat too high (see Table XXVIII), especially for flour milled in bond from Canadian wheat and for flour exported from the Pacific Northwest. For earlier data see our previous "Reviews" and Table XXX below.

^a Probably understated by 7 to 9 million bushels. See *WHEAT STUDIES*, December 1932, IX, 104.

TABLE XVIII.—UNITED STATES IMPORTS OF WHEAT GRAIN, ANNUALLY FROM 1931-32*

(Thousand bushels)

July-June	For grinding in bond			For domestic use		
	Free	Dutiable ^{a,b}	Total	Total	42-cent duty	10% ad val. duty ^{a,c}
1931-32..	11,538	1,341	12,879	6	6	0
1932-33..	6,628	2,744	9,372	7	6	1
1933-34..	8,316	3,025	11,341	149	143	6
1934-35..	7,292	3,772	11,064	14,052	5,906	8,146
1935-36..	7,855	4,123	11,978	34,519	25,314	9,205
1936-37..	9,458	4,000	13,458	34,262	30,205	4,057

* Official data as now published currently in *Monthly Summary of Foreign Commerce* and *Foreign Crops and Markets*. Misleadingly termed "imports for consumption."

^a New classification in Tariff Act of 1930.

^b For export of flour to Cuba.

^c "Unfit for human consumption."

TABLE XIX.—CANADIAN EXPORTS OF WHEAT GRAIN, ANNUALLY FROM 1931-32*

(Million bushels)

Aug.-July	Grand total	To or through U.S.		Overseas from Canadian ports		
		To U.S. ^a	Total	Total ^b	Atlantic	Pacific
1931-32..	182.8	4.5	53.2	129.6	54.2	74.9
1932-33..	240.1	.3	55.1	185.0	85.8	96.5
1933-34..	170.2	.2	44.9	125.3	74.4	48.2
1934-35..	144.4	15.1	53.8	90.6	36.2	50.3
1935-36..	232.0	29.1	102.5	129.5	70.0	57.1
1936-37..	174.9	14.9	54.1	120.8	82.0	34.5

* Official data from *Canadian Grain Statistics*.

^a These figures understate the truth; see Table XVIII.

^b Including shipments from Port Churchill, Hudson Bay. Beginning with 1931-32 these have run as follows, in thousand bushels: 545; 2,758; 2,708; 4,050; 2,407; and 4,294.

TABLE XX.—INTERNATIONAL SHIPMENTS OF WHEAT AND OTHER GRAINS, ANNUALLY FROM 1932-33*

(Million bushels or units of 60 pounds)

Year ending about Aug. 1	Wheat, including wheat flour, by areas of origin									Other grains			
	Total	North America	Argentina ^a	Australia	All other	India	Balkans	Russia	Others	Rye	Barley	Oats	Malze
1932-33....	615.2	290.0	126.4	154.4	44.4	.0	7.2	17.6	19.6	26.2	63.1	28.5	294
1933-34....	523.6	219.2	140.8	89.6	74.0	.0	30.4	26.8	16.8	26.8	75.8	23.0	252
1934-35 ^b ...	526.8	166.4	182.8	112.0	65.6	.3	22.0	1.6	41.7	36.7	51.6	27.6	285
1935-36....	494.4	236.0	71.2	106.4	80.8	.7	24.0	29.6	26.5	24.3	67.0	16.5	323
1936-37....	590.0 ^c	206.0 ^c	162.4	107.2	114.4	16.5	80.0	.0	17.9	23.9	55.3	19.5	439
Average													
1927-32....	777.8	407.3	163.0	111.7	95.9	3.1	42.2	45.1	14.6	40.0	112.8	37.3	318
1933-36....	514.9	207.2	131.6	102.7	73.4	.3	25.5	19.3	28.3	29.3	64.8	22.4	287

Year ending about Aug. 1	Wheat and flour to Europe				Wheat and flour to ex-Europe								
	U.K.	Orders	Continent	Total	Total	China, Japan	Central America ^a	Brazil	Egypt	N. and S. Africa	India	U.S.	Others
1932-33....	161.2	127.9	159.8	448.8	166.4	91.5	34.7	29.5	3.7	1.0	1.8	.0	4.2
1933-34....	138.5	129.8	133.2	401.6	122.0	47.5	34.3	31.3	3.6	.8	.3	.0	4.3
1934-35 ^b ...	128.2	123.1	129.8	381.2	145.6	63.4	27.3	34.0	3.0	1.4	.2	17.0	5.7
1935-36....	165.6	69.7	123.0	358.4	136.0	29.2	29.5	34.3	2.6	.6	.5	36.5	5.3
1936-37....	141.0	156.1	179.8	476.8	113.2 ^c	13.5	29.2	35.9	2.5	2.0	.0	29.7	5.7 ^c
Average													
1927-32....	143.7	159.3	311.1	607.4	170.5	58.0	58.2	28.6	10.8	4.6	11.6	.0	1.0
1933-36....	144.1	107.5	128.7	380.4	134.5	46.7	30.4	33.2	3.1	.9	.3	17.8	5.1

* Broomhall's cumulative totals, from the *Corn Trade News*, converted from quarters of various weights. Sub-items in the lower section are from different tables, and the separate items do not always add to the totals given.

^a Includes Uruguay also.

^b For 53 weeks; for other years, 52 weeks.

^c Apparently not including 5.2 million bushels reported shipped from the United States to Canada.

^d Includes West Indies, Dutch East Indies, Venezuela, etc.

TABLE XXI.—SUMMARY OF INTERNATIONAL TRADE IN WHEAT AND FLOUR, ANNUALLY FROM 1923-24*

(Million bushels)

Year Aug.-July	Net exports of net-exporting countries										Net imports of Europe ex-Danube			
	Total	United States	Canada	Australia	Argentina	Lower Danube	French North Africa ^a	India	Others ^b ex-Russia	USSR	Total ^c	British Isles	France, Germany, Italy ^c	Others ^c
1923-24....	833	130	346	86	173	34	11	20	11	22	594	240	169	185
1924-25....	776	259	192	124	125	26	1	38	11	(17)	630	226	215	189
1925-26....	702	106	324	77	97	45	8	8	10	27	522	208	150	164
1926-27....	853	202	292	103	144	45	2	12	3	50	679	236	262	181
1927-28....	823	187	332	71	178	32	9	8	4	2	656	232	219	205
1928-29....	947	154	406	109	222	37	13	(25)	6	(6)	667	219	232	216
1929-30....	629	145	185	63	151	56	14	1	5	9	505	224	95	186
1930-31....	839	116	258	152	125	46	17	(5)	11	114	609	245	174	190
1931-32....	795 ^d	115 ^d	207	156	140	82	22	2	6	65	606	261	135	210
1932-33....	630	33	264	150	132	12	20	(1)	2	17	441	234	47	160
1933-34....	555	29	194	86	147	35	20	0	10	34	387	238	20	129
1934-35....	541	(4)	165	109	182	22	26	1	34	2	350	217	5	128
1935-36....	523	(31)	254	102	70	25	19	1	23	29	339	220	13	106
1936-37....	609	(17)	195	102	162	89	6	19	31	5	444 ^e	212	101	131 ^e

* Mainly from data in Table XXII. Figures in parentheses represent net imports, ignored in arriving at totals.

^a Morocco, Algeria, Tunis. For Morocco, means of calendar-year data are used through 1926-27, and July-June years thereafter through 1931-32.

^b Including various countries of Europe, Turkey, Iraq, Syria and Lebanon, Uruguay, and Chile. For Chile prior to 1928-29 and Uruguay prior to 1931-32, net exports are esti-

mated from calendar-year data. For Iraq prior to 1931-32, data for April-March years are used. See Table XXV.

^c Deducting net exports by one or more of these countries in years in which they were net exporters.

^d Probably understated by 7 to 9 million bushels.

^e Including our estimate of 15 million bushels for Spain.

TABLE XXII.—INTERNATIONAL TRADE IN WHEAT AND FLOUR, ANNUALLY FROM 1926-27*

(Million bushels)

A. NET EXPORTS (In parentheses, net imports)

Year Aug.-July	United States ^a	Canada	Aus- tralia	Argen- tina	Brazil ^b	Chile	Hun- gary	Yugo- slavia	Ru- mania	Bul- garia	Mo- rocco	Al- geria	Tunis	India	USSR ^c
1926-27..	201.7	292.5	102.7	144.4	...	...	21.88	9.70	11.18	2.25	1.60	(1.61)	.30	11.5	49.5
1927-28..	186.7	332.5	70.7	178.1	...	...	21.84	.55	7.46	2.04	3.33	5.30	.57	8.5	1.6
1928-29..	153.9	406.2	108.6	222.4	(36.6)	.56	26.00	8.80	1.59	.28	4.35	3.28	5.31	(25.0)	(5.8)
1929-30..	144.8	184.9	62.6	151.0	(34.2)	1.24	30.05	22.92	2.82	(1.42)	3.79	4.62	5.81	.6	8.8
1930-31..	116.0	258.4	152.3	124.7	(30.9)	.93	18.28	5.61	16.08	5.91	2.03	9.56	5.84	(4.9)	113.7
1931-32..	114.8 ^d	206.9	156.3	140.3	(31.6)	.07	18.26	14.90	37.36	11.27	7.56	5.86	8.52	2.0	65.0
1932-33..	32.9	264.1	150.2	132.3	(30.5)	(2.55)	7.48	.97	.05	3.14	5.72	8.82	5.35	(.9)	16.7
1933-34..	29.1	194.4	86.1	147.1	(33.8)	(.36)	29.32	1.05	.23	3.96	7.88	12.15	(.06)	.4	34.3
1934-35..	(3.9)	164.9	109.1	181.5	(33.9)	.37	12.80	4.26	4.22	.37	7.59	13.13	4.80	1.0	1.9
1935-36..	(31.1)	254.1	102.1	69.9	(36.4)	2.29	17.30	.79	5.87	1.14	4.87	9.91	4.63	1.2	28.5
1936-37..	(17.1)	194.8	101.6	162.4	(43.8)	(.22) ^e	25.09	18.27	37.54	7.91	(1.51) ^f	6.03	(.59)	18.6	4.6
Average															
1933-36..	(2.0)	204.5	99.1	132.8	(34.7)	.77	19.81	2.03	3.44	1.82	6.78	11.73	3.12	.9	21.6
1927-32..	143.2	277.8	110.1	163.3	(33.3) ^g	.70 ^g	22.89	10.56	13.06	3.62	4.21	5.72	5.21	(3.8)	36.7

B. NET IMPORTS (In parentheses, net exports)

Year Aug.-July	United King- dom	Irish Free State	France ^h	Italy	Ger- many	Czecho- slo- vakia	Aus- tria	Switzer- land	Bel- gium ⁱ	Nether- lands	Den- mark	Nor- way	Swen- den	Spain	Por- tugal
1926-27..	216.0	19.9	83.6	86.6	91.8	20.1	16.9	16.3	39.5	28.4	7.24	6.22	6.02	(1.01)	6.12
1927-28..	213.6	18.6	42.5	87.7	88.5	21.4	16.5	18.4	41.8	31.0	10.96	6.78	8.42	2.92	9.96
1928-29..	200.8	18.5	66.6	87.7	77.6	17.4	14.6	16.6	41.9	30.0	16.67	9.15	8.05	17.20	8.86
1929-30..	206.1	17.8	5.5	42.1	47.8	13.7	19.6	16.0	42.4	30.6	7.97	6.96	7.32	3.41	6.58
1930-31..	225.5	19.4	62.0	81.2	31.2	17.6	16.1	18.5	48.5	35.4	11.73	8.53	4.87	(.19)	2.71
1931-32..	240.8	20.2	79.1	33.0	23.2	24.8	13.7	21.1	46.6	31.2	17.55	8.70	6.83	10.76	2.80
1932-33..	216.0	18.2	32.1	10.5	4.6	12.1	13.3	19.1	39.3	27.3	12.16	8.69	3.23	(.02)	1.36
1933-34..	218.3	19.7	17.5	8.1	(5.4)	.2	10.5	17.6	43.0	22.4	12.61	8.47	1.20	(.08)	.96
1934-35..	200.5	16.9	(16.6)	11.5	10.1	1.4	9.8	17.9	39.8	19.5	18.99	8.88	(1.78)	(.00)	.70
1935-36..	205.3	15.0	8.0	5.1	(.3)	2.2	7.1	16.7	39.0	21.7	8.99	7.73	(1.89)	(.00)	(3.59)
1936-37..	199.2	12.5	12.1	57.5	31.8	(9.2)	9.9	17.7	39.5	21.3	6.36	8.58	.53	...	.14
Average															
1933-36..	208.0	17.2	3.0	8.2	1.5	1.3	9.1	17.4	40.6	21.2	13.53	8.36	(.82)	(.03)	(.64)
1927-32..	217.4	18.9	51.1	66.3	53.7	19.0	16.1	18.1	44.2	31.6	12.98	8.02	7.10	6.82	6.18

C. NET IMPORTS (In parentheses, net exports)

Year Aug.-July	Pol- land	Lithu- ania	Latvia	Es- tonia	Fin- land	Greece	Tur- key	Syria, Leba- non	Egypt	Japan ^j	Man- chukuo	China	Cuba ^k	South Africa	New Zea- land
1926-27..	8.07	...	1.68	.91	5.14	19.4	...	...	8.77	15.3	...	...	5.76	...	2.76
1927-28..	8.62	...	1.51	1.12	6.04	19.5	...	2.15	6.59	16.3	...	...	5.66	...	1.05
1928-29..	2.45	.04	2.99	1.25	6.93	22.0	6.07	5.58	13.65	17.2	...	...	5.93	7.99	.81
1929-30..	(.21)	(.10)	2.44	1.19	5.93	21.7	.82	1.21	11.27	13.6	...	...	5.65	3.88	.49
1930-31..	(4.41)	(.96)	1.55	.82	5.27	24.1	(.47)	.20	10.17	17.8	...	...	4.56	3.27	.76
1931-32..	(3.30)	(.10)	.96	.44	4.51	23.7	(1.54)	.42	7.44	20.4	...	...	4.17	1.75	.99
1932-33..	(1.18)	(.07)	.03	.00	4.47	19.7	(.44)	1.63	.48	3.7	...	55.9	3.67	.28	1.11
1933-34..	(2.49)	(.05)	(.00)	.00	4.56	10.5	(1.39)	1.56	.23	3.1	23.8	21.1	4.07	.08	.39
1934-35..	(3.89)	(.97)	(1.10)	(.23)	4.26	14.5	(4.39)	(.34)	2.15	1.1	31.3	21.1	4.58	.91	.59
1935-36..	(7.09)	(2.12)	(1.54)	.00	4.33	14.8	(.67)	(.40)	.18	4.8	14.5	7.9	4.92	.07	.96
1936-37..	(5.33)	.00	.99	.12	3.69	21.5	(4.69)	(1.39)	(.55)	3.7	4.9	1.2	4.69	(.94)	.56
Average															
1933-36..	(4.49)	(1.05)	(.88)	(.08)	4.38	13.3	(2.15)	.27	.85	3.0	23.2	16.7	4.52	.35	.65
1927-32..	.63	(.28) ^l	1.89	.96	5.74	22.2	1.22 ^l	1.91	9.82	17.1	...	...	5.19	4.22 ^l	.82

* Data from official sources, in large part through International Institute of Agriculture. Dots (...) indicate that data are not available. Table XXV gives calendar-year data for some countries.

^a Including shipments to possessions.

^b July-June.

^c Grain only through 1929-30; July-June through 1927-28; gross exports in 1926-27.

^d Probably understated by 7 to 9 million bushels.

^e Eleven months.

^f Average for 1928-32.

^g Net trade in "commerce général."

^h Including Luxemburg.

ⁱ Exclusive of trade with Chosen and Taiwan; see Table

XXV.

^j Gross imports of flour, from unofficial sources.

TABLE XXIII.—NET EXPORTS AND NET IMPORTS OF WHEAT AND FLOUR, MONTHLY, 1936-37*

(Million bushels)

A. NET EXPORTS (In parentheses, net imports)

Month	United States ^a	Canada	Australia	Argentina	Chile	Hungary	Yugoslavia	Rumania	Bulgaria	Morocco	Algeria	Tunis	India	USSR
July	(3.65)	27.90	5.18	4.51	.00	2.98	.08	.28	.15	.06	.57	.08	.23	.12
Aug.	(5.53)	22.87	4.92	4.04	.00	3.22	1.93	5.04	1.01	.00	.88	(.04)	.39	.26
Sept.	(3.00)	22.40	7.60	4.30	.00	3.68	3.38	6.72	.69	(.00)	2.03	{(.02)	1.51	.37
Oct.	(2.78)	28.90	5.47	6.27	.00	2.59	2.10	5.52	1.16	(.37)	.03	.03	2.07	.39
Nov.	(3.10)	35.11	5.59	4.74	.00	2.54	1.70	2.02	.61	(.26)	1.16	(.19)	2.33	.28
Dec.	(2.71)	22.54	7.30	13.32	.00	2.05	1.21	2.32	1.03	(.32)	1.25	(.20)	.94	.75
Jan.	(1.39)	11.18	10.66	29.56	.00	2.05	.48	1.58	.27	(.62)	.09	(.29)	{1.04	.43
Feb.	(.64)	6.91	10.65	32.07	.00	1.78	.89	1.04	.16	(.33)	.01	(.21)	.21	.54
Mar.	(.73)	6.47	11.70	32.31	(.00)	1.84	1.64	1.38	.14	.21	(.01)	.01	.75	.23
Apr.	(.37)	4.88	8.20	18.96	.00	2.33	1.52	6.22	.64	.18	.12	.01	.83	.25
May	.24	9.57	12.26	8.03	(.22)	{1.71	2.40	3.71	.68	...	.22	.00	4.56	.51
June	.46	13.91	10.06	5.07	{.78	.63	.72	.73	...	.23	.02	.02	3.26	.40
July	2.36	10.08	7.23	3.74	...	.51	.39	1.30	.78	...	.06	.08		

B. NET IMPORTS (In parentheses, net exports)

Month	United Kingdom	Irish Free State	France ^b	Italy	Germany	Czechoslovakia	Austria	Switzerland	Belgium ^c	Netherlands	Denmark	Norway	Sweden	Portugal
July	16.99	1.92	(.05)	.41	(.30)	.01	.80	1.64	3.31	1.95	1.15	.38	(.36)	.01
Aug.	14.89	1.07	(.07)	(.48)	.09	(.00)	1.32	{1.22	3.94	1.56	.46	.53	(.60)	.03
Sept.	15.25	.53	.49	.35	.06	(.03)	.90	{1.55	4.84	1.58	.61	.26	(.13)	.01
Oct.	17.39	1.64	.46		.12	.00	1.61	3.31	1.47	.81	.76	(.01)	.01	
Nov.	18.39	1.41	.97	6.16	.16	(.19)	.45	1.59	4.32	1.35	.66	.58	.17	.01
Dec.	18.55	1.58	.87		.08	(.98)	.47	1.98	3.72	2.33	.66	1.23	.15	.00
Jan.	11.48	.39	1.04	4.70	.20	(.70)	.51	1.06	1.50	1.78	.48	.19	.05	.00
Feb.	20.24	.71	1.34	5.38	.22	(1.01)	.81	1.28	2.75	1.71	.58	.53	.16	.00
Mar.	20.00	1.01	1.10	8.00	.82	(1.00)	1.12	1.18	3.66	1.93	.38	.79	.12	.01
Apr.	14.91	.49	.80	7.64	1.86	(1.85)	1.12	2.50	2.90	2.87	.41	1.18	.21	.02
May	15.53	1.51	.91	12.60	8.23	(1.72)	.89	1.88	2.22	1.36	.27	1.47	.15	.01
June	15.92	1.04	2.05	9.15	10.98	(1.44)	1.30	1.04	3.34	1.46	.52	.73	.13	.00
July	16.69	1.15	2.13	3.95	8.94	(.24)	.84	.83	2.96	1.84	.52	.33	.12	.03

C. NET IMPORTS (In parentheses, net exports)

Month	Poland	Lithuania	Latvia	Estonia	Finland	Greece	Syria, Lebanon	Egypt	Japan	Manchukuo	China	Cuba ^d	South Africa	New Zealand
July	(.47)	.00	(.08)	(.03)	.51	1.63	(.12)	.02	.52	.90	.16	.37	.01	.03
Aug.	(1.12)	.00	.00	.00	.45	1.54	(.07)	.00	.48	.66	(.31)	.25	.00	.08
Sept.	(.82)	.00	.00	.00	.28	1.55	(.19)	.01	.67	.28	(.28)	.49	.00	.13
Oct.	(.69)	.00	.00	.00	.21	1.79	(.32)	.01	.17	.42	(.13)	.27	.01	.01
Nov.	(.63)	.00	.00	.00	.18	1.63	(.36)	.01	(.21)	.83	(.04)	.39	.01	.02
Dec.	(.53)	.00	.00	.02	.18	1.69	(.49)	.01	.13	.57	(.00)	.47	.01	.02
Jan.	(.70)	.00	.02	.12	.38	1.97	(.22)	(.01)	.56	.41	.04	.46	.00	.01
Feb.	(.37)	.00	.08	.00	.33	1.54	(.04)	(.07)	.43	.17	.09	.50	.00	.00
Mar.	(.40)	.00	.22	.00	.20	2.32	.00	(.03)	.95	.32	.85	.36		{.04
Apr.	(.02)	.00	.28	.05	.26	2.34	.23	(.11)	.13	.73	.71	.41	(.23)	{.16
May	(.03)	.00	.20	.00	.44	1.74	.01	(.18)	.29	.39	.20	.42	(.71)	.03
June	(.01)	.00	.20	.00	.37	1.59	.01	(.20)	.22	.14		{.35	(.03)	.02
July	(.01)	.00	.00	(.03)	.40	1.81	.03	.01	(.10)	.04	.10	{.32	.00	.05

* Data from official sources, in large part through International Institute of Agriculture. Dots (...) indicate that data are not available.

^a Adjusted for shipments to possessions.

^b Net trade in "commerce général."

^c Including Luxemburg.

^d Gross imports of flour, from unofficial sources.

TABLE XXIV.—WHEAT AND FLOUR IMPORTS INTO THE UNITED KINGDOM, BY SOURCES, ANNUALLY FROM 1932-33*

August-July	Total	British Empire	Foreign	U.S. and Canada	United States	Canada	Australia	Argentina	USSR	All other	India	Germany	Rumania	France	Italy
WHEAT GRAIN (Million bushels)															
1932-33...	204.3	153.5	50.8	105.0	2.21	102.75	50.29	33.28	3.96	11.76	.00	9.77	.07	...	...
1933-34...	199.5	110.3	89.2	68.6	.09	68.51	41.47	53.91	14.65	20.83	.00	10.51	4.21	...	...
1934-35...	188.4	102.5	85.9	65.9	.74	65.19	36.97	60.39	.00	25.06	.33	.20	1.21	...	...
1935-36...	190.2	139.3	50.9	95.1	.52	94.55	44.22	12.00	13.21	25.67	.44	.12	3.11	...	...
1936-37...	184.5	136.7	47.8	86.4	.08	86.28	39.03	29.46	.00	29.61	10.66	.53	8.45	...	...
WHEAT FLOUR (Thousand barrels)															
1932-33...	4,854	3,624	1,230	2,498	93	2,405	1,210	207	....	939	....	....	....	583	...
1933-34...	5,963	4,002	1,961	2,656	71	2,585	1,416	168	....	1,723	....	....	....	719	335
1934-35...	4,639	3,314	1,325	2,379	57	2,322	992	123	....	1,145	....	....	....	730	228
1935-36...	4,861	3,709	1,152	2,462	43	2,419	1,286	110	....	1,003	....	....	....	443	107
1936-37...	4,841	4,092	749	2,383	46	2,337	1,742	229	....	487	....	....	....	317	...

* Data from Accounts Relating to the Trade and Navigation of the United Kingdom. See WHEAT STUDIES, XIII, 209.

TABLE XXV.—NET IMPORTS OF WHEAT AND FLOUR OF SPECIFIED COUNTRIES, CALENDAR YEARS 1926-36*

(Million bushels; in parentheses, net exports)

Year	China	Chosen, Taiwan ^a	Philippines ^b	Turkey	Iraq ^c	Palestine	Cyprus
1926..	22.5	2.62	3.52	.26	.18	1.05	.61
1927..	14.4	2.77	3.54	(.45)	(.22)	.82	.67
1928..	16.7	3.28	3.98	1.48	(.34)	1.42	.90
1929..	48.6	2.97	4.07	5.40	(.10)	1.85	.82
1930..	22.6	3.03	3.70	(.29)	(3.43)	.77	.54
1931..	66.0	2.83	4.15	(.63)	(1.51)	1.66	1.07
1932..	51.9	2.26	3.63	(1.19)	(1.01)	1.83	1.50
1933..	47.5	2.08	3.64	(.98)	(.95)	3.62	1.47
1934..	19.4	3.73	3.65	(3.22)	(.63)	2.96	1.07
1935..	21.5	5.39	3.75	(2.37)	(.83)	2.39	.30
1936..	4.3	....	4.81	(1.26)	(1.91)	2.40	.59 ^d

Year	Brazil, total	Brazil, wheat	Uruguay	Chile	Peru	South Africa	New Zealand
1926..	31.5	19.9	(1.32)	(1.05)	3.10	4.54	2.97
1927..	32.6	21.9	(1.94)	.30	3.25	5.81	1.42
1928..	36.5	25.5	(6.05)	(.54)	3.22	8.81	1.21
1929..	35.9	27.4	(4.28)	(.29)	4.25	7.70	.52
1930..	31.8	23.8	(2.69)	(1.90)	2.91	2.80	.73
1931..	32.5	29.2	.62	(.10)	4.16	3.41	.74
1932..	28.6	28.4	.07	.60	3.22	.93	1.98
1933..	33.8	31.2	1.72	3.22	3.15	(.08)	(.11)
1934..	34.9	29.8	(2.83)	(1.42)	4.80	.75	.63
1935..	34.8	32.4	(1.37)	.00	5.18	(.09)	.81
1936..	36.4	33.8	(.87) ^e	(1.81)	....	(.11)	.77

* Data from Foreign Trade of China (Maritime Customs), International Yearbooks of Agricultural Statistics, and U.S. Department of Agriculture.
^a In trade with Japan. ^b Flour only.
^c Years beginning April 1, prior to 1931.
^d Gross imports. ^e Gross exports.

TABLE XXVI.—OCEAN FREIGHTS ON WHEAT TO EUROPE, ANNUALLY FROM 1925-26 AND MONTHLY, 1936-37*

(U.S. cents per bushel)

August-July	Canada ^a	New York ^b	North-ern Pacific ^a	Black Sea ^c	La Plata down river ^c	Australia ^d
1925-26.....	9.0	7.0	20.0	...	10.9	22.3
1926-27.....	12.0	9.7	23.9	...	19.9	28.5
1927-28.....	7.7	5.6	19.5	...	13.9	23.2
1928-29.....	8.5	6.1	19.6	...	14.9	23.1
1929-30.....	5.5 ^d	4.7	14.7	...	8.3	16.7
1930-31.....	5.6 ^d	4.6	14.5	7.1	10.9	19.3
1931-32.....	4.9 ^d	3.9	10.9 ^d	5.5	8.2	13.2
1932-33.....	4.0 ^d	3.3	9.9 ^d	4.8	6.7	11.8
1933-34.....	4.3 ^d	4.7	12.6 ^d	6.8 ^d	9.4	15.9
1934-35.....	4.9 ^d	4.6	12.0 ^d	6.5 ^d	9.8	16.2
1935-36.....	5.7 ^d	4.6 ^d	12.8	6.6 ^d	11.0	17.8
1936-37.....	7.9 ^d	...	19.7 ^d	11.0 ^d	15.7	24.7 ^d
July	6.3	...	12.8	7.1	11.3	18.8
Aug.	6.3	...	12.8	8.4	11.4	18.8
Sept.	6.8	...	15.0	9.5	12.0	18.2
Oct.	6.9	...	16.1	10.5	12.2	18.2 ^e
Nov.	7.1	...	18.6	11.1	12.6	...
Dec. ....	...	...	18.6	12.4	13.9	19.9
Jan. ....	...	...	18.6	12.8 ^e	13.9	23.8
Feb. ....	...	...	18.5 ^f	...	16.2	25.7
Mar. ....	...	...	...	...	18.3	26.4
Apr. ....	...	...	19.8	12.5	17.3	27.2
May	9.6	...	26.5	...	20.2	29.5
June	9.4	...	26.4	...	20.0	30.7
July	9.1	...	26.1	11.1	20.7	32.9

* Averages of Friday rates published in International Crop Report and Agricultural Statistics, for cargoes except from New York. Dots (...) indicate lack of data.
^a To United Kingdom. ^b To Liverpool, parcels.
^c To Antwerp and Hamburg.
^d Average for months in which quotations are available.
^e Three-week average. ^f Two-week average.

TABLE XXVII.—INTERNATIONAL TRADE IN WHEAT FLOUR, ANNUALLY FROM 1926-27*

(Thousand barrels of 196 pounds)

A. NET EXPORTS (In parentheses, net imports)

Year Aug.-July	United States ^a	Canada	Aus- tralia	Argen- tina	Brazil ^b	Hun- gary	Yugo- slavia	Ru- mania	Bul- garia	Mo- rocco	Al- geria	Tunis	India
1926-27....	13,913	9,190	5,169	1,760	(2,444)	1,587	302	983	336	(90)	(36)	24	717
1927-28....	12,226	9,792	4,381	1,829	(2,345)	2,108	(28)	441	115	(66)	98	9	671
1928-29....	13,992	11,732	5,845	1,738	(2,049)	2,615	23	197	51	(102)	115	50	497
1929-30....	13,477	6,695	4,676	1,328	(1,707)	2,889	162	162	4	(16)	40	79	567
1930-31....	12,314	6,677	5,307	1,050	(1,306)	2,045	43	215	112	(50)	107	123	525
1931-32....	8,286	5,363	7,139	789	(258)	1,086	53	437	383	(48)	51	64	426
1932-33....	4,896	5,344	6,404	844	(147)	441	29	7	28	(32)	233	59	172
1933-34....	4,439	5,365	5,571	1,248	(1,021)	748	28	3	47	20	405	(14)	132
1934-35....	4,489	4,552	7,335	1,091	(760)	413	21	0	1	26	413	287	155
1935-36....	3,917	4,918	6,197	898	(580)	636	38	1	0	2	385	193	198
1936-37....	4,492	4,469	5,646	1,095	(536)	690	63	3	44	5°	242	47	426
Average													
1932-36....	4,435	5,045	6,377	1,020	(627)	560	29	3	19	4	359	131	164
1926-31....	13,184	8,817	5,076	1,541	(1,970)	2,249	100	400	124	(65)	65	57	595

B. NET IMPORTS (In parentheses, net exports)

Year Aug.-July	United Kingdom	Irish F.S.	France ^d	Italy	Ger- many	Czecho- slovakia	Austria	Bel- gium ^e	Nether- lands	Den- mark	Nor- way	Sweden	Spain
1926-27....	4,046	1,855	(772)	(195)	492	1,691	1,763	(64)	1,751	690	611	76	(218)
1927-28....	3,163	1,907	(1,150)	(207)	2	2,106	1,821	(145)	2,008	828	754	136	(82)
1928-29....	2,129	1,677	(1,752)	(441)	(401)	1,978	1,386	(176)	1,639	782	961	150	(74)
1929-30....	3,962	1,838	(3,202)	(666)	(263)	1,694	1,917	158	1,305	716	701	147	(34)
1930-31....	4,189	1,863	(3,477)	(492)	56	1,235	1,574	8	1,903	790	710	34	(38)
1931-32....	2,853	2,053	(2,300)	(995)	85	598	640	(11)	333	651	688	19	(9)
1932-33....	2,713	916	(1,824)	(1,732)	(1,103)	219	293	6	463	395	577	4	(5)
1933-34....	4,307	556	(1,631)	(1,804)	(2,818)	8	506	125	446	289	472	3	(16)
1934-35....	2,905	250	(1,385)	(1,864)	(299)	8	395	50	458	236	507	1	0
1935-36....	3,511	81	(1,006)	(2,211)	(371)	9	381	16	612	100	449	(8)	(7)
1936-37....	3,802	71	(1,021)	(2,228)	176	(173)	236	14	504	74	465	(12)	...
Average													
1932-36....	3,359	451	(1,462)	(1,903)	(1,148)	61	394	49	495	255	501	0	(7)
1926-31....	3,498	1,828	(2,071)	(400)	(23)	1,741	1,692	(44)	1,721	761	747	109	(89)

C. NET IMPORTS (In parentheses, net exports)

Year Aug.-July	Poland	Finland	Greece	Syria, Lebanon	Egypt	Japan ^f	Chosen ^g	Man- chukuo	China	Indo- China	British Malaya	Java, Ma- dura ^h	Ceylon
1926-27....	76	1,098	1,194	...	1,891	(591)	...	.....	.....	258	...	...	219
1927-28....	84	1,293	617	...	1,490	(1,000)	...	.....	.....	271	...	...	223
1928-29....	1	1,481	376	598	2,586	(2,310)	...	.....	.....	266	...	...	239
1929-30....	(60)	1,269	252	216	2,411	(981)	...	.....	.....	267	...	...	220
1930-31....	(301)	1,097	85	75	1,816	(1,664)	...	.....	.....	219	...	523	227
1931-32....	(259)	814	34	155	1,239	(1,716)	338	.....	.....	198	499	584	204
1932-33....	(119)	631	11	358	104	(3,368)	273	.....	2,374	174	468	488	195
1933-34....	(144)	585	6	414	50	(2,830)	296	5,054	587	172	560	555	197
1934-35....	(382)	436	16	20	37	(3,651)	684	6,655	735	196	630	587	206
1935-36....	(1,104)	350	11	(22)	40	(1,974)	570	3,295	419	199	619	654	172
1936-37....	(739)	245	8	(51)	12	(748)	...	1,205	161	212	690	505	180
Average													
1932-36....	(437)	500	11	192	58	(2,956)	456	5,001 ⁱ	1,029	185	569	571	192
1926-31....	(40)	1,248	505	296 ^j	2,039	(1,309)	...	.....	.....	256	...	...	226

* Data from official sources, in large part through International Institute of Agriculture. Dots (...) indicate that data are not available. For crop-year total net exports, see p. 144.

^a Including shipments to possessions.

^b July-June.

^c Net imports from Japan.

^d Nine months. ^e Net exports in "commerce général."

^f Including Luxemburg.

^g For the five years ending with July 1936, net imports of other Netherlands East Indies averaged nearly 300 thousand barrels a year, with 263 in the poorest year 1932-33.

^h Exclusive of net outward shipments to Chosen and Taiwan, which were 958 thousand barrels in 1935 and averaged 537 in the calendar years 1930-34.

ⁱ Three years ending with 1935-36.

^j Three years ending with 1930-31.

TABLE XXVIII.—UNITED STATES MILLING AND FLOUR DISPOSITION, ANNUALLY FROM 1925-26*

July-June	Wheat ground		Millfeed output (thousand tons)	Flour production and disposition (thousand barrels)							Per capita consumption	
	Total (million bushels)	Per barrel (bushels)		Output	Domestic exports ^a	Imports less re-exports	Shipments to possessions ^b	Net exports plus shipments	Computed net retention	Estimated consumption	Flour (pounds)	As wheat (bushels)
1925-26..	536.7	4.635	4,753	115,789	9,542	6	568	10,104	105,685	105,100	176	4.17
1926-27..	557.4	4.568	4,764	122,026	13,384	2	644	14,026	108,000	106,500	176	4.11
1927-28..	556.0	4.620	4,886	120,355	12,821	2	558	13,377	106,978	107,900	176	4.15
1928-29..	562.1	4.578	4,830	122,779	12,888	(1)	660	13,547	109,232	109,000	176	4.12
1929-30..	558.5	4.603	4,864	121,332	12,994	(2)	620	13,616	107,716	107,800	172	4.05
1930-31..	537.9	4.613	4,709	116,595	11,726	0	593	12,319	104,276	105,100	167	3.92
1931-32..	515.0	4.575	4,419	112,576 ^c	8,356	(1)	571	8,928 ^c	103,648	102,800	162	3.77
1932-33..	506.6	4.585	4,370	110,495	4,379	0	630	5,009	105,486	101,500	159	3.71
1933-34..	460.0	4.582	3,961	100,394	3,873	1	579	4,451	95,943	99,000	154	3.60
1934-35..	470.8	4.561	4,009	103,227	3,934	0	576	4,510	98,717	100,000	154	3.59
1935-36..	483.6	4.628	4,268	104,505	3,323	35	598	3,886	100,619	101,100	155	3.65
1936-37..	492.1	4.608	4,297	106,803	3,918	39	616	4,495	102,308	102,200	156	3.65

* Estimates by the Food Research Institute of wheat ground, millfeed output, flour output, and flour consumption, combined with official trade data.

^a Including flour milled in bond from imported wheat.

^c Incorrectly given in WHEAT STUDIES, September 1937, XIV, 33.

^b Including Virgin Islands since January 1935.

TABLE XXIX.—UNITED STATES FLOUR PRODUCTION AND DISPOSITION, MONTHLY FROM JULY 1932*

(Thousand barrels)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
A. REPORTED PRODUCTION, ALL REPORTING MILLS													
1932-33.....	7,828	9,005	9,395	9,382	8,719	8,323	8,077	7,216	8,867	9,298	8,777	8,577	103,464
1933-34.....	8,275	6,719	7,540	8,181	8,116	7,332	8,719	7,867	8,362	7,455	8,103	7,507	94,176
1934-35.....	7,325	8,654	8,822	9,181	8,211	7,547	8,316	7,599	7,986	7,786	7,806	7,381	96,614
1935-36.....	7,387	8,082	9,055	9,897	8,274	7,175	8,644	8,401	8,252	7,840	7,569	7,845	98,421
1936-37.....	9,416	9,148	8,708	9,120	8,019	8,216	8,180	7,536	8,402	8,340	7,542	7,637	100,264
B. ESTIMATED TOTAL UNITED STATES PRODUCTION													
1932-33.....	8,363	9,621	10,048	10,034	9,335	8,911	8,648	7,726	9,454	9,913	9,327	9,115	110,495
1933-34.....	8,803	7,147	8,021	8,703	8,634	7,800	9,306	8,405	8,933	7,965	8,657	8,020	100,394
1934-35.....	7,826	9,256	9,435	9,819	8,782	8,071	8,894	8,136	8,550	8,337	8,286	7,835	103,227
1935-36.....	7,825	8,561	9,602	10,495	8,784	7,617	9,176	8,927	8,769	8,341	8,053	8,355	104,505
1936-37.....	10,028	9,753	9,284	9,733	8,558	8,778	8,739	8,051	8,939	8,844	7,998	8,098	106,803
C. NET EXPORTS PLUS SHIPMENTS TO POSSESSIONS													
1932-33.....	399	460	420	417	537	447	392	344	392	392	384	425	5,009
1933-34.....	337	416	362	352	338	428	415	325	422	469	322	265	4,451
1934-35.....	322	486	489	434	432	354	319	315	359	333	347	320	4,510
1935-36.....	296	315	314	356	302	294	298	310	328	371	358	344	3,886
1936-37.....	320	356	470	361	307	401	358	398	370	378	420	356	4,495
D. ESTIMATED NET RETENTION													
1932-33.....	7,964	9,161	9,628	9,617	8,798	8,464	8,256	7,382	9,062	9,521	8,943	8,690	105,486
1933-34.....	8,466	6,731	7,659	8,351	8,296	7,372	8,891	8,080	8,511	7,496	8,335	7,755	95,943
1934-35.....	7,504	8,770	8,946	9,385	8,350	7,717	8,575	7,821	8,191	8,004	7,939	7,515	98,717
1935-36.....	7,529	8,246	9,288	10,139	8,482	7,323	8,878	8,617	8,441	7,970	7,695	8,011	100,619
1936-37.....	9,708	9,397	8,814	9,372	8,251	8,377	8,381	7,653	8,569	8,466	7,578	7,742	102,308

* Reported production and trade data from U.S. Department of Commerce, *Wheat Ground and Wheat Milling Products, Monthly Summary of Foreign Commerce, Foodstuffs Round the World, and Statements* Nos. 3009, 3013, and 3015; estimated production as for Table XXVIII. For some corresponding revised data from January 1925, see WHEAT STUDIES, May 1936, XII, 335, and September 1937, XIV, 33.

TABLE XXX.—WHEAT SUPPLIES AND DISPOSITION IN FOUR CHIEF EXPORTING COUNTRIES, FROM 1923-24*

(Million bushels)

A. UNITED STATES (JULY-JUNE)

Year	Supplies			Domestic utilization					Surplus over domestic use	Net exports ^g	Shipments to possessions ^h	Year-end stocks ^a
	Initial stocks ^a	Crop ^b	Total ^c	Milled (net) ^d	Seed use ^e	Fed on farms ^b	Residual ^o	Total ^f				
1923-24.....	132	759	891	470	74.1	70	+ 5	619	272	132	2.97	137
1924-25.....	137	842	979	472	79.9	56	+ 5	613	366	255	2.87	108
1925-26.....	108	669	777	490	78.8	28	-16	581	196	93	2.74	100
1926-27.....	100	832	932	493	83.3	34	+ 3	613	319	206	3.08	110
1927-28.....	110	875	985	494	89.9	45	+50	679	306	191	2.69	112
1928-29.....	112	914	1,026	500	83.7	57	+12	653	373	142	3.17	228
1929-30.....	228	823	1,051	495	83.4	59	-18	619	432	140	2.98	289
1930-31.....	289	886	1,175	481	80.9	157	+28	747	428	112 ^b	2.85	313
1931-32.....	313	942	1,255	474	80.0	174	+25	753	502	124 ^b	2.80	375
1932-33.....	375	757	1,132	484	83.5	125	+25	718	414	33	3.02	378
1933-34.....	378	552	930	440	77.8	72	+38	628	302	25	2.78	274
1934-35.....	274	526	800	450	82.6	84	+36	653	147	(4) ⁱ	2.78	148
1935-36.....	148	626	774	466	87.4	83	+28	664	110	(31) ⁱ	2.89	138 ^j
1936-37.....	138 ^j	626	764	471	95.8	93	+36	696	68	(26) ⁱ	3.01	91 ^j

B. CANADA (AUGUST-JULY)

Year	Supplies			Domestic utilization							Surplus over domestic use	Net exports ^g	Year-end stocks ^a
	Initial stocks ^a	Crop ^b	Total ^c	Milled (net) ^d	Seed use ^e	Other A ^b ⁱ	Other B ^m	Other C ⁿ	Residual ^o	Total ^f			
1923-24.....	32	474	506	41.5	38.7	19.4	...	11.9	+ 3	115	391	346	45
1924-25.....	45	262	307	42.1	38.5	12.0	...	10.0	-16	87	220	192	28
1925-26.....	28	395	423	42.3	39.8	11.2	...	6.3	-37	63	360	324	36
1926-27.....	36	407	443	42.8	39.3	12.3	...	19.1	-14	99	344	293	51
1927-28.....	51	480	531	43.5	42.2	27.6	...	6.7	0	120	411	333	78
1928-29.....	78	567	645	44.1	44.2	29.6	...	12.8	+ 4	135	510	406	104
1929-30.....	104	305	409	43.4	43.6	7.2	...	6.7	+12	113	296	185	111
1930-31.....	111	421	532	41.9	39.2	4.5	41	7.7	+ 7	141	391	258	133
1931-32.....	133	321	454	41.8	36.9	2.8	27	6.0	+ 3	117	337	207	130
1932-33.....	130	443	573	43.6	35.5	2.1	22	7.2	-11	99	474	264	210
1933-34.....	210	282	492	43.1	32.7	3.0	17	4.5	+ 5	105	387	194	193
1934-35.....	193	276	469	43.1	32.3	3.6	18	4.6	0	102	367	165	202
1935-36.....	202	282	484	44.9	33.3	9.9	21	4.0	+ 9	122	362	254	108
1936-37.....	108	229	337	44.1	33.7	1.5	16	2.5	+11	109	228	195	33

* Based on official data so far as possible. Crop revisions in December 1937 (U.S.) and January 1938 (Canada) may affect 1936-37 figures given here.

^a See Table XIII, columns 5 and 12.

^b Latest official estimates of U.S. Department of Agriculture and Dominion Bureau of Statistics, respectively.

^c Imports are taken into account in arriving at net exports.

^d Wheat equivalent of flour production less flour exports. For the United States, Holbrook Working's estimates corresponding to data in Table XXVIII; for Canada, official estimates of "wheat milled for food."

^e Difference between total domestic disappearance and the sum of other disappearance items. This is normally a positive item representing dockage (U.S.), feed elsewhere than on farms where grown, and use of wheat in some prepared breakfast foods, in mixed feeds, and in industry; but it is determined in part by errors in estimates of stocks, crops, specified domestic use items, and net exports. Negative items (e.g., Canada, 1924-27) ordinarily imply more or

less underestimate of the crop and/or overestimates of amount fed on farms. For Canada the 1936 crop estimate is expected to be revised downward; if so, the residual and total will be reduced.

^f Total supplies less net exports (and for the United States, shipments to possessions) and year-end stocks.

^g Official trade data, as in Tables XVII, XXII.

^h Does not include all wheat shipped to Canada.

ⁱ Net imports.

^j Excluding new-crop wheat in certain positions.

^k On account of a change in the estimated seed requirement per acre, seed use figures from 1930-31 are not properly comparable with those for earlier years.

^l Unmerchantable.

^m Merchantable wheat fed on farms where grown.

ⁿ Loss in cleaning.

TABLE XXX (Continued).—WHEAT SUPPLIES AND DISPOSITION IN FOUR CHIEF EXPORTING COUNTRIES, FROM 1923-24*

C. AUSTRALIA (AUGUST-JULY)

Year	Supplies			Domestic utilization				Surplus over domestic use	Net exports ^d	Estimated stocks		
	Initial stocks ^a	Crop ^b	Total ^c	Milled (net) ^d	Seed use ^e	Residual ^f	Total ^f			Aug. 1 total ^a	Aug. 1 ex- portable ^h	Nov. 30 total ⁱ
1923-24.....	33	125	158	27.8	11.0	- 1	38	120	86	34	25	9.0
1924-25.....	34	165	199	29.7	10.6	+ 7	47	152	124	28	18	4.6
1925-26.....	28	115	143	32.8	11.6	- 2	42	101	77	24	13	6.9
1926-27.....	24	161	185	31.0	14.5	+ 2	47	138	103	35	25	12.1
1927-28.....	35	118	153	31.6	15.7	- 1	46	107	71	36	25	8.9
1928-29.....	36	160	196	29.1	15.9	+ 1	46	150	109	41	31	15.6
1929-30.....	41	127	168	32.1	19.1	+ 5	56	112	63	49	38	13.8
1930-31.....	49	214	263	31.3	15.6	+ 4	51	212	152	60	49	16.6
1931-32.....	60	191	251	31.6	16.3	- 3	45	206	156	50	40	10.8
1932-33.....	50	214	264	33.0	15.7	+10	59	205	150	55	44	18.5
1933-34.....	55	177	232	33.3	13.3	+14	61	171	86	85	74	40.1
1934-35.....	85	133	218	31.7	12.7	+ 8	52	166	109	57	46	16.7
1935-36.....	57	144	201	33.1	13.3	+10	56	145	102	43	32	8.3
1936-37.....	43	150	193	33.0	15.0	+ 3	51	142	102	40	29	...

D. ARGENTINA (AUGUST-JULY)

Year	Supplies			Domestic utilization				Surplus over domestic use	Net exports ^d	Estimated stocks		
	Initial stocks ^a	Crop ^b	Total ^c	Milled (net) ^d	Seed use ^e	Residual ^f	Total ^f			Aug. 1 total ^a	Aug. 1 ex- portable ^h	Dec. 31 total ⁱ
1923-24.....	64	248	312	49.0	21.3	+ 3	73	239	173	66	44	10
1924-25.....	66	191	257	53.0	23.0	- 2	74	183	125	58	35	10
1925-26.....	58	191	249	53.9	23.1	+ 8	85	164	97	67	43	35
1926-27.....	67	230	297	56.9	24.8	+ 2	84	213	144	69	44	15
1927-28.....	69	282	351	59.7	27.3	- 9	78	273	178	95	70	15
1928-29.....	95	349	444	60.4	24.6	+ 7	92	352	222	130	105	20
1929-30.....	130	163	293	60.0	25.5	- 9	77	216	151	65	40	20
1930-31.....	65	232	297	62.5	20.8	+ 9	92	205	125	80	54	20
1931-32.....	80	220	300	64.8	23.7	+ 6	95	205	140	65	38	14
1932-33.....	65	241	306	64.5	23.6	+11	99	207	132	75	48	10
1933-34.....	75	286	361	66.1	22.6	+ 7	96	265	147	118	90	15
1934-35.....	118	241	359	68.7	17.1	+ 6	92	267	182	85	56	17
1935-36.....	85	141	226	68.5	21.0	+ 2	91	135	70	65	36	4
1936-37.....	65	249	314	69.5	22.7	+ 9	102	212	162	50	21	..

* Based on official data so far as possible.

^a Australia: stocks on November 30 (last column), plus August-November net exports, plus $\frac{1}{2}$ of net mill grindings (column 4). Argentina: stocks on December 31 (last column), plus August-December net exports, plus $\frac{1}{2}$ of net mill grindings (column 4).

^b Official data or estimates.

^c Imports are taken into account in arriving at net exports.

^d Australia: official data for July-June years to 1935-36; our estimates for 1936-37. Argentina: our estimates based on official data on flour milled minus flour exports in calendar years 1922-36.

^e See footnote e, p. 176; here including feed use.

^f Total supplies less net exports and year-end stocks.

^g Official trade data, as in Table XXII.

^h Preceding column minus $\frac{1}{2}$ of net mill grindings for Australia, $\frac{1}{2}$ of net mill grindings for Argentina.

ⁱ Australia: official estimates 1925-36, our approximations for other years. Argentina: rough approximations to December 31 stocks of old-crop wheat, based largely upon estimates by the *Times of Argentina*.

^j Based on official data on acreage sown and average seed requirements.

TABLE XXXI.—APPROXIMATE UTILIZATION OF WHEAT IN OTHER COUNTRIES, ANNUALLY FROM 1926-27*

(Million bushels)

Aug.-July	India	Hungary	Yugoslavia	Rumania	Bulgaria	Morocco	Algeria	Tunis	British Isles	France	Italy	Germany	Czechoslovakia	Austria	Switzerland
1926-27..	326	53.0	59.9	93.7	36.8	22.0	24.2	7.1	282	329	298	192	64.0	26.5	20.3
1927-28..	328	55.8	66.2	98.2	40.3	22.5	25.0	8.5	281	328	300	209	65.6	27.3	20.7
1928-29..	322	55.6	79.5	103.9	41.8	22.9	25.2	8.4	281	331	302	209	67.6	28.3	21.2
1929-30..	320	58.0	77.6	101.1	43.3	23.3	25.5	7.9	279	332	303	189	67.1	29.8	21.6
1930-31..	354	59.4	80.7	107.5	46.1	22.3	24.5	7.5	278	325	301	176	67.2	28.7	22.1
1931-32..	365	60.1	83.6	104.9	48.2	23.0	23.6	7.6	293	330	290	179	65.2	25.9	23.9
1932-33..	360	61.0	59.6	61.5	49.1	22.8	22.8	9.5	288	331	287	178	63.8	25.5	23.4
1933-34..	353	61.7	86.7	107.3	50.5	21.5	19.8	10.1	294	342	284	169	63.1	25.1	23.1
1934-35..	348	59.4	72.9	84.0	45.7	23.4	25.9	10.0	297	345	268	183	54.2	23.1	23.8
1935-36..	355	62.0	72.3	90.5	46.8	20.4	25.6	10.1	289	328	286	196	56.8	22.6	22.7
1936-37..	340	62.5	83.2	89.2	49.3	16.0	24.7	11.4	281	303	284	201	60.9	23.7	22.2
Average 1932-36..	354	61.0	72.9	85.8	48.0	22.0	23.5	9.9	292	336	281	182	59.5	24.1	23.0

Aug.-July	Belgium ^a	Netherlands	Denmark	Norway	Sweden	Spain	Portugal	Poland	Lithuania	Latvia	Estonia	Finland	Greece	Egypt	Japan ^b
1926-27..	53.7	33.9	16.0	7.01	19.0	147	15.8	60.6	4.71	3.71	1.79	6.22	31.8	47.8	45.3
1927-28..	58.0	36.3	20.4	7.39	22.4	148	18.1	63.0	5.25	4.15	2.20	6.87	32.5	49.5	44.8
1928-29..	58.4	36.8	25.7	8.65	25.9	148	17.6	65.8	6.37	5.11	2.29	7.59	33.1	51.5	45.4
1929-30..	53.7	37.5	22.7	9.01	27.1	150	17.2	68.3	7.53	4.95	2.45	7.11	34.1	53.3	45.0
1930-31..	59.4	39.9	22.2	9.25	26.3	152	17.2	73.3	8.59	5.04	2.46	6.30	34.8	54.0	44.5
1931-32..	60.2	38.8	25.7	9.29	25.0	152	16.9	73.4	9.02	5.13	2.18	5.63	34.9	53.5	44.6
1932-33..	57.8	39.6	25.2	9.44	25.5	159	18.7	59.1	9.25	5.18	2.09	5.95	36.5	48.1	42.9
1933-34..	59.0	37.9	24.1	9.23	25.9	157	17.7	73.4	8.67	6.08	2.45	7.02	38.8	45.2	42.3
1934-35..	58.7	38.8	31.0	9.68	26.5	162	19.2	72.5	9.30	6.37	2.68	7.54	40.3	39.5	44.9
1935-36..	56.1	38.5	24.5	9.90	22.7	164	19.7	70.8	8.17	5.88	2.47	8.36	41.8	43.4	48.5
1936-37..	55.7	36.2	17.7	10.56	23.5	162	17.7	71.7	7.95	6.48	2.59	9.05	41.2	44.1	45.3
Average 1932-36..	57.9	38.7	26.2	9.50	25.2	160	18.8	69.0	8.85	5.88	2.42	7.22	39.3	44.0	44.6

* Computed from production and trade data given in Tables II and XXII, and our latest unpublished estimates of stocks about August 1. For more detailed analysis by M. K. Bennett, see WHEAT STUDIES, March 1935, XI, 255-305, and *ibid.*, June 1936, XII, 339-404. ^a Including Luxemburg. ^b Taking account of trade with Chosen and Taiwan.

TABLE XXXII.—WORLD WHEAT SUPPLIES AND APPROXIMATE DISAPPEARANCE, ANNUALLY FROM 1923-24*

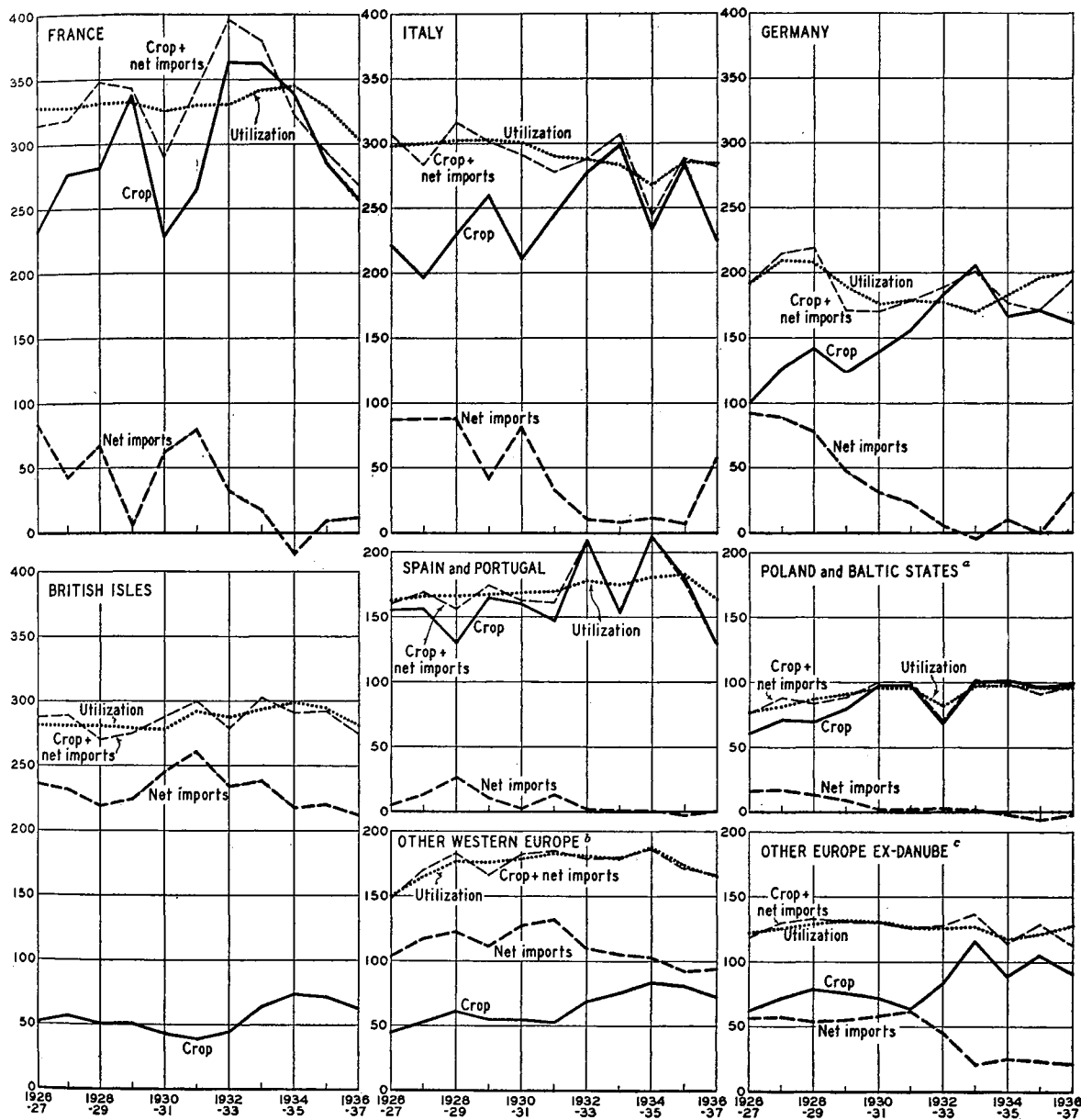
(Million bushels)

August-July	World ex-Russia					Four chief exporters				Europe ex-Danube ex-Russia				
	Initial stocks	Crops	USSR ex-ports	Total supplies	Disappearance	Initial stocks	Crops	Net ex-ports	Utilization	Initial stocks	Crops	Net imports	Total supplies	Utilization
1923-24..	551	3,554	22	4,127	3,444	263	1,606	735	849	154	1,003	594	1,751	1,532
1924-25..	683	3,170	.. ^a	3,853	3,325	285	1,460	700	817	219	868	630	1,717	1,547
1925-26..	528	3,415	27	3,970	3,355	228	1,370	604	762	170	1,113	522	1,805	1,592
1926-27..	615	3,523	50	4,188	3,541	232	1,630	741	850	213	926	679	1,818	1,612
1927-28..	647	3,705	2	4,354	3,657	271	1,755	768	921	206	1,008	656	1,870	1,656
1928-29..	697	4,037	.. ^a	4,734	3,777	337	1,990	891	906	214	1,041	667	1,922	1,681
1929-30..	957	3,607	9	4,573	3,658	530	1,418	544	869	241	1,146	505	1,892	1,667
1930-31..	915	3,881	114	4,910	3,910	535	1,753	651	1,029	225	1,006	609	1,840	1,654
1931-32..	1,000	3,873	65	4,938	3,939	608	1,674	618	1,022	186	1,064	606	1,856	1,665
1932-33..	999	3,874	17	4,890	3,760	642	1,655	579	988	191	1,296	441	1,928	1,649
1933-34..	1,130	3,810	34	4,974	3,775	730	1,297	456	891	279	1,375	387	2,041	1,666
1934-35..	1,199	3,490	2	4,691	3,739	680	1,176	456	896	375	1,297	350	2,022	1,678
1935-36..	952	3,553	29	4,534	3,762	504	1,193	426	898	344	1,273	339	1,956	1,673
1936-37..	772	3,514	5	4,291	3,770	373	1,254	459	950	283	1,099	444	1,826	1,639

* Summarized from Tables I, XII, and XXI. For the world ex-Russia, "disappearance" represents utilization within the area so defined, plus small and variable net exports to areas outside it. See also pp. 106, 116-20. ^a Net imports.

CHART 23.—WHEAT SUPPLIES AND UTILIZATION IN EUROPE EX-DANUBE, ANNUALLY FROM 1926-27*

(Million bushels)



* Based on data in Tables II, XXII, and XXXI. Utilization data rest partly on our estimates of carryovers, which vary considerably in degree of trustworthiness.

^a Lithuania, Latvia, Estonia, Finland.

^c Austria, Czechoslovakia, Greece.

^b Belgium, Netherlands, Scandinavia, Switzerland.

TABLE XXXIII.—ANNUAL AND MONTHLY AVERAGE PRICES OF WHEAT IN FOUR CHIEF EXPORTING COUNTRIES*

Year and month	United States (July-June) ^a								Winnipeg ^b and others (August-July)				
	Farm price	All classes	Basic cash (Chi.)	No. 2 H. W. (K. C.)	No. 2 R. W. (St. L.)	No. 1 Dk. N. S. (Mnpls.)	No. 2 A. D. (Mnpls.)	Western White (Seattle)	Wtd. average	No. 1 Manitoba	No. 3 Manitoba	Buenos Aires 78-kilo ^c	Melbourne ^d
U.S. PRE-DEVALUATION GOLD CENTS PER BUSHEL													
1923-24	94	108	105	107	111	125	108	...	100	102	97	101	102
1924-25	140	155	154	151	172	164	169	...	156	168	159	157	146
1925-26	146	156	159	162	171	167	148	...	143	151	142	146	148
1926-27	123	139	138	136	137	151	157	...	131	146	135	133	137
1927-28	122	135	137	138	159	147	134	...	124	146	130	130	133
1928-29	99	111	116	111	136	128	116	117	105	124	115	108	114
1929-30	101	116	117	113	126	127	114	114	121	124	118	108	115
1930-31	62	75	82	73	82	81	75	69	61	64	58	56	53
1931-32	41	58	55	50	49	72	75	60	50	53	46	44	43
1932-33	38	53	52	49	54	57	55	51	44	44	41	40	40
1933-34	46	57	56	55	58	58	67	48	41	42	39	34	33
1934-35	52	65	58	59	58	68	80	50	46	49	45	34	34
1935-36	51	59	59	63	61	75	67	49	44	50	46	50	42
1936-37	67	78	75	76	77	90	92	64	72	73	70	65	59
U.S. CURRENT CENTS PER BUSHEL													
1932-33	39	56	54	51	57	59	58	55	47	48	45	43	43
1933-34	72	90	88	86	90	91	104	75	65	68	63	53	51
1934-35	87	109	98	100	98	115	135	84	78	82	76	58	57
1935-36	86	100	99	107	103	126	113	83	74	84	77	84	70
1936-37	113	131	126	128	129	150	154	108	121	123	118	109	100
1936-37													
July	94	110	106	111	106	136	143	89	85	93	87	99	78
Aug.	105	127	115	122	117	147	149	98	100	102	98	108	92
Sept.	104	125	116	122	119	146	137	95	103	104	102	100	93
Oct.	107	129	118	122	121	148	153	98	110	111	107	101	95
Nov.	106	127	120	122	123	144	148	...	107	108	104	95	94
Dec.	114	139	135	134	135	159	178	112	119	120	116	99	103
Jan.	124	144	137	138	140	166	171	112	124	125	120	98	100
Feb.	125	138	138	137	143	159	170	114	125	127	122	100	98
Mar.	123	142	142	139	143	153	183	117	135	136	132	114	104
Apr.	127	141	138	140	144	156	172	120	135	139	132	124	106
May	118	131	130	132	132	146	128	116	128	131	125	123	104
June	109	123	122	121	122	145	122	112	124	124	122	117	102
July	113	119	127	122	122	151	133	112	142	145	139	127	107

* Basic data partly from official sources and partly from trade journals. Annual averages are arithmetic averages of monthly data. Conversions of foreign prices at par when exchanges were near par; otherwise at current exchange rates except that, after February 1933, gold prices are based on the price of gold in London.

^a Data of the U.S. Department of Agriculture on farm prices (as of the fifteenth of the month), all classes and grades in six markets, No. 2 Hard Winter at Kansas City, No. 2 Red Winter at St. Louis, No. 1 Dark Northern Spring and No. 2 Amber Durum (No. 2 Hard A.D. 1934-35 ff.) at Minneapolis, and Western White at Seattle. See especially *Agriculture Yearbook, 1935*, pp. 364-65, and *Crops and Markets and Foreign Crops and Markets*. Monthly prices of the foregoing series (except farm prices and Western White at Seattle) are weighted by carlot sales. Prices of basic cash wheat (Chicago) are simple averages of weekly average prices of the cheapest wheat deliverable on Chicago contracts; see WHEAT STUDIES, November 1934, XI, 103-24.

^b Based on data from *Canadian Grain Statistics, Grain Trade of Canada*, and *Monthly Review of the Wheat Situa-*

tion (Dominion Bureau of Statistics). The monthly average prices of No. 1 Manitoba are as reported by the Dominion Bureau of Statistics; Winnipeg weighted averages are simple averages of weekly weighted average prices; prices of No. 3 Manitoba are simple averages of unweighted weekly average prices.

^c Recent monthly prices are simple averages of daily quotations from *Revista Semanal* and *Revista Oficial*. For 1923-24, prices computed by deducting 6 cents per bushel from Friday prices of Barletta wheat reported in the *Times of Argentina*. From Mar. 16 to Dec. 11, 1932, and from Dec. 5, 1933, prices are for 80-kilo wheat.

^d Recent monthly prices are simple averages of daily quotations from *Wheat and Grain Review*, Melbourne, of "Wheat, Trucks, Williamstown."

TABLE XXXIV.—ANNUAL AND MONTHLY AVERAGE PRICES OF IMPORT AND DOMESTIC WHEAT IN EUROPE*
(U.S. cents per bushel)

Year (August–July) and month	United Kingdom import wheats					Domestic wheats							
	All im- ports	British parcels	No. 3 Mani- toba	Argen- tine Rosafé plus duty	Aus- trallian	Great Brit- ain	France (Paris) ^a	Ger- many (Berlin) ^a	Italy (Milan) ^a	Hun- gary (Buda- pest)	Yugo- slavia (Novi- Sad)	Ru- mania (Bra- ila) ^b	Bul- garia (Bour- gas)
1923-24	121	123	119 ^b	122	128	121	135	104	120	135	...	...	...
1924-25	180	182	181	181	181	160	173	156	185	182	...	...	...
1925-26	170	170	168	163 ^b	176	158	145	161 ^b	208	149	...	...	...
1926-27	164	163	164	160	167	157	186	177 ^b	208	152	...	...	...
1927-28	155	152	154	151	160	137	173	162	191	152	...	...	...
1928-29	132	129	138	128	140	127	167	142	187	118	...	...	...
1929-30	130	127	137	122	133	120	147	165	187	109	...	...	...
1930-31	79	76	77	72	78	81	184	168	156	72	79 ^b	55	63
1931-32	57	59	62	56	61	61	172	152	149	59	77	49	51
1932-33	56	56	58	56	58	56	124	135	151	70	77	97	56 ^b
1933-34	68	69	77	67	71	64	212	191	189	77	64	100	...
1934-35	77	80	88	75	79	66	165	222	220	...	77	118	...
1935-36	88	91	95	94 ^b	93	81	159	225	249	...	95	97	...
1936-37	126	129	136	129	133	120	191	224	195	103	102	97	...
1936-37	75	77	81	77	79	71	113	133	116	62	61	58	...
July	93	100	104	...	105	94	186	235	257	...	78	78	...
Aug.	101	111	116	115	121	105	249	220	260	82	79	86	...
Sept.	106	109	115	113	118	100	242	214	263	86	85	92	...
Oct.	110	118	124	116	123	112	179	217	191	96	101	96	...
Nov.	117	116	121	112	116	112	180	219	176	98	102	93	...
Dec.	123	128	137	126	136	117	182	228	178	104	103	94	...
Jan.	131	132	143	128	138	129	183	228	178	116	104	99	...
Feb.	130	125	138	123	133	119	184	228	178	110	101	98	...
Mar.	129	137	148	139	141	119	184	228	178	106	104	96	...
Apr.	137	153	151	149	147	133	182	228	178	112	112	109	...
May	145	144	143	145	142	130	183	227	178	110	112	104	...
June	142	135	137	140 ^b	136	128	183	227	190	108	109	98	...
July	144	146	158	140	145	130	158	228	198	113	113	98	...

* See corresponding footnote to Table XXXIII. Figures in italics for 1936-37 are in terms of pre-devaluation gold cents. For corresponding annual figures for 1932-33 to 1935-36, and for sources of data herein, see WHEAT STUDIES, XIII, 231.

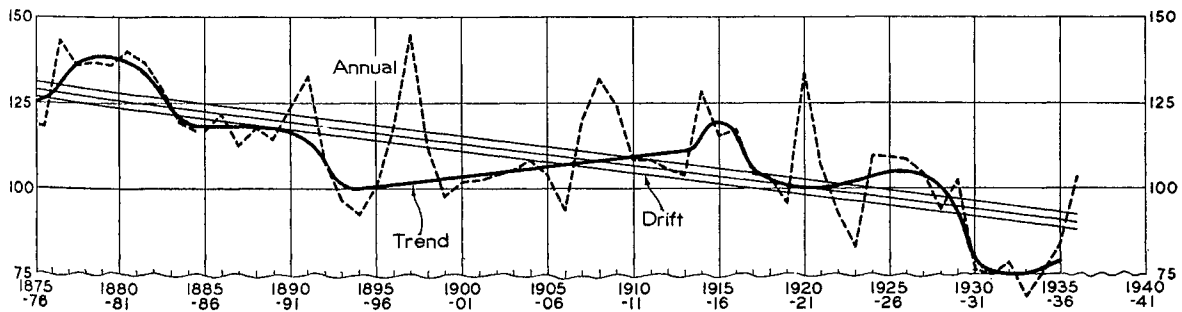
^a "Fixed prices" from August 1936, or earlier.

^c Because of the nominal character of exchange quotations, conversion to U.S. cents is unsatisfactory.

^b Prices missing for some weeks.

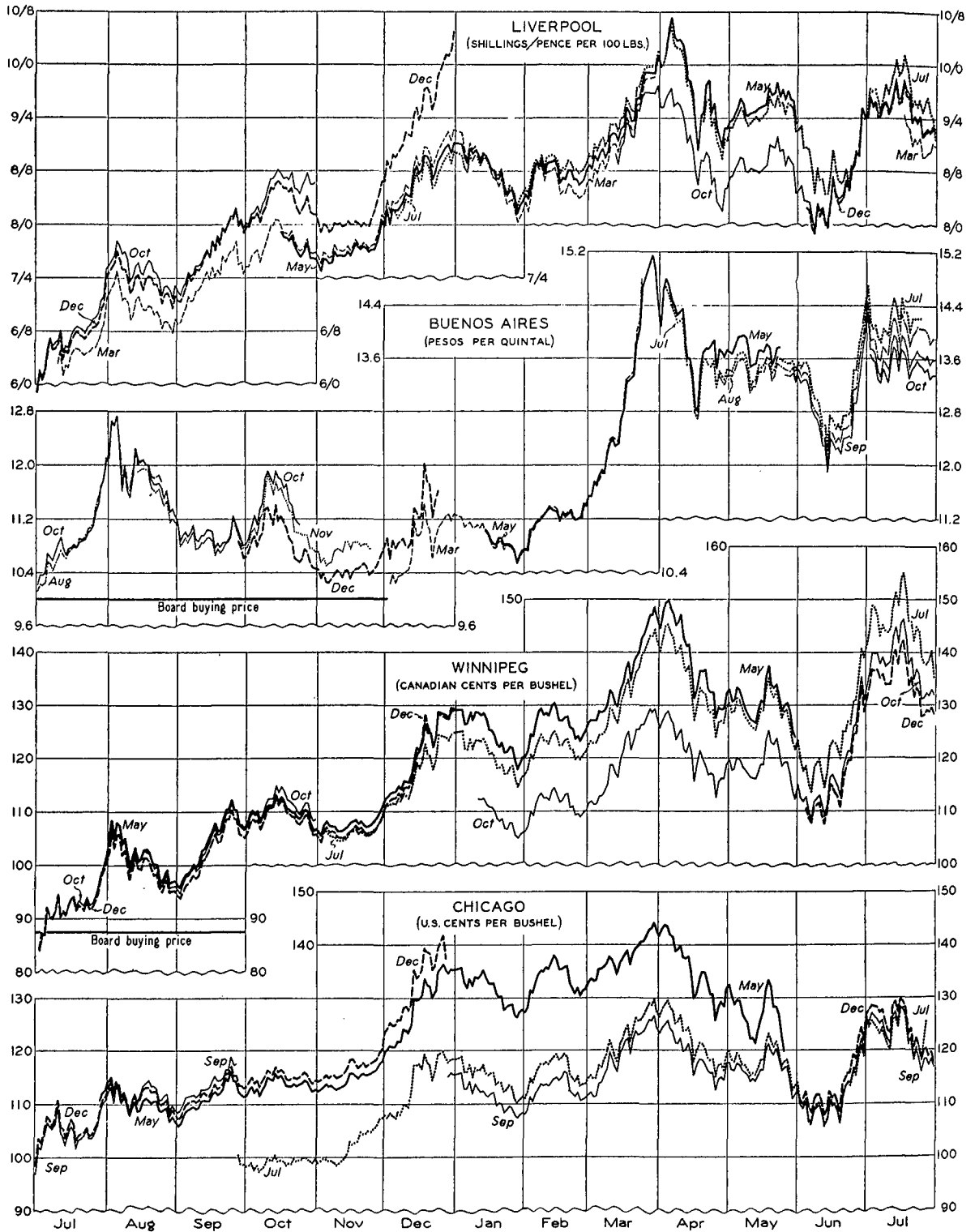
CHART 24.—DEFLATED PRICES OF BRITISH IMPORT WHEAT, ANNUALLY FROM 1875-76*

(U.S. cents per bushel, 1910-14 basis)



* Averages of monthly data for calendar years 1875-85, and for August-July years from 1885-86. Price averages in sterling are divided by corresponding averages of the Sauerbeck-Statist index of wholesale commodity prices expressed in terms of its average for 1910-14, and the results converted to U.S. currency at \$4.8665 to the £. For some discussion, see WHEAT STUDIES, December 1935, XII, 146-47, and above p. 148.

CHART 25.—WHEAT FUTURES PRICES IN LEADING FUTURES MARKETS, DAILY, 1936-37*



* Daily closing prices from *London Grain, Seed and Oil Reporter*, *Buenos Aires Revista Oficial*, *Winnipeg Grain Trade News*, and *Chicago Daily Trade Bulletin*. For "board buying prices," see p. 123.