WHEAT STUDIES

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THE WORLD WHEAT SITUATION, 1932-33

A REVIEW OF THE CROP YEAR

WORLD wheat supplies were again superabundant in 1932–33, despite short crops in the Danube basin and the United States. Importing Europe harvested a record crop, and import restrictions were tighter than ever before; consequently imports were the smallest since 1917–18, and well below the pre-war average. Ex-European imports, however, were sizable, though only because of heavy Chinese takings. Italy, Germany, and Japan were conspicuously small net importers. The United States, again prominent as a country willing and able to hold stocks, exported less wheat and flour than in any year since 1868–69.

World wheat prices (in gold) fluctuated around a new low average level, in spite of an advance induced toward the close of the year by unfavorable prospects for the North American crops of 1933. The impact of low prices in all of the major exporting countries, however, was softened by depreciation of domestic currencies, including the United States dollar. A tremendous wave of speculative enthusiasm, based on the unfavorable new-crop prospects and inflationary developments, more than doubled the price of wheat futures at Chicago between March 23 and July 17, 1933; but a spectacular crash ensued. In some of the principal importing countries of continental Europe, the crops of 1932 were so large that increased stringency of import controls failed to prevent sharp reductions in wheat prices.

World disappearance was smaller than in the two preceding years, with conspicuous reductions of wheat consumption for feed in the United States, and for food in Rumania, Yugoslavia, Poland, Germany, Italy, and Japan. Stocks were built up during the year, and stood at a new high level at its close. The excess—roughly 70 per cent above normal—was again mainly in North America.

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THE WORLD WHEAT SITUATION, 1932-33

A REVIEW OF THE CROP YEAR

Persisting superabundance of wheat in the midst of severe economic depression again dominated the world wheat situation in 1932–33. Despite small exports from Russia, total wheat supplies in the world ex-Russia, China, and southwestern Asia were practically as large as in the two preceding crop years. Despite heavy shipments to countries outside this area, wheat disappearance within it declined to a level not far above that of 1927–28 and well below the peak in 1931–32. End-year stocks were enlarged about as much as disappearance was reduced, standing when the year closed at a new high level of more than 1,100 million bushels, roughly 450 million above normal. Wheat prices in terms of gold, duty-free on the import markets and in exporting countries, were again exceedingly low—even below those of 1931–32. The volume of international trade was small. Import restrictions were tighter than ever before.

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The 1932 wheat crop of the world ex-Russia exceeded all previous crops except that of 1928. It was not, however, remarkably large in relation to trend. Production exceeded all records in importing Europe and was very large in Australia; it was above average in northern Africa and average in India. Crops were distinctly small in the Danube basin, the United States, and Chile, and moderately small in Asia Minor and China. Russia had a rather small crop, especially in relation to increasing domestic requirements.

The crop distribution profoundly influenced the volume of international trade and its direction of movement. European domestic supplies of wheat and wheat substitutes were so large, and import restrictions so severe in many countries, that European net imports of 442 million bushels were the smallest in all but one (1917–18) of the past twenty-four years. Except in China, good crops together with import restrictions and low purchasing power held ex-European imports low; but heavy Chinese takings kept the total fairly high.

With relatively little wheat available for export from the minor exporting countries, the small world import requirements were filled mainly by the four overseas exporters. Australia and Argentina shipped freely; the United States refused to compete and exported net only 32 million bushels of wheat (mostly as flour), the smallest quantity since 1868–69; and Canada took an intermediate position. Relative prices reflected the differing attitudes toward export sales; United States prices were out of line for export throughout the year, and Canadian were out of line in some periods. With importing countries and the Southern Hemisphere unwilling or unable to carry stocks, the world supplies that could not be consumed naturally continued to pile up in North America.

The world crop distribution also affected world wheat consumption. Crops were so small in Rumania, Yugoslavia, and Poland that net imports sufficient to maintain consumption at earlier levels could hardly have been made even in the absence of trade barriers. Governmental measures and reduced incomes of individuals rather than short crops were responsible for less conspicuous reductions of wheat consumption in some other European countries, notably Germany and Italy, and also in Japan. Germany and Italy, which before the depression often ranked as the world's second or third largest import markets, together imported net only 15 million bushels of wheat and flour in 1932–33. The downward drift of flour consumption in the United States, in evidence since the onset of recession, continued further; feed use of wheat, though higher than in most post-

war years, declined from the high levels of 1930–31 and 1931–32.

Governments in many countries continued their attempts to shelter domestic wheat producers from the impact of low international wheat prices. The movement in importing countries mainly took the form of milling regulations and strict governmental control of imports rather than increase of tariff duties. By the end of the crop year, Britain was conspicuous in importing Europe as a country wherein the bulk of the imports of wheat grain could still be brought in free of duty and also free from governmental controls of other types. But even here a reversal of traditional policy denied free entry to wheat produced outside of the British Empire. In more than half of the European importing countries, domestic producers when the year closed were selling their wheat either under price-supplementing subsidies or under prices fixed above world levels by law or by agreement between governments and millers. In exporting countries, on the other hand, governmental measures specifically affecting wheat were narrower in scope than in 1931–32; the year 1932–33 represents a period of abandonment of unsuccessful expedients and formulation of new measures. Departure from the gold standard by the United States, however, was a potent factor which, with a crop scare, instigated a wave of speculative enthusiasm in North America, upon which domestic prices rose steeply toward the close of the crop year. A crash followed.

Expressed in terms of gold, wheat prices in all of the major exporting countries and on free import markets established new lows in 1932–33 under the continuing pressure of superabundant supplies. Annual averages (gold), however, fell less than 15 per cent below those of 1931–32; a larger reduction was prevented by a substantial rise in prices toward the close of the crop year, induced mainly by unfavorable prospects for the North American crop of 1933. Expressed in terms of domestic currencies, the prices of export and duty-free import wheats declined less and averaged relatively higher than wheat prices expressed in gold; but exchange depreciation did not suffice to bring the quoted wheat prices back even to immediate pre-depression levels. Governmental measures in France, Germany, Italy, and some other European countries were successful in maintaining the level of domestic prices far above the prices of duty-free imported wheat. But the pressure of domestic supplies was so severe that in none of these three countries could average annual domestic prices be held at the level of 1931–32 despite increased stringency of governmental measures. In France and Germany, respectively, prices (gold) declined 56 and 26 cents per bushel, in contrast with a decline of 5–7 cents in duty-free prices of British imports.

I. WORLD WHEAT SUPPLIES

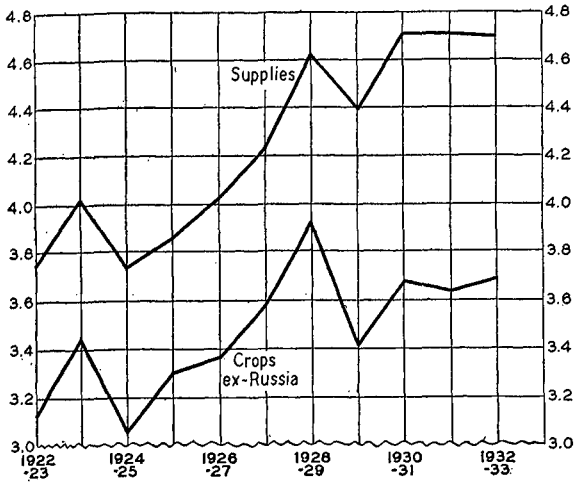
The crop year 1932–33, like the three preceding years, opened with huge and burdensome world stocks of old-crop wheat. Our revised total for the world ex-Russia[1] (more inclusive than our earlier figures but still incomplete; see below, p. 81) is 996 million bushels about as of August 1, 1932. No other crop year except 1931–32 at the outset faced old-crop stocks equally large (Table XXVII); and even the initial stocks of 1931–32 were not so much as 25 million bushels larger than those of 1932–33. The surplus stocks—roughly 350 million bushels above a "normal" level—were again heavily concentrated in North America (Chart 11, p. 81). Russian stocks, not covered by our estimates, were probably rather small.

These huge initial stocks assured ample world wheat supplies for 1932–33, barring severe and widespread failure of 1932 wheat crops. Only local crop shortages seemed in prospect early in the season. Hence it was early apparent that another year of superabundant supplies lay immediately ahead. Available wheat supplies in the world ex-

[1] With reference to statistics of production, we use the term "world ex-Russia" to include all countries listed in Table II, Mexico sometimes excepted. Our estimates of stocks, however, do not include appraisals for Mexico, Uruguay, Chile, Chosen, South Africa, and New Zealand.

Russia, as they may now be appraised (Chart 1), nearly reached the record totals of the two preceding years, despite a substantial reduction in Russian exports.

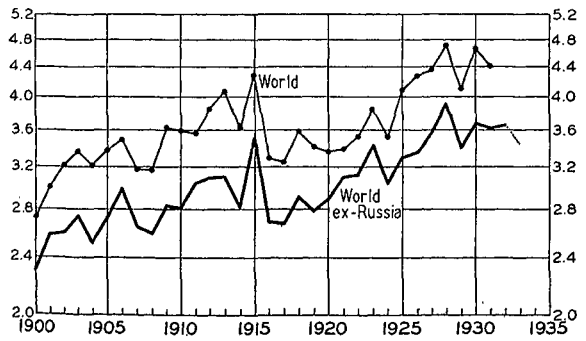
CHART 1.—WORLD WHEAT SUPPLIES, 1922–33*
(Billion bushels)



* See Table XXXIV.

The 1932 wheat crop of the world ex-Russia was a little larger than the big crop of 1930 and has been materially exceeded only by the record crop of 1928 (Chart 2). Trends

CHART 2.—WORLD WHEAT PRODUCTION, 1900–1933*
(Billion bushels; logarithmic vertical scale)



* Our estimates; see WHEAT STUDIES, April 1933, Vol. IX, No. 7. Totals include all countries listed in Table II except Mexico.

considered, however, it was neither notably large nor notably small. Calculated to include Russian production, for which official estimates are not available, the "world" crop of 1932 probably ranked as about the third largest on record. Comparisons which include production in China and southwestern Asia are not feasible; but the Chinese crop of 1932 was a relatively short one, and Turkey, the largest producer in southwestern Asia, had the shortest crop since 1928 (Table IX).

Early-season forecasts of the 1932 world crop ex-Russia were but little under final or semi-final returns. Our successive appraisals, which seem to have been fairly close to general expectations, were as follows in million bushels, with comparisons:[1]

Date	World ex-Russia	Four chief exporters	European importers	Others
Late August, 1932....	3,671	1,653	1,200	818
Late December, 1932..	3,668	1,599	1,263	804
Mid-May, 1933	3,643	1,607	1,256	780
Mid-September, 1933..	3,657	1,606	1,263	788
Mid-December, 1933..	3,703	1,646	1,266	790

Early in the season, the crops in all four of the exporting countries of the Danube basin were appraised too high, and those of the European importing countries too low. These changes in crop appraisals introduced errors into some early- and mid-season forecasts of the year's volume of international trade, which proved too high; and into our forecasts of end-year stocks, which proved too low. Early forecasts of the world wheat crop in recent years have so frequently fallen below later appraisals that the tendency may fairly be said to be in this direction.

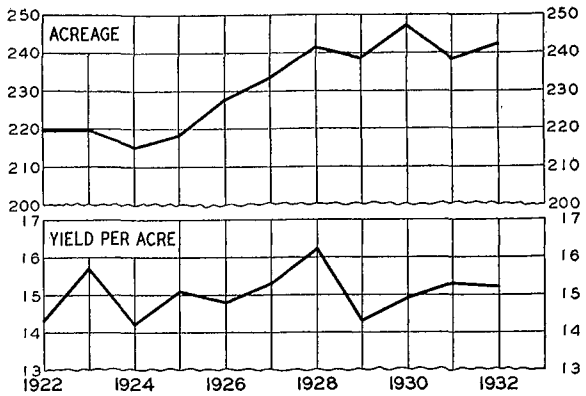
World wheat acreage ex-Russia in 1932, like the crop, was the second largest on record (Chart 3, p. 74). The increase in harvested acreage over 1931, some 6.4 million acres, reflects enlargement of area sown and change in the basis of estimating United States acreage. New post-war peaks of acreage harvested were recorded in no less than sixteen of the thirty-nine countries included in the total (Table III); eleven of these sixteen were European importing countries where farmers have been sheltered from the impact of low

[1] Totals comparable as to countries included with the total in Table II. Figures as published in WHEAT STUDIES (September 1932, VIII, 496; January 1933, IX, 162; May 1933, IX, 299; September 1933, IX, 381) included appraisals of crops in Brazil and Peru, which are excluded from the totals here given. The total as of August 1932 was erroneously printed 20 million bushels too low.

international wheat prices. Reductions in acreage harvested were mainly in eastern Europe, where sowing conditions were unfavorable in the autumn of 1931. The harvested world wheat acreage of 1932, ex-Russia, would nearly have equaled the record total of 1930 if abandonment of winter-wheat acreage in the United States and Argentina (Table VIII) had been as small in 1932 as in 1930.

CHART 3.—WORLD WHEAT ACREAGE AND YIELD PER ACRE, EX-RUSSIA, 1922–32*

(Million acres; bushels per acre)



* See Table I. 1932 acreage plotted too low, yield too high.

At 15.1 bushels, the world ex-Russian yield per acre of 1932 was about normal, equivalent to the 1923–31 average. Climatic conditions seem to have been relatively most favorable in countries bordering the Mediterranean Sea and in Australia, where yields per acre were of record or near-record post-war size. Yields in important areas were relatively the poorest in eastern Europe and the United States winter-wheat belt (Table IV). Spring-wheat yields (ex-Russia) were better in 1932 than in 1931, winter-wheat yields poorer; softer types of winter wheat gave better yields in 1932 than in 1931, and harder types gave poorer yields.

Outstanding features of the distribution of the 1932 wheat crop ex-Russia (Table I) were the record production in European importing countries and the short or moderate supplies in the various minor exporting countries. Early in the crop year it was clear that European import requirements would be small, and that imports must be drawn mainly from the four major overseas exporting countries. These harvested one of the smallest crops in seven years, though more than in 1929; but initial stocks were heavy. Among the four major exporters, Argentina and Australia harvested a combined crop smaller only than that of 1928; whereas the North American crop was below average on account of the small crop in the United States.

The geographical distribution of the 1932 crop was unfavorable for heavy wheat disappearance. The strikingly short crops were harvested in countries of southeastern Europe, where a short domestic crop is more likely to result in reduced domestic consumption than in imports sufficient to maintain consumption.

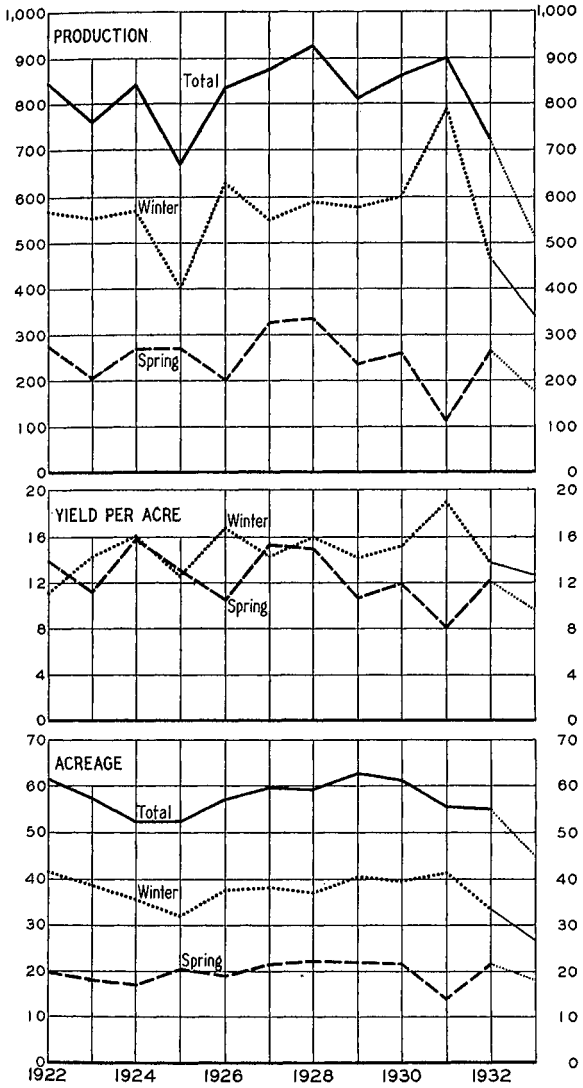
NORTH AMERICAN CROPS

The United States crop, 744 million bushels in 1932, was the fourth smallest in two decades, representing a relatively small harvested acreage (57.2 million acres on the new basis of estimation, 55.2 on the old) and a yield per acre (13.0 bushels) even more strikingly short. A much higher yield per acre in 1931 had resulted in a crop 21 per cent larger than the crop of 1932. In 1931 the winter-wheat crop had been of record size, the spring-wheat crop very short; but in 1932 the winter-wheat crop was the second shortest in post-war years, while the spring-wheat crop was about of average size (Chart 4).

Indications that the winter-wheat crop would be small appeared early in its development, and were confirmed during the growing season. The area sown was relatively small. The reduction from 1931 was due more to an unfavorably dry seed-bed in the Southwest than to a general tendency among farmers to curtail sowings in view of low wheat prices. Condition as of December 1, 1931, was exceptionally low; winter abandonment was heavy, especially in the dry Southwest; in general, a crop of only 500 million bushels or less was anticipated on April 1, 1932; deterioration in April and May was followed by little if any improvement by harvest time (Table X). The standing estimate is 476 million bushels. Production and yield per acre were strikingly low not only in Oklahoma,

CHART 4.—UNITED STATES WHEAT PRODUCTION, YIELD PER ACRE, AND ACREAGE, 1922–33*

(Million bushels; bushels per acre; million acres)



* See Tables II–IV, which give revised figures for 1932 and 1933 released on December 19.

Kansas, Colorado, and Nebraska, but also in Iowa, Missouri, and Illinois, and farther east in Pennsylvania, Delaware, Maryland, and Virginia. The low harvested acreage and the low yield per acre in the first group of states brought production of hard red winter wheat to the lowest level since 1925; and in only two years of the past thirteen had the outturn been smaller (Table VII). The crop of soft red winter was also small; but white wheats (partly spring varieties) made an average crop.

The spring-wheat crop, unlike the winter, was a fairly good one in 1932. The area harvested, as revised, was only a little below the highest level of the past decade, that of 1928 (Chart 4). Abandoned acreage was light, as usual—sharply in contrast with the extraordinary abandonment in 1931. In spite of rather late seeding, early-season indications of the probable outturn substantially exceeded the estimate of 268 million bushels now standing (Table X). But drought and heat, especially in mid-July, reduced the prospective yield per acre from a high to an average figure. Durum wheat was relatively considerably less abundant than hard red spring wheat, mainly because the acreage sown to durum was sharply curtailed, but partly because yields per acre of durum were below average while yields of hard red spring were above. The durum crop of 41 million bushels, for the first time since specific statistics have been prepared (1920), was in 1932 less than a fourth as large as the crop of hard red spring.

In quality (Table XI), the United States crop of 1932 was apparently rather good with respect both to flour yield and protein content.

The Canadian crop of 1932, now appraised at 455 million bushels,[1] was the fourth largest on record and notably exceeded by only one crop, that of 1928 (Chart 5, p. 76). The yield per acre sown was below average, but the acreage sown was the largest in history. Early indications, in which a smaller planted acreage but a larger yield per acre were anticipated,[2] exceeded the semi-final estimate. As in the spring-wheat belt of the United States, prospective yield per acre was reduced by hot, dry weather especially in July. The crop was excellent in quality; 88 per cent of it graded No. 3 Northern and above, the highest proportion in at least a decade (Table XI), and in milling and baking qualities these superior grades were described as approximately equal

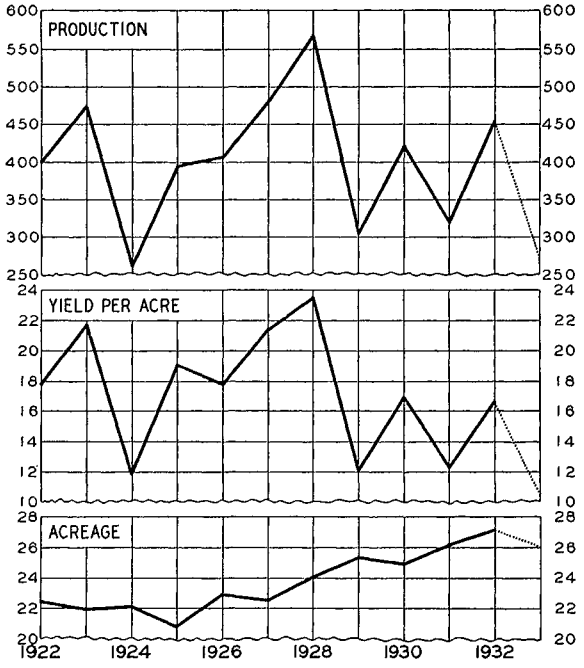
[1] This figure represents a tentative official correction of the crop estimate issued in January 1933, based upon disposition statistics for the crop year 1932–33. A final revised estimate will be issued in January 1934.

[2] See WHEAT STUDIES, September 1932, IX, 474.

to those of 1931, which "were the best ever examined."[1]

CHART 5.—CANADIAN WHEAT PRODUCTION, YIELD PER ACRE, AND ACREAGE, 1922–33*

(Million bushels; bushels per acre; million acres)



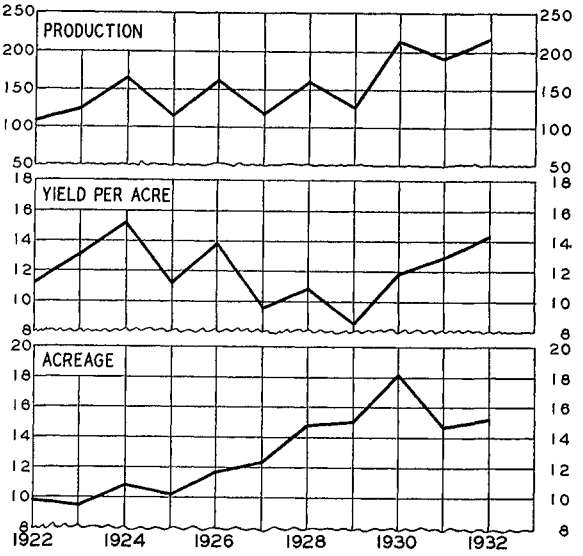
* See Table I.

CROPS OF OTHER EXPORTING COUNTRIES

The Australian crop of 1932 was the second largest on record, only a trifle below the crop of 1930 (Chart 6). Although early advices suggested that the 1932 acreage might approximately equal the record figure of 1930[2] (18.2 million acres), the official estimate now standing is 3 million acres less, and not much in excess of the acreages in 1928, 1929, and 1931. The bumper crop of 1932 therefore reflected mainly an exceptionally high yield per acre of 14.0 bushels, which had been exceeded in only two years of the present century, 1920 and 1924. The high yield in 1932 presumably resulted not only from favorable weather, but also from relatively extensive sowing of wheat on land used for wheat in 1930 but fallowed in 1931. Wheat production was relatively large in each of the several states and of record size in New South Wales. The crop was of high quality except in South Australia, where an attack of rust in some districts resulted in considerable quantities of shriveled grain.[3]

CHART 6.—AUSTRALIAN WHEAT PRODUCTION, YIELD PER ACRE, AND ACREAGE, 1922–33*

(Million bushels; bushels per acre; million acres)



* See Table I. Production and yield for 1932 are here plotted somewhat too high.

The Argentine crop of 1932 (Chart 7) was about an average one, now estimated at 236 million bushels. The area sown, though substantially larger than in 1931 partly because wheat tended to displace linseed, was smaller than in any of the four years 1927–30. The crop was sown under favorable conditions and progressed without major set-backs. The principal unfavorable developments were a mild winter, which promoted early growth and made the plant vulnerable; and some later damage from rust, heat, and locusts, especially in the northern regions, which made for moderately heavy abandonment and tended to reduce the yield per harvested acre. The wheat crop, however, suffered no such heavy losses from locust depredations as were later incurred by the corn crop. The yield per harvested acre of wheat, while not a high one, was nevertheless fairly good. The crop was

[1] Dominion Grain Research Laboratory, *Report on the Milling and Baking Characteristics of the Crop of 1932* (Winnipeg), October 18, 1932.

[2] *Foreign Crops and Markets*, June 20, 1932, p. 972.

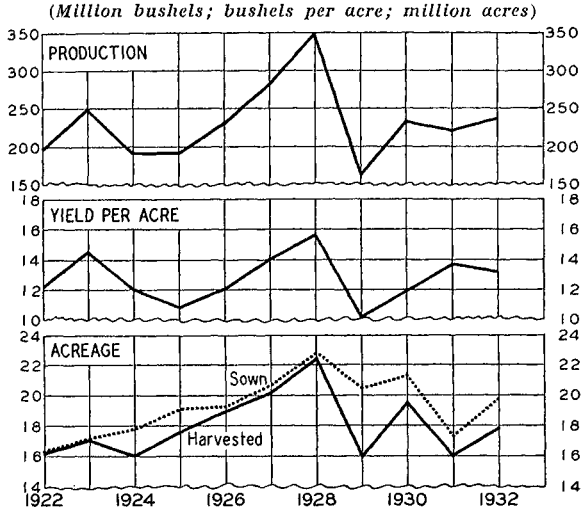
[3] *Wheat and Grain Review* (Melbourne), January 9, 1933, p. 8.

of moderately good quality, much better than the low-quality crops of 1926, 1929, and 1930.

The northern African exporting countries as a group had a big crop, 75 million bushels as compared with the record outturn of 77 million in 1929; the acreage was further above average than was the yield per acre. In Tunis, where the acreage was 18 per cent higher than ever before, the crop of 1932 was the largest on record. In India the 1932 wheat acreage reached its highest peak, 1918 excepted; but the yield per acre was one of the three lowest in a decade, and at 337 million bushels the crop was only equal to the 1927–31 average (Tables I–IV).

CHART 7.—ARGENTINE WHEAT PRODUCTION, YIELD PER ACRE, AND ACREAGE, 1922–32*

(Million bushels; bushels per acre; million acres)



* See Tables I–IV, VIII.

No official estimate of Soviet Russian wheat production in 1932 has yet appeared. The area sown has been placed officially at 88.7 million acres, a reduction of 3.4 million acres from the peak in 1931 (Table I); winter sowings were increased 3 million acres, but spring sowings were reduced 6.6 million and were delayed, as in 1930 and 1931, by a cold, wet spring. The area harvested is given semi-officially as 85.5 million acres,[1] a reduction of 6.7 million acres from 1931 if sown and harvested areas in 1931 were identical. Unofficial authorities suggest that the yield per acre of all grain was 6 per cent larger in 1932 than in 1931.[2] Since the yield per acre of wheat tends to correlate roughly with the yield of other grains,[3] it is not unreasonable to calculate from the available data that the wheat crop of 1932 (semi-official harvested acreage multiplied by a yield per acre 6 per cent larger than the official yield in 1931) may have approximated 770 million bushels. If so, the crop of 1932 fell slightly below that of 1931, and was over 200 million bushels below the big crop of 1930 and nearly 150 million below the good crop of 1926. Dry, hot weather from mid-June into August, apparently centering in the important regions of Lower and Middle Volga, was probably a dominant factor in keeping the average yield per acre low.

Farther to the west, in the Danube exporting countries, the aggregate wheat crop of 1932 was distinctly small (Chart 8, p. 78). Rumania had the smallest crop ever harvested since present boundaries were established, Yugoslavia the smallest crop since 1922, Hungary the smallest since 1924, and only Bulgaria had a good crop. Except in Bulgaria, unfavorably dry weather during the sowing season and moderately heavy winterkilling kept harvested acreages low; and severe rust infestation reduced yields per acre drastically. In quality, the crop was generally poor. Unlike wheat, rye made an average crop; and the corn crop was the largest in post-war years (Tables V, VI).

CROPS OF IMPORTING COUNTRIES

The unfavorable crop conditions prevailing in the Danube basin did not extend far into other countries of Europe ex-Russia; Poland alone harvested a strikingly short crop in 1932, the smallest since 1924. The British crop was also relatively small, but on

[1] *World Wheat Prospects*, October 25, 1933, p. 10.

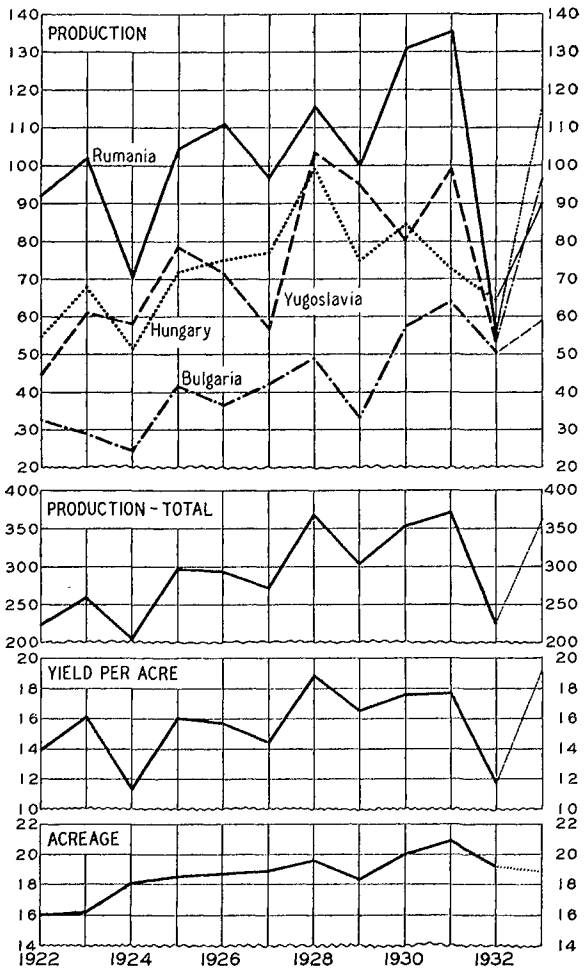
[2] Boris Brutzkus, "Russlands Getreideausfuhr," *Weltwirtschaftliches Archiv*, Band 38, Heft 2, October 1933, p. 495. Dr. Brutzkus cites the *Bulletin of the Economic Cabinet of Professor S. N. Prokopovich* (Prague), No. 102, February–March 1933, p. 12. On July 5, 1932, however, the chief of the Soviet Central Statistical Office is reported to have anticipated a yield per acre of all cereals 15 per cent or more above the yield in 1931; see WHEAT STUDIES, September 1932, IX, 472. An appraisal of 1932 yield given in *World Wheat Prospects, loc. cit.*, ranges from 0 to 8 per cent above the 1931 yield.

[3] See WHEAT STUDIES, March and April 1932, VIII, 328.

account of low acreage rather than low yield per acre. There were record post-war crops in an impressive list of countries—Czechoslovakia, Austria, Estonia, Latvia, Finland, Sweden, Netherlands, Germany, Italy, Spain, Portugal, and Greece; and the French crop had been exceeded in post-war years only in 1929. With record or near-record crops in the major wheat-producing countries and good crops elsewhere except in Poland and the British Isles, the total wheat crop of 1932 in importing Europe (Chart 9) was much the largest in post-war years. It surpassed the big crop of 1929 by over 10 per cent, and the good crop of 1931 by 19 per cent.

CHART 8.—DANUBIAN WHEAT PRODUCTION, YIELD PER ACRE, AND ACREAGE, 1922–33*

(Million bushels; bushels per acre; million acres)

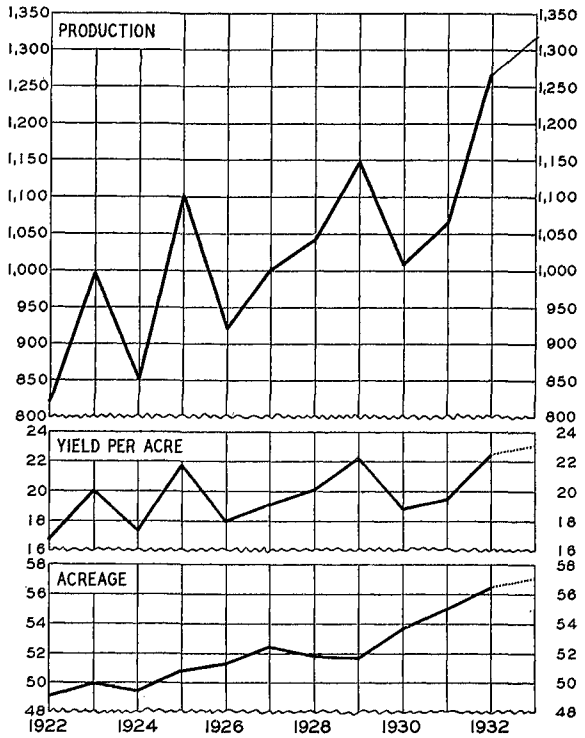


* See Tables I–IV.

A crop as large as 1,266 million bushels was not anticipated early in the growing season; for, although the acreage sown was thought to have been increased and there was little winterkilling, the spring was late and cold and crops were generally backward. Six weeks of fine, warm weather in late May and June, however, reversed earlier prospects and resulted in excellent yields. The average yield per acre throughout importing Europe, indeed, was the highest since the war. Every country of this group except the British Isles, Switzerland, Poland, and Lithuania obtained yields above the 1923–31 average, and there were record post-war yields in Italy, Spain, Portugal, Greece, and Finland.

CHART 9.—OTHER EUROPEAN WHEAT PRODUCTION, YIELD PER ACRE, AND ACREAGE, 1922–33*

(Million bushels; bushels per acre; million acres)



* See Tables I–IV.

The statistics now available indicate increases of wheat acreage between 1931 and 1932 in every country of importing Europe except Denmark, Norway, Poland, and Greece. New peaks of acreage were recorded in no less than eleven countries—Germany, Netherlands, Sweden, Switzerland, Spain, Portugal, Austria, Czechoslovakia, Finland, Lat-

via, and Estonia. Between 1929 and 1932, wheat acreage expanded in every European importing country except the British Isles, Denmark, and Norway; and the aggregate increase was 4.7 million acres, or about 9 per cent. Even with generous allowance for fundamental tendencies to expand wheat acreage in some of these countries, the conclusion is inescapable that in the main the recent expansion reflects governmental measures directed toward reduction of wheat imports and protection of domestic wheat producers. Importing Europe harvested about 100 million bushels more wheat in 1932 than in 1929 solely because of expansion of domestic wheat acreage. Even with an average yield per acre (1923–31) instead of the exceptional actual yield of 1932, the crop of 1932 on the reported acreage would have fallen only 40 million bushels short of the bumper crop of 1929.

The crop of 1932 was presumably of average quality or a little above, not generally excellent as it was in 1929. Low-quality wheat was perhaps most prominent in southern France, northern Italy, and Poland, where rust was prevalent before harvest. Rain during the harvest also resulted in more or less damp grain in northwestern Europe.

Other cereals and potatoes were also abundant in importing Europe (Tables V, VI). The 1932 crops of rye, corn, potatoes, barley, and oats all substantially exceeded the poor or moderate crops of 1931, and exceeded the 1927–31 average. The potato and corn crops were of record post-war size. Bumper post-war rye crops were harvested in Belgium, Portugal, Austria, Czechoslovakia, and Greece; and the German rye crop was the second largest since the war.

In countries not mentioned above, the 1932 wheat crop was of record size in Egypt and about average in the Japanese Empire, Mexico, and Chile. New Zealand had the largest crop in more than a decade, Uruguay the smallest; and South Africa harvested a crop above the average of recent years (Table II).

Visible Supplies in 1932–33

For the first time since 1925, "world" visible wheat supplies on August 1, 1932, were smaller than they had been the year before (Table XXVIII, Chart 10, p. 80). The fraction of total August 1 world stocks (Table XXVII) included in the visible supply was also smaller. Throughout 1932–33, until July, the general level remained lower than in 1931–32. But it continued far above normal (cf. 1927–28, Chart 10), reflecting the persisting extraordinary abundance of world wheat supplies in relation to effective demand and the piling up of stocks particularly in North America.

The lower level of world visible supplies in 1932–33 than in 1931–32 was not the result of general reduction in the components of the total. Canadian and Australian visibles, indeed, were larger in 1932–33. But United States visibles ran enough lower to offset the higher levels in these countries. The reduction in United States commercial stocks (including United States wheat in Canada) ranged between 50 and 100 million bushels in different periods of the year. This reduction does not represent a reduction in total stocks, but a redistribution among the several components. A larger proportion of total United States stocks was stored on farms, in country mills and elevators, and in city mills in 1932–33 than in 1931–32, and a correspondingly smaller fraction was in the visible supply. This redistribution of stocks was in large part a natural consequence of the cessation of purchases by the Grain Stabilization Corporation, whose operations especially in the last half of 1930–31 had tended to pile up wheat in terminal elevators and to keep stocks low on farms and in flour mills. The resulting abnormal distribution was partially corrected in 1931–32, and the correction was carried further in 1932–33 under circumstances that induced millers in particular to carry huge stocks at the end of the year.

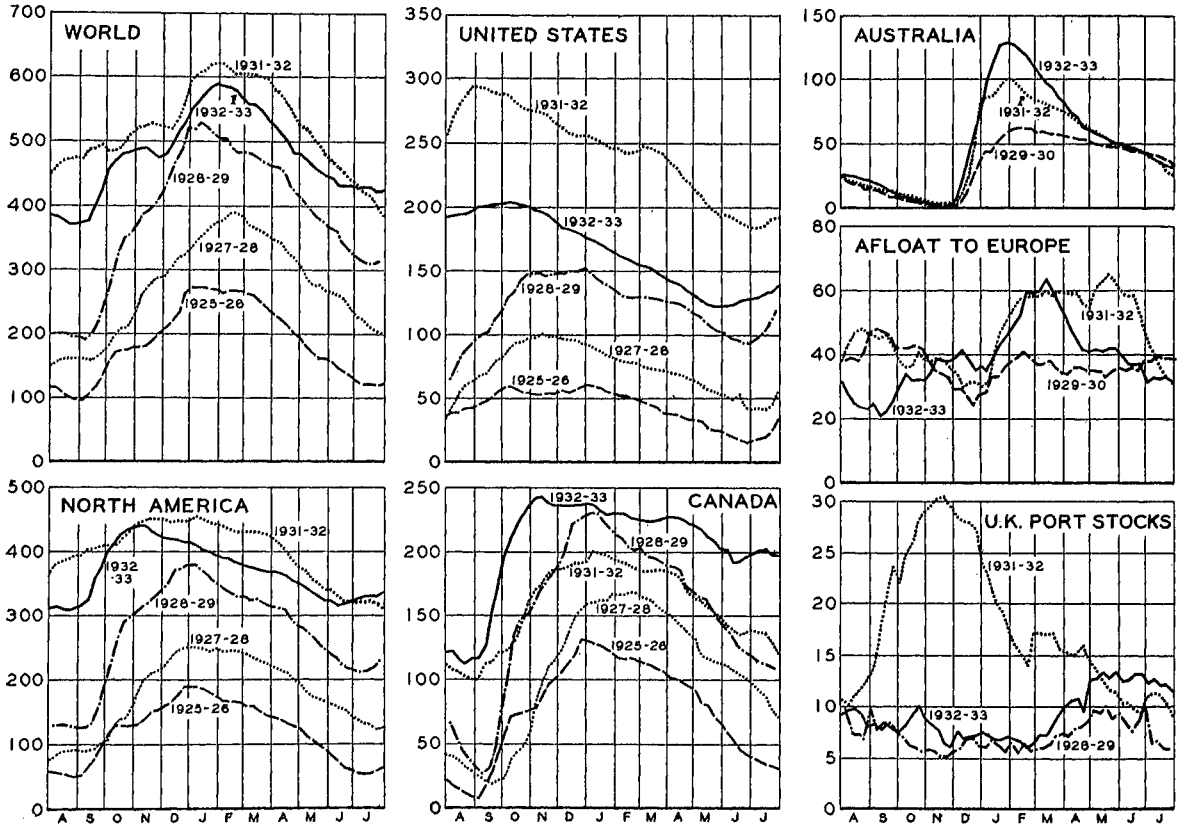
In its course from week to week, the United States visible in 1932–33 showed an unusually small increase in August–September, reflecting the small wheat crop; large reduction in the winter and early spring, when farmers tended to hold and mills were accumulating stocks; and an unusually early seasonal increase toward the end of the crop year, beginning in May. This increase re-

flected initially a stimulus to farm marketings (Table XIII) afforded by sharply rising prices (Chart 17, p. 99), and occurred in the face of heavy accumulation of stocks by flour mills. In July, however, the effect of the very short winter-wheat crop of 1933 became apparent in the moderate increase of the visible

time when exports were only of moderate size. Partly because of expectations that Canadian wheat shipped through the United States would not be admitted into the United Kingdom duty-free under the new British preferential duties (November 17, 1932), stocks of Canadian wheat stored in the United

CHART 10.—WHEAT VISIBLE SUPPLIES, 1932–33, WITH COMPARISONS*

(Million bushels)



* Weekly data for the series summarized monthly in Table XXVIII.

supply. Within a few months after the crop year opened, the exceptionally large remaining stocks of United States wheat stored in Canada under stabilization operations in May–September 1931 were reduced about to a normal level.

The outstanding features of the Canadian visible were its generally high level due to a big inward carryover, a big crop, and moderate exports; and its failure to decline as much as usual in January–July 1933. Farmers tended to restrain marketings in November–February, but to market liberally on rising prices in March–July (Table XIII), at a

States failed to reach as high a peak in 1932–33 as in any of the preceding seven years.[1]

Prompt and heavy marketings of the big 1932 crop brought Australian visibles to a new high post-war peak of 129 million bushels late in January 1933. Exceptionally large exports in February–March resulted in a steep decline of visibles. The course in April–July 1933 was about as usual for a year of large supplies, and the net reduction from April 1 to August 1 was practically the same as in 1932. Yet since exports during these

[1] See "British Preference for Empire Wheat," WHEAT STUDIES, October 1933, X, 28–30.

months were substantially larger in 1932, it seems probable that farm holding of wheat was more extensive in 1933 than in 1932, presumably because seeding conditions for the new crop were relatively less favorable.

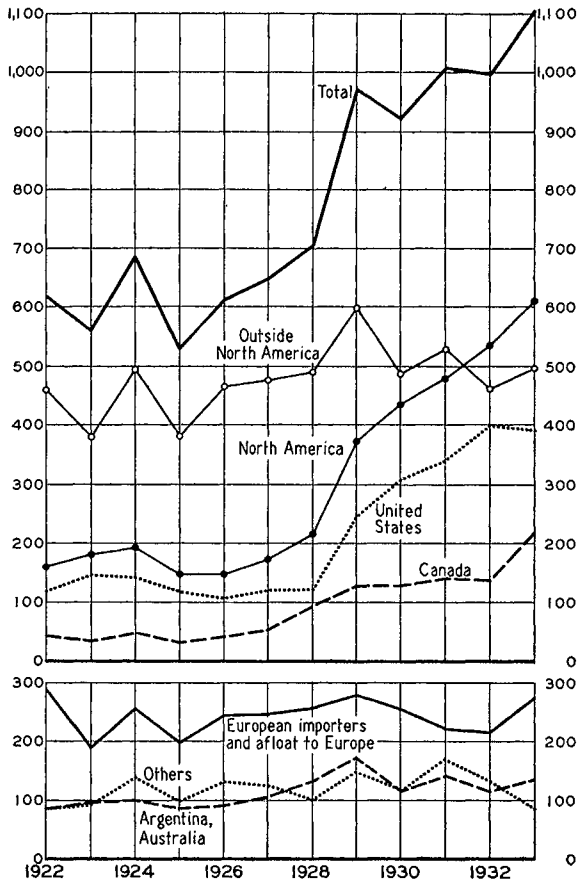
Stocks afloat to Europe ran low or moderately low during most of the crop year, reflecting the small volume of international trade. A substantial bulge centering in early March coincided with the peak of shipments, which came chiefly from the Southern Hemisphere (Chart 22, p. 110). Stocks in United Kingdom ports also remained at a low level during most of the crop year, never rising to the high level of September–April 1931–32, when heavy arrivals of Russian wheat were very slowly absorbed. In the closing months of the crop year, when prices were rising, British port stocks were held at a higher level but never became burdensome.

End-Year Stocks

As soon as the outcome of the Southern Hemisphere crops of 1932 became fairly clear, it seemed probable that end-year stocks of wheat in the world ex-Russia would be built up further by the close of 1932–33.[1] Since total crops then seemed likely to exceed total disappearance, the prospect was that the world wheat surplus problem would be intensified rather than mitigated in the course of the crop year. This was the event. Our revised estimates of end-year stocks (Chart 11, Table XXVII)[2] suggest an increase of 110 million bushels in the course of the crop year. The new peak of just over 1,100 million bushels about on August 1, 1933, is 100 million bushels above the earlier peak of 1931.

Chart 11.—Wheat Stocks in Various Regions, about August 1, 1922–33*

(*Million bushels*)



* See Table XXVII. Estimates are revised and broadened in scope.

The increase of end-year stocks during 1932–33 was the largest that has occurred since 1928–29. In that year stocks increased as a direct result of the bumper wheat crop of 1928; but in 1932–33 the increase represented a substantial reduction in wheat consumption from the high levels of the two preceding years (Table XXXIV, and p. 119).

[1] See Wheat Studies, January 1933, IX, 138, 159.

[2] The estimates given in Chart 11 and Table XXVII include two revisions of data given in our last "Review" (Wheat Studies, December 1932, IX, 128). The first revision was published in "Estimation of End-Year World Wheat Stocks from 1922," Wheat Studies, February 1933, Vol. IX, No. 5. This revision covered stocks in additional positions, Japan and afloat to ex-Europe; stocks in countries outside of North America, Argentina, and Australia were estimated on principles slightly different from principles earlier used; and the totals were higher than those previously published. The second revision, as given in Table XXVII, has involved no major change in method. It includes, however, a more detailed consideration of the pertinent statistics in certain individual European and northern African countries which were earlier grouped; and it takes into account new official stocks estimates for Australia (November 30, from 1925) and for France (August 1, 1933), as well as important revisions of official figures for the United States. The general effect of our second revision is to reduce slightly the totals obtained from the first revision, except as concerns stocks on August 1, 1932; these are increased by 24 million bushels, and the official revision of the United States carryover accounts for 20 million of this.

Stocks at the end of the crop year were more heavily concentrated in North America than ever before (Chart 11), reflecting the continued assumption by North American farmers and speculators of the major part of the burden of carrying world stocks which under the circumstances could not be consumed. The Canadian carryover rose to a new peak, and the increase of stocks was larger in Canada than in any other country. Despite a small crop in the United States in 1932 and feed use that continued heavy in 1932–33 though lower than in the two preceding years (Table XXXII), stocks of United States wheat in North America declined by less than 10 million bushels, and the carryover within the country increased slightly. Had not net exports fallen to much the lowest level in the twentieth century (see p. 111), the United States carryover would have been reduced. Aggregate stocks in European importing countries increased substantially to a level probably the highest in a decade. This occurred in the face of continued stringent restriction of imports; it resulted not from ineffective regulation of imports, but from the particularly large 1932 wheat crops in several countries—crops so large that adequate channels of consumption, whether domestic or foreign, could not be found. The level of stocks was high only in certain of the countries that harvested exceptionally big crops in 1932 — France, Spain, Portugal, Greece, Germany, Sweden, and Holland; elsewhere the level was low or moderately low,[1] and stocks afloat to Europe were nearly the smallest in a decade. Aggregate stocks in Japan and afloat to ex-Europe were practically at a minimum, and were reduced in the course of the crop year. Argentina held only moderate stocks on August 1, 1933, while the Australian were large; but the transactions in wheat of farmers and dealers in these countries, unlike those in North America, continued to reflect willingness to move wheat to export rather than to retain heavy stocks domestically.

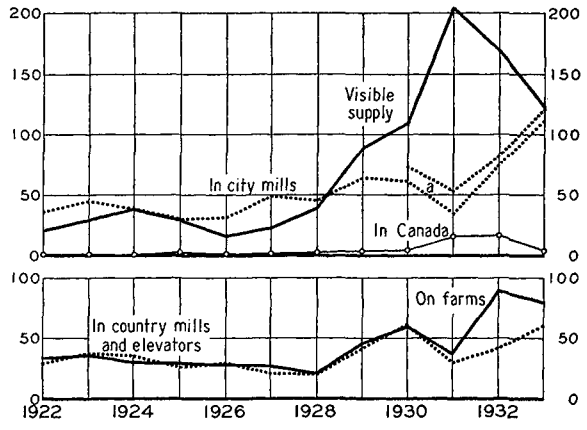
In Russia, stocks at the end of 1932–33 were again probably at a low level. Stocks of imported wheat and flour in China, on the other hand, were presumably large.

The composition of the United States carryover on July 1, 1933, was substantially different from what it was a year before (Chart 12), with regard both to ownership and to position. The Grain Stabilization Corporation had then owned 72 million bushels of cash wheat (also 36 million bushels of wheat futures); but by the end of April 1933 both cash and futures had been disposed of, and the Corporation had on hand merely about 7½ million bushels subject to requisition by the Red Cross. Two years before, the Corporation had owned 257 million bushels, or 76 per cent of the total (revised) carryover of United States grain in North America.

The 1933 carryover contained an extraordinarily large quantity of wheat stored in flour mills. Throughout the crop year favorable carrying charges between near and distant futures provided an incentive for millers to

CHART 12.—COMPONENTS OF UNITED STATES WHEAT CARRYOVERS, JULY 1, 1922–33*

(Million bushels)



* See Table XXIX.

[a] The lower line covers stocks owned by mills; the upper includes also stocks "stored for others."

[1] The following figures, in million bushels, are our estimates of August 1 wheat stocks in the principal wheat-consuming countries of importing Europe since 1928:

Aug. 1	British Isles	France	Germany	Italy	Spain	Poland	Czechoslovakia	Belgium
1928 ..	43.0	22.0	31.3	35.1	27.5	12.2	7.5	6.3
1929 ..	32.3	38.6	45.6	49.0	19.1	8.1	8.7	7.7
1930 ..	28.0	49.2	20.5	48.5	26.4	5.5	7.4	5.5
1931 ..	37.8	16.9	16.6	39.1	21.4	10.1	8.0	8.3
1932 ..	44.7	26.6	16.6	26.9	14.1	16.3	6.8	8.9
1933 ..	36.3	57.1[a]	31.8	26.9	43.9	5.5	5.7	6.5

[a] Official.

store wheat; and toward the end of the year especially potent incentives existed in the poor outlook for the 1933 crop, rising wheat prices, and a heavy accumulation of flour orders placed partly in anticipation of imposition of the new processing tax (see below, p. 85). The rising prices of April–June also encouraged farmers to sell wheat freely; as a result, farm stocks were lower than the year before, but remained heavy because the marketings were insufficient to make larger inroads upon the record holdings that had accumulated before the rise of prices began. Aggregate stocks in country mills and elevators were brought to a new peak both by the end-year increase in farm marketings and by the absence of export outlets for the big stocks in the Pacific Northwest, where any exceptional accumulation of wheat tends to appear in this category rather than in farm or mill stocks or in the visible supply.[1] Liquidation of stabilization holdings was the principal factor in the reduction of stocks stored in Canada. Stocks on farms and in the domestic visible would have been larger, and stocks in city mills and in country elevators smaller, in the absence of the crop and price developments in the closing months of the crop year.

Official estimates of the distribution of recent carryovers of wheat grain in the United States, by classes, run as follows in million bushels:[2]

July 1	Hard red winter	Soft red winter	White	Hard red spring	Durum	Total
1929 ...	90	26	16	84	25	241
1930 ...	119	36	24	97	27	302
1931 ...	151	28	25	93	28	323
1932 ...	229	70	16	55	11	381
1933 ...	181	33	40	119	13	386

The 1933 carryovers of durum and soft red winter wheat were small or moderately small; that of hard red winter was large; those of hard red spring and of white wheat were distinctly large.

II. GOVERNMENTAL MEASURES

Practically throughout the world, governmental efforts to ameliorate the economic position of wheat producers within national boundaries were again prominent in 1932–33. Wheat prices, trade, and stocks were again affected, more or less significantly in different countries, by governmental action of various types. Persistently low international wheat prices kept the problem in the foreground. In importing countries, there was apparently a continued drift toward the politico-economic philosophy of economic nationalism and domestic self-sufficiency in wheat; and in some of these countries the big domestic wheat crops of 1932 gave rise to new modes of protection or to intensified governmental efforts to strengthen devices already operative. But in most exporting countries, where the problem of enhancing returns to wheat growers is inherently more difficult, governmental measures affecting wheat were less in evidence or narrower in scope in 1932–33 than in 1931–32.

In the following pages are set forth the main facts regarding what may broadly be termed governmental measures.[3] Their effects are considered partly here, partly in subsequent discussion of prices, trade, and consumption.

[1] See tabulation in WHEAT STUDIES, September 1933, IX, 369.

[2] Revised data furnished by the U.S. Department of Agriculture.

[3] We do not undertake to describe in detail, country by country, the governmental measures affecting wheat operative in 1932–33, but merely to summarize briefly the more outstanding ones, with particular reference to developments during the year under review. Readers who wish to follow more closely the recent development of governmental efforts to maintain the prosperity of wheat growers (and, more generally, agricultural prosperity) will find useful comprehensive surveys in *World Trade Barriers in Relation to American Agriculture* (Senate Document No. 7, 73rd Congress, 1st Session, Washington, 1933) and in International Institute of Agriculture, "Development in Europe of Tariffs and Restrictions on International Trade in Cereals," *Monthly Bulletin of Agricultural Economics and Sociology*, July and August 1933, pp. 249–93, 299–330, and *Monthly Crop Report and Agricultural Statistics*, September 1933, pp. 652–58. These publications indicate clearly both how numerous and complex the types of governmental action have become, and how difficult is the problem of ascertaining, even for a single commodity like wheat, increase or decrease either in number, scope, and prevalence of these measures or in their effectiveness. It has seemed unnecessary to attempt to follow the developments of

In the United States

Outstanding developments in the United States were liquidation of the wheat holdings (cash and futures) of the Grain Stabilization Corporation; charitable distribution through the Red Cross of most of the stabilization wheat assigned to it by Congressional resolutions; enactment of legislation embodying a new plan to assist wheat producers in the crop year 1933–34 and subsequently; and organization of agencies and elucidation of methods whereby the new wheat adjustment plan would be put into effect.

On July 1, 1932, the Stabilization Corporation had on hand 139 million bushels of wheat and wheat futures. Of this, 103 million bushels were cash wheat, of which some 16 million had been sold (9 million to Brazil) but not yet delivered, and 15 million represented unfulfilled commitments for Red Cross disposition. After Congressional allotment (July 5) of 45 million bushels more to the Red Cross, the Corporation had for sale only about 27 million bushels of cash wheat, and 36 million bushels of wheat futures. Most of the cash wheat was sold in July–August 1932; for on September 6 it was announced that less than 3 million bushels of cash wheat remained unsold,[1] and disposition of cash wheat could not have been by transfer into futures rather than by sale.[2] No further sales either of cash or of futures seem to have been made until February–April 1933. Full details of these sales are not available. From successive official announcements, however,[3] it is clear that no more than 10 million bushels, cash and futures, could have been sold before March 3, when holdings of futures were 30.4 million bushels;[4] that futures amounting to 18.6 million bushels were sold between March 16 and March 31; and that the remaining 11.9 million bushels were sold between April 1 and April 29, mostly before April 18.

It has been officially estimated[5] that stabilization operations in wheat, from their inception to their completion, resulted in a net loss of 184 million dollars to the Farm Board's revolving fund. The Congressional reservations of wheat for the Red Cross accounted for 24 million of this amount. An appraisal of stabilization operations in their entirety has no place here; and adequate appraisal continues to be impossible in the absence of detailed reports of the Grain Stabilization Corporation.

Deliveries of wheat from the Stabilization Corporation to the Red Cross involved a total of 85 million bushels between March 7, 1932, and June 27, 1933, when the final delivery was made; and 60 million bushels in the crop year July 1–June 30, 1932–33. Of the total of 85 million bushels, 11 million went for feed and the inclusive costs of manufacturing and distributing it (wholly out of the 40 million bushels specified in the earlier Congressional resolution). Hence 74 million bushels went mainly into flour and the costs of manufacturing and distributing flour, a relatively much smaller amount going for wheaten cereal preparations and their costs.

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some forms of government aid which wheat producers share with other farmers, such as tax abatements, legal easements of farm indebtedness, and reduction of transportation costs. Little attention has been accorded to devices in importing countries which tend to affect the sources of imports rather than their total volume; these devices include preferential tariff arrangements, application of maximum or of minimum tariff duties, and allocation of import quotas. It has further proved impossible to obtain a satisfactory insight into the operations of some governmental or quasi-governmental organizations which are legally endowed with nearly complete discretionary control of the flow of imports.

[1] Federal Farm Board, *Press Service*, No. 3-38, September 6, 1932. This announcement stated that neither the cash nor the futures would be sold before the end of 1932, unless for export to countries that were not important markets for American wheat.

[2] See chart in E. S. Haskell, *Stabilization Operations of the Federal Farm Board* (published by Institute of Pacific Relations, New York, 1933), p. 12. This chart, ascribed to the Federal Farm Board, shows that total wheat and wheat futures owned by the Stabilization Corporation amounted to close to 40 million bushels in mid-September; hence, since only 3 million bushels were cash wheat, the residue must have been about equal to the 36 million bushels of futures stated to have been owned three months earlier.

[3] Federal Farm Board, *Press Service*, Nos. 3-60, 3-66, 3-67, 3-69, April 2, 18, 21, and 30, 1933.

[4] Holdings of this size were announced as of March 7, but the amount must have been the same on March 3, since the markets were closed March 4, 5, 6, and 7, and until March 16.

[5] Federal Farm Board, *Press Service*, No. 3-69, April 30, 1933.

The inclusive costs of flour production and distribution absorbed 31.2 per cent of the amount of wheat allocated to flour production, so that the total quantity of flour distributed was 10.7 million barrels, equivalent at 4.6 bushels per barrel to 49.2 million bushels of wheat. When operations were terminated on August 12, 1933, the flour had reached practically every locality in the United States (over 99 per cent of the counties), and had been distributed to 5,800,000 families, representing over a fifth of the nation's population. In view of this wide geographical distribution, which must have brought flour to many families that could not have purchased it in the crop year 1932–33, the operations of the Red Cross presumably tended to maintain rather than to reduce aggregate crop-year flour consumption in the United States. Such relief wheat as was used for feed, only a few million bushels in 1932–33, represented a net addition to wheat disappearance.[1] Viewed as a method whereby stabilization stocks were passed into consumption without sales on the open market, charitable distribution by the Red Cross tended to sustain domestic wheat prices. To the extent that this distribution displaced flour purchases which would otherwise have been made, it tended to depress flour and wheat prices. The actual net effect on wheat prices is indeterminate, but in our judgment it was mildly favorable if only because some wheat was consumed which might otherwise have remained to swell stocks.

The new national administration which took office on March 4, 1933, contemplated relief for domestic wheat growers in a form radically different from the stabilization purchases and support to co-operatives sponsored by the outgoing administration. The basic legislation, the Agricultural Adjustment Act, was approved on May 12. Most features of the plan for wheat, as they were formulated and made public on June 16 and subsequently elucidated, concern developments in the wheat situation of 1933–34 and following years rather than in 1932–33; consequently we reserve discussion.[2]

One feature of the wheat adjustment plan, however, had important effects in 1932–33. This was the imposition from July 9, 1933, of a processing tax on wheat for domestic consumption, of which the proceeds were to constitute the funds from which payment of benefits would be made to farmers who might agree to reduce their sowings of wheat for the crop of 1934. The tax (officially promulgated on June 28, but generally anticipated several weeks earlier) was fixed at 30 cents per bushel of 60 pounds, the maximum in consideration of the average farm price about June 15 and the "fair exchange value" specified in the Agricultural Adjustment Act. Payable by millers on wheat ground, it was also applied to "floor stocks" of wheaten products. But exemptions were made of wheat ground or cracked for feed purposes; of retail stocks of wheaten products held (in shops) by retailers if disposed of within thirty days; and of wheat processed by or for a producer for consumption in his own household. Exporters were granted refunds of processing taxes.

Widespread anticipations of the imposition of the tax provided household users of flour, and to a lesser extent retailers (who could count upon imposition of the tax a month later than it fell upon millers, wholesalers, and bakers), with a strong incentive to accumulate flour stocks in order to escape the burden of the tax. Flour orders from these sources and others, whether stimulated by anticipation of taxes or by anticipation of undefined price-raising legislation, seemingly began to reach millers in March 1933 or earlier; for in that month flour production (Table XXXI) rose greatly from the February level and exceeded production in March of the two preceding years despite reduced flour exports. In April, flour production was the highest in a decade, exports continuing very small; and in May and June output remained high, though less so than in April. Domestic retention of flour was about 4 million bar-

[1] For quantities and dates cited in this paragraph, see William M. Baxter, Jr., "Wheat into Flour—A Gigantic Relief Job," *Red Cross Courier*, September 1933, pp. 68–71, 88–89; also WHEAT STUDIES, December 1932, IX, 78–80.

[2] A brief description of early developments appeared in WHEAT STUDIES, September 1933, IX, 353–55; further discussion will appear in subsequent Survey and Outlook issues.

rels larger in March–June 1933 than it was in 1932.

This increase in net retention of flour in our opinion represented roughly an enlargement of flour stocks in the United States between July 1, 1932 and 1933. The inadequacy of the statistical evidence on which this inference rests, however, merits a brief comment. Known quantities are the amount of flour exported net and shipped to possessions, and the stocks of flour held by "city mills" (Table XXX) on July 1 of both years. The total annual or monthly output of flour is not known, though by far the largest fraction of it is reported. Most of the stocks elsewhere than in mills are not measured at any date, and total consumption in any period has to be appraised by reference to *estimated* total (retained) output and *estimated* total stocks. Tentatively we believe that total stocks of flour were about of the same size on March 1, 1933 and 1932; that total available flour supplies from stocks and domestically retained mill output were about 4 million barrels larger in March–June 1933 than in these months of 1932; that, on account of continuing pressure for economy in households, actual consumption of flour was somewhat smaller in March–June 1933 than in 1932; and consequently that total flour stocks on July 1 were more than 4 million barrels larger in 1933 than in 1932.[1] The increase presumably came to a larger extent in stocks held in households and retail establishments than in those held in large flour mills or in wholesale establishments and bakeries, where flour inventories became subject to taxation as early as July 9. Aside from the processing tax, however, wheat prices provided an inducement to accumulate stocks which was shared not only by households and retailers, but by wholesalers and bakeries as well. It was not clear until late in June that the flour inventories of retail bakers would be subject to taxation on July 9.[2]

The wheat milled into flour and utilized to enlarge the invisible carryover of wheat flour as of July 1, 1933, naturally corresponded to a subtraction from the July 1 carryover of wheat grain. Imposition of the processing tax accordingly was a factor of some importance in keeping the carryover of United States wheat grain in North America from rising to a new peak on July 1, 1933.

A further governmental action bearing upon the wheat situation in the United States was establishment by the Reconstruction Finance Corporation on June 5, 1933, of a credit of $50,000,000 for the Chinese government, $10,000,000 of which was made available for purchase of United States wheat and flour in the open market. No sales, however, were made in the crop year here under review.

In Other Exporting Countries

Government aid to wheat producers in 1932–33 remained inconspicuous in Argentina, India, Algeria, Morocco, and Tunis. In India the existing wheat import duty of 39 cents per bushel (at pars of exchange)[3] was renewed (with exemption of wheat ground for export as flour) for another year, to March 31, 1934. The French dependencies continued to be able to sell wheat in France free of duty, though as usual specified limits were set upon duty-free imports into France from Morocco. Algerian wheat producers, like the French (p. 89), came under a régime of fixed prices in July 1933.

In Canada and Australia, governmental aids were less conspicuous for the 1932 crops than for those of 1931. The bonus of 5 Canadian cents paid to growers in the Prairie Provinces on wheat marketed from the 1931 crop was not renewed for the crop of 1932. Government aid continued, however, in the form of sponsorship of dealings in wheat futures by John I. MacFarland, manager since November 1930 in charge of liquidation

[1] For an analysis which gives a smaller increase in flour stocks, see Martin E. Newell, "Consumption of Flour . . . . ," *Northwestern Miller*, October 11, 1933, p. 105. Newell also expresses the opinion that consumption of flour was larger in 1932–33 than in 1931–32, and states that this was probably due to the Red Cross distribution of flour.

[2] See *Bakers' Helper*, July 1, 1933, p. 995.

[3] Tariff duties specified in this section are given in terms of U.S. cents per bushel at pars of exchange. Since the currencies both of the United States and of many foreign countries are now depreciated in relation to those of countries which remain on the gold standard, the specified figures do not permit close comparisons directed toward measurement of the relative height of import duties.

of the holdings of the central selling agency of the provincial wheat pools. The timing and magnitude of these dealings are not of public record. The consensus of trade opinion, based partly on official statements, seems to be that purchases were heavy mainly in October 1932; that total holdings during the winter and spring may have reached 125–150 million bushels; and that substantial sales, perhaps 40 million bushels, were made during the advance of prices in the closing months of the crop year,[1] with some purchases on the break in July.

Governmental payments to producers in Australia[2] were made on the 1932 crop, but on a more modest scale than those made on the crop of 1931, which involved about 3.4 million Australian pounds paid out to producers at the rate of 4½*d.* per bushel (9 cents at par) on wheat delivered for sale. In 1932–33, the federal appropriation was 2 million pounds; distribution was left to the several states; and the specified basis of distribution to farmers was the area sown, not the quantity delivered for sale. This change was designed to eliminate inequities due to differences in yields per acre. The states employed diverse methods of distribution, some granting relatively larger per acre payments to small farmers or to those whose yields per acre were low. In New South Wales, the Commonwealth fund was supplemented by a state appropriation from proceeds of a tax on flour.

The four Danube countries continued in 1932–33 to give relief to wheat growers (and other farmers) in the form of tax abatements or other measures tending to reduce the burden of farm indebtedness. All four, however, tended to abandon or to weaken direct price-enhancing measures, seeking rather to take shelter behind tariff walls (made feasible by the short crops), or to elaborate the structure of bilateral treaties with neighboring importing countries.

In Hungary, the grain-ticket system, which involves a benefit payment to wheat producers at the expense of flour consumers, was retained for 1932–33 after abandonment had been officially contemplated in April – May 1932. The amount of the benefit, however, was reduced from 6 to 4 pengoes per quintal (from 29 to 19 cents per bushel at par). No attempt was made to renew the bounty on exports which had been paid (eventually) on exports made between July 20 and October 18, 1931.

Heavy losses incurred by the Bulgarian government in July–June 1931–32, when a grain-purchasing bureau with monopoly control of the grain trade had purchased 18 million bushels of wheat, caused the monopoly to be abandoned. But governmental stabilization purchases in 1932–33 (July 31 to June 30) were authorized if domestic prices should fall below 2.7 levas per kilo (52 cents per bushel at par), possible losses to be met by a stamp tax on bread.[3] The attempt in Yugoslavia to maintain fixed domestic prices and monopolistic control of the grain trade in 1931–32 involved difficulties so great that the monopoly was formally abandoned in March 1932. Government control of wheat exports and imports, however, was retained in 1932 – 33; the program, as in 1930 – 31, contemplated domestic price enhancement through restrained imports and government purchase and export of the small 1932–33 surplus, with losses to be covered by a tax on commercial milling. In Rumania, export premiums were abolished in April 1932, although the tax on bread was retained in order to reduce unpaid balances on the premiums. Aid to wheat growers in 1932–33 was confined to a heavy increase, effective September 14, 1932, in import duties—on wheat, from 26 to 65 cents per bushel at par. Behind the tariff wall, domestic prices were maintained at a high level (Chart 15, p. 96) in the absence of an export surplus from the short crop of 1932, and imports which might otherwise have occurred were kept out. In lesser degree, this occurred also in Yugoslavia.

Developments in certain other countries which sometimes rank as small net exporters, sometimes as net importers, may conven-

[1] See especially WHEAT STUDIES, December 1932, IX, 81–82; January 1933, IX, 148; May 1933, IX, 289; and September 1933, IX, 357, 371; also *The Economist* (London), September 16, 1933, p. 530.

[2] See especially "State Assistance to Australian Wheat Growers," *International Review of Agriculture*, April 1933, pp. E130–35.

[3] *World Trade Barriers*, p. 326.

iently be summarized briefly here, so far as the facts are known to us. Spain, a net importer in the preceding year, continued with a régime of fixed domestic prices and prohibition of imports except on license. Whether or not fixed prices were actually maintained under the huge crop of 1932 is not clear, but that difficulties arose is suggested by reported agitation for governmental purchase of surplus farm stocks toward the close of the crop year. In Poland, where the 1932 crop was short, small net exports were made in 1932–33, apparently aided by maintenance of prohibitive tariff duties and the export bonus on wheat and flour.[1] Whether or not a scale of fixed prices was again maintained in Lithuania, through governmental support of purchase and storage by a co-operative organization, is not known to us. In Uruguay, where limited governmental purchases of wheat and bounties on flour exports have been authorized for several years, the short crop of 1932 and the ensuing opportunity to enhance domestic prices prompted the inauguration of a governmental monopoly on wheat and flour imports in April 1933. Between August 23 and December 15, 1932, the shortage of domestic supplies from the crop of 1931 in Chile led to some relaxation of import restrictions, which were apparently reimposed when the better crop of 1932 became available; the régime of fixed prices and adjustable duties seems to have persisted. In New Zealand, a sliding scale of import duties had been the device used in attempts to maintain domestic prices at an elevated and stable level until January 1933, when a Wheat Purchase Board was organized. The Board, virtually a compulsory wheat pool, was designed to maintain a stable high level of domestic wheat prices even in the face of a prospective export surplus from the big crop of 1932—an objective impossible of attainment under the older system.

[1] Our sources of information disagree with respect to continuation of the export bonus in 1932–33.

[2] For purposes of the present discussion, not only the four Danube countries and Russia but also Poland, Spain, and Lithuania are regarded as European wheat-exporting countries, though in other sections we include the last three in the broad grouping "European importing countries."

In European Importing Countries

By the end of 1932–33, the United Kingdom stood alone among the eighteen wheat-importing countries of Europe[2] as one wherein the bulk of the imports of wheat grain could still be brought in free of duty and also free from governmental controls exercised through monopolies, licensing bureaus, or governmental specifications of the quotas of domestic wheat to be mixed with foreign by mills. Even in the United Kingdom, free entry of wheat was denied to produce grown outside of the British Empire. Protection of domestic flour-milling industries continued to be a feature of European policy.

Moreover, by the end of the year domestic wheat producers in no less than eleven of these eighteen countries sold their wheat either under price-supplementing subsidies or under prices fixed above world levels by law or by agreement between governments and millers. Only Denmark persisted in adhering to a general policy of non-protection of domestic wheat producers; and even there imports were subjected to permit and to broad quantitative limitations in order to facilitate control over the position of Danish currency in the foreign exchanges.

In short, European governmental measures tending to keep wheat imports at a minimum —whether through barriers to imports *per se* or through encouragement of production and utilization of domestic wheats—were in 1932–33 more numerous and more stringent than ever before.

Principal importers. — Among the seven countries whose imports have averaged more than 20 million bushels annually in recent years, Italy continued in 1932–33 to depend mainly upon high import duties and compulsory milling quotas. Duties ($1.07 per bushel of wheat at par) were not changed during the year, but the percentage of domestic wheat required in milling (Table XXXVII) was held higher than ever before, never falling below 60 for either bread or durum wheat in any of the three areas for which different quotas are customarily specified. The quotas were lowest in January–March 1933; they attained a level of 95 per cent everywhere after April 16, and a level of

99 per cent after July 16. In July, the government was reported as taking steps to loan substantial sums to farmers who agreed to hold new-crop wheat in storage.

In France, the burden of domestic supplies from the big crop of 1932 proved so heavy that, with sagging prices (Chart 16, p. 97), resort was taken to other protective devices than the usual high import duties and compulsory milling quotas. The high duties[1] remained unchanged in 1932–33; but milling quotas were successively raised (Table XXXVII) until 99 per cent of domestic wheat was required in December–March, and 100 per cent thereafter. Early in the crop year, on September 28, it was required that flour should be bolted so as to constitute not more than 66 per cent of the weight of the wheat milled—a low figure that would tend to reduce the burden of wheat supplies by diverting relatively more wheat to feed use as offal, leaving less to be used as flour; but this requirement was abolished on December 14. The next step, taken on February 10, 1933, was governmental provision for purchase on the open market, and storage, as reserve, of domestic wheat to the value of 300 million francs, an amount which at the prevailing prices would absorb about 10 million bushels. Later, on March 9, the price to be paid for these "intervention purchases" was fixed above the market, at 115 francs per quintal ($1.23 per bushel at par). Finally, when a big new crop was in prospect, a comprehensive law was passed on July 10, fixing a minimum wheat price to farmers for the period July 15, 1933, to July 15, 1934, and prescribing methods of enforcement. The fixed minimum price was set at the same figure specified for "intervention purchases" in March—115 francs per quintal at the outset, but increasing from month to month thereafter. The results pertinent to a review of developments in 1932–33 were a sharp rise in French domestic wheat prices in July (Chart 16, p. 97), and the appearance of the first official estimate of end-year stocks in France (see p. 82).[2]

The size of these stocks, taken in relation to the 1933 crop, suggests that the French problem for 1933–34 is that of a surplus rather than of a deficiency country—maintenance of domestic prices not by simple devices such as restriction of imports, but by the much more thorny path of impounding, exporting, or consuming a physical surplus of wheat. The law of July 10 includes measures directed toward solution of a surplus problem.

Some of the measures employed in Germany even in 1932–33 were of this nature. Protection was as usual exercised through high tariffs and compulsory milling quotas: the basic duty on durum wheat, indeed, was substantially increased on August 1, 1932 (from $.73 to $1.04 per bushel at par);[3] and the standard milling quota, 97 per cent of domestic wheat, was maintained throughout the year, with special relaxations of it less prominent than in 1931–32.[4] In addition, the government early in the year sponsored stabilization purchases of wheat and granted financial assistance to encourage storage; and in March 1933, a decree provided for governmental purchase of 11 million bushels of domestic wheat on the open market, staining with eosin, and sale of it at reduced prices to

[1] France has maximum and minimum duties of $1.71 and $.85, respectively, at par. Canadian wheat was subject to the maximum throughout most of 1932–33, until June 10. Other adjustments of import duties were imposition of compensatory import surtaxes on wheat from countries with depreciated currency, and (on April 10, 1933) abrogation of a bilateral treaty with Hungary which had fixed an import quota for Hungarian wheat and partial refund of duty thereon.

[2] A more complete analysis of the law of July 10 is given in WHEAT STUDIES, September 1933, IX, 355–56.

[3] At the same time durum imports for semolina manufacture in 1932–33 were limited to 45 per cent of the imports in 1931–32. There was no change in the high basic duty ($1.62 per bushel at par) on bread wheat. Under the export certificate system (essentially an exchange of domestic wheat for imported hard wheat equal in quantity and free or nearly free of duty), wheat imported against the certificates was admitted free of duty from August 1 to October 1, 1932, and at a greatly reduced duty from November 1, 1932, to January 31, 1933, and again (if imported by a specified group of mills) from March 6 to July 31, 1933.

[4] The wheat brought in against export certificates was allowed to be used by members of the millers' Consortium so as to constitute 30 per cent of the mill mix. In 1931–32, it had been possible to use not only 30 per cent of such wheat, but (from May 1, 1932) wheat imported duty-paid as well. See Table XXXVII; cf. WHEAT STUDIES, December 1932, IX, 136.

poultrymen—essentially a measure for surplus disposal. In one respect, however, the events of the year included relaxation of regulations tending to restrain imports; for only 2½ per cent of potato flour was required to be mixed in bread flour after October 15, 1932, instead of 5 per cent. Despite the efforts to minimize the use of foreign wheat, and to expand consumption of domestic, the German crop of 1932 was so large and consumption so small that heavy stocks were carried out of the crop year (p. 82). With an even larger crop in 1933, Germany has more definitely become one of the nations facing a wheat-surplus problem; and for 1933–34 has altered her system of protection to include a régime of fixed prices.

In the United Kingdom, the crop year 1932–33 represented a departure from the traditional policy of free trade in breadstuffs and non-protection of domestic wheat producers. From March 1, 1932, flour from non-Empire sources was subjected to a duty of 10 per cent ad valorem; from June 19, 1932, a virtual excise tax of 2*s.* 6*d.* per sack (2*s.* 9*d.* after October 30) was collected on domestically retained flour produced at home or imported, the resulting fund to be used in paying a price-supplementing subsidy to domestic wheat producers on their sales of millable wheat; and from November 17, 1932, wheat grain from non-Empire sources was subjected to a low duty of 2*s.* per quarter (6 cents per bushel at par). These departures from traditional British policy have been considered in detail in earlier issues of WHEAT STUDIES,[1] and little comment is necessary here. The experience of the first season shows that the preferential duties are too low to restrict British imports to wheat and flour from sources within the Empire. The price-supplementing subsidy is such that neither an extreme extension of domestic wheat growing nor a heavy increase in the price of bread is in prospect. The outstanding effect of the subsidy is apparent in a prompt increase of domestic wheat acreage from 1.34 million acres in 1932 to 1.74 million in 1933, largely at the expense of barley, oats, hay, and some minor crops. This increase of 30 per cent about recouped the decline in acreage over the past decade. With high yield per acre on the expanded 1933 acreage, and consequently a prospect that sales of millable wheat in 1933–34 would reach or exceed the statutory limit (27 million cwt.) to which the guaranteed average price of 10*s.* per hundredweight applies, the Wheat Commission (anticipating also a low average farm price) felt impelled on August 2, 1933, to increase the flour levy to 3*s.* 6*d.* per sack; and in November it was raised to 4*s.* 6*d.* because of sagging prices.

In Belgium, where controls have remained less rigid than in most continental European countries, significant governmental regulations in 1932–33 were apparently confined to a milling quota of 10 per cent of domestic wheat after September 22, 1932, together with refusal of licenses (required on all wheat imports) to bring in soft wheat that might be confused with the native product.[2] The fixed scale of domestic prices in Holland was continued in 1932–33, with the milling quota the principal device for making it effective. Quotas were higher than in 1931–32—25 per cent of domestic wheat from August 8, 1932, to February 13, 1933, and 35 per cent thereafter (Table XXXVII). Because of the large increase of domestic wheat acreage that had occurred between 1931 and 1932 (Table III), the government announced in the autumn of 1932 that the guaranteed prices on the crop of 1933 would be paid on only a third of the total land cultivated by any farmer. In Greece the elaborate system of strict controls[3] continued in operation without significant change.

[1] See "Britain's New Wheat Policy in Perspective," July 1933, Vol. IX, No. 9; and "British Preference for Empire Wheat," October 1933, Vol. X, No. 1.

[2] It is not clear from our sources of information whether or not fixed domestic prices, paid by millers in agreement with the government in 1931–32, were again in effect in 1932–33; or whether or not an increase from 10 to 15 per cent in the milling quota, announced as scheduled for January 1, 1933, actually became effective.

[3] Greece has tariffs and tariff surtaxes, and milling quotas elaborated to specify what percentages millers must use of foreign wheats from different sources. There are also fixed prices, maintained partly by direct governmental purchase of domestic wheat after harvest and sale later; and requirements that wheat flour must represent a relatively high fraction of the weight of wheat grain milled.

Secondary importers. — Developments in governmental regulations in the five European countries which ordinarily import 10–20 million bushels of wheat and flour yearly were mainly in the direction of stricter control of imports and domestic prices. Austria was perhaps an exception; for, although the turnover tax was doubled on August 4, 1932, and although from July 16 flour was subject to import by license only, the licenses were unconditionally granted except on Hungarian flour between August 4 and December 31, and supplementary duties on flour were actually reduced after March 30, 1933.

The tightening of control was not particularly drastic in Denmark and Switzerland. In Denmark, import permits had been required on wheat and flour between January 30 and September 1, 1932. From this date to April 5, 1933, wheat could be imported freely. But flour continued to be imported on permit, and by a law of December 5, 1932, flour imports in 1933 were limited to specified percentages of their 1931 value in Danish currency. After April 5, 1933, both wheat and flour were subjected to import by permit, and also to limitation on their value. In Switzerland, the system of fixed domestic wheat prices, virtual prohibition of flour imports, and licensing (from May 12, 1932) of wheat imports was continued. After August 15, licenses were somewhat restricted and some restrictions were placed on imports from particular sources of supply; and from April 1, 1933, monopolistic control of wheat importation (including allocation of quotas to countries supplying the imports) was delegated to a co-operative society.

A law of July 28, 1932, empowered a Czechoslovakian syndicate, closely supervised by the government, to control both the flow and the sources of imports in such a way as to maintain the domestic price at a specified high level. The syndicate practically prohibited imports until December 1932; for several months thereafter it required an importer to purchase twice as much domestic wheat as he imported, and allowed imports only to importers who could produce documentary evidence of an export equivalent in value. Supplementary duties on flour were raised from month to month, throughout most of the year.

In the Irish Free State, wheat was imported free from all control until late in May 1933, and flour also except for British-milled after November 22, 1932. The Agricultural Produce Act of May 24, 1933, however, provided the basis for strict governmental regulation —virtually a monopoly—designed to protect both domestic millers and domestic wheat growers. After May 31, flour could be imported only on permit; only licensed flour mills could operate; and each licensed mill was assigned the quantity of imported wheat available to it. Provisions were included to prevent under-milling or over-milling of the assigned quantities.

Minor importers.—Little need be said of developments in the European countries which ordinarily import less than 10 million bushels of wheat annually. Finland, whose domestic crop is trifling, continued to depend solely upon high import duties, and changes in these were limited to a small increase in the wheat duty (from 86 to 89 cents per bushel at par) effective January 1, 1933. From a system of fixed domestic prices combined with purchasing quotas in 1931–32, Latvia transferred to a system of fixed prices and import monopoly, not greatly different from the systems maintained in Estonia and Norway, though less rigid than the Norwegian. Portugal again sought to maintain a fixed scale of prices, admitting wheat only on governmental authorization and on payment of variable duties. Price maintenance seems to have been difficult under the big crop of 1932, and governmental purchase of old-crop stocks was decreed on June 6, 1933. Sweden again employed a delegated monopoly over imports, purchase of domestic wheat by the monopoly, and milling quotas as the devices for maintaining fixed prices of domestic wheat. The quotas (Table XXXVII) were raised as the year progressed, and on account of the big crop of 1932 ruled throughout the year much higher than in 1931–32.

In ex-European Importing Countries

Among the principal wheat-importing countries outside of Europe, China alone con-

tinued to admit wheat free of duty in 1932–33; and even in China a small duty on flour (15 gold cents per barrel) was imposed late in May 1933. There were no other changes in basic tariff duties except in Egypt. Japan embarked upon a five-year program looking toward national self-sufficiency in wheat through increase of domestic production; thus far, however, the governmental measures appear to have been limited to tariff protection (wheat was dutiable at an increased rate of 57 cents per bushel at par from June 16, 1932) and financial aid in storing grain. Developments in Brazil were restricted to lifting, in February 1933, of the embargo on flour that had been imposed in August 1931, following the exchange of coffee for stabilization wheat from the United States. Imports were on permit. In Cuba, flour for consumption has been required to contain 10 per cent of yucca flour since July 1, 1932. On September 13, 1932, the Egyptian sliding-scale duties both on wheat and flour were raised, the minimum duty on wheat being more than doubled (to $1.00 per bushel at par); another increase in flour duties came on May 1, 1933. These increases presumably represent in part attempts of the government to recoup losses incurred on governmental purchases of domestic wheat and on loans to producers.[1] Rigid licensing of wheat and flour imports, under duties equal to the difference between the landed cost of imported wheat and $1.64 per bushel at par, continued in South Africa.

International Conferences

Several international conferences in which wheat was one or the main subject of discussion were held during 1932–33. From the Imperial Economic Conference meeting at Ottawa in August 1932 emerged adoption of Empire preference for wheat and flour, made effective in Great Britain by the Ottawa Agreements Act, 1932, passed on November 15. As directed by the Lausanne Conference of July 1932, a technical committee including representatives from fifteen European countries met at Stresa, Italy, in September to work out a program for solution of the general economic problem of eastern Europe. The committee made a series of recommendations, some of which concerned wheat; these were particularly noteworthy as representing "crystallization of European sentiment in favor of preferential tariff treatment for eastern European cereals."[2] The findings of this committee were advisory, and in view of later developments need not be discussed.

On May 10, 1933, delegates from the four major overseas exporting countries convened at Geneva to discuss policies and methods. The conference adjourned without formal agreement, but reconvened in London on May 29 in order to enjoy contacts with representatives of European countries at the World Economic Conference. Again no definite agreement had been reached when this meeting (not organically connected with the World Economic Conference) adjourned in July. But four days after it reconvened on August 21, an agreement, conditional upon a supplementary agreement among the four major exporting countries, was consummated between twenty-one (later 22) participating nations. The supplementary agreement was initialed on August 30. Consideration of these agreements is outside the scope of the present review, and is reserved for discussion in later issues of Wheat Studies.

III. WHEAT PRICES

Continued Low Level of World Wheat Prices

With governmental regulation of wheat imports or prices in most of the leading importing countries, and with currency depreciation in a large number of countries both importers and exporters, the concept of a "world" price of wheat is less meaningful than in pre-depression years. Averages of the declared value of wheat imported into the United Kingdom could formerly be regarded as reasonably representative of the general level of wheat prices in most of the large wheat-consuming

[1] *World Trade Barriers*, p. 355.
[2] *Ibid.*, p. 126.

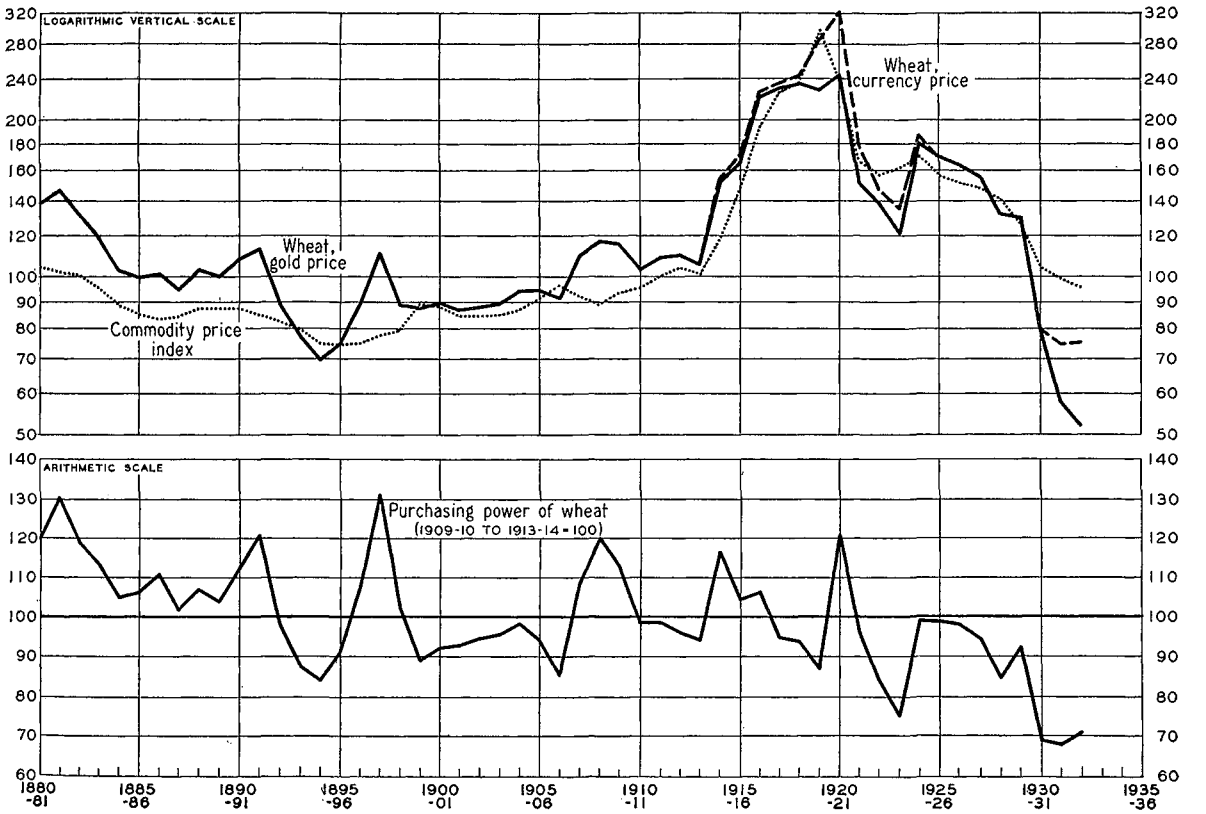
countries of the world. At present, no single price series is similarly representative. British import prices expressed in gold, however, still provide a fair index of the general level of wheat prices (gold) in most exporting countries and in the few remaining free (or practically free) importing countries; and they still warrant primary attention.

In 1932–33, the average gold price of wheat imported into the United Kingdom was 52 cents. Though only 5 cents below the notably low figure for 1931–32, this was the lowest crop-year average price in more than fifty years (Chart 13, top tier). Indeed, it was probably the lowest in over three centuries.[1] Even in terms of depreciated British currency, the price of imported wheat was strikingly low in 1932–33 (Chart 13, top tier); but it was fractionally higher than in the previous year, and slightly above the previous low price of 1894–95.

The purchasing power of British import

CHART 13.—BRITISH IMPORT WHEAT PRICES, IN GOLD AND CURRENCY; BRITISH COMMODITY PRICE INDEX; AND INDEX OF PURCHASING POWER OF IMPORT WHEAT, ANNUALLY FROM 1880–81*

(U.S. cents per bushel; percentage of commodity prices in 1910–14; percentage of deflated wheat prices, August 1909 to July 1914)



* British import wheat prices are August–July averages; conversions for *currency* prices at par of exchange, and for *gold* prices at current exchange rates until April 1933, thereafter through rates on the French franc in New York. Sauerbeck-Statist index of wholesale commodity prices (August–July) adjusted so that average of original (base 1867–77) index numbers in 1910–14 should equal 100. Figures plotted in lower tier are August–July averages of monthly currency prices of wheat, deflated by monthly values of the Sauerbeck index (1910–14 = 100), these deflated prices finally being expressed in terms of index numbers, average 1909–10 to 1913–14 taken as 100. Since monthly indexes of general commodity prices are not available before January 1885, we have deflated crop-year average wheat prices 1880–81 to 1884–85 by estimated crop-year values of the Sauerbeck index, the estimated figure being weighted averages of corresponding pairs of calendar-year values.

[1] Comparable prices for years prior to 1870–71 are not available to us. But to judge by calendar-year average prices of British wheat, published in the United States *Agriculture Yearbook*, 1922, pp. 605–06, wheat prices regularly exceeded 55 cents after the last decade of the sixteenth century.

wheat in each of the past three crop years (Chart 13, bottom tier) has been only about 70 per cent of the pre-war average, and lower than in any other year of the past half-century, including 1894–95 and 1923–24. Wheat had a slightly higher purchasing power in 1932–33 than in either of the two crop years immediately preceding; but the gain was small, only a little over 1 per cent.

The continued low level of British import wheat prices in 1932–33 reflected joint operation of several major price-depressing factors. Of primary importance was the persistence of the huge world wheat surplus. The emergence of the surplus following the bumper wheat crop of 1928, and its persistence and growth through 1932–33 have been treated elsewhere in WHEAT STUDIES.[1] It suffices here to repeat that the crop year 1932–33 opened with world stocks of old-crop wheat at a near-record high level and closed with old-crop stocks unprecedentedly large, increased during the course of the year by over 100 million bushels. The size of total available supplies in 1932–33 would have prevented any substantial reduction of the surplus, even if wheat consumption had been maintained at the high level of 1930–31 or 1931–32. But world consumption actually declined in 1932–33,[2] and the world wheat surplus tended to become even more burdensome than before.

The general economic situation also continued more or less depressing in 1932–33.[3] Business and trade, though showing signs of improvement, were still notably depressed in most countries; and general wholesale commodity prices averaged lower than in the preceding crop year, declining until about March 1933. Had they averaged significantly higher in 1932–33 than in the preceding year, wheat prices also would probably have been higher, despite the continued unfavorable wheat supply position.[4]

The instability of international exchanges also affected leading wheat markets in 1932–33. Significant depreciation of exchanges of important wheat-exporting or wheat-importing countries probably normally tends temporarily to lower the *gold* price of British import wheat. Thus, depreciation of Canadian exchange in November 1932 (Chart 18, p. 100) may have induced Canadian exporters to offer wheat at lower prices in terms of gold, since traders and exporters were then able to get more Canadian dollars for a given gold price than they would have received in either of the two preceding months. Moreover, English importers, dealing with bids and offers expressed in English currency, were probably reluctant to follow any upturn in the sterling price of wheat, even though sterling exchange, too, was then declining in gold value. It therefore seems probable that the gold price of British import wheat was lower in November than it would have been if the Canadian and English exchanges had not depreciated.

But in April–July 1933, even greater depreciation of the American and Canadian exchanges may have had little, if any, depressing effect upon international wheat prices. The decline of American exchange at that time was associated mainly with inflationary developments and sentiment in the United States. The same factors stimulated speculation in United States stock and commodity markets. There was concurrent depreciation of Canadian exchange and speculation in commodity markets in Canada. Under the influence of professional and public buying, wheat prices in North American markets rose more rapidly than the exchanges depreciated. The situation was complex, for a considerable, though unknown, part of the speculation in North American wheat markets in April–July was based upon reports of extensive crop damage in both the United States and Canada. In short, North American crop developments were such as to stimulate an advance in North American, and probably international, wheat prices, even if there had been no talk of inflation and no depreciation of North American exchanges. And since it is impos-

[1] See above, pp. 81–82; also "The World Wheat Problem," July 1932, VIII, especially 428–32; and "The World Wheat Situation, 1932–33," December 1932, VIII, 74–77.

[2] See below, p. 119.

[3] See *World Economic Survey*, 1932–33, published by the League of Nations.

[4] For a discussion of the behavior of wheat prices during the recent general price recession, see WHEAT STUDIES, December 1932, IX, 91–94.

sible to say how high wheat prices would have gone in the absence of inflationary developments in North America, we cannot definitely conclude, though we may surmise, that exchange depreciation in April–July was without significant depressing effect upon the gold price of British import wheat.

Another factor associated with the general trade depression—low freight rates—doubtless tended to keep price spreads between export and import markets small, and to keep wheat prices in free importing countries relatively low in 1932–33. In terms of gold, ocean freight rates in 1932–33 were as much as 55 per cent lower than in 1928–29, the last pre-depression year; and 20 per cent lower even than in 1931–32. Other costs of producing and handling wheat have also been reduced, along with the general price level, since 1928–29. But the fall in international wheat prices has so greatly exceeded all possible reductions in the cost of producing, handling, and transporting wheat that reduction in cost does not seem to rank as a major causal factor of the prevailing low level of international wheat prices.

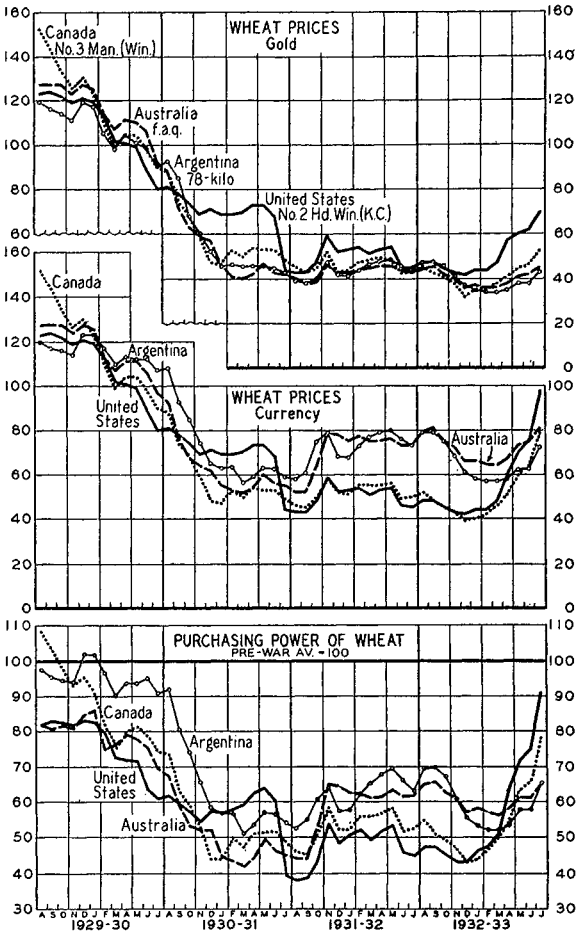
The Level in Exporting Countries

In the four major exporting countries, wheat prices in terms of gold were generally lower in 1932–33 than in any other recent year (Chart 14, top tier). But from April to July, prices in all four countries tended upward, a development noteworthy mainly because no concerted price advance extending over four months occurred in any of the three preceding crop years. The April–July advance was most pronounced in the United States, where speculation on crop and inflation prospects raised the gold price of wheat at Kansas City about to the level maintained by stabilization purchases of wheat in 1930–31.

The level and course of gold wheat prices in the Danube countries (Chart 15, p. 96) differed greatly in 1932–33 from the level and course in the four major exporting countries. Small wheat crops in the Danube basin in 1932, and governmental measures (particularly in Rumania and Yugoslavia) which effectively restricted importation of wheat, tended to keep domestic wheat prices above what they would have been if these countries had been in a position to export wheat freely.

Chart 14. — Representative Wheat Prices in Gold and Currency, and Indexes of Purchasing Power of Wheat in Major Exporting Countries, Monthly from August 1929*

(U.S. cents per bushel; percentage of deflated wheat prices in specified pre-war period)



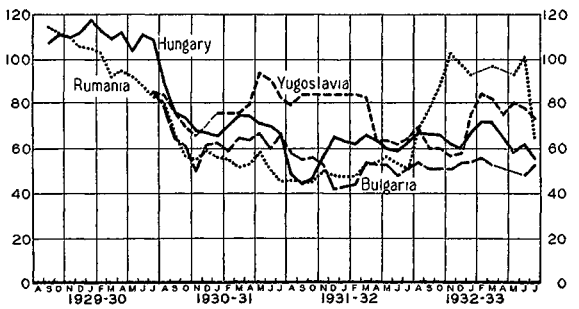
* For sources of price data see Table XXXV; pre-war price of No. 3 Manitoba estimated by deducting 6 cents from average pre-war price of No. 1 Manitoba; for conversions see Chart 13. Figures in bottom tier are monthly wheat prices in original currencies deflated by national indexes of general wholesale commodity prices, finally expressed in terms of index numbers based on a pre-war average taken as 100. Pre-war bases as follows: United States, wheat prices and wholesale price index, averages of monthly data July 1909–June 1914; Canada and Australia, averages of monthly wheat prices August 1909–July 1914 and of annual calendar year wholesale price indexes 1910–14; Argentina, averages of monthly wheat prices for calendar years 1910–14 and of calendar year wholesale price indexes 1913–14.

Behind a tariff equal to about 65 cents per bushel, Rumanian wheat prices rose from an average of 50 cents in 1931–32 to 88 gold cents

in 1932–33 (Table XXXVI). Hungarian prices averaged about 7 cents higher in 1932–33, but mainly because prices in that country had been at a record low level in August–November 1931 as a result of heavy early marketings

CHART 15.—REPRESENTATIVE WHEAT PRICES (GOLD) IN DANUBE EXPORTING COUNTRIES, MONTHLY FROM AUGUST 1929*

(U.S. cents per bushel)



* See Table XXXVI for description of price series, except Hungarian prices in 1929–30 which are data of the International Institute of Agriculture.

from a large crop. The notably small Yugoslavian crop of 1932 failed to result in higher prices in 1932–33 than in 1931–32; but this was because Yugoslavian prices had been maintained at an artificially high level during August–March 1931–32 through operations of the government monopoly.[1] After the monopoly was abandoned in March 1932, the price of wheat broke sharply, and remained low through December 1933; then the small wheat supplies of 1932–33 became an important market influence, raising wheat prices to a level not much below the stabilized level of the preceding crop year. The Bulgarian wheat crop of 1932, though more nearly of normal size than any of the other Danubian crops, was considerably smaller than the crop of 1931. Mainly because of this, Bulgarian wheat prices were maintained in 1932–33 about as high as in the previous year, despite much less governmental buying support in 1932–33.

Farmers and wheat traders in the various exporting countries were more concerned with the level and course of wheat prices in their own domestic currencies than with wheat prices expressed in gold. In the four Danube countries, where domestic currencies remained close to gold parity, there was practically no difference between wheat price movements in domestic currencies and in gold: Chart 15, which shows gold prices of Danubian wheat, therefore gives a fairly accurate picture of price movements in domestic currencies also. In the four major exporting countries, however, there was less similarity between gold and currency prices. In contrast with the gold wheat prices presented in the top tier of Chart 14, the second tier shows the course of actual wheat prices in each country as it appeared in the currency of each country. Kansas City and Winnipeg prices are in current United States and Canadian cents, as quoted; Australian and Argentine prices are expressed in dollars, but at par of exchange so that the course of prices is the same as though prices were expressed in the currency of the country.

Comparison of the two upper sections of Chart 14 indicates that though new low gold prices of wheat (monthly averages) were established in 1932–33 in all major exporting countries, currency prices of wheat in Argentina and Australia were maintained throughout 1932–33 above the low average for March 1931. The advance of United States and Canadian prices in April–July 1933 was much larger, and that of Australian somewhat larger, in terms of domestic currency than in gold.

Wheat farmers in any country are interested not only in the price of wheat, but also in the prices of things which they buy. Satisfactory national indexes of the prices of commodities commonly used by farmers are not available; however, wheat prices deflated by national indexes of general wholesale commodity prices give a rough indication of changes in the purchasing power of wheat. Chart 14, bottom tier, shows such deflated wheat prices in the major exporting countries as monthly index numbers based upon prewar averages. During the past three crop years the purchasing power of wheat in these countries has been only about half of what it was in the five years immediately preceding the war. Though wheat was still low in purchasing power in 1932–33, Australian wheat farmers in particular were apparently in a

[1] See above, p. 87.

better economic position in that year than in 1930–31 when the Australian crop was about as large; and United States and Canadian farmers who marketed their wheat in April–July 1933 must have been encouraged by the fact that wheat then had a higher purchasing power than it had had for at least two years.

The Level in Importing Countries

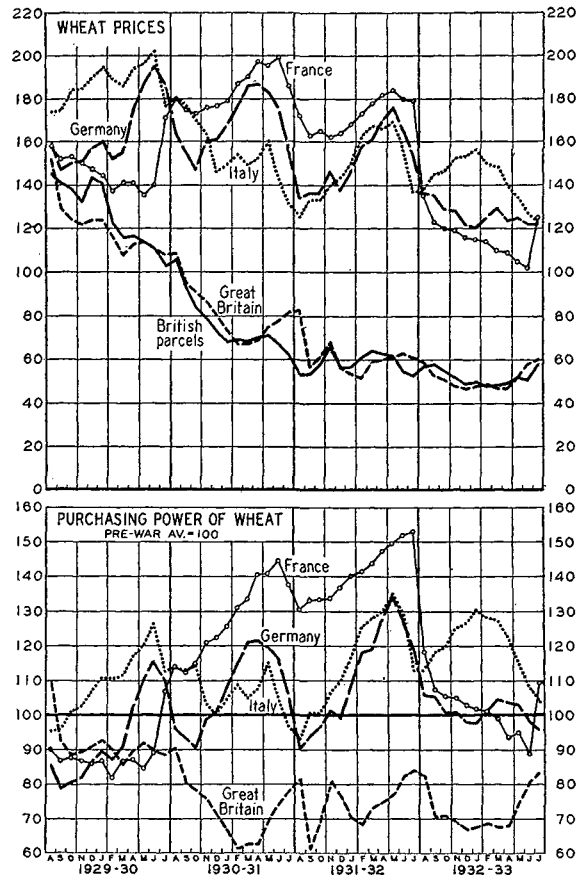
In leading importing countries where domestic wheat markets were "defended" by various governmental measures, wheat prices in 1932–33 remained far above prices in exporting and free importing countries. Thus, while import and domestic wheats in British markets were fluctuating about a price level of 50 gold cents, domestic wheat prices in France, Germany, and Italy were approximating $1.15, $1.25, and $1.40, respectively, in terms of gold. Similar wide price differences prevailed in the two preceding crop years (Chart 16, top tier). The relatively higher continental prices of 1929–33 are directly attributable to the various price-supporting measures adopted by the continental countries.[1] In 1932–33 these measures were strengthened rather than relaxed. Yet wheat prices in all three of the continental countries averaged lower in 1932–33 than in any year since 1923–24 (Table XXXVI), and prices in France and Germany were less high in relation to British parcels and British domestic wheat prices than in either of the two preceding years.

The immediate cause of the weakening of these prices was the harvesting of bumper 1932 wheat crops in France, Germany, and Italy. Aggregate supplies of wheat from crops and estimated carryovers were in France and Germany large enough to cover domestic requirements and in Germany to leave a small surplus for export or for addition to the carryover. French policy continued to include admission of wheat from northern Africa; and both France and Germany needed to import some foreign wheat to strengthen their mill mixtures. Consequently, for the first time in recent years, both countries began to face the problem of maintaining domestic wheat prices under domestic surplus conditions—a very different problem from that of supporting prices under a wheat deficit.

[1] See above, pp. 88–90; also Wheat Studies, December 1931, VIII, 168–74, and December 1932, IX, 77–86.

Chart 16.—Prices (Gold) and Purchasing Power of Domestic Wheats in European Countries, and Price of British Wheat Parcels, Monthly from August 1929*

(U.S. cents per bushel; percentage of deflated wheat prices in specified pre-war period)



* See Table XXXVI for description of price series. Figures in lower tier are monthly average wheat prices as quoted, deflated by appropriate monthly wholesale price indexes, and finally expressed as index numbers based on a pre-war average as 100. Pre-war bases as follows: France and England, averages of monthly data August 1909–July 1914; Germany, averages of monthly wheat prices August 1909–July 1914 and of calendar year wholesale price indexes 1910–14; Italy, averages of calendar year wheat prices 1910–14 and of wholesale price indexes (Bachi) 1913–14.

Methods previously used to sustain wheat prices, strengthened as they were, proved less efficient than before. Between 1931–32 and 1932–33 average wheat prices declined 56 gold cents in France, and 26 gold cents in Germany, as compared with a decline of only 7

gold cents in the annual average price of British wheat parcels (Table XXXVI). Italian wheat prices, on the other hand, showed an average decline no greater than that for British parcels. The Italian crop, though large, did not suffice to cover total domestic requirements; and in addition, a considerable part of the grain was of poor quality. These factors prevented a surplus problem from arising in Italy. The upturn in French wheat prices in July 1933 reflected the inauguration of a new governmental policy—definite price fixing—to keep domestic prices from being affected by the wheat surplus.

In all three continental countries, wheat prices averaged considerably lower in 1932–33 than in the five years immediately preceding the war. Comparisons in United States gold cents are shown below:[1]

Period	France	Germany	Italy
Pre-war	142	135	150
1932–33	116	126	143

Wheat growers, however, probably fared as well under the lower wheat prices of 1932–33 as they did in 1909–14; for the purchasing power of wheat in France and Germany was about as high in 1932–33 as it was in the pre-war period, and in Italy was distinctly higher (Chart 16, bottom tier). In 1930–31 and 1931–32, the purchasing power of wheat in all three continental countries (but particularly in France) was substantially above the pre-war average. This may well be associated with the tendency toward maintenance or expansion of wheat acreage in these countries in the last few years. In Great Britain, as in major exporting countries, the purchasing power of wheat in 1932–33 was notably lower than in pre-war years; but British wheat growers received a subsidy which brought their average returns per bushel marketed to approximately $1.23 (currency) in 1932–33, and the purchasing power of wheat, subsidy included, to 128 per cent of the pre-war average.

As was to be expected, French and German wheats commanded smaller average quantities of other commodities in 1932–33 than in either of the two preceding years; but with more wheat to sell in 1932–33 growers, particularly in Germany, probably did not suffer greatly as a result of this reduction. In Italy, wheat farmers were favored both by a large crop and by a high level of purchasing power of wheat. As compared with 1929–30, wheat farmers probably fared better in all these countries in 1932–33; yields per acre of wheat were about as high or higher, and the purchasing power of wheat was also higher, even though absolute wheat prices were lower.

[1] See Table XXXVI.

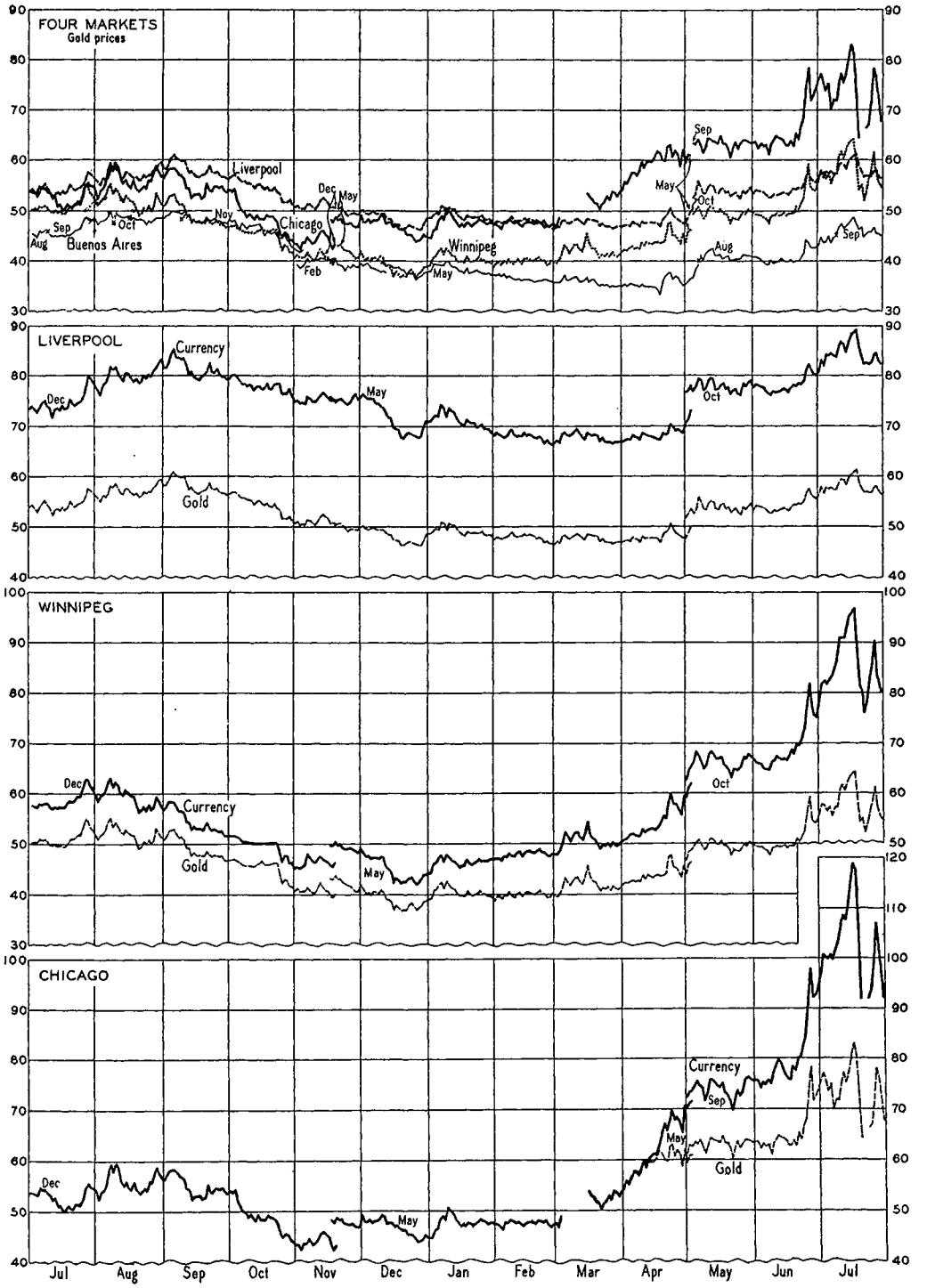
Wheat Price Movements in 1932–33

The crop year 1932–33 opened with wheat futures prices tending upward from the depressed levels of mid-July, but with prices in terms of gold less than 7 cents above bottom levels of the preceding year. The general course of wheat futures prices in 1932–33 consisted of five distinct short-time movements (Chart 17). (1) Irregular firmness characterized leading futures markets during August. (2) Thereafter, until late in December, prices drifted downward, touching new record lows (in gold) in all markets. (3) During the next five months Liverpool and Buenos Aires prices remained fairly stable, both as quoted and in gold; but prices in North American markets began to rise early in March, the upturn being much more striking in terms of domestic currency than in gold. (4) After mid-June the North American price advance became spectacular: from June 17 to July 17 Chicago futures prices increased more in terms of United States currency than in any preceding month during the past half-century, except in connection with corners; and Winnipeg prices increased more in Canadian currency than in any month since July 1929. Even in terms of gold, these upturns were significant; yet Liverpool and Buenos Aires prices showed but little response. (5) During the latter part of July, Chicago and Winnipeg futures prices suffered severe reaction, which brought them somewhat closer in line with prices at Liverpool and Buenos Aires. The crop year closed with prices tending downward in all markets.

The strength in wheat futures during the first few weeks of the crop year was associated with a change in market sentiment

CHART 17.—FUTURES PRICES IN GOLD AND CURRENCY, IN LEADING MARKETS, 1932–33*

(U.S. cents per bushel)



* Daily closing prices. Data from *London Grain, Seed and Oil Reporter*, Winnipeg *Grain Trade News*, and Chicago *Daily Trade Bulletin*. *Gold* prices represent conversions to United States currency at noon cable transfer rates in New York, through the French franc after March. *Currency* prices for Chicago are as quoted; for foreign markets, conversions are at par of exchange.

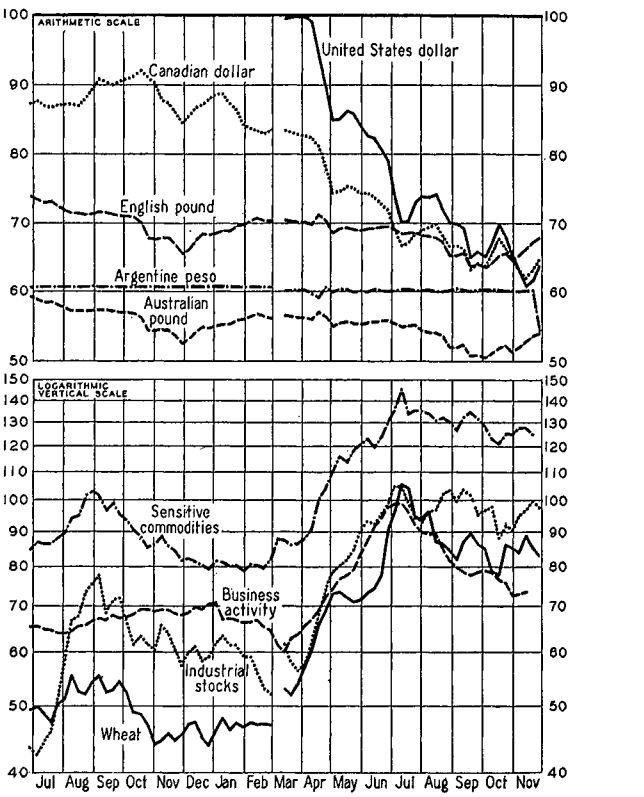
from deep pessimism to mild optimism, a change more noticeable in the United States than in other countries. Primary factors in restoring market confidence were: the Lausanne agreement of July 9, 1932; the adjournment on July 16 of the United States Congress, which had passed legislation less disturbing to the large business and financial interests than many had feared; and the greater stability of weekly business and trade indexes after early July, together with optimistic statements on business conditions by President Hoover and other prominent officials. Prices of industrial stocks and of the more speculative commodities rose markedly (Chart 18). Wheat shared in this general advance. But because the European import demand for wheat was notably small, and Canadian marketings as well as stocks were depressingly heavy, wheat prices increased proportionally less from mid-July to the end of August 1932 than did the prices of several other basic commodities or the average of industrial stocks prices at New York.

In Liverpool, wheat prices rose during August partly in reflection of the strength in North American markets, partly on account of immediate constructive elements within the wheat situation itself. Port stocks in the United Kingdom were moderately light; world wheat shipments were at the lowest ebb in many years; the exportable supplies of Argentina and Australia were far from heavy; and Russia and the Danube countries had harvested crops too small to yield large exports. It was clear, therefore, that European importers would have to draw mainly upon North American supplies until after December; and these supplies were still being held firmly, despite seasonally large marketings in Canada.

As the Canadian crop movement increased to a peak in mid-September, and as speculative interest in United States stock and commodity markets diminished, the course of wheat futures prices was reversed. The downward drift continued until late in December in the face of small shipments from the Black Sea and the Southern Hemisphere, intermittent support of Winnipeg futures through purchases authorized by the Canadian government, promised holding of the small remaining wheat stocks of the United States Grain Stabilization Corporation,[1] and a notably poor start for the United States winter-wheat crop. Wheat traders, however, were more impressed

CHART 18. — SIGNIFICANT INTERNATIONAL EXCHANGES, INDUSTRIAL STOCKS PRICES, INDEXES OF SENSITIVE COMMODITY PRICES AND BUSINESS ACTIVITY, AND THE PRICE OF WHEAT, WEEKLY FROM JULY 1932*

(Percentage of gold parity of exchanges; dollars per share and per bushel; percentage of commodity prices December 1931; and percentage of computed normal business activity)



* Dow-Jones average of 31 industrial stocks at New York (weekly average of dailies); Moody's index of prices of 15 staple commodities (Saturday prices); *New York Times* weekly index of business activity; and lowest contract cash price of wheat at Chicago (see Table XXXV).

with the fact that the import demand for wheat was too small to keep stocks from piling up to new record high levels in Canada or appreciably to reduce the large surplus in the United States. Moreover, during October and most of November, reports of the new South-

[1] See above, p. 84.

ern Hemisphere crops were optimistic; and even after earlier forecasts of the Argentine crop were considerably reduced late in November, pressure of cheap offers from Argentina and Australia prevented any significant price advance.

Wheat prices would not have declined as much as they did in September–December if general economic and financial conditions had been favorable rather than depressing. In the United States, the speculative upturn of commodity and stocks prices culminated early in September (Chart 18), and the three following months were characterized by general, though irregular, price recession. This reversal in speculative sentiment reflected disappointment over slight improvement in business conditions, and anxiety about the political and economic uncertainties brought to public attention successively by the presidential campaign and by unfavorable news and agitation regarding the war-debt payments due December 15. Depreciation of English and Canadian exchanges also contributed to the decline of world wheat prices (gold), particularly during October–November. English exchange weakened significantly in October; and while Liverpool prices remained fairly stable in domestic currency, they declined in terms of gold and also in terms of Canadian currency, since Canadian exchange was advancing rather than declining up to the last week of October (Chart 18). Meanwhile Canadian wheat prices were being held at a constant level in Canadian money by government-sponsored purchases of wheat futures. Export sales of Canadian wheat accordingly fell off; and stabilizing operations were abandoned October 25, immediately precipitating a break in Winnipeg wheat prices. During the next five weeks, English (and consequently Australian) and Canadian exchanges weakened further in relation to gold currencies; this facilitated lower export offers of wheat in terms of gold, and tended generally to depress the gold price of wheat in all markets. Wheat prices continued to decline in December, despite advancing rates for English and Canadian exchange at New York. World political and economic conditions remained disturbing, and there was competitive pressure of wheat offers from Canada, Argentina, and Australia on European import markets.

The new record low gold prices for wheat futures established at Chicago November 29 still stand as all-time record lows; but since December 1932 new low records have been established at Winnipeg, Liverpool, and Buenos Aires.

From early January to the middle of March world wheat prices were relatively stable in the absence of notably bullish or bearish developments. Market views of the world wheat statistical position changed little during the period: exportable supplies were clearly abundant and the import demand was stagnant. However, competition on wheat import markets was confined to Canada, Argentina, and Australia. Russia and the Danube countries did not have surplus wheat to ship, and United States wheat was being firmly held above export parity by farmers and speculators who were impressed not only with the exceedingly low prices prevailing in world markets but also with the prospect that wheat prices in the United States might be raised by one or more of the various political devices which were being proposed. China was absorbing unusually large quantities of Australian wheat, thus further relieving competitive pressure on European markets. The time of the year was not conducive to the development of a crop scare. With harvest several months away, and immediate supplies abundant, reports that the growing winter-wheat crop of the United States was in notably poor condition had very little effect upon wheat prices, even in the United States.

World economic conditions in the first quarter of 1933 were not such as to improve market sentiment. The upturn of production and price indexes in most industrial countries in the autumn of 1932 had been arrested early in the winter, and during January–March these indexes were generally tending downward. International exchanges were on the whole more stable than they had been in October–November; but Canadian exchange weakened again after the middle of January, probably with some depressing effect upon offers of Canadian wheat for export. In the United States, growing distrust of the liquid-

ity of banking institutions culminated in a crisis the first of March, with runs on banks in every state of the Union. When President Roosevelt took office March 4, he was confronted with the fact that bank holidays had been declared in all but a few of the states, and that all foreign exchange, stock, and commodity markets were consequently closed. The President immediately imposed a temporary embargo upon the export of gold and silver and declared a national banking holiday which was not terminated (even for banks in sound position) until March 13–15.

Wheat price movements in Chicago from mid-March through July were the striking price developments of the crop year. In many respects they were the most extraordinary wheat price movements that have been witnessed in the United States in half a century at least. The magnitude of the price advance —nearly 70 cents from March 22 to July 17— and the precipitous decline with which it was terminated find parallels in the history of Chicago wheat prices only in connection with corners. But these price movements were not associated with a corner.

The end-year price developments have commonly been regarded as offering merely an extreme example of a type of speculative price cycle that occurs fairly frequently in the Chicago market—what we have described as "crop-scare and related cycles."[1] The differences between this particular price cycle and the numerous superficially similar cycles which have developed in the past half-century, however, are much more than differences in degree. The peculiar features of this cycle merit special attention. In considerable part they rested on the character and timing of the influences stimulating the price advance. The rise had behind it the powerful influences both of severe crop damage and of rapid depreciation of the dollar, and was aided by prospects for special measures to raise prices of farm products and for general price inflation beyond that discounted in dollar depreciation. The important developments, sometimes of one character and sometimes of another, came in a nearly continuous succession of mainly bullish influences. Timed as they were, the net price-raising effect was greater than if intervals had elapsed between the various sets of developments long enough to permit such periods of substantial reaction as have followed most large and rapid increases in Chicago wheat prices in the past half-century. The strength of the rise and especially the wide public interest centered in prospects for general price inflation brought into the wheat market buying of a character which made almost inevitable the extraordinary price collapse in which the rise terminated.

The sharp price rise which occurred on reopening the market following the banking holiday is probably not to be regarded as an integral part of the general movement. It seems to have reflected chiefly a common feeling that, with the long-feared financial crisis past, the worst was over and a turn for the better would be seen. The rise, which on the first day of trading was stopped only by the newly imposed rule limiting wheat price changes in one day to 5 cents above or below the previous closing price, was followed by a week of gradual decline that wiped out most of the gain, suggesting that the upturn had rested on ephemeral influences. The wheat market received some unusual pressure at this time from liquidation of futures held by the Grain Stabilization Corporation; but similar declines in prices occurred on the stock market and in other commodity markets (Chart 18, p. 100).

On March 23, however, a most extraordinary price advance began. Although this upward movement extended over about four months, most of the net gain in prices was recorded during two periods of approximately one month each: March 23–May 5, and June 18–July 17. From March 23 to April 18 there were sensational reports of damage to the winter-wheat crop. The accompanying wheat price rise had the timing and character that might have been expected, on comparison with previous similar cases, from the crop news alone; at the same time, market sentiment in the United States was also affected by political rumors and developments which

[1] "Cycles in Wheat Prices," WHEAT STUDIES, November 1931, Vol. VIII, No. 1.

seemed to presage general and substantial price inflation.

Whether or not the crop developments alone would have carried Chicago wheat prices substantially above the level reached on April 18 can never be known.[1] On April 19, the United States abandoned the gold standard (by embargo of gold exports) as a step toward the President's announced objective of raising commodity prices. This and other phases of the administration's program[2] thereafter forced crop news into the background as a wheat price factor. Stimulated by these inflationary developments, speculators rapidly bid up the price of wheat futures at Chicago. There was concurrent speculative buying of other commodities, securities, and foreign exchange (Chart 18).

Winnipeg wheat prices partially reflected the upward movement at Chicago (March 23–May 5), and were aided by fair export sales. There was some talk of price inflation in Canada as well as in the United States; and with depreciation of the United States dollar after the middle of April, the gold value of the Canadian dollar also declined. At Liverpool and Buenos Aires, wheat futures maintained a fairly steady course from the first of March until after the middle of April, when they were somewhat influenced by reports of expected price inflation in the United States and Canada, higher c.i.f. offers for Canadian wheat, and the poor outlook for the United States winter-wheat crop.

From May 6 to June 17, developments bearing on prospects for general price inflation in the United States were less spectacular; and crop news included more favorable reports from the United States winter-wheat belt as a result of rains in late April, while reports were favorable from the North American spring-wheat belt and from Europe. There were only slight changes in Chicago or other wheat futures prices. This was in sharp contrast to the continued rapid rise in prices of sensitive commodities generally and of industrial stocks at New York.

After June 18, however, prices rose precipitously, dominated in the first few days by reports of sensational crop damage to spring wheat in the United States and Canada. They were notably stimulated by President Roosevelt's rejection (July 3) of the proposal drafted at the World Economic Conference for temporary stabilization of international exchanges and the specific statement (July 5) of his intended policy with regard to commodity prices.[3] Other markets—commodity, stock, and foreign exchange—were also influenced by speculative buying based on anticipation of inflation. But with weekly indexes of business activity showing a slackened rate of increase after mid-June, industrial stocks prices at New York increased proportionally less during the first half of July than did the price of wheat or the prices of a number of other commodities (Chart 18). In foreign exchange markets, the American dollar depreciated against gold currencies, declining from 82 per cent of gold parity in mid-June to 70 per cent in the middle of July. In terms of gold, therefore, the price advance of Chicago wheat futures from June 17 to July 17 was not so spectacular; it amounted to only 20 gold cents as against 43 depreciated cents.

In foreign wheat markets the upward price movement of June 18–July 17 was even smaller in terms of gold cents — approximately 15 cents at Winnipeg and 8 cents at Liverpool and Buenos Aires. Though Winnipeg traders were inclined to interpret North American crop news in a bullish manner, they were less influenced by inflation talk than were speculators in the United States. Moreover, as Winnipeg futures prices rose, concentrated selling suggestive of liquidation by the government agency tended somewhat to restrict the advance. Outside of North America, reports of deterioration of the North

[1] If it had not gone further, the price rise would have fallen short of the minimum rise of typical crop-scare cycles as we define them.

[2] Passage of the "inflation amendment" to the farm relief bill by the Senate, April 28, and by the House, May 3; also anticipated enactment of bills for farm and unemployment relief and for a public works program.

[3] The President's message to the Conference included the statement: "The revaluation of the dollar in terms of American commodities is an end from which the Government and the people of the United States cannot be diverted. We wish to make this perfectly clear: we are interested in American commodity prices. What is to be the value of the dollar in terms of foreign currencies is not and cannot be our immediate concern."

American crop created less stir in the markets. At Liverpool and Buenos Aires, traders were concentrating attention upon the bearishness of the immediate supply position, which included the prospect of a world end-year carryover of record size. Moreover, they were impressed with the favorable outlook for the new European wheat crop.

The upward movement of Chicago wheat prices was abruptly checked on July 18. The ensuing precipitous decline of Chicago wheat prices was not of the character normally to be expected as a consequence of a crop scare and a price increase, with the usual degree of public participation attracted to the wheat market under such circumstances. The "public" normally attracted to the wheat market in such circumstances is indeed made up largely of non-professional speculators, but of non-professionals accustomed to follow wheat prices more or less closely, including many who buy on the basis of some fairly well-settled judgment as to what price the crop conditions warrant. Such "public" participation carries prices usually to levels that cannot long be maintained, but lays a basis for vigorous or even very stubborn resistance to subsequent price decline. At the peak of the price rise in July, however, a large proportion of the long open interest in Chicago wheat futures had passed to a "public" that had bought either on very slender bases of judgment regarding wheat prices, or on no basis at all. Some were led to buy commodities on a reasoned belief that price inflation would go much further, and had been attracted to wheat because, unaware of the fundamental wheat situation, the reports of a crop 100 million bushels under domestic requirements seemed to indicate that wheat was a "good buy." Some were probably led to buy wheat merely because it was making sensational price gains almost daily.[1] Meanwhile previous buyers with fairly well-settled ideas as to what level of wheat prices could be maintained were retiring from the market.

[1] An excellent description of members of this public as they appeared in customers' rooms of brokerage houses may be found in the *Northwestern Miller*, August 2, 1933, pp. 272–73.

The members of this "public" who, together with some professional and semi-professional wheat traders, carried prices to their final peak may or may not have had unusually narrow margins and financial resources from which to replenish margins. The essential fact was that a large percentage of them lacked convictions that would encourage them to hold their purchases against a price decline even though financially able. In these circumstances a turn in the apparent trend of prices was sufficient to bring on the market an overwhelming volume of selling orders.

The reaction in wheat prices came without change in the type of political news emanating from Washington, and without significant improvement in North American crop conditions, though rains in the spring-wheat belt several days earlier had temporarily checked deterioration. Thoughtful traders must have been disturbed by the increased premium of Chicago futures over futures in foreign markets (particularly Liverpool and Buenos Aires), by offers at New York of Argentine wheat close to import parity, by increased cash-futures spreads in domestic wheat markets, and by a statement issued by Secretary Wallace (July 17) indicating that even a small crop in 1933 would probably leave a large carryover—perhaps 200 million bushels—in the United States on July 1, 1934.

In two days (July 19–20) Chicago wheat futures suffered a setback of over 25 cents—the largest two-day decline since May 1917. There were concurrent similar developments in other commodity markets and on the New York stock exchange, weakness in each of the markets reacting upon all of the others. Trading in Chicago wheat futures was so heavy July 19–20 (a new high record being established July 20) and market sentiment was so demoralized that the Chicago Board of Trade, with the co-operation of boards of trade in other cities, ordered all futures markets to remain closed July 21 and 22. Futures trading was resumed Monday, July 24, under regulations which limited daily price changes and set definite minimum prices (the average closing prices of July 20) for all grain futures. For wheat and rye, daily price fluctu-

ations were limited to 8 cents above or below the average closing price of the preceding business day. These provisions helped at least to check panic. During the four days they remained in force, Chicago futures prices recovered much of their loss, partly influenced by reports of further crop deterioration in Canada. But when minimum price restrictions were removed July 28 (limits on daily price changes for wheat and rye being simultaneously reduced from 8 to 5 cents), weakness again set in. During the three remaining business days of the month, wheat futures prices declined 15 cents—the maximum reduction permitted. Directors of the Chicago Board of Trade were accordingly influenced to re-establish minimum prices August 1–15. The sharp rise which again ensued was followed, however, by gradual decline to the fixed minimums; and when these were removed, wheat futures prices at Chicago as well as in foreign markets drifted downward during the first few weeks of the new crop year.

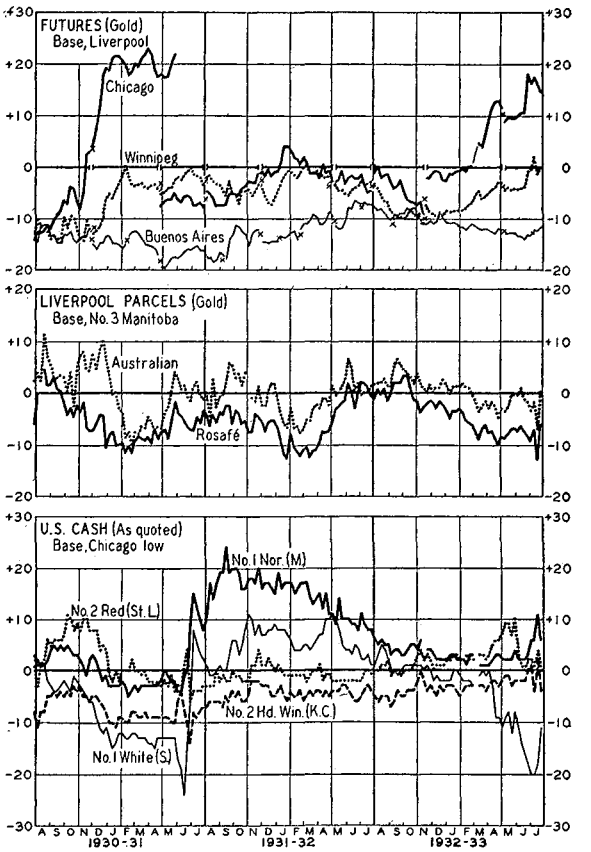
Foreign markets responded to the late July break in Chicago wheat prices much as they had responded to the previous upturn. Winnipeg prices declined sharply, despite indications of government-sponsored stabilizing purchases for account of the Canadian government and an improved export demand for Canadian wheat. But Liverpool and Buenos Aires, which had taken little part in the preceding advance, showed little reaction as prices dropped precipitously in American markets.

Significant Wheat Price Relationships

An outstanding feature of price relationships among leading futures markets in 1932–33 was the continued small discount of futures in active export markets under futures in free import markets (Chart 19, top tier). As in other recent depression years, low lake and ocean freight rates (Table XXV) tended to keep prices in these markets closer together than they ordinarily had been in pre-depression years. On the other hand, an opposing force in the form of a British preferential duty on non-Empire wheat tended to depress Buenos Aires futures (and would have tended to depress Chicago futures if United States wheat had actively been seeking an export outlet) in relation to futures at Liverpool and Winnipeg after November

Chart 19.—Significant Wheat-Price Spreads, Weekly from August 1929*

(U.S. cents per bushel)



* For futures, weekly average spreads of prices in Chart 17; for each year the base is successively the Liverpool December, May, October, as indicated by short vertical lines, though in May 1931 the Liverpool base is May for comparison with the Chicago May, and July for comparison with other futures. Change in futures at Chicago, Winnipeg, and Buenos Aires indicated by x. See Tables XXXV and XXXVI for description of import parcels and United States cash prices.

1932. Some statistical evidence that this tendency was reflected in a measurable price effect is to be found in historical survey (February–April, 1924–33) of Liverpool–Buenos Aires and Winnipeg–Buenos Aires price spreads, if allowance is made for differences in freight rates, in crop size and quality, and in speculative activity at Winnipeg in the different years. However, we find no statisti-

cal evidence suggesting that the import duty on Argentine wheat affected price relationships on the British import market between Rosafé wheat, duty-unpaid, and duty-free Empire wheats. Accordingly, the effects of British preference in altering the prices of Argentine wheat in relation to Canadian and Australian are not clearly demonstrable from the price statistics.

The relative position of Chicago futures, particularly after March, was extraordinary. In April–July, Chicago futures were maintained at a level some 15 cents above Winnipeg futures, and 10–15 cents above corresponding futures at Liverpool. Never before in post-war years had so wide a Liverpool–Chicago spread been maintained in the course of regular trading; and in only one other year—1930–31, when the Grain Stabilization Corporation was buying Chicago futures—had so large a spread even existed. Chicago futures had also commanded a premium over futures at Liverpool during the early months of 1926; but in that year the premium created in the course of private trading was small, and the unusual price relationship was based upon practical exhaustion of exportable supplies in the United States. In contrast with these years, Chicago futures were supported in 1932–33, in the face of a huge wheat surplus, by speculative trading on the part of private individuals excited by inflation prospects and reports of heavy crop damage in North America. At no time during 1932–33 were United States wheat prices in line for export. From mid-August to December, Chicago and Winnipeg prices weakened relative to prices at Liverpool; and Canadian wheat moved freely into export channels. But with Chicago futures still at a premium over the higher-grade Winnipeg futures, there was practically no export demand for United States wheat. After early January, Chicago prices moved still farther from export parity. At the same time, the Liverpool–Winnipeg price spread narrowed, while the Liverpool–Buenos Aires spread widened. These changes were partly seasonal; in addition, Winnipeg prices were stimulated by speculative buying based on inflation and crop news, and Buenos Aires prices were affected by pressure of the fairly heavy exportable supplies of wheat still remaining in Argentina.

Substantial spreads existed between near and distant futures at both Chicago and Winnipeg during the greater part of the crop year. At Chicago, these spreads narrowed in midwinter, with increasing tightness in cash wheat. The Chicago July future, which opened in October at a premium over the May, sold at a discount in late December and early January; and while both May and July futures were declining to new record lows in December, the December future, reflecting the tight cash position, was distinctly firm. At Liverpool, the December future, which was selling about a cent under the March old-style future in August, strengthened relative to the March during the next four months under the influence of light receipts from Northern Hemisphere countries, partly in consequence of restricted purchases in anticipation of cheap offers of Argentine and Australian wheat for future shipment. Finally, as March approached, the old-contract future for that month went to a full four-cent (gold) discount under the new-contract future, the difference representing the duty payable on non-Empire wheat.[1] During the latter part of the crop year, spreads between near and distant futures at Liverpool were fairly wide, reflecting abundant supplies of import wheat. In November, the Chicago December future was at a much wider discount under the Liverpool December than the Chicago May was under the Liverpool May (despite the fact that the Liverpool May was a new-contract future). This situation, which was due to a fairly large carrying charge between December and May futures at Chicago and a small inverse carrying charge between those futures at Liverpool, was responsible for the big change in Chicago–Liverpool spreads shown in Chart 19 (top tier) in mid-November, when there was a change in the futures plotted for those markets.

On the British import market, United States and Russian wheats were seldom

[1] The duty, if any, payable on wheat delivered on an old-style contract was at the expense of the buyer; that payable on wheat delivered on a new-style contract was at the expense of the seller.

quoted during 1932–33. Parcels of Rosafé (duty-unpaid) were sold at prices not much, if any, farther below parcels of No. 3 Manitoba and Australian f.a.q. than in earlier years, quality considered (Chart 19, second tier), despite the preferential duty on Argentine wheats (see comment above, p. 106). Southern Hemisphere wheat prices weakened, as usual, relative to Manitobas during December–March, as the Southern Hemisphere crop movement got under way; but with speculation running wild in North American markets in June–July there was not the usual narrowing of these price spreads in the summer months, though relationships were more normal after the break in North American prices in mid-July.

In the United States, spreads between the prices of leading wheat varieties were unusually narrow until late in April (Chart 19, bottom tier). Then, as wheat prices rose rapidly in eastern markets until the middle of July, prices at Seattle advanced more gradually. Farmers and wheat traders in the Pacific Northwest were influenced by lack of an export outlet for the heavy exportable supplies still remaining in that region, and by prospects for another good-sized crop in 1933. The discount on Western White wheat, which resulted in shipments of wheat from the Pacific Coast to eastern domestic markets in late June and early July, was reduced later in July when wheat prices in the East broke more drastically than prices in the Pacific Northwest. Following July 24, official encouragement of the formulation of plans for subsidized exports from the Pacific Northwest helped to support Seattle prices. Red wheat at St. Louis was relatively strong in April–May under the influence of an active mill demand and light marketings; but the premium disappeared early in June.

IV. INTERNATIONAL TRADE AND CONSUMPTION

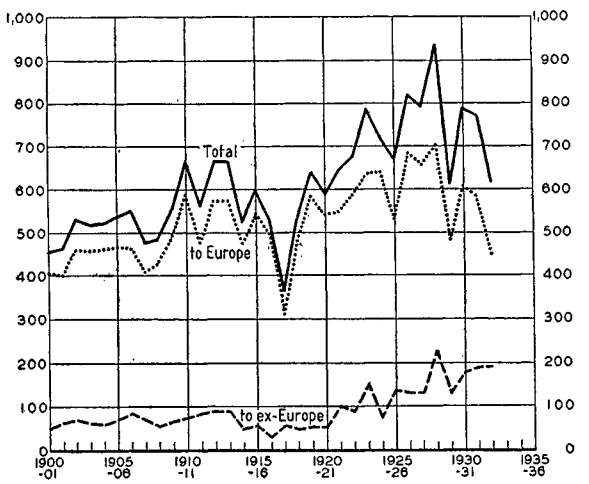
Volume and Course of Trade

The volume of international trade in wheat and flour was notably small in 1932–33. Shipments (Table XIX and Chart 20) totaled only 615 million bushels, a trifle more than in 1929–30 but otherwise the lowest since 1920–21, and smaller also than shipments in three of the five years immediately preceding the war. Net exports of 627 million bushels (Table XX) were similarly small.

Limitations of effective import demand, especially from continental Europe, but also from many ex-European countries, were responsible for the small volume of trade. In large degree these limitations originated in the exceptionally large 1932 wheat crop in importing Europe. Governmental measures restraining wheat imports, upholding domestic wheat prices, and forcing full utilization of domestic wheats were important also, as were the abundance and cheapness of wheat substitutes. In some countries both net imports and wheat consumption were reduced partly as a result of such measures, partly as a result of further decline in national and individual purchasing power. Finally, import purchasing in many countries could proceed only on a hand-to-mouth basis with governmental regulations subject to sudden changes; and toward the end of the crop year the outlook for new, early, and large wheat crops in 1933 prevented import purchases by

Chart 20.—International Shipments of Wheat and Flour, Annually from 1900–1901*

(*Million bushels*)



* Data from Broomhall's *Corn Trade Year Books* and *Corn Trade News*. See Table XIX.

some European countries which would presumably have imported more heavily under less promising new-crop conditions.

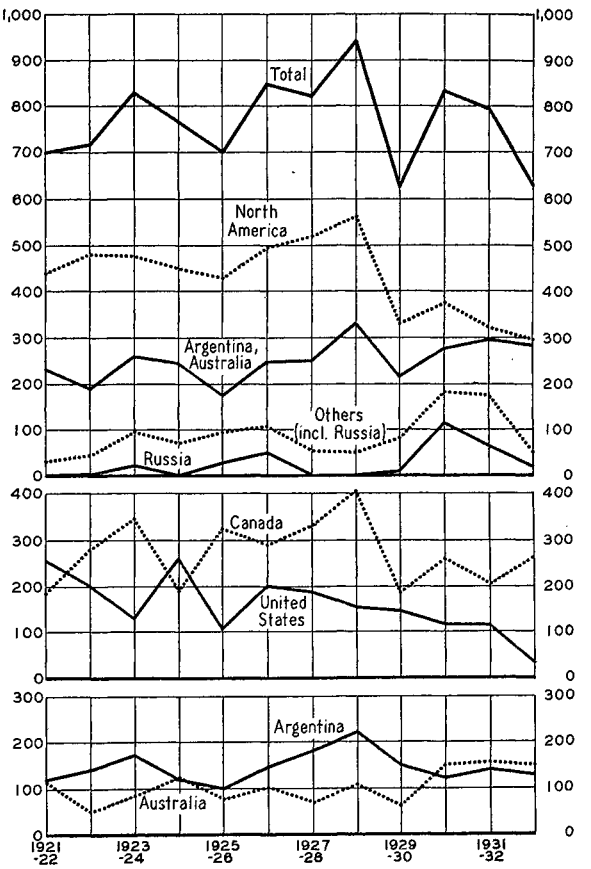
The number and force of the circumstances that combined to curtail the volume of international trade is illustrated roughly by the facts that not a single European importing country took as much wheat and flour in 1932–33 as in 1931–32; that only two—Norway and Switzerland—imported as much as or more than they had done on the average in the five years preceding 1932–33; and that nine of the eighteen net-importing countries of Europe had the smallest net imports in a decade, while twelve had the smallest net imports in the past five years. Curtailment of imports occurred not only in countries whose wheat crops were relatively abundant in 1932, but in countries whose crops were average or small; it occurred also in some countries with mild import restrictions as well as in countries with severe restrictions. China, in fact, was the only significant importing country of the world which imported a record quantity at the prevailing low prices, and it was the heavy Chinese takings which prevented the total volume of trade from falling to a new post-war low level. The shipments to Europe (Chart 20) were the lowest since 1909–10 except for the war year 1917–18.

Since governmental measures tending to restrict flour imports have been operative longer than those affecting wheat and have been even more stringent, it is not surprising that the volume of international trade in wheat flour fell to much the lowest level in post-war years (Table XXII), including even 1929–30 when net exports of wheat and flour together were of practically the same size as in 1932–33. American and Danubian flour exports were most strikingly low; but Japan, Germany, and Italy exported more flour than in any year of the past decade.

The small total volume of international trade was not a reflection of shortage of world exportable wheat supplies in 1932–33, as was the case in 1917–18. As we have seen (p. 82), stocks were built up in all four of the major exporting countries during the year. The North American exportable surplus was probably larger than ever before, despite a small crop in the United States; but North American net exports (Chart 21) were the smallest since the war. The exportable surpluses in Argentina and Australia, on the contrary, were shipped out much more freely, though not so freely as to prevent some hold-

CHART 21.—NET EXPORTS OF WHEAT AND FLOUR FROM PRINCIPAL EXPORT AREAS, FROM 1921–22*

(Million bushels)



* See Table XX.

over of stocks. These countries supplied a larger fraction of world exports than ever before. The North American fraction was small, though not quite so small as in 1931–32.

The Danube countries and Poland exported very little, not because farmers and dealers there tended to hold stocks but because supplies were very short; not all of the 13 million bushels exported from these countries, indeed, represented shipments from surpluses above ordinary domestic requirements, and Poland was a net-importing country in the

first half of the crop year (Table XXVI). Russia had little wheat available for export after two small crops in succession. Sizable exports from northern Africa perhaps resulted less from the abundance of domestic wheat supplies than from the opportunity to sell wheat freely in the protected market of France. Mainly on account of the short crop of 1932 in the Danube basin, the minor exporters of the world shipped out less wheat in 1932–33 than in any post-war year except 1928–29.

The total volume of international trade, now measurable with some precision, fell substantially below our forecasts published roughly at four-month intervals in the course of the crop year.[1] The forecasts and reported totals were as follows, in million bushels:

Date	Shipments to Europe	Shipments to ex-Europe	Total shipments	Total net exports
August 1932	520	180	700	720
December 1932 ...	465	180	645	665
May 1933	465	180	645	665
Reported	449	166	615	627

The earliest forecast was far too high, largely because data available in August 1932 seemed to us to point toward a 1932 wheat crop in importing Europe at least 66 million bushels below the total now reported. Our latest forecast (May) was moderately too high for three principal reasons: despite their very short crops, Poland, Rumania, and Yugoslavia did not import wheat net in the closing months of the year; shipments to ex-Europe, continuing well above average in April, declined sharply in May as wheat prices rose and remained little above average thereafter (Chart 27, p. 118); and new-crop prospects in Europe were exceptionally favorable with respect both to quantity, quality, and early availability of new wheat, so that some imports which might otherwise have been necessary were not required and an incentive existed to draw upon stocks of wheat afloat (Table XXVII). Broomhall's forecasts of shipments (Table XVIII) were also high throughout the crop year; but the forecast of net exports (630 million bushels) published by the International Institute of Agriculture in October 1932 and in March 1933[2] was within a few million bushels of the reported total.

The course of international shipments (Chart 22) was determined largely by the unusual proportion drawn from the Southern Hemisphere. With Argentina and Australia shipping freely from their new crops, the mid-winter peak of total shipments was much higher than usual in relation to the autumn and spring peaks dominated by the movement of wheat from North America. The small Danubian and Russian shipments had little effect upon the total in 1932–33, in sharp contrast with developments the year before, when in the autumn these exports were strikingly large and strongly influenced the seasonal course of trade.

Very small total shipments during August 1932—the smallest in many years—represented the culmination of a decline, almost unprecedented in severity, that had begun in May. The main factor in this long decline was radical reduction in European purchases, induced chiefly by favorable new-crop prospects in Europe and Canada and prompt tightening of import restrictions, together with the absence of heavy export surpluses in the Southern Hemisphere and eastern Europe. The low point of shipments fell in August, reflecting principally the movement from Canada, since very little wheat was leaving the United States. When in September wheat prices began to fall (Chart 17, p. 99) and British import stocks (Chart 10, p. 80) and probably the stocks of some other countries had been reduced, shipments increased sharply, with Canadian exports dominant.

The seasonal increase of Southern Hemisphere shipments in December–January was timed about as usual, though the seasonal decline of the Canadian made the winter trough of total shipments a little later than usual. Australian exports, themselves heavily dependent upon Oriental demand (Chart 27, p. 118), dominated the mid-winter fluctuations in the total; the year's peak came in March rather than at the usual time in late

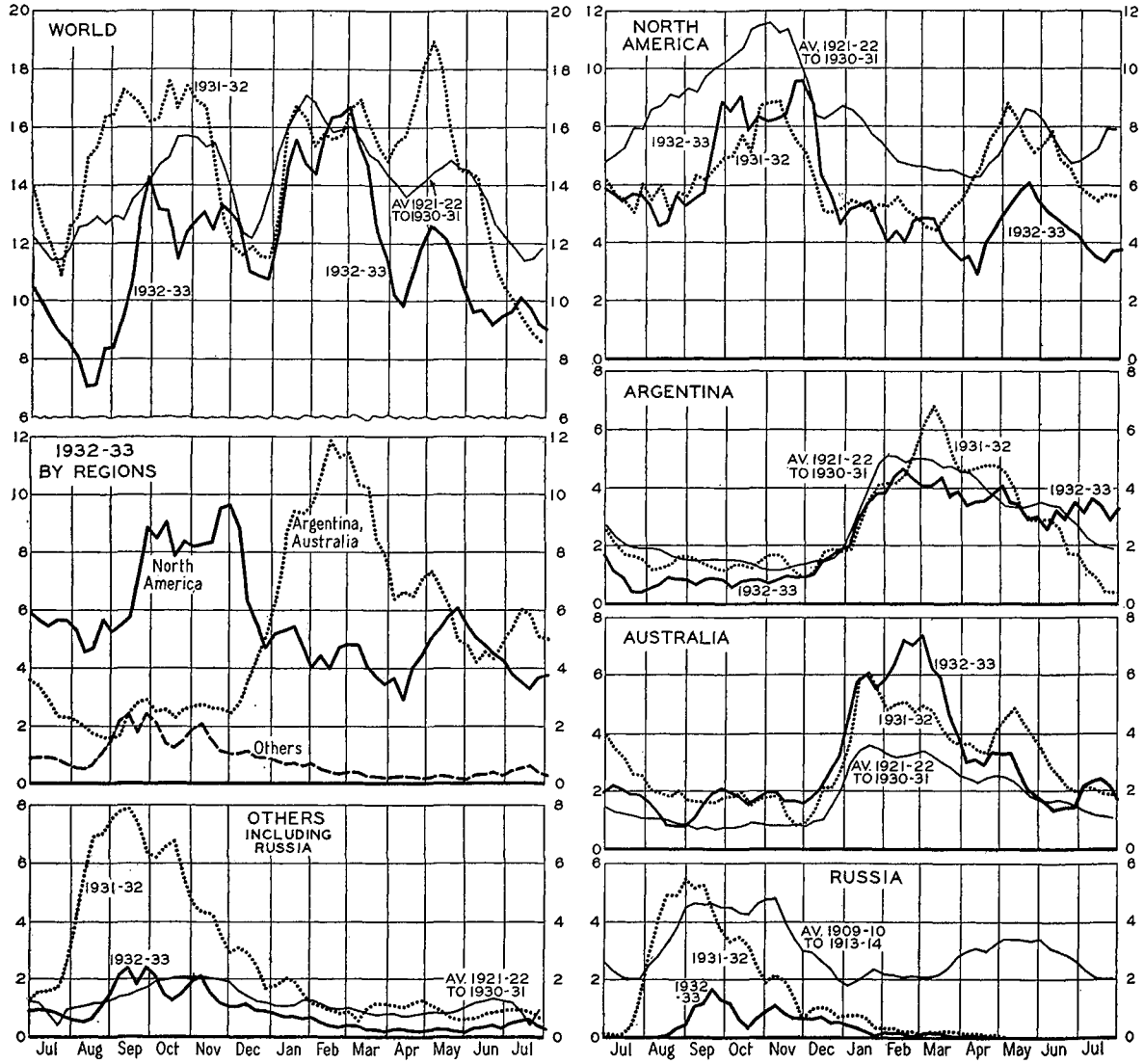
[1] WHEAT STUDIES, September 1932, IX, 493; January 1933, IX, 157; May 1933, IX, 294.

[2] *Monthly Crop Report and Agricultural Statistics*, October 1932 and March 1933.

January. From this peak there was an unusually sharp decline. Heavy shipments on "orders" to Europe had preceded this decline; stocks afloat to Europe (Chart 10, p. 80), probably to ex-Europe, had been brought to a rather high level; import requirements had presumably been filled for several weeks in the future; and more or less of a decline in shipments was therefore to be expected. The drop was accentuated, however, by restriction of transactions both by importers and exporters when the New York foreign exchange market closed during part of the "bank holiday" in the United States and fluctuations in foreign exchanges were subsequently erratic.

CHART 22.—INTERNATIONAL SHIPMENTS OF WHEAT AND FLOUR, 1932–33, WITH COMPARISONS*

(Million bushels; 3-week moving average)



* Broomhall's weekly data from *Corn Trade News* and *Corn Trade Year Books*. Averages are for periods ending July 1914 and July 1931.

There followed a revival of European import demand for Canadian wheat for shipment at the opening of navigation. But the resulting bulge in shipments to Europe was short-lived as import restrictions were tightened and prospects for a new large European crop became more definite. Sharply rising

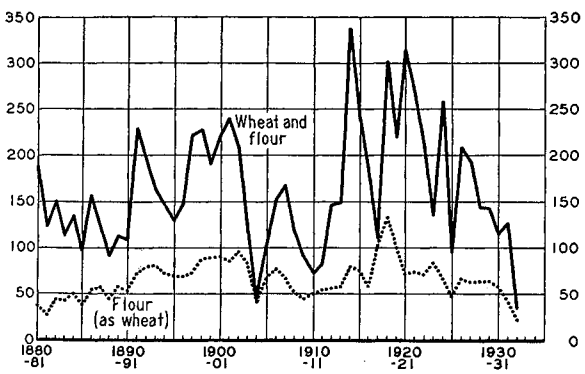
prices in June–July failed to induce more than a minor revival in European demand, which was curtailed partly because the new crop then promised to be good in quality and promptly available for milling. In these months, when Canadian prices moved out of line on unfavorable prospects for the 1933 crop, import purchases were mainly of Argentine and Australian wheat.

United States Exports and Domestic Use

Wheat and flour exports from the United States in 1932–33 fell to the lowest level recorded since 1868–69. July–June net exports, including shipments to possessions, were only 35 million bushels; those of August–July were only 32 million. The smallest net exports (July–June) in the preceding half a century, those of 1904–05 (Chart 23), reflected short

Chart 23.—United States Net Exports of Wheat and Flour, from 1880–81*

(Million bushels)



* Including shipments to Alaska, Hawaii, and Puerto Rico. Official data (July–June), here from Table XIV; Wheat Studies, December 1927, IV, 101; and *Agriculture Yearbook, 1933*, pp. 403–04.

domestic supplies. The still smaller net exports of 1932–33, however, occurred in the face of abundant supplies; perhaps 250 million bushels could have been exported if stocks had been reduced to a normal level. The movement of wheat to export was curtailed because United States wheat prices were held too high in relation to prices of wheat from other exporting countries. This general price position was by no means a new development; but in no other crop year had United States prices been held out of line so persistently from week to week. Farmers, dealers, and speculators were wholly responsible for prolongation of this situation in 1932–33; governmental agencies exerted no such influence as stabilization purchases had done in 1930–31 or stabilization stock-holding and marketing policy in 1931–32.

The decline of net exports from around 134 million bushels in 1931–32[1] to 35 million in 1932–33 represents reduction of non-commercial exports by the Grain Stabilization Corporation more than a further striking retreat of the United States from export competition on the price basis. The net exports of 1931–32 included barely 48 million bushels of ordinary commercial net exports, the balance (around 86 million) consisting of sales made by the Stabilization Corporation.[2] In 1932–33, exports of stabilization wheat consisted of 9¼ million bushels to Brazil, so that ordinary commercial net exports were about 26 million bushels. The decline was thus much the larger in non-commercial net exports.

The shrinkage in the American international trade in wheat and flour found reflection in practically all of its different aspects. Shipments of flour to possessions, however, were somewhat larger than in any of the three preceding crop years (Table XIV); and the United States handled in absolute amount somewhat more of the total Canadian exports than in 1931–32, though the proportion passing through the United States was the lowest in more than a decade (Table XVII). Gross exports of wheat grain, 21 million bushels, were very small; of the various types of wheat in the total, only the exports of hard red winter failed to establish post-war low records (Table XVI). Price disparity affected net exports of wheat grain to such an extent that the total was only 12 million bushels (Chart 23), the lowest in a half-century except for 1904–05; and in 1932–33 ordinary *commercial* net exports were about as small even as those of 1904–05. The United States was a net importer of wheat grain in several months in the last half of the crop year, after

[1] Reported net exports of 126 million understate the facts in 1931–32; see Wheat Studies, December 1932, IX, 104.

[2] *Ibid.*, pp. 104–05.

(we infer) shipments of stabilization wheat to Brazil were completed. Gross imports of wheat grain from Canada for milling in bond suffered some reduction (Table XV), mainly because the flour milled from this wheat encountered further reduction of import demand in some of its principal markets and (through the new Empire preferential system) more severe competition from Canadian-milled flour in others. The narrowing of outlets for flour milled in bond from Canadian wheat contributed toward reduction of total net exports of flour from the United States to quite the lowest level in half a century (Chart 23). But United States flour exports were low mainly because of the prevailing wheat price disparity.

With net exports and shipments of flour amounting to only 4.9 million barrels (a decline of 4.0 million barrels from 1931–32 and of 9.6 million from 1924–25, the peak in the past decade), total flour production in July–June 1932–33 was presumably the smallest in at least ten years. This conclusion follows if output is estimated either on the assumption that the production of small merchant and custom mills which do not report monthly or biennially to the Census Bureau has remained about constant in the past five years or on the assumption that during the depression the output of these small mills has increased progressively.[1] Undoubtedly the second assumption is the sounder of the two; consequently total flour output did not decline as much as our figures reached on the first assumption (Table XXXI) suggest. But the bases for estimating the output of very small merchant and custom mills are still insecure.

If appraisal of total flour output is uncertain, so also is appraisal of total and per capita flour consumption. Newell, allowing for an increase in flour stocks of 2.5 million barrels during 1932–33, concluded that actual flour consumption both total and per capita was higher in 1932–33 than in 1931–32. In our opinion (see p. 86) the increase in flour stocks exceeded 4 million barrels. If so, total and per capita consumption (even accepting Newell's estimate of total flour production) were lower in 1932–33 than in 1931–32, despite some stimulus to consumption afforded by charitable distribution of flour through the Red Cross. The available data indeed seem to warrant the inference that flour consumption in the United States, which was approximately stable per capita but was increasing in the aggregate through 1928–29, has tended to decline both per capita and in total in successive years thereafter. The factors responsible for the progressive decline, and particularly their relative quantitative importance, remain obscure. Prominent among them, however, are (*a*) decline in wastage of bread resulting from reduced income and forced household economy; (*b*) reduced ingestion of bread used in sandwiches, a reflection of widespread unemployment; and (*c*) reduced ingestion of sweet baked goods. Whether or not—as is often alleged—the decline in per capita wheat consumption has been abetted by relative cheapness of meats and vegetables, we are not able to ascertain.

The use of wheat grain for grinding into flour for domestic consumption and stock-building together, though probably somewhat larger than in the two preceding crop years, was nevertheless low in 1932–33 (Table XXXII). The use of wheat for seed was also small because of the small area sown. But feed use was heavy. About 138 million bushels of wheat was fed on farms, according to official estimates; some 30 million more had been fed in 1931–32 and 20 million more in

[1] See Table XXXI. Our estimates of total production there given, including a constant allowance for output of mills not reporting in biennial censuses, compare as follows in million barrels with estimates presented by Martin E. Newell (*Northwestern Miller*, October 11, 1933, p. 105) and based on the assumption of increasing production in non-reporting mills:

	1928–29	1929–30	1930–31	1931–32	1932–33
F.R.I.	123.6	122.5	117.6	113.4	110.9
Newell	121.7	121.3	118.6	116.3	115.0
Difference	−1.9	−1.2	+1.0	+2.9	+4.1

The differences arise not only because our estimates of output in non-reporting ("custom") mills are held constant at 1.2 million barrels per year, while Newell's estimates (Table XXXI) are higher and rise progressively to 3.3 million barrels in 1932–33, but also because our estimates of output in mills reporting biennially but not monthly decline slightly while Newell's rise successively as follows from 1928–29: 4.8, 5.3, 6.6, 7.5, 8.2. We doubt that much if any rise has actually occurred in the production of mills that report biennially but not monthly, while admitting the probability that output of non-reporting mills has risen more or less as Newell estimates.

1930–31, but the figure for 1932–33 is high in contrast with estimates for all earlier years of the past decade. The absolutely low price of wheat doubtless again induced many farmers to feed home-grown wheat rather than sell it and use the proceeds for customary purchases of other grains or mixed feeds for livestock. Substitution of wheat for corn, however, was certainly less prevalent than in 1930–31 and probably less so than in 1931–32. Feed use in 1932–33 was ample to keep the total quantity of wheat used in the United States in 1932–33 for domestically retained flour, for seed, and for feed on farms well above the highest level in any year prior to 1930–31. But it was not heavy enough to prevent a substantial decline from the high levels of 1930–31 and 1931–32.

Net Exports and Domestic Use in Other Exporting Countries

Canada continued in 1932–33 to perform, with the United States, the necessary function of stock-carrying which importing countries would not or could not assume. This is evidenced by the increase of the outward carryover to a new high peak at the close of the crop year (Chart 11, p. 81); by the fact that Canadian net exports of 263 million bushels, while the largest in four years, nevertheless fell for the fourth successive year below 50 per cent of the total available supplies; and by the fact that Winnipeg futures during the year seldom ran as much as 10 cents below the corresponding Liverpool futures (Chart 19, p. 105) and toward the end of the crop year were above Liverpool. Government-sponsored purchases of Winnipeg futures at the height of the marketing season were presumably a factor tending to curtail exports, as was speculative enthusiasm associated with unfavorable developments of the Canadian 1933 crop in the closing weeks of the crop year. Net exports of wheat flour (Table XXII) fell to the lowest level in more than a decade; but the decline from 1931–32 was trifling.

The geographical distribution of the 1932 crop favored the movement of Canadian exports through ports on the Pacific Coast; these, though not quite so large as in 1928–29, made up almost as large a fraction of total overseas exports as the record fraction of 1931–32 (Table XVII). The proportion exported through the United States was the smallest in more than a decade, partly in continuation of a trend but partly also because of special disadvantages incurred by this route of shipment following the adoption of Empire preference.[1]

Small flour exports again kept Canadian mill grindings low at 14.9 million barrels, though there was an increase of about 2 per cent from the level of 1931–32. Milling and export statistics indicate that domestic retention of flour was the largest in a decade, and the increase from 1931–32 apparently represented expansion of flour consumption more than of flour stocks. The wheat equivalent of the flour retained domestically was only a million bushels larger in 1932–33 than in 1931–32, because fewer bushels of wheat (4.45, an exceptionally low figure) were required to produce a barrel of flour. Official estimates of wheat "milled for food," however, have been kept at 42 million bushels as in each of the two previous years (Table XXXII). Seed use of wheat was smaller than in 1931–32 on account of reduction in the area sown for the crop of 1933. The quantities unmerchantable and lost in cleaning were again very small, reflecting the excellent quality of the 1932 crop. The official estimate of sound wheat fed to livestock on farms was higher for 1932–33 than for 1931–32, but lower than for 1930–31; in all three of these years, low farm prices and pressure for economy in farmers' cash outlay have tended to divert unusually large amounts of wheat to feed. The diversion was of sufficient magnitude in 1932–33 to hold total domestic use of wheat in Canada to a fairly high level in spite of the small amount of unsound wheat in the 1932 crop. In 1930–31, however, and in a few earlier years when the crops were of poorer quality, total domestic use was higher than in 1932–33.

Argentina and Australia, unlike the United States and Canada, again exported wheat

[1] See especially "British Preference for Empire Wheat," Wheat Studies, October 1933, X, 28–31.

freely in 1932–33, though not so freely as to ship out fractions of their exportable surpluses as large as those of 1931–32, and not freely enough to prevent moderate increases in end-year stocks. Australian net exports of 150 million bushels fell a little below those of the two preceding years, but were only slightly smaller than would be expected from the magnitude of the supplies available from initial stocks and the big crop. Farmers apparently tended to hold back their wheat in May–June 1933 with new-crop prospects unfavorable, but when in July European demand increased slightly and prices rose slightly, Australian exports were heavy for the season (Chart 22, p. 110). Argentine exports were unusually heavy for the season both in June and July. The year's net exports from Argentina, 132 million bushels, were also little smaller than could be expected in view of the size of available supplies.

As in the two preceding years, Australia found a wide market for her surplus in China and Japan; exports to these destinations (Table XXIII), indeed, probably amounted to over 40 per cent of total Australian exports for the first time in history. The heavy Chinese takings in 1932–33 were drawn to the extent of perhaps 80 per cent or more from Australia either directly or indirectly in the form of flour milled from Australian wheat in Japan, whose net imports were small. Relatively high American prices made the American share in the Chinese trade by far the lowest in a decade, and the Canadian share was kept rather low for the same reason. Argentine exports of 4.6 million bushels[1] to China, though small in relation to the Australian, exceeded those from the United States and were remarkable if only because Argentina had never before exported more than a trickle of wheat to China. Such competition of Argentine wheat with Australian as was possible on the Chinese market seems to have rested partly upon exceptionally low ocean freight rates from Argentina to China, and partly upon a relative reduction of Argentine f.o.b. prices in relation to Australian, probably due in part to Empire preference.

Domestic use of wheat in Australia and Argentina (Table XXXII) appears not to have been unusual in any respect. In both countries the areas sown for the 1933 crops were reduced, and seed use in 1932–33 was consequently somewhat smaller than in 1931–32. No reliable data are available regarding food use and feed use, but there is little reason to suppose that significant changes took place. Milling statistics which have appeared in the course of the past year lead to the inference that food use of wheat in both countries has been better maintained (expanded in Argentina) during the general economic depression than we had previously inferred.[2]

The outstanding developments in domestic consumption of wheat in exporting countries occurred in three nations of eastern Europe—Rumania, Yugoslavia, and Poland—where the crops of 1932 were very small. In spite of this, all three were net exporters, though barely so. All three drew for consumption upon sizable stocks that had accumulated from good crops in preceding years. Nevertheless, according to our rough calculations, actual consumption of wheat in 1932–33 in Rumania was the smallest since the war, in Poland the smallest since 1924–25, and in Yugoslavia the smallest since 1927–28. Under pre-depression conditions, and in the absence of import restrictions, these countries would presumably have imported substantial quantities of wheat, thereby enlarging the volume of international trade and of world wheat disappearance, and restraining the increase in world wheat stocks. Apparently corn was the principal substitute for wheat in Rumania and Yugoslavia, rye in Poland.

Hungary and Bulgaria harvested 1932 wheat crops large enough, with drafts upon accumulated stocks, to maintain domestic wheat consumption on the upward trend characteristic since the war. But very little wheat was available for export from either country. In India consumption of wheat was again heavy under the stimulus afforded by low prices; there were small net imports dur-

[1] So appraised from statistics of shipments given in *Times of Argentina*. Official net import statistics of China excluding Manchuria (*World Wheat Prospects*, August 26, 1933, p. 19) show July–June net imports of 1.8 million bushels from Argentina.

[2] See Table XXXII; cf. WHEAT STUDIES, December 1932, IX, 132.

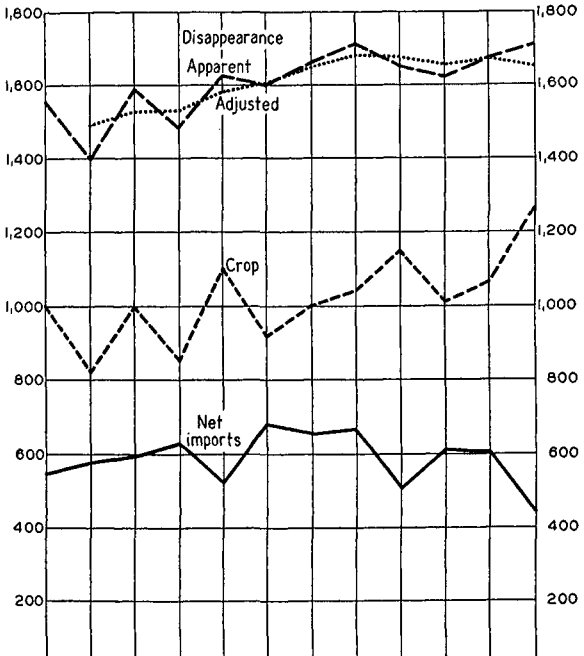
ing the year, which might have been larger in the absence of the import duty. Among the three exporting countries of northern Africa, domestic use of wheat from crops and stocks, which apparently varies widely from year to year, could not have been heavy except in Tunis. Exports were large, under the influence of high prices obtainable by these countries in the protected French market.

European Imports and Consumption

The net imports of Europe ex-Danube ex-Russia, 442 million bushels in 1932–33, were the smallest since the war (Chart 24). But

Chart 24.—Wheat Supplies and Disappearance in Importing Europe, from 1921–22*

(Million bushels)



* Data in Tables II, XXI, and XXXIV. The dotted line represents crop plus net imports adjusted for our estimates of changes in stocks.

they were large enough, when added to the huge crop of 1933 and the moderate inward carryover, to bring total available supplies to their highest post-war level, that of 1928–29 excepted (Table XXXIV). Abundant total supplies did not lead to heavy consumption. Rather, consumption (according to our estimates shown by the "adjusted disappearance" curve in Chart 24) was lower than in any of the four preceding crop years, and barely above consumption in 1927–28. Substantial quantities of the heavy total supplies available in 1932–33 went to build up stocks, but of domestic rather than of imported wheat. Had the upward trend of consumption to 1928–29 persisted thereafter, European net imports might have been nearly 100 million bushels larger than they were in 1932–33[1] and stocks might not have been built up in the course of the year.

The data summarized in Chart 24 include statistics for Poland, Spain, and Lithuania, which were net-exporting countries in 1932–33 as in several earlier years of the past decade. The Polish net exports were made at the expense of domestic wheat consumption, under the stimulus of an export bounty operative behind severe import restrictions. In the absence of these restrictions in Poland, both wheat consumption and net imports of 1932–33 in Europe would have been larger. The Spanish surplus from the record 1932 crop, despite heavy consumption, went mainly toward increase of stocks; very little was exported. In Lithuania, the crops and stocks

[1] "Presumably if the reduction in the levels of world prices since 1928–29 had been effective in all of these [European] importing countries instead of being largely confined to Great Britain, consumption might have increased more rapidly [after 1928–29 than before] instead of falling off as has actually been the case. Hence, it would seem likely that the high prices and other effects of import restrictions have been to decrease consumption of these importing countries by well over 150,000,000 bushels yearly [presumably in 1931–32]."—*World Trade Barriers*, p. 168.

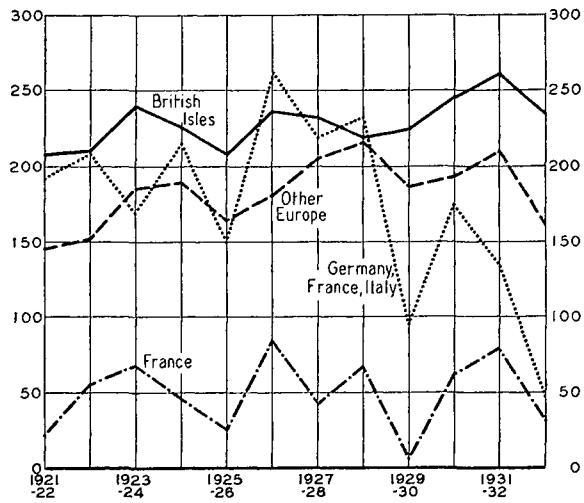
Without minimizing the admitted importance of European import restrictions, we tentatively regard this appraisal of their effects upon wheat consumption as an overstatement. It seems to us impossible to measure with much precision the effects of import restrictions separately from the effects of general economic depression, either of which taken alone would have affected consumption adversely. It is also difficult to find convincing evidence that the apparent statistical trend of consumption prior to 1928–29, which was almost certainly somewhat too steep because of underestimate of certain crops and was also considerably steeper than the trend of population, would even in the absence of depression and import restrictions have moved upward as rapidly after 1928–29 as it did before.

of 1932–33 were not large enough to maintain consumption at earlier levels.

In contrast with developments in most continental countries, the British Isles imported rather heavily (Chart 25) in 1932–33. These

CHART 25.—NET IMPORTS OF WHEAT AND FLOUR BY EUROPEAN IMPORTING COUNTRIES, FROM 1921–22*

(Million bushels)



* See Table XXI.

imports, appreciably smaller only than those of 1931–32, constituted nearly 55 per cent of the European total. In earlier post-war years, even when continental crops were large, the fraction had not exceeded 45 per cent. Since large stocks were carried into the crop year, and in spite of a small crop, the sizable British and Irish imports brought total supplies to a level well above average. Consumption was heavy, swelled by relatively large use of wheat for feed; but presumably somewhat less wheat was consumed than in 1931–32. Empire preference had little effect in restricting imports of non-Empire wheat into the United Kingdom.[1]

Several countries of continental Europe also imported rather liberally in 1932–33. Swiss imports were larger than in any year but one of the past decade; Norwegian and Danish imports were larger than in any year but two. These are countries whose controls of imports were relatively mild.[2] The level of wheat consumption was high in each, though in Denmark less wheat was probably used for feed than in 1928–29 or 1931–32.

Belgium, Netherlands, and Greece, of the remaining thirteen European net-importing countries, were the only ones whose net imports in 1932–33 did not fall more than 15 per cent below the annual average of imports during the five preceding years. Yet Belgium and Holland imported the smallest quantities in six years, and Greece the smallest in five. Relatively low imports into Holland and Greece were due mainly to the large domestic wheat crops of 1932, and may not have involved a break in the steadily rising post-war trend of consumption. Greek imports, indeed, were surprisingly large if the crop of 1932 actually reached 20 million bushels;[3] and domestic wheat presumably was used to build up stocks. Possibly feed use of domestic wheat in Holland tended to be somewhat reduced on account of the milling quota. This may also have occurred in Belgium, where—unless our appraisal of inward carryover is too low—total consumption of wheat probably fell to the lowest level in six years, breaking the upward trend. In these three countries, where on the whole flour prices have probably been allowed to decline roughly in accord with world wheat prices in recent years, there is little evidence that expansion in the consumption of wheat for food has been checked either by general economic depression or by governmental measures affecting wheat imports. The principal effects of governmental measures have been to enforce displacement of imported wheat by domestic wheat in the manufacture of flour, to reduce the quantity of domestic wheat used for feed, and (at least in Holland) to increase domestic wheat production or prevent its decline.

In France also there is no convincing evi-

[1] See "British Preference for Empire Wheat," WHEAT STUDIES, October 1933, X, 23–28.

[2] Wheat could be imported duty-free or at low duties in all three; the import limitation in Denmark was not severe; maintenance of high prices for domestic wheat in Norway and Switzerland presumably has not tended to keep flour prices high, since each country produces so little wheat in relation to what is consumed.

[3] The available statistics point to a yield per acre in 1932 fantastically high, no less than 57 per cent above the 1923–31 average; see Table IV.

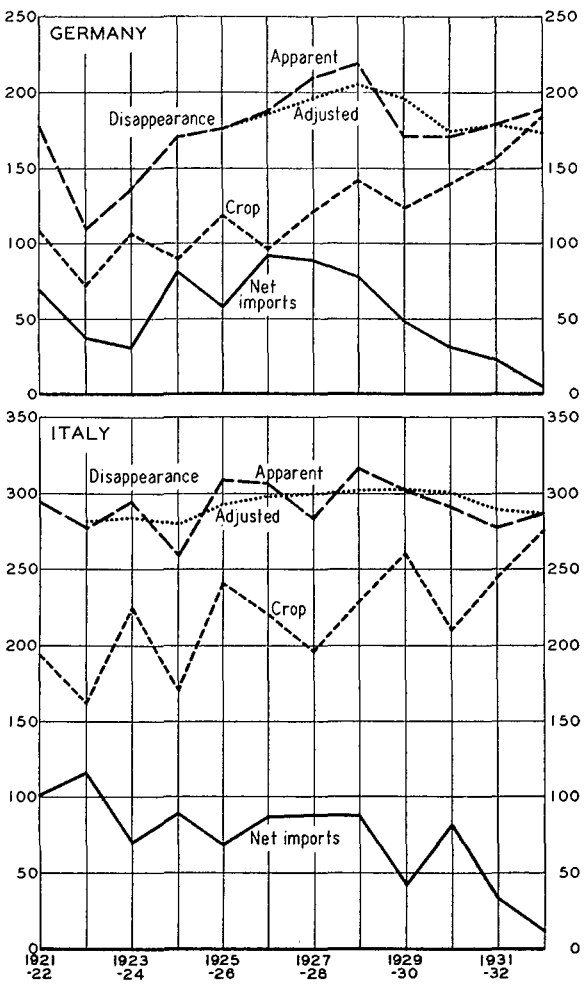
dence that total wheat consumption tends to decline, in spite of high tariffs and stringent milling regulations; apparently it remains about stable, and consumption in 1932–33 was presumably quite as heavy as usual. The net imports of 1932–33, though far below average, were large in view of the trend of consumption, the size of the 1932 crop, and the stringency of import restrictions. The bulk of the imports, however, consisted of wheat admitted duty-free from the northern African dependencies, and the small net imports from other sources entered France mostly before the milling quota was raised to 99 per cent in December 1932 (Tables XXVI, XXXVII). In 1929–30, when the crop was barely larger than that of 1932, net imports were only 5.5 million bushels. But in that year only two-thirds as much wheat was imported from northern Africa free of duty; and French exports, facilitated by an export bounty as well as by domestic wheat prices relatively low in relation to world prices (Chart 16, p. 97), were three times larger than the exports of 1932–33. The more stringent import restrictions of 1932–33 were adequate to keep imports of duty-paid wheat lower than in 1929–30 and also to maintain French domestic prices at a level farther above world prices. They did not, however, keep total net imports lower, or maintain domestic prices on an absolute level as high as that of 1929–30. The carryover was built up to a new high peak.

Portuguese net imports, like those of France and Greece, were relatively small but were large in view of the trend of consumption and the crop of 1932. Here, also, heavy stocks were carried out of the crop year. The net imports, admitted as usual only on permit, probably represented little more than the supplies of hard wheat needed in order to improve flour quality. In Sweden the situation was similar. Net imports into both of these countries were much the smallest in more than a decade.

Germany and Italy (Chart 26) represent a group of countries (which includes Austria, Czechoslovakia, Finland, Latvia, and Estonia) wherein trends of total wheat consumption, steeply upward through 1928–29, have been flattened or reversed in subsequent years with resultant decline of per capita wheat consumption for food. Tariff barriers were high in all seven countries; other import restrictions were severe; and all had record

CHART 26.—WHEAT SUPPLIES AND DISAPPEARANCE IN GERMANY AND ITALY, FROM 1921–22*

(Million bushels)



* Data in Tables II, XXI, and XXXIV. Figures for Germany are understated, probably in all years prior to 1926–27 or 1927–28. The dotted lines represent crop plus net imports adjusted for our estimates of changes in stocks.

post-war wheat crops in 1932, harvested (except in Italy) from record post-war acreages which themselves reflect the influence of the price-sustaining governmental measures. In all seven countries the net imports of 1932–33 were the smallest in a decade, and in most the consumption of wheat was lower than in any of the preceding five years. To meet even

this low level of consumption, stocks were drawn down or kept about at a minimum except in Germany. Germany produced more wheat than she consumed in 1932–33, and toward the end of the year had recourse to measures designed to reduce the domestic surplus (see p. 89); she was a net exporter in five of the first seven months of the crop year, but rather because the export certificate system permitted German wheat to compete on world markets than because German domestic wheat prices fell to export parity.

German and Italian net imports together were only 15 million bushels in 1932–33, an altogether trifling fraction of world net exports; less than 4 per cent of European net imports; barely more than the net imports of Austria. At their peak of 178 million bushels in 1926–27, the net imports of Germany and Italy, then respectively the second and third largest wheat importers in the world, represented more than a fourth of total European imports, and more than a fifth of the total volume of international trade. Both moved in 1932–33 to the brink of self-sufficiency in wheat, with profound effects upon international trade. The still larger wheat crops of 1933 are now directing governmental attention to the problem of price maintenance in the face of domestic surpluses.

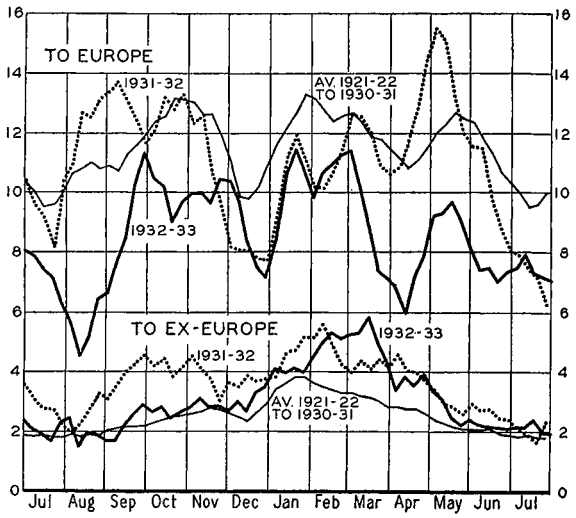
Trade with ex-Europe

The imports of ex-European countries, with the notable exception of China, in most instances apparently fell to relatively low levels in 1932–33. But Chinese imports (excluding Manchuria, 56 million bushels in August–July or 59 million in July–June) were undoubtedly the largest in history, though close comparisons with earlier years are not feasible in the absence of crop-year statistics.[1] The heavy Chinese imports sufficed to hold the total volume of ex-European trade to a relatively high level; total shipments to ex-Europe (Table XIX) of 166 million were smaller only than those of the two preceding years and also of 1928–29, when India imported heavily. China (including or excluding Manchuria) was for the first time the second largest wheat-importing country of the world in 1932–33, ranking next to the United Kingdom.

Low wheat and flour prices, a relatively small domestic wheat crop, and continued admission of wheat free of duty were the main factors in the heavy takings of China and Manchuria. The principal source of supply was Australia, which provided 78 per cent of the wheat imports (July–June) of China proper, and 39 per cent of the flour imports.[2] The course of shipments to ex-Europe (Chart 27), with the heavy movement concentrated

Chart 27.—Shipments to Europe and ex-Europe, 1932–33, with Comparisons*

(Million bushels; 3-week moving average)



* See note to Chart 22.

in February–April, strongly reflects the preponderance of Australia among the sources of Oriental imports.

Sharply in contrast with the Chinese, the Japanese net imports were strikingly low—only 3.8 million bushels, barely a third as large as the smallest recorded in the preceding decade (Table XXI). Heavy stocks, accumulated toward the end of 1931–32 in anticipation of weakening of the exchange and an increase in tariff duties effective on June 16, were drawn down in 1932–33. Nevertheless so little wheat was imported that total consumption of wheat fell off perhaps as much as 15–20 per cent from the average of

[1] Table XXIV gives calendar-year net imports into China, including Manchuria, 1923–32.

[2] *World Wheat Prospects*, August 26, 1933, p. 19.

the five preceding years. Depreciation of Japanese currency and moderately abundant domestic crops of rice and barley were probably the main factors in the low level of wheat consumption and net imports. Flour exports were the largest on record.

Egypt and South Africa (Tables XXI, XXIII) also imported less than in any year of the past decade because of large domestic crops and high trade barriers. New Zealand, never an important importer, had a large crop in 1932 and was a net exporter toward the end of the crop year (Table XXVI) under the operation of the new Wheat Purchase Board. Brazilian net imports fell to somewhat the lowest level of the past seven years (Table XXIII), mainly because of reduced purchasing power. The imports contained less United States wheat and more Argentine in 1932–33 than in 1931–32 since the bulk of the stabilization wheat was shipped in 1931–32; under the flour embargo lifted in February 1933, Brazilian net imports of flour were the smallest in a decade (Table XXII). Net imports into the West Indies, practically all flour, likewise apparently fell to a new post-war low level (Table XXIII), with reduced purchasing power, higher trade barriers, and (at least in Cuba) enforced use of wheat-flour substitutes the dominant factors. The decline from 1931–32, however, was smaller in magnitude than is suggested by Broomhall's data (Table XIX) on total shipments to a group of countries designated "Central America, West Indies, Dutch East Indies, Venezuela, etc." These shipments declined 22 million bushels, or over 40 per cent. But other available statistics relating to the West Indies, the Dutch East Indies, Ceylon, and Indo-China suggest a reduction in the trade with these countries of only 2 million bushels or 12 per cent.

A few ex-European countries imported more wheat than in 1931–32. The list includes Syria and Lebanon, where the 1932 crop was short, and possibly other small countries in Asia Minor; Turkey, however, did not import net, but exported less than half a million bushels, about a fourth of her net exports in 1931–32. Chile, more often a net exporter than a net importer, had so short a crop in 1931, followed by an average one in 1932, that net imports of 2.5 million bushels in 1932–33 were the largest in a decade. India was a net importer of less than a million bushels in 1932–33; imports were probably again kept out by the tariff barrier.

China (including Manchuria) imported so heavily in 1932–33 that it is reasonable to infer that shipments from the area described in our crop statistics as the "world excluding Russia, China, and southwestern Asia" to outside areas must have been of record post-war size. Total available supplies of 1932–33 within this area (Table XXXIV) were not quite so large as in the two preceding crop years. Other things equal, the heavy shipments to outside areas would have resulted in exceptionally heavy disappearance within the area. But disappearance actually fell more than 100 million bushels below the figures for 1930–31 and 1931–32. Reduction of wheat consumption in the United States (feed more than food use), Rumania, Yugoslavia, Poland, Germany, Italy, and Japan—and to a less marked degree in some other countries both European and ex-European—accounts for this reduction in "world" wheat disappearance. In some degree the reduction represents merely the accident of crop distribution, since low yields per acre occurred in some countries which never maintain domestic consumption by importing quantities of wheat necessary to counterbalance a domestic crop deficit. In some degree the reduction represents forced economy in the use of food among individuals, resulting from circumstances inherent in general economic depression. But in some degree governmental efforts to protect domestic wheat producers are directly responsible for decline in wheat consumption, and hence for the huge world wheat surplus carried out of 1932–33 and into the new crop year.

This review was written by M. K. Bennett and Helen C. Farnsworth, with the advice of Joseph S. Davis and Holbrook Working and the aid of Robert F. Lundy on tables and of P. Stanley King on charts

APPENDIX

TABLE I.—WHEAT PRODUCTION, ACREAGE, AND YIELD PER ACRE IN PRINCIPAL PRODUCING AREAS, 1923–32*

Year	World ex-Russia[a]			Four chief exporters					India	Northern Africa[b]	Europe ex-Russia			USSR	World including Russia
	Total	Northern Hemisphere	Southern Hemisphere	Total	United States	Canada	Australia	Argentina			Lower Danube[c]	Other Europe	Total		
	A. PRODUCTION (*million bushels*)														
1923	3,441	3,017	424	1,606	759	474	125	248	372	66	260	997	1,257	...	....
1924	3,055	2,652	403	1,458	840	262	165	191	361	51	204	853	1,057	...	....
1925	3,302	2,946	356	1,370	669	395	115	191	331	68	296	1,101	1,397	782	4,084
1926	3,364	2,924	440	1,632	834	407	161	230	325	57	294	922	1,216	914	4,278
1927	3,580	3,118	462	1,755	875	480	118	282	335	60	272	1,002	1,274	785	4,365
1928	3,917	3,350	567	2,002	926	567	160	349	291	69	367	1,042	1,409	807	4,714
1929	3,414	3,060	354	1,408	813	305	127	163	321	77	303	1,146	1,449	694	4,108
1930	3,677	3,186	491	1,726	859	421	214	232	391	64	353	1,009	1,362	989	4,666
1931	3,637	3,174	463	1,632	900	321	191	220	347	69	370	1,064	1,434	786	4,423
1932	3,703	3,203	500	1,646	744	455	212	235	337	75	224	1,266	1,490	...	....
Average 1927–31	3,645	3,178	467	1,705	875	419	162	249	337	68	333	1,053	1,386	812	4,455
1909–13	2,998	2,721	277	1,125	690	197	91	147	352	58	330	1,016	1,346	757	3,755
	B. ACREAGE (*million acres*)														
1923	219.5	189.4	30.1	105.3	56.9	21.9	9.5	17.0	30.9	7.0	16.2	49.9	66.1	....	....
1924	215.2	185.2	30.0	101.4	52.5	22.1	10.8	16.0	31.2	7.2	18.1	49.4	67.5	....	....
1925	218.1	186.7	31.4	101.0	52.4	20.8	10.2	17.6	31.8	7.9	18.5	50.8	69.3	63.1	281.2
1926	227.4	193.2	34.2	110.4	56.8	22.9	11.7	19.0	30.5	8.1	18.7	51.3	70.0	73.9	301.3
1927	233.3	196.8	36.5	114.6	59.6	22.5	12.3	20.2	31.3	7.2	18.9	52.4	71.3	77.4	310.7
1928	241.5	200.3	41.2	120.6	59.3	24.1	14.8	22.4	32.2	8.3	19.6	51.8	71.4	68.5	310.0
1929	238.5	203.5	35.0	118.9	62.7	25.3	15.0	15.9	32.0	8.5	18.3	51.7	70.0	73.5	312.0
1930	247.0	205.2	41.8	123.8	61.2	24.9	18.2	19.5	31.7	8.9	20.0	53.7	73.7	80.5	327.6
1931	238.3	202.9	35.4	112.2	55.3	26.2	14.7	16.0	32.2	8.2	20.9	55.0	75.9	92.1	330.4
1932	244.7	207.5	37.2	117.4	57.2	27.2	15.2	17.8	33.8	8.8	19.2	56.4	75.6	88.7	331.1
Average 1927–31	239.7	201.7	38.0	118.1	59.6	24.6	15.0	18.8	31.9	8.2	19.5	52.9	72.5	78.4	318.1
1909–13	196.1	170.9	25.2	79.5	47.1	9.9	7.6	14.9	29.2	6.5	19.6	53.2	72.8	74.0	270.1
	C. YIELD PER ACRE (*bushels*)														
1923	15.7	15.9	14.1	15.2	13.3	21.7	13.1	14.5	12.1	9.5	16.1	20.0	19.0	....	....
1924	14.2	14.3	13.4	14.4	16.0	11.8	15.2	12.0	11.6	7.1	11.3	17.3	15.7	....	....
1925	15.1	15.8	11.4	13.5	12.8	19.0	11.2	10.8	10.4	8.7	16.0	21.7	20.1	12.4	14.5
1926	14.8	15.1	12.9	14.8	14.7	17.8	13.8	12.1	10.7	7.0	15.7	18.0	17.4	12.4	14.2
1927	15.3	15.8	12.6	15.3	14.7	21.4	9.6	14.0	10.7	8.4	14.4	19.1	17.9	10.1	14.0
1928	16.2	16.7	13.8	16.6	15.6	23.5	10.8	15.6	9.0	8.2	18.8	20.1	19.7	11.8	15.2
1929	14.3	15.0	10.1	11.8	13.0	12.1	8.5	10.2	10.0	9.1	16.5	22.2	20.7	9.4	13.2
1930	14.9	15.5	11.7	13.9	14.0	16.9	11.8	11.9	12.3	7.2	17.6	18.8	18.5	12.3	14.2
1931	15.3	15.6	13.1	14.5	16.3	12.3	12.9	13.7	10.8	8.5	17.7	19.4	18.9	8.5	13.4
1932	15.1	15.4	13.5	14.0	13.0	16.7	14.0	13.2	10.0	8.4	11.7	22.4	19.0	....	....
Average 1923–31	15.1	15.5	12.6	14.4	14.5	17.4	11.9	12.7	10.8	8.2	16.0	19.6	18.6	11.0[d]	14.1[d]
1909–13	15.3	15.9	11.0	14.2	14.7	19.8	11.9	9.9	12.0	8.9	16.8	19.1	18.5	10.2	13.9

* Data summarized from Tables II and III. Yield per acre averages for 1923–31 are simple averages of annual yields. Average yields for 1909–13 computed from average production and acreage data.

[a] Excludes China and numerous small producing countries, of which Turkey is the largest.

[b] Morocco, Algeria, Tunis.

[c] Hungary, Yugoslavia, Rumania, Bulgaria.

[d] 1925–31 average.

TABLE II.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING COUNTRIES, 1923–33*

(Million bushels)

Year	U.S. total	U.S. winter	U.S. spring	Canada	India	Australia	Argentina	Uruguay	Chile	Hungary	Yugoslavia	Rumania	Bulgaria	USSR
1923.....	759.5	555.3	204.2	474.2	372.4	125.0	247.8	13.3	28.1	67.7	61.1	102.1	29.1	....
1924.....	840.1	571.6	268.5	262.1	360.6	164.6	191.1	9.9	24.5	51.6	57.8	70.4	24.7	....
1925.....	669.1	401.1	268.0	395.5	331.0	114.5	191.1	10.0	26.7	71.7	78.6	104.7	41.4	782.3
1926.....	833.5	631.9	201.6	407.1	324.7	160.8	230.1	10.2	23.3	74.9	71.4	110.9	36.5	913.8
1927.....	874.7	547.7	327.0	479.7	335.0	118.2	282.3	15.4	30.6	76.9	56.6	96.7	42.1	784.6
1928.....	926.1	591.0	335.1	566.7	290.9	159.7	349.1	12.3	29.7	99.2	103.3	115.5	49.2	807.3
1929.....	812.6	577.0	235.6	304.5	320.8	126.9	162.6	13.2	33.5	75.0	95.0	99.8	33.2	693.6
1930.....	858.9	601.1	257.8	420.7	390.8	213.6	232.3	7.4	21.2	84.3	80.3	130.8	57.3	989.2
1931.....	900.2	787.4	112.8	321.3	347.4	190.6	219.7	11.3	21.2	72.6	98.8	135.3	63.8	786.0
1932.....	744.1	475.7	268.4	455.0	336.9	212.4	235.4	5.2	26.1	64.5	53.4	55.5	50.6	....
1933.....	527.4	351.0	176.4	271.8	352.9	160.0	256.2	....	....	90.1	96.6	115.6	58.9	....
Average 1927–31..	874.5	620.8	253.7	418.6	337.0	161.8	249.2	11.9	27.2	81.6	86.8	115.6	49.1	810.7
1909–13..	690.1	.....	.....	197.1	351.8	90.5	147.1	6.5[a]	20.1	71.5	62.0	158.7[a]	37.8	757.3

Year	Morocco	Algeria	Tunis	Egypt	British Isles	France	Germany	Italy	Belgium[b]	Netherlands	Denmark	Norway	Sweden	Switzerland
1923.....	20.0	36.2	9.9	40.7	60.6	275.6	106.4	224.8	13.7	6.2	8.9	.59	11.0	3.84
1924.....	28.8	17.3	5.1	34.2	53.9	281.2	89.2	170.1	13.3	4.6	5.9	.49	6.8	3.33
1925.....	23.9	32.7	11.8	36.2	53.7	330.3	118.2	240.8	15.0	5.7	9.7	.49	13.4	3.76
1926.....	20.6[c]	23.6	13.0	37.2	52.2	231.8	95.4	220.6	13.4	5.5	8.8	.59	12.2	4.04
1927.....	23.5[c]	28.3	8.1	44.3	57.2	276.1	120.5	195.8	17.0	6.2	9.4	.60	15.3	4.12
1928.....	24.7[c]	30.3	13.7	37.3	50.9	281.3	141.6	228.6	17.9	7.3	12.2	.80	18.3	4.24
1929.....	31.8	33.3	12.3	45.2	50.9	337.3	123.1	260.1	13.5	5.5	11.8	.75	19.0	4.21
1930.....	21.3	32.4	10.4	39.8	43.4	228.1	139.2	210.1	13.7	6.1	10.2	.72	20.8	3.60
1931.....	29.8	25.6	14.0	46.1	38.6	264.1	155.5	244.4	14.2	6.8	10.1	.59	17.0	4.04
1932.....	28.0	29.2	17.5	52.6	44.4	333.5	183.8	277.2	16.1	12.8	10.7	.78	26.5	4.18
1933.....	27.0	27.1	9.2	40.0	62.5	338.7	205.8	297.6	14.4	14.2	....	.77	27.8	4.81
Average 1927–31..	26.2	30.0	11.7	42.6	48.2	277.4	136.0	227.8	15.3	6.4	10.7	.69	18.1	4.04
1909–13..	17.0	35.2	6.2	33.7	59.6	325.6	131.3	184.4	15.8	5.0	6.3	.31	8.1	3.31

Year	Spain	Portugal	Austria	Czechoslovakia	Poland	Finland	Latvia	Estonia	Lithuania	Greece	Japan, Chosen	Mexico	South Africa	New Zealand
1923.....	157.1	13.2	8.9	36.2	54.9	.69	1.64	.74	3.0	8.8	33.6	....	6.0	4.18
1924.....	121.8	10.6	8.5	32.2	37.5	.79	1.58	.54	3.3	7.7	35.7	10.4	7.1	5.45
1925.....	162.6	12.5	10.7	39.3	63.9	.93	2.16	.79	5.3	11.2	40.0	9.2	9.2	4.62
1926.....	146.6	8.6	9.4	39.9	52.5	.92	1.86	.88	4.2	12.4	38.7	10.3	8.0	7.95
1927.....	144.8	11.4	12.0	47.2	61.1	1.06	2.64	1.08	5.2	13.0	38.3	11.9	5.7	9.54
1928.....	122.6	7.5	12.9	52.9	59.2	1.00	2.50	1.04	6.3	13.1	39.4	11.0	7.2	8.83
1929.....	154.2	10.6	11.6	52.9	65.9	.76	2.34	1.26	9.3	11.4	38.8	11.3	10.6	7.24
1930.....	146.7	13.8	12.0	50.6	82.3	.87	4.06	1.64	11.3	9.7	38.5	11.4	9.3	7.58
1931.....	134.4	13.0	11.0	41.2	83.2	1.12	3.39	1.74	8.3	11.2	39.2	16.2	13.7	6.58
1932.....	184.2	18.1	13.0	53.7	49.5	1.48	5.27	2.09	8.1	20.3	39.9	9.7	10.6	10.35
1933.....	131.9	14.7	17.4	72.9	68.3	1.50	6.60	2.09	8.7	28.6	47.6	11.8	9.4	....
Average 1927–31..	140.5	11.3	11.9	49.0	70.3	.96	3.00	1.35	8.1	11.7	38.8	12.4	9.3	7.95
1909–13..	130.4	11.8[d]	12.8	37.9	61.7	.14	1.48	.36	3.3	16.3[d]	32.0	11.5[a]	6.3	6.92

* Data of U.S. Department of Agriculture and International Institute of Agriculture. Figures for 1933 are preliminary. Averages for 1909–13 are U.S. Department of Agriculture estimates of production within post-war boundaries. Dots (...) indicate that comparable data are not available.

[a] Four-year average.

[b] Including Luxemburg.

[c] Mean of maximum and minimum production reported.

[d] One year only.

TABLE III.—WHEAT ACREAGE IN PRINCIPAL PRODUCING COUNTRIES, 1923–33*

(*Million acres*)

Year	U.S. total	U.S. winter	U.S. spring	Canada	India	Australia	Argentina	Uruguay	Chile	Hungary	Yugoslavia	Rumania	Bulgaria	USSR
1923.....	56.92	38.71	18.21	21.89	30.85	9.54	17.04	1.06	1.54	3.29	3.84	6.65	2.38	....
1924.....	52.46	35.42	17.04	22.06	31.18	10.82	15.98	.85	1.43	3.50	4.24	7.84	2.49	....
1925.....	52.44	31.96	20.48	20.79	31.78	10.20	17.62	.96	1.45	3.52	4.31	8.16	2.55	63.12
1926.....	56.82	37.60	19.22	22.90	30.47	11.69	18.95	.99	1.48	3.71	4.18	8.22	2.62	73.90
1927.....	59.63	38.20	21.43	22.46	31.30	12.28	20.20	1.15	1.84	4.02	4.52	7.66	2.67	77.39
1928.....	59.31	36.96	22.35	24.12	32.19	14.84	22.43	1.08	1.72	4.14	4.68	7.92	2.81	68.52
1929.....	62.67	40.58	22.09	25.26	31.97	14.98	15.90	1.10	1.72	3.71	5.21	6.76	2.66	73.46
1930.....	61.25	39.57	21.68	24.90	31.65	18.16	19.53	.96	1.61	4.19	5.25	7.55	3.01	80.49
1931.....	55.34	41.36	13.98	26.20	32.19	14.74	16.03	1.08	1.52	4.01	5.29	8.57	3.05	92.07
1932.....	57.20	35.27	21.93	27.18	33.80	15.17	17.79	.95	1.47	3.79	5.25	7.09	3.08	88.72
1933.....	47.49	28.42	19.07	25.99	32.99	14.50	.....[a]	1.23	....	3.94	5.07	6.92	3.00	....
Average 1927–31..	59.64	39.33	20.31	24.59	31.86	15.00	18.85	1.07	1.68	4.01	4.99	7.69	2.84	78.38
1909–13..	47.10	.....	.....	9.94	29.22	7.60	14.88	.79[b]	1.00	3.71	3.98	9.52[b]	2.41	74.03

Year	Morocco	Algeria	Tunis	Egypt	British Isles	France	Germany	Italy	Belgium[c]	Netherlands	Denmark	Norway	Sweden	Switzerland
1923.....	2.25	3.12	1.61	1.54	1.84	13.67	3.65	11.55	.361	.154	.205	.025	.362	.112
1924.....	2.46	3.53	1.20	1.42	1.63	13.62	3.62	11.28	.362	.118	.149	.021	.322	.111
1925.....	2.62	3.61	1.62	1.38	1.58	13.87	3.84	11.67	.392	.132	.199	.022	.363	.112
1926.....	2.56	3.74	1.84	1.53	1.68	12.97	3.96	12.14	.386	.132	.252	.022	.381	.127
1927.....	2.30	3.47	1.38	1.66	1.74	13.06	4.32	12.30	.427	.153	.274	.025	.561	.127
1928.....	2.66	3.66	2.02	1.59	1.49	12.96	4.27	12.26	.445	.148	.252	.028	.561	.127
1929.....	3.01	3.80	1.73	1.61	1.41	13.34	3.96	11.79	.377	.112	.260	.030	.574	.129
1930.....	2.96	4.03	1.90	1.52	1.43	13.28	4.40	11.92	.436	.142	.249	.030	.647	.134
1931.....	2.54	3.64	1.98	1.65	1.27	12.84	5.36	11.88	.404	.192	.259	.029	.683	.135
1932.....	2.71	3.74	2.39	1.76	1.36	13.43	5.64	12.24	.417	.297	.245	.028	.746	.137
1933.....	3.03	3.82	1.98	1.43	1.80	13.36	5.73	12.52	....	.332	....	.031	....	....
Average 1927–31..	2.69	3.72	1.80	1.61	1.47	13.10	4.46	12.03	.418	.149	.259	.028	.605	.130
1909–13..	1.70	3.52	1.31	1.31	1.89	16.50	4.03	11.79	.431	.138	.154	.012	.255	.105

Year	Spain	Portugal	Austria	Czechoslovakia	Poland	Finland	Latvia	Estonia	Lithuania	Greece	Japan, Chosen	Mexico	South Africa	New Zealand
1923.....	10.49	1.06	.475	1.51	2.99	.038	.106	.056	.201	1.06	2.07	....	.78	.174
1924.....	10.38	1.04	.482	1.51	3.16	.037	.106	.044	.210	1.15	2.03	1.40	.76	.167
1925.....	10.72	1.05	.484	1.53	3.20	.038	.119	.051	.277	1.15	2.04	1.13	.97	.152
1926.....	10.78	1.06	.500	1.80	3.25	.039	.122	.059	.303	1.30	2.04	1.29	.88	.220
1927.....	10.83	1.06	.505	1.85	3.36	.044	.145	.067	.297	1.23	2.06	1.31	.77	.261
1928.....	10.57	1.10	.514	1.92	3.19	.046	.164	.070	.393	1.33	2.10	1.28	.82	.255
1929.....	10.62	1.08	.515	2.02	3.53	.034	.145	.082	.488	1.24	2.09	1.29	1.08	.236
1930.....	11.13	1.10	.508	1.96	4.07	.035	.179	.090	.526	1.43	2.05	1.22	1.27	.249
1931.....	11.24	1.27	.517	2.05	4.50	.047	.215	.099	.478	1.50	2.04	1.50	1.74	.269
1932.....	11.25	1.36	.536	2.06	4.26	.059	.255	.128	.509	1.48	2.04	1.10	1.56	....
1933.....	11.05	1.24	....	2.24	4.08	.065	....	.163	.499	1.73	....	1.18	....	....
Average 1927–31..	10.88	1.12	.512	1.96	3.73	.041	.170	.082	.436	1.35	2.07	1.32	1.14	.254
1909–13..	9.55	1.21[d]	.635	1.72	3.34	.008	.085	.023	.211	1.13[e]	1.75	2.17[f]	.74	.241

* Data of U.S. Department of Agriculture and International Institute of Agriculture. Figures for 1933 are preliminary. Averages for 1909–13 are U.S. Department of Agriculture estimates of area within post-war boundaries. Dots (...) indicate that comparable data are not available.

[a] See Table VIII for area sown.
[b] Four-year average.
[c] Including Luxemburg.
[d] Three-year average.
[e] One year only.
[f] Two-year average.

TABLE IV.—WHEAT YIELD PER ACRE IN PRINCIPAL PRODUCING COUNTRIES, 1923–33*

(Bushels per acre)

Year	U.S. total	U.S. winter	U.S. spring	Canada	India	Australia	Argentina	Uruguay	Chile	Hungary	Yugoslavia	Rumania	Bulgaria	USSR
1923.....	13.3	14.3	11.2	21.7	12.1	13.1	14.5	12.6	18.3	20.6	15.9	15.4	12.2	....
1924.....	16.0	16.1	15.8	11.8	11.6	15.2	12.0	11.7	17.1	14.7	13.6	9.0	9.9	....
1925.....	12.8	12.6	13.1	19.0	10.4	11.2	10.8	10.5	18.4	20.3	18.3	12.8	16.2	12.4
1926.....	14.7	16.8	10.5	17.8	10.7	13.8	12.1	10.4	15.7	20.2	17.1	13.5	14.0	12.4
1927.....	14.7	14.3	15.3	21.4	10.7	9.6	14.0	13.4	16.6	19.1	12.5	12.6	15.8	10.1
1928.....	15.6	16.0	15.0	23.5	9.0	10.8	15.6	11.3	17.3	23.9	22.1	14.6	17.5	11.8
1929.....	13.0	14.2	10.7	12.1	10.0	8.5	10.2	12.0	19.4	20.2	18.2	14.7	12.5	9.4
1930.....	14.0	15.2	11.9	16.9	12.3	11.8	11.9	7.7	13.2	20.1	15.3	17.3	19.1	12.3
1931.....	16.3	19.0	8.1	12.3	10.8	12.9	13.7	10.4	14.0	18.1	18.7	15.8	20.9	8.5
1932.....	13.0	13.5	12.2	16.7	10.0	14.0	13.2	5.5	17.8	17.0	10.2	7.8	16.4	....
1933.....	11.1	12.4	9.3	10.5	10.7	11.0	....	....	....	22.9	19.1	16.7	19.6	....
Average 1923-31..	14.5	15.4	12.4	17.4	10.8	13.0	12.8	11.1	16.7	19.7	16.9	14.0	15.3	11.0[a]
1909-13..	14.7	....	....	19.8	12.0	11.9	9.9	8.2[b]	20.0	19.3	15.6	16.7[b]	15.7	10.2

Year	Morocco	Algeria	Tunis	Egypt	British Isles	France	Germany	Italy	Belgium[c]	Netherlands	Denmark	Norway	Sweden	Switzerland
1923.....	8.9	11.6	6.2	26.5	32.9	20.2	29.1	19.5	37.9	40.3	43.2	23.5	30.4	34.3
1924.....	11.7	4.9	4.3	24.1	33.0	20.6	24.6	15.1	36.8	39.2	39.4	23.5	21.1	30.0
1925.....	9.1	9.1	7.2	26.2	34.1	23.8	30.8	20.6	38.3	43.5	49.0	22.3	36.8	33.6
1926.....	8.0	6.3	7.1	24.3	31.0	17.9	24.1	18.2	34.8	41.6	34.8	26.6	31.9	31.9
1927.....	10.2	8.2	5.8	26.8	32.8	21.1	27.9	15.9	39.8	40.2	34.3	24.2	27.3	32.5
1928.....	9.3	8.3	6.8	23.5	34.2	21.7	33.2	18.6	40.3	49.6	48.5	28.5	32.7	33.4
1929.....	10.6	8.8	7.1	28.0	36.0	25.3	31.1	22.1	35.8	48.8	45.3	25.0	33.1	32.6
1930.....	7.2	8.1	5.5	26.1	30.3	17.2	31.6	17.6	31.4	42.6	41.0	24.0	32.2	26.9
1931.....	11.7	7.0	7.1	27.9	30.4	20.6	29.0	20.6	35.2	35.2	38.8	20.4	24.9	30.0
1932.....	10.3	7.8	7.3	29.8	32.6	24.8	32.6	22.6	38.6	43.2	44.9	28.0	35.5	30.5
1933.....	8.9	7.1	4.6	28.0	34.8	25.4	35.9	23.8	....	42.7	....	....	....	....
Average 1923-31..	9.6	8.0	6.3	25.9	32.7	20.9	29.0	18.7	36.7	42.3	41.6	24.2	30.0	31.7
1909-13..	10.0	10.0	4.8	25.6	31.6	19.7	32.6	15.6	36.7	36.1	41.1	25.5	31.8	31.6

Year	Spain	Portugal	Austria	Czechoslovakia	Poland	Finland	Latvia	Estonia	Lithuania	Greece	Japan, Chosen	Mexico	South Africa	New Zealand
1923.....	15.0	12.5	18.7	24.0	18.4	18.1	15.5	13.2	14.8	8.3	16.3	...	7.7	24.0
1924.....	11.7	10.2	17.6	21.3	11.9	21.4	14.9	12.3	15.8	6.7	17.6	7.4	9.4	32.6
1925.....	15.2	11.9	22.0	25.7	19.9	24.4	18.2	15.5	19.1	9.8	19.7	8.2	9.5	30.4
1926.....	13.6	8.1	18.9	22.2	16.2	23.7	15.2	14.9	13.8	9.5	19.0	8.0	9.1	36.1
1927.....	13.4	10.8	23.7	25.5	18.2	24.2	18.2	16.1	17.7	10.5	18.6	9.1	7.3	36.6
1928.....	11.6	6.8	25.1	27.6	18.6	21.7	15.2	14.8	16.1	9.8	18.8	8.6	8.8	34.6
1929.....	14.5	9.9	22.4	26.2	18.7	22.5	16.1	15.4	19.1	9.2	18.6	8.8	9.8	30.7
1930.....	13.2	12.5	23.6	25.8	20.2	24.7	22.7	18.2	21.5	6.8	18.8	9.4	7.3	30.4
1931.....	12.0	10.2	21.3	20.1	18.5	23.9	15.8	17.6	17.4	7.5	19.2	10.8	7.9	24.5
1932.....	16.4	13.3	24.3	26.0	11.6	25.1	20.7	16.3	16.0	13.7	19.6	8.7	6.8	....
1933.....	11.9	11.9	....	29.3	16.7	23.0	....	12.8	17.5	16.5	....	10.0	...	....
Average 1923-31..	13.4	10.3	21.5	24.3	17.8	22.7	16.9	15.3	17.3	8.7	18.5	8.8[d]	8.5	31.1
1909-13..	13.7	....	20.2	22.0	18.4	17.1	17.4	15.8	15.5	14.4[e]	18.2	...	8.4	28.7

* Computed from data in Tables II and III. Figures for 1933 are preliminary. Dots (...) indicate that comparable data are not available. Averages for 1923–31 are simple averages of annual yields; 1909–13 averages are computed from average production and acreage data.

[a] Average for 1925–31. [b] Four-year average. [c] Including Luxemburg. [d] Average for 1924–31. [e] One year only.

TABLE V.—CEREAL AND POTATO PRODUCTION IN EUROPE EX-RUSSIA AND USSR, 1923–32*

(Million bushels)

Year	Europe ex-Russia						USSR[a]				
	Wheat	Rye	Barley	Oats	Corn	Potatoes	Wheat	Rye	Barley	Oats	Corn
1923	1,257	831	649	1,722	469	3,707	...	...	...	...	...
1924	1,057	654	565	1,572	589	4,053	...	...	...	...	...
1925	1,397	946	672	1,709	626	4,582	782	906	269	838	172
1926	1,216	761	674	1,843	653	3,714	914	941	246	1,071	131
1927	1,274	812	659	1,748	485	4,610	785	950	203	917	118
1928	1,409	904	743	1,879	384	4,562	807	760	260	1,135	130
1929	1,449	939	827	2,060	705	5,186	694	801	331	1,084	119
1930	1,362	922	760	1,711	611	5,055	989	937	311	1,145	105
1931	1,434	775	689	1,695	638	5,027	786	854	225	772	...
1932	1,490	932	780	1,853	770	5,328	...	...	...	...	...
Average 1927–31	1,386	870	736	1,819	565	4,888	812	860	266	1,011	118[b]
1909–13	1,346	982	701	1,929	581	4,183	757	744	418	925	52

* Data of U.S. Department of Agriculture and International Institute of Agriculture. Dots (...) indicate that comparable data are not available. Averages for 1909–13 are U.S. Department of Agriculture estimates of production within post-war boundaries.

[a] Many Russian statisticians regard pre-war averages as too low for proper comparison with post-war figures.

[b] 1927–30 average.

TABLE VI.—RYE, CORN, AND POTATO PRODUCTION IN PRINCIPAL PRODUCING COUNTRIES EX-RUSSIA, 1927–32*

(Million bushels)

Year	RYE													
	Germany	Poland	Baltic States[a]	Czechoslovakia	Austria	Hungary	Other Danube[b]	Scandinavia[c]	Netherlands	Belgium[d]	France	Spain	United States	Canada
1927	269.0	231.8	51.0	60.0	20.1	22.4	22.2	26.1	13.5	22.2	34.0	26.5	52.1	15.6
1928	335.5	240.5	43.7	72.3	19.9	32.6	27.1	27.1	17.3	23.5	34.1	16.4	38.6	14.6
1929	321.0	276.0	47.7	72.2	20.1	31.4	28.9	27.2	18.3	22.6	36.5	22.9	35.5	13.2
1930	302.3	273.9	61.7	70.4	20.6	28.4	38.7	27.8	14.9	19.1	28.4	21.5	46.3	22.0
1931	263.0	224.5	39.5	54.6	18.9	21.7	32.2	19.9	14.2	20.8	29.5	21.1	32.0	5.3
1932	329.3	240.6	52.7	85.7	23.9	30.3	29.0	26.4	13.9	24.2	33.9	25.9	40.6	8.9
Average 1927–31	298.2	249.3	48.7	65.9	19.9	27.3	29.8	25.6	15.6	21.6	32.5	21.7	40.9	14.1
1909–13	368.3	224.8	56.0	63.5	23.8	31.4	38.0	44.2	16.4	24.3	52.5	27.6	36.1	2.1

Year	CORN (MAIZE)							POTATOES					
	United States	Argentina	South Africa	Rumania	Yugoslavia	Italy	Hungary	Bulgaria	Germany	Poland	France	Czechoslovakia	British Isles	Belgium,[d] Netherlands
1927	2,678	312	69	139	83	87	68	21	1,380	984	644	370	275	220
1928	2,715	252	67	109	72	65	50	20	1,516	1,016	414	326	297	277
1929	2,536	281	80	251	163	100	71	37	1,473	1,167	594	393	331	303
1930	2,058	420	57	178	136	118	55	31	1,731	1,135	512	329	254	226
1931	2,567	293	68	248	126	77	60	35	1,612	1,139	599	357	216	240
1932	2,907	264	31	236	189	119	96	42	1,728	1,101	606	341	321	298
Average 1927–31	2,511	312	68	185	116	89	61	29	1,542	1,088	553	355	275	253
1909–13	2,712	192	34	193	112	103	61	26	1,374	911	527	245	254	221

* Data of U.S. Department of Agriculture and International Institute of Agriculture.

[a] Finland, Estonia, Latvia, Lithuania.

[b] Yugoslavia, Rumania, Bulgaria.

[c] Denmark, Norway, Sweden.

[d] Including Luxemburg.

TABLE VII.—UNITED STATES WHEAT PRODUCTION BY CLASSES, 1925–33*

(Million bushels)

Crop of	Hard red winter	Soft red winter	White	Hard red spring	Durum	Total
1925	206	170	80	156	65	677
1926	360	229	73	121	48	831
1927	317	181	95	202	83	878
1928	384	140	86	203	102	915
1929	362	166	84	145	56	813
1930	375	175	89	161	59	859
1931	492	249	68	70	21	900
1932	264	148	86	187	41	726
1933	163	143	92	98	19	515
Average 1927–31	386	182	85	156	64	873

* Latest estimates of the U.S. Department of Agriculture from *Agriculture Yearbooks* and *Crops and Markets*, October 1933, p. 372.

TABLE VIII.—WHEAT ACREAGE IN THE UNITED STATES AND ARGENTINA, 1925–33*

(Million acres)

Year	United States				Argentina	
	Winter sown	Winter harvested	Spring harvested	Total harvested	Sown	Harvested
1925	40.92	31.96	20.48	52.44	19.20	17.62
1926	40.60	37.60	19.22	56.82	19.27	18.95
1927	44.13	38.20	21.43	59.63	20.69	20.20
1928	48.35	36.96	22.35	59.31	22.78	22.43
1929	43.34	40.58	22.09	62.67	20.47	15.90
1930	43.63	39.57	21.68	61.25	21.28	19.53
1931	43.52	41.36	13.98	55.34	17.30	16.03
1932	40.42	35.27	21.93	57.20	19.79	17.79
1933	39.98	28.42	19.07	47.49	18.90	.....

* Data as reported by the U.S. Department of Agriculture in *Agriculture Yearbooks*, *Crop Reports*, and *Foreign Crops and Markets*.

TABLE IX.—WHEAT PRODUCTION IN OTHER COUNTRIES, 1925–32*

(Million bushels)

Year	Turkey	Syria, Lebanon	Palestine	Cyprus	Manchuria	Brazil	Peru
1925	39.5	9.0	3.71	2.08	21.7	5.67	3.18
1926	90.7	12.7	3.64	1.62	25.7	4.96	2.67
1927	49.0	13.7	3.65	1.87	45.9	4.64	3.15
1928	59.2	6.5	2.40	1.56	54.0†	4.63	3.08
1929	99.9	16.3	3.13	2.20	47.8	6.27	4.47
1930	91.3	18.6	3.28	1.87	49.8	4.98	4.52
1931	102.4	13.9	2.93†	1.62	58.4†	....	3.48
1932	69.3	10.4	....	1.18	....	....	....

* Available data for countries not included in Table II and producing over 1 million bushels a year, from U.S. Department of Agriculture and (items marked†) International Institute of Agriculture. Persia, 1931, 18.8† million bushels.

TABLE X.—NORTH AMERICAN WHEAT CROP FORECASTS AND ESTIMATES, 1926–33*

(Million bushels)

Date	1926	1927	1927	1929	1930	1931	1932	1933
U.S. WINTER								
May 1	549	594	486	595	525	653	441	337
June 1	543	537	512	622	532	649	411	341
July 1	568	580	544	583	558	713	432	336
Aug. 1	626	553	578	568	598	775	442	340
Dec. 1	627	553	579	578	604	787	462	351
Revised[a]	627	553	579	576	602	787	476	...
Standing[b]	632	548	591	577	601	787	476	351
U.S. SPRING								
July 1	199	274	256	251	249	156	305	160
Aug. 1	213	298	313	206	223	119	281	160
Sept. 1	212	308	322	218	240	111	273	166
Oct. 1	213	314	325	224	242	109	270	175
Dec. 1	205	319	324	228	247	105	265	176
Revised[a]	204	325	336	233	256	113	268	...
Standing[b]	202	327	335	236	258	113	268	176
U.S. TOTAL								
July 1	767	854	800	834	807	869	737	496
Aug. 1	839	851	891	774	821	894	723	500
Sept. 1	839	861	901	786	838	886	715	506
Oct. 1	840	867	904	792	840	884	712	515
Dec. 1	832	872	903	806	851	892	727	527
Revised[a]	831	878	915	809	858	900	744	...
Standing[b]	834	875	926	813	859	900	744	527
CANADA P.P.								
Aug. 31	376	432	527	269	362	246	446	264
Oct. 31	381	419	480	272	374	279	411	253
Dec. 31[c]	383	415	511	277	374	284	408	...
Standing[bd]	381	455	545	282	397	301	434	...
CANADA TOTAL								
Aug. 31	399	459	550	294	385	271	467	283
Oct. 31	406	444	501	294	396	298	431	272
Dec. 31[c]	410	440	534	300	398	304	429	...
Standing[bd]	407	480	567	305	421	321	455	...

* Data for the United States from *Agriculture Yearbooks*, *Crops and Markets*, and *Crop Reports* of the Department of Agriculture; Canadian data from *Monthly Bulletin of Agricultural Statistics* and press releases.

[a] Published in December of the following year.

[b] On December 15, 1933.

[c] So-called "final" estimate.

[d] Revisions based upon disposition statistics, usually published a year later than the "final" estimates.

TABLE XI.—INDEXES OF THE QUALITY OF UNITED STATES WHEAT CROPS, 1923–32

Year	Weight per measured bushel[a] (pounds)	Bushels ground per barrel of flour[b]	Percentage of high medium quality[c]		Percentage of protein content[d]	
			Winter	Spring	Winter	Spring
1923	57.4	4.70	89.0	83.4	.....	.....
1924	58.9	4.65	93.0	93.4	.....	.....
1925	58.3	4.70	90.4	87.0	13.00	12.48
1926	59.1	4.64	94.5	87.1	13.02	13.26
1927	58.5	4.69	88.5	87.7	12.27	11.89
1928	58.5	4.64	88.7	90.9	11.91	12.34
1929	58.2	4.67	86.7	88.7	12.27	13.59
1930	58.9	4.68	93.4	86.5	12.41	14.43
1931	59.1	4.64	92.1	82.7	11.81	13.89
1932	....[e]	4.65	....[e]	....[e]	.....	.....

[a] *Agriculture Yearbook, 1931*, p. 592, and *Crops and Markets*.

[b] Computed from data as given in U.S. Department of Commerce, *Wheat Ground and Wheat Milling Products*.

[c] From *Crops and Markets*.

[d] See *World Wheat Prospects*, October 19, 1931, p. 16.

[e] Statistics discontinued.

TABLE XII.—CANADIAN SPRING WHEAT GRADINGS, SEPTEMBER–AUGUST, 1923–33*

(Percentages of total)

Year	No. 1[a]	No. 2	No. 3	Total Nos. 1-3	Nos. 4-6 and feed	No grade[b]	Other[c]
1923–24	37.3	25.8	22.9	86.0	7.4	1.0	5.6
1924–25	19.3	18.3	18.6	56.2	28.9	11.7	3.2
1925–26	22.4	27.0	13.9	63.3	4.3	28.6	3.8
1926–27	9.2	17.5	7.8	34.5	5.9	51.2	8.4
1927–28	.9	7.7	22.3	30.9	21.4	43.1	4.6
1928–29	1.5	12.3	19.7	33.5	58.0	1.4	7.1
1929–30	40.0	35.9	11.8	87.7	2.9	1.4	8.0
1930–31	39.6	20.8	5.1	65.5	2.2	25.3	7.0
1931–32	36.2	33.8	9.9	79.9	4.6	10.8	4.7
1932–33	54.8	29.7	3.5	88.0	2.9	3.8	5.3

* Computed from data in *Canadian Grain Statistics*.

[a] Includes No. 1 Hard and No. 1 Northern.

[b] Wheat of straight grades except that it contains a higher proportion of moisture. Aside from higher moisture content, it may be as good quality as these grades. Designation changed to "tough and damp" beginning with 1930–31.

[c] Largely durum.

TABLE XIII.—WHEAT MARKETINGS IN NORTH AMERICA, MONTHLY, 1923–33*

(Million bushels)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total[a]
	UNITED STATES (RECEIPTS AT 14 PRIMARY MARKETS)[b]														
1923–24	33.8	65.3	45.3	40.5	37.2	28.4	15.9	19.8	18.0	10.1	15.4	16.4	35.1	93.0	346.1
1924–25	35.1	93.0	82.1	88.0	60.5	36.3	24.7	19.9	17.3	10.4	17.7	21.9	41.8	43.3	506.9
1925–26	41.8	43.3	57.9	36.0	34.1	34.9	21.6	16.2	15.1	14.0	15.7	21.1	77.0	71.6	351.7
1926–27	77.0	71.6	48.7	37.1	29.8	22.4	24.6	21.0	16.6	14.4	19.3	20.7	58.8	81.6	403.2
1927–28	58.8	81.6	79.7	73.2	44.8	26.5	23.5	22.5	26.3	17.9	25.9	15.5	72.6	84.2	496.2
1928–29	72.6	84.2	73.3	84.4	43.5	33.0	22.5	28.7	27.2	17.5	18.6	25.7	94.2	101.7	531.2
1929–30	94.2	101.7	47.0	36.3	20.6	22.9	17.5	19.9	16.7	13.4	16.5	18.7	99.0	85.5	425.4
1930–31	99.0	85.5	62.6	28.9	24.6	21.5	29.5	30.7	30.8	21.2	30.9	29.7	104.0	61.5	494.9
1931–32	104.0	61.5	38.9	32.7	26.4	13.8	17.1	25.0	13.4	13.2	15.3	13.5	41.0	40.7	374.8
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	37.2	26.7	281.9
	CANADA (RECEIPTS AT COUNTRY ELEVATORS AND PLATFORM LOADINGS)[c]														
1923–24	2.9	3.9	62.5	92.4	102.4	53.4	24.0	23.9	24.7	8.7	8.1	8.7	4.4	4.0	417.2
1924–25	4.4	4.0	21.3	73.2	47.2	23.4	15.1	11.6	7.6	3.0	4.4	5.6	3.5	2.3	218.2
1925–26	3.5	2.3	77.3	70.7	81.8	55.2	26.4	14.6	11.0	5.4	3.1	6.4	4.5	4.1	360.5
1926–27	4.5	4.1	60.7	90.0	75.9	39.0	22.2	14.9	14.2	3.0	2.4	8.7	5.6	1.7	338.3
1927–28	5.6	1.7	38.0	90.4	100.0	58.5	36.8	27.6	16.4	10.1	11.9	12.0	6.0	3.4	411.1
1928–29	6.0	3.4	134.1	105.6	107.0	43.9	17.5	16.5	21.0	9.0	5.5	8.2	4.1	14.2	486.6
1929–30	4.1	14.2	109.6	52.9	19.5	10.9	5.8	4.9	5.5	2.7	4.0	4.4	3.0	21.2	244.4
1930–31	3.0	21.2	105.1	53.8	52.4	17.3	9.3	9.8	9.6	8.4	6.4	8.2	5.4	11.9	297.6
1931–32	5.4	11.9	47.4	74.1	43.1	19.7	10.9	12.2	12.9	6.0	8.2	15.0	3.8	17.6	270.9
1932–33	3.8	17.6	120.5	82.7	36.5	18.5	11.3	11.5	20.8	10.3	10.8	19.5	10.5	25.6	378.5

* United States data unofficial, compiled from *Survey of Current Business;* Canadian data computed from official figures given in *Canadian Grain Statistics*.

[a] For United States, July–June; for Canada, September–August.

[b] Includes Chicago, Detroit, Duluth, Indianapolis, Kansas City, Milwaukee, Minneapolis, Omaha, Peoria, Sioux City, St. Joseph, St. Louis, Toledo, and Wichita.

[c] Prairie Provinces only. These figures better represent the movement of wheat from farms, and are more significant in explaining the course of Canadian visible supplies, than the statistics of receipts at terminal markets previously given in this table.

TABLE XIV.—UNITED STATES TRADE IN WHEAT AND FLOUR WITH FOREIGN COUNTRIES AND ALASKA, HAWAII, AND PUERTO RICO, FROM 1923–24*

(Thousand bushels)

July–June	Wheat				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
1923–24	78,793	27,284	28	51,537	81,087	80,355	159,880	27,988	131,892	2,973	134,865
1924–25	195,490	6,169	70	189,391	65,313	65,304	260,803	6,108	254,695	2,871	257,566
1925–26	63,189	15,583	261	47,867	44,846	44,816	108,035	15,352	92,683	2,741	95,424
1926–27	156,250	13,235	81	143,096	62,910	62,899	219,160	13,165	205,995	3,082	209,077
1927–28	145,999	15,707	39	130,331	60,260	60,247	206,259	15,681	190,578	2,692	193,270
1928–29	103,114	21,430	43	81,727	60,574	60,575	163,688	21,386	142,302	3,172	145,474
1929–30	92,175	12,948	60	79,287	61,070	61,075	153,245	12,883	140,362	2,983	143,345
1930–31	76,365	19,054	15	57,326	55,110	55,108	131,475	19,041	112,434	2,850	115,284
1931–32	96,521	12,885	863	84,499[a]	39,278	39,278	135,799[a]	12,022	123,777[a]	2,797	126,574[a]
1932–33	20,887	9,379	453	11,961	20,337	20,337	41,224	8,926	32,298	3,026	35,324

* Data from *Monthly Summary of Foreign Commerce.* Flour converted to wheat equivalent at 4.7 bushels per barrel; this rate is somewhat too high, particularly for flour milled in bond from Canadian wheat and flour exports from the Pacific Northwest.

[a] Probably understated by 7 to 9 million bushels.

TABLE XV.—UNITED STATES IMPORTS OF WHEAT AND FLOUR, ANNUALLY FROM 1923–24*

(Million bushels)

Crop year July–June	Withdrawn for consumption, duty-paid	Withdrawn for milling in bond	General imports		
			Wheat grain	Flour as wheat	Total
1923–24	13.78	13.90	27.28	.76	28.04
1924–25	.27	5.81	6.17	.03	6.20
1925–26	1.64	13.44	15.60	.08	15.68
1926–27	.05	13.17	13.24	.03	13.27
1927–28	.16	15.04	15.71	.03	15.74
1928–29	.08	21.68	21.43	.01	21.44
1929–30	.03	12.01	12.95	.01	12.96
1930–31	.04	19.90	19.05	.01	19.06
1931–32	.01	12.82	12.88	.00	12.88
1932–33	...	9.27	9.38	.00	9.38

* Data of U.S. Department of Commerce direct and from *Monthly Summary of Foreign Commerce of the United States.*

TABLE XVI.—UNITED STATES WHEAT GRAIN EXPORTS BY CLASSES, FROM 1923–24*

(Million bushels)

July–June	Hard red winter	Soft red winter	White	Hard red spring	Durum	Total
1923–24	27	11	20	2	19	79
1924–25	121	8	11	21	34	195
1925–26	10	2	19	5	27	63
1926–27	73	31	28	2	22	156
1927–28	60	13	30	6	37	146
1928–29	35	3	15	2	48	103
1929–30	54	3	18	2	15	92
1930–31	47	3	14	1	12	76
1931–32	76	2	14	0	5	97
1932–33[a]	17	0	2	0	2	21

* Estimates of the U.S. Department of Agriculture.

[a] Preliminary.

TABLE XVII.—CANADIAN WHEAT AND FLOUR EXPORTS, ANNUALLY FROM 1923–24*

(Million bushels)

August–July	Grand total	To United States	Total overseas	Through U.S. ports	Through Canadian ports	
					Total	Pacific
1923–24	345.7	22.1	323.6	164.7	158.8	58.4[a]
1924–25	192.7	3.2	189.5	99.1	90.4	26.0
1925–26	324.5	10.5	314.0	161.3	152.7	58.7
1926–27	292.9	7.7	285.2	150.8	134.4	39.7
1927–28	333.0	8.5	324.5	151.5	173.0	85.7
1928–29	407.6	10.1	397.5	172.2	225.3	108.1
1929–30	186.3	7.3	179.0	77.2	101.8	54.9
1930–31	258.6	8.1	250.5	96.3	154.2	79.6
1931–32	207.0	4.5	202.5	52.3	150.2	79.8
1932–33	264.3	.3	264.0	57.2	206.8	102.2

* Official data from *Reports on the Grain Trade of Canada* and *Canadian Grain Statistics.*

[a] September–July.

TABLE XVIII.—BROOMHALL'S FORECASTS OF WHEAT EXPORT SUPPLIES AND REQUIREMENTS, 1932–33*

(Million bushels)

Date of report	Available for export	Importers' purchases			Margin over importers' purchases
		Total	Europe	Ex-Europe	
Aug. 24	964	704	504	200	260
Dec. 14	980	704	504	200	276
Mar. 8	980	664	480	184	316
Actual	...	615	449	166	...

* Data from *Corn Trade News.*

TABLE XIX.—INTERNATIONAL SHIPMENTS OF WHEAT AND RYE (BROOMHALL) FROM 1923–24*

(*Million bushels*)

Year ending about Aug. 1	Wheat, including wheat flour, by areas of origin									Rye, including rye flour			
	Total	North America	Argentina[a]	Australia	All other	India	Balkans	Russia	Others[b]	North America	Russia, Danube	Other	Total
1923–24[c]	782.9	454.2	174.4	78.0	76.3	17.1	36.0	23.2	...	28.7	44.3	...	73.0
1924–25	715.2	422.6	121.4	117.1	54.1	31.7	13.5	....	8.9	62.3	.4	.1	66.8
1925–26	667.6	413.2	94.0	74.0	86.4	4.8	28.8	23.6	29.2	16.1	4.2	20.6[d]	40.9
1926–27	817.6	484.0	139.2	104.0	90.2	10.4	31.2	44.4	4.2	34.8	8.6	7.1	50.5
1927–28	792.8	489.6	177.6	74.4	51.2	7.2	29.2	4.8	10.0	45.9	3.1	4.8	53.8
1928–29[c]	927.6	542.9	223.7	112.1	48.9	.2	37.4	....	11.3	19.1	.5	12.2	31.8
1929–30	612.5	318.4	151.9	64.6	77.6	4.2	46.8	6.4	20.2	2.3	4.8	25.1	32.2
1930–31	786.7	354.3	123.2	154.0	155.2	3.6	37.6	98.7	15.3	4.8	22.6	12.8	40.2
1931–32	769.6	331.2	138.4	153.2	146.8	.3	60.0	70.4	16.1	10.8	31.1	14.4	56.3
1932–33	615.2	290.0	126.4	154.4	44.4	.0	7.2	17.6	19.6	1.9	6.6	19.6	28.1
Average 1927–32	777.8	407.3	162.9	111.7	95.9	3.1	42.2	36.0	14.6	16.6	12.4	13.9	42.9

Year ending about Aug. 1	Wheat and flour to Europe				Wheat and flour to ex-Europe							
	U.K.	Orders	Continent	Total[e]	Total	China, Japan	Central America[f]	Brazil	Egypt	North and South Africa	India	Others
1923–24[c]	188.4	132.4	305.7	634.2	148.7	....	....	....	....	...	...	...
1924–25	160.2	167.0	312.5	639.7	75.5	....	....	....	....	...	...	...
1925–26	162.8	109.4	260.1	532.4	135.2	....	....	....	....	...	...	...
1926–27	176.5	151.3	355.2	685.6	132.0	30.7	55.6	22.7	11.0	7.0	4.0	1.0
1927–28	164.7	145.0	352.1	661.6	131.2	31.4	55.6	26.7	9.2	5.9	1.5	.9
1928–29[c]	158.8	145.1	399.3	702.8	224.8	69.5	70.4	30.3	17.8	7.3	27.6	1.9
1929–30	137.4	120.4	225.3	483.1	129.4	33.6	50.1	28.2	7.6	2.7	6.3	.9
1930–31	131.0	193.7	282.8	607.7	179.0	67.4	58.0	26.5	11.1	4.1	11.0	.9
1931–32	135.8	193.2	252.9	581.6	188.0	88.1	56.7	31.2	8.4	3.1	...	.5
1932–33	161.2	127.9	159.8	448.8	166.4	91.5	34.7	29.5	3.7	1.0	1.8	4.2
Average 1927–32	145.5	159.5	302.5	607.3	170.5	58.0	58.2	28.6	10.8	4.6	9.3	1.0

* Broomhall's cumulative totals, from the *Corn Trade News*.

[a] Includes Uruguay also.

[b] North Africa, Chile, Germany, France, etc.

[c] For 53 weeks.

[d] Chiefly from Germany.

[e] As reported by Broomhall in different tables.

[f] Includes West Indies, Dutch East Indies, Venezuela, etc.

TABLE XX.—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, ex-Russia			
	Total	Four chief exporters	United States	Canada	Australia	Argentina	Lower Danube	USSR	India	Others[a]	Total	British Isles	France, Germany, Italy	Others
1923–24	829	735	130	346	86	173	34	22	20	18	594	240	169	185[b]
1924–25	766	696	259	192	124	121	26	(17)	38	6	630	226	215	189
1925–26	699	605	106	324	77	98	45	27	8	14	522	208	150	164[b]
1926–27	850	743	202	292	103	146	45	49	11	2	679	236	262	181[b]
1927–28	822	769	187	332	71	179	32	2	9	10	656	232	219	205
1928–29	941	891	154	406	109	222	37	(6)	(25)	13	667	219	232	216
1929–30	626	544	145	185	63	151	56	9	1	16	505	224	95	186[b]
1930–31	833	650	116	258	152	124	46	114	(5)	23	610	245	174	191[b]
1931–32	793[c]	618[c]	115[c]	207	156	140	82	65	2	26	606	261	135	210[b]
1932–33	627	577	32	263	150	132	12	17	(1)	21	442	234	47	161[b]

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

[a] Includes Morocco, Algeria, Tunis, Chile, Spain, and Poland for years in which these countries were net exporters but not net exports from a few other minor exporters, notably Turkey since 1929–30, and Uruguay.

[b] Deducting net exports made by Spain and/or Poland in these years.

[c] Too low by 7–9 million bushels.

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

(Million bushels)

A. NET EXPORTS

Year Aug.-July	United States[a]	Canada	Australia	Argentina	Hungary	Yugoslavia	Rumania	Bulgaria	USSR[b]	India	Algeria	Tunis
1923–24....	130.3	346.1	85.6	172.9	16.79	5.84	8.98	2.45	22.1	20.1	7.23	2.77
1924–25....	259.3	192.1	123.6	121.4	13.54	9.55	3.21	(1.70)	(16.7)	38.1	(.45)	.17
1925–26....	106.2	324.2	77.2	97.7	19.79	10.81	9.93	4.37	27.1	8.0	4.57	2.65
1926–27....	201.7	292.5	102.7	145.5	21.88	9.70	11.18	2.25	49.5	11.5	(1.61)	.30
1927–28....	186.7	332.5	70.7	178.9	21.84	.55	7.46	2.04	1.6	8.5	5.30	.57
1928–29....	153.9	406.2	108.6	222.4	26.00	8.80	1.59	.28	(5.8)	(25.0)	3.28	5.31
1929–30....	144.8	184.9	62.6	151.0	30.05	22.92	2.82	(1.42)	8.8	.6	4.62	5.81
1930–31....	116.0	258.4	152.3	124.4	18.28	5.61	16.08	5.91	113.7	(4.9)	9.56	5.84
1931–32....	114.6[c]	206.9	156.3	140.3	18.26	14.91	37.35	11.27	65.0	2.0	5.86	8.53
1932–33....	31.8	263.4	150.2	131.9	7.48	.97	.05	3.14	16.7	(.9)	8.44	5.35
Average 1927–32....	143.2	277.8	110.1	163.4	22.89	10.56	13.06	3.62	36.7	(3.8)	5.72	3.21

B. NET IMPORTS

Year Aug.-July	Egypt	British Isles	United Kingdom	Irish Free State	France[d]	Germany	Italy	Belgium[e]	Netherlands	Denmark	Norway	Sweden
1923–24....	8.52	239.7	219.4	20.3	68.1	30.7[f]	69.8	40.0	26.7	9.28	6.11	12.35
1924–25....	9.90	226.2	207.1	19.1	45.6	80.9[f]	88.7	39.0	26.8	6.55	5.57	10.58
1925–26....	12.78	208.2	189.4	18.8	24.6	57.4	67.9	39.2	27.2	6.00	6.70	6.10
1926–27....	8.77	235.9	216.0	19.9	83.6	91.8	86.6	39.5	28.4	7.24	6.22	6.02
1927–28....	6.59	232.2	213.6	18.6	42.5	88.5	87.7	41.8	31.0	10.96	6.78	8.42
1928–29....	13.65	219.3	200.8	18.5	66.6	77.6	87.7	41.9	30.0	16.67	9.15	8.05
1929–30....	11.27	223.9	206.1	17.8	5.5	47.8	42.1	42.4	30.6	7.97	6.96	7.32
1930–31....	10.17	244.9	225.5	19.4	62.0	31.2	81.2	48.5	35.4	11.73	8.53	4.87
1931–32....	7.44	261.0	240.8	20.2	79.1	23.2	33.0	46.4	31.2	17.56	8.70	6.83
1932–33....	.48	234.1	215.9	18.2	31.4	4.7	10.6	40.5	27.3	12.16	8.61	3.23
Average 1927–32....	9.82	236.3	217.4	18.9	51.1	53.7	66.3	44.2	31.6	12.98	8.02	7.10

B. NET IMPORTS (*Continued*)

Year Aug.-July	Spain	Portugal	Switzerland	Austria	Czechoslovakia	Poland	Finland	Latvia	Estonia	Lithuania	Greece	Japan
1923–24....	(.32)	4.84	17.1	18.1	21.2	2.63	5.12	1.80	.97	....	18.8	29.1
1924–25....	.80	4.07	13.9	14.7[g]	21.5	17.10	4.54	1.94	.86	....	20.8	12.2
1925–26....	(.73)	5.13	15.6	14.7[h]	21.7	(4.60)	5.23	1.56	.97	....	18.8	22.7
1926–27....	(1.01)	6.12	16.3	16.9	20.1	8.07	5.14	1.68	.91	....	19.4	15.3
1927–28....	2.92	9.96	18.4	16.5	21.4	8.62	6.04	1.51	1.12	....	19.5	16.3
1928–29....	17.20	8.86	16.6	14.6	17.4	2.45	6.93	2.99	1.25	.04	22.0	17.2
1929–30....	3.41	6.58	16.0	19.6	13.7	(.21)	5.93	2.44	1.19	(.10)	21.7	13.6
1930–31....	(.19)	2.71	18.5	16.0	17.6	(4.41)	5.27	1.55	.82	(.96)	24.1	17.8
1931–32....	10.76	2.80	21.1	13.7	24.8	(3.87)	4.51	.96	.44	.48	23.7	20.4
1932–33....	(.02)	1.36	19.1	13.3	12.0	(1.18)	4.50	.02	.00	(.06)	19.7	3.8
Average 1927–32....	6.82	6.18	18.1	16.1	19.0	.52	5.74	1.89	.96	(.13)[i]	22.2	17.1

* Data from official sources, in large part through International Institute of Agriculture. Figures in parentheses represent, under A, net imports, under B, net exports. Dots (...) indicate that data are not available. See Table XXIV for calendar year trade data for selected countries.

[a] Including shipments to possessions.

[b] Grain only through 1929–30; July–June through 1927–28; gross exports in 1922–23, 1923–24, 1925–26, and 1926–27.

[c] Probably understated by 7 to 9 million bushels.

[d] Net imports in "commerce général," compiled directly from *Statistique mensuelle du commerce extérieur de la France.*

[e] Including Luxemburg.

[f] Data incomplete because of territory occupied by foreign armies.

[g] Eleven months.

[h] July–June.

[i] Four-year average.

TABLE XXII.—INTERNATIONAL TRADE IN WHEAT FLOUR, ANNUALLY FROM 1923–24*

(Thousand barrels of 196 pounds)

A. NET EXPORTS

Year Aug.–July	Total net exports[a]	Four exporters[b]	United States[c]	Canada	Australia	Argentina	Lower Danube	Hungary	Yugoslavia	Rumania	Bulgaria	India
1923–24....	46,352	36,543	17,631	11,933	5,222	1,757	3,833	2,333	417[d]	936	147	708
1924–25....	40,936	30,801	14,475	10,108	4,626	1,592	3,341	2,025	697[d]	619	(23)	892
1925–26....	35,707	27,597	10,130	10,847	5,009	1,611	3,441	1,817	310	849	465	685
1926–27....	35,828	30,032	13,913	9,190	5,169	1,760	3,208	1,587	302	983	336	717
1927–28....	34,257	28,231	12,226	9,792	4,381	1,832	2,664	2,108	(28)	441	115	671
1928–29....	42,009	33,307	13,992	11,732	5,845	1,738	2,886	2,615	23	197[d]	51	497
1929–30....	35,306	26,176	13,477	6,695	4,676	1,328	3,217	2,889	162	162	4	567
1930–31....	34,589	25,408	12,374	6,677	5,308	1,049	2,417	2,045	45	215	112	525
1931–32....	29,367	21,580	8,288	5,363	7,140	789	1,959	1,087	53	436	383	426
1932–33....	26,479	17,432	4,844	5,344	6,405	839	504	441	29	6	28	172
Average 1927–32....	35,106	26,940	12,071	8,052	5,470	1,347	2,629	2,149	51	290	133	537

B. NET IMPORTS

Year Aug.–July	Algeria	Tunis	Egypt	British Isles	United Kingdom	Irish Free State	France[e]	Germany	Italy	Belgium[f]	Netherlands	Spain
1923–24....	(62)	(34)	1,798	5,076	2,950	2,126	(3,126)	4,166[g]	(1,500)	(480)	1,286	(66)
1924–25....	55	95	1,906	3,352	1,445	1,907	(3,295)	5,384[g]	(1,243)	(787)	698	(59)
1925–26....	5	...[h]	2,436	4,217	2,468	1,749	(2,309)	1,411	(334)	(151)	1,269	(157)
1926–27....	36	(24)	1,891	5,901	4,046	1,855	(772)	492	(195)	(64)	1,751	(218)
1927–28....	(98)	(9)	1,490	5,070	3,163	1,907	(1,150)	2	(207)	(145)	2,008	(82)
1928–29....	(115)	(50)	2,586	3,806	2,129	1,677	(1,752)	(401)	(441)	(176)	1,639	(74)
1929–30....	(40)	(79)	2,411	5,800	3,962	1,838	(3,202)	(263)	(666)	158	1,305	(34)
1930–31....	(107)	(122)	1,817	6,052	4,189	1,863	(3,477)	56	(493)	8	1,903	(38)
1931–32....	(51)	(64)	1,240	4,906	2,853	2,053	(2,300)	84	(995)	(11)	333	(9)
1932–33....	(229)	(60)	104	3,622	2,706	916	(1,766)	(1,102)	(1,730)	7	464	(4)
Average 1927–32....	(82)	(65)	1,909	5,127	3,259	1,868	(2,376)	(104)	(360)	(33)	1,438	(47)

B. NET IMPORTS (*Continued*)

Year Aug.–July	Denmark	Norway	Sweden	Austria	Czechoslovakia	Poland	Finland	Latvia	Estonia	Greece	Japan	Brazil[i]
1923–24....	476	635	264	2,607	3,584	530	1,098	34	99	1,301	37	1,507
1924–25....	201	560	146	1,580[j]	3,094	3,326	973	2	129	1,324	(518)	2,087
1925–26....	495	775	(17)	1,279[k]	3,252	43	1,115	...	76	1,506	(1,016)	2,129
1926–27....	690	611	76	1,763	1,691	76	1,098	(7)	75	1,194	(591)	2,444
1927–28....	828	754	136	1,821	2,106	84	1,293	3	76	617	(1,000)	2,345
1928–29....	782	961	150	1,386	1,978	1	1,481	4	84	376	(2,310)	2,049
1929–30....	716	701	147	1,917	1,694	(60)	1,269	(21)	63	252	(981)	1,707
1930–31....	790	711	35	1,574	1,235	(302)	1,097	(36)	44	84	(1,664)	1,306
1931–32....	651	689	19	640	599	(259)	814	0	4	34	(1,713)	258
1932–33....	396	577	4	294	220	(119)	632	0	0	11	(3,361)	146
Average 1927–32....	753	763	97	1,468	1,522	(107)	1,191	(10)	54	273	(1,534)	1,533

* Data from official sources, in large part through International Institute of Agriculture. Figures in parentheses represent, under A, net imports, under B, net exports. Dots (...) indicate that data are not available.

[a] Sum of net exports of net-exporting countries in the years in which they were net exporters.

[b] United States, Canada, Australia, and Argentina.

[c] Including shipments to possessions.

[d] Gross exports.

[e] Exports in "commerce général," compiled directly from *Statistique mensuelle du commerce extérieur de la France.*

[f] Including Luxemburg.

[g] Data incomplete because of territory occupied by foreign armies.

[h] Net imports of 224 barrels.

[i] July–June gross imports.

[j] Eleven months.

[k] July–June net imports.

TABLE XXIII.—EXPORTS OF WHEAT AND FLOUR TO SPECIFIED EX-EUROPEAN COUNTRIES FROM PRINCIPAL SOURCES OF EXPORTS, ANNUALLY FROM 1923–24*

(Million bushels)

A. TO JAPAN FROM NORTH AMERICA AND AUSTRALIA

July–June	Wheat and flour			Total from			Wheat from			Flour from		
	Total	Wheat	Flour	United States	Canada	Australia	United States	Canada	Australia	United States	Canada	Australia
1923–24....	32.12	30.29	1.83	11.06	7.25	13.81	10.26	6.96	13.07	.80	.29	.74
1924–25....	14.89	14.55	.34	4.35	3.51	7.03	4.10	3.43	7.02	.25	.08	.01
1925–26....	29.66	29.07	.59	5.28	13.48	10.90	5.18	13.03	10.86	.10	.45	.04
1926–27....	19.97	19.27	.70	7.34	8.30	4.33	7.34	7.63	4.30	.00	.67	.03
1927–28....	20.79	20.09	.70	6.30	11.25	3.24	6.30	10.59	3.20	.00	.66	.04
1928–29....	31.55	31.32	.23	3.78	22.11	5.66	3.78	21.91	5.63	.00	.20	.03
1929–30....	18.81	18.07	.74	9.17	6.79	2.85	9.17	6.09	2.81	.00	.70	.04
1930–31....	29.17	28.19	.98	3.24	8.21	17.72	3.06	7.45	17.68	.18	.76	.04
1931–32....	31.44	30.48	.96	1.79	8.11	21.54	1.65	7.37	21.46	.14	.74	.08
1932–33....	22.68	21.89	.79	.13	4.47	18.08	.12	3.87	17.90	.01	.60	.18
Average 1927–32....	26.35	25.63	.72	4.86	11.29	10.20	4.79	10.68	10.16	.06	.61	.05

B. TO CHINA, HONG KONG, AND KWANTUNG FROM NORTH AMERICA, AUSTRALIA, AND JAPAN

July–June	Wheat and flour			Total from		Wheat from			Flour from			
	Total	Wheat	Flour	United States	Canada	United States	Canada	Australia	United States	Canada	Australia	Japan[a]
1923–24....	50.86	20.21	30.65	32.87	11.95	8.30	7.40	4.51	24.57	4.55	1.18	.35
1924–25....	7.70	.57	7.13	3.29	1.72	.37	.20	.00	2.92	1.52	.65	2.04
1925–26....	24.95	8.12	16.83	5.29	13.72	.00	7.69	.43	5.29	6.03	.47	5.04
1926–27....	17.36	4.24	13.12	6.06	6.96	.30	3.94	.00	5.76	3.02	.21	4.13
1927–28....	20.12	1.26	18.86	8.72	6.11	.00	1.26	.00	8.72	4.85	.29	5.00
1928–29....	49.57	12.56	37.01	13.18	22.47	1.25	8.61	2.70	11.93	13.86	.15	11.17
1929–30....	22.32	1.29	21.03	10.52	6.05	.16	1.13	.00	10.36	4.92	.15	5.60
1930–31....	54.58	33.55	21.03	12.34	9.21	1.88	7.27	24.40	10.46	1.94	.38	8.25
1931–32....	72.13	48.90	23.23	25.20	5.18	14.37	3.53	31.00	10.83	1.65	2.88	7.87
1932–33....	71.82	41.69	30.13	2.78	9.73	.01	8.06	33.62	2.77	1.67	10.04	15.65
Average 1927–32....	43.74	19.51	24.23	13.99	9.80	3.53	4.36	11.62	10.46	5.45	.74	7.58

C. TO BRAZIL FROM NORTH AMERICA AND ARGENTINA

July–June	Wheat and flour			Wheat and flour from		
	Total	Wheat	Flour	United States	Canada	Argentina
1923–24....	21.93	15.53	6.40	2.49	.34	19.10
1924–25....	20.50	13.16	7.34	3.24	.15	17.11
1925–26....	21.94	13.52	8.42	4.06	1.00	16.88
1926–27....	28.07	19.03	9.04	7.37	1.20	19.50
1927–28....	31.77	22.64	9.13	4.10	.17	27.50
1928–29....	34.25	25.80	8.45	3.91	.05	30.29
1929–30....	30.83	23.73	7.10	3.67	.04	27.12
1930–31....	28.24	23.08	5.16	4.03	.34	23.87
1931–32....	30.89	29.98	.91	15.23	.00	15.66
1932–33....	27.74	27.03	.71	9.30	...	18.43
Average 1927–32....	31.20	25.05	6.15	6.19	.12	24.89

D. TO EGYPT FROM NORTH AMERICA AND AUSTRALIA

July–June	Wheat and flour			Wheat and flour from		
	Total	Wheat	Flour	United States[b]	Canada[b]	Australia[c]
1923–24....	11.40	1.34	10.06	.61	.67	10.12
1924–25....	11.56	1.89	9.67	.92	.46	10.18
1925–26....	12.28	.67	11.61	1.44	.76	10.08
1926–27....	15.83	4.62	11.21	1.58	.67	13.58
1927–28....	12.55	3.83	8.72	.82	.62	11.11
1928–29....	19.57	4.94	14.63	1.03	1.65	16.89
1929–30....	9.39	1.85	7.54	.99	.22	8.18
1930–31....	11.38	3.14	8.24	.87	.12	10.39[d]
1931–32....	7.98	1.64	6.34	.76	.04	7.18[d]
1932–33....	3.75	1.04	2.71	.62	.03	3.10[d]
Average 1927–32....	12.17	3.08	9.09	.89	.53	10.75

* Data from official statistics of exporting countries. Argentine exports to China, of some importance in 1932–33 (see text, p. 114), not included.

[a] Total flour exports, the bulk of which go to China and Kwantung.

[b] Flour as wheat only.

[c] Exports from Australia to Egypt and Sudan, except as noted.

[d] Australian exports of wheat to Egypt; Australian flour exports to Egypt and Sudan.

TABLE XXIII. (*Continued*).—EXPORTS OF WHEAT AND FLOUR TO SPECIFIED EX-EUROPEAN COUNTRIES FROM PRINCIPAL SOURCES OF EXPORTS, ANNUALLY FROM 1923–24

(*Million bushels*)

July–June	E. To West Indies from North America			F. To South Africa from Canada and Australia								
	Total flour[e]	Flour from		Wheat and flour			Total from		Wheat from		Flour from	
		United States	Canada	Total	Wheat	Flour	Canada	Australia	Canada	Australia	Canada	Australia
1923–24....	14.61	9.76	4.85	6.72	4.59	2.13	1.19	5.53	.87	3.72	.32	1.81
1924–25....	12.82	9.23	3.59	5.60	4.09	1.51	.71	4.89	.42	3.67	.29	1.22
1925–26....	12.94	8.24	4.70	4.70	3.37	1.33	.49	4.21	.25	3.12	.24	1.09
1926–27....	13.22	9.19	4.03	3.58	2.36	1.22	.66	2.92	.35	2.01	.31	.91
1927–28....	13.30	8.93	4.37	8.84	7.44	1.40	.84	8.00	.50	6.94	.34	1.06
1928–29....	14.62	9.49	5.13	7.78	6.29	1.49	2.46	5.32	2.15	4.14	.31	1.18
1929–30....	12.69	8.77	3.92	3.23	2.14	1.09	.81	2.42	.60	1.54	.21	.88
1930–31....	11.72	7.33	4.39	5.14	4.51	.63	3.75	1.39	3.55	.96	.20	.43
1931–32....	10.69	6.78	3.91	4.08	3.99	.09	3.56	.52	3.53	.46	.03	.06
1932–33....	9.36	5.52	3.84	.26	.23	.03	.23	.03	.21	.02	.02	.01
Average 1927–32....	12.60	8.26	4.34	5.81	4.87	.94	2.28	3.53	2.06	2.81	.22	.72

[e] Flour only, as wheat exports to the West Indies are negligible.

TABLE XXIV.—INTERNATIONAL TRADE IN WHEAT AND FLOUR, AND APPARENT DOMESTIC UTILIZATION, IN SPECIFIED COUNTRIES, BY CALENDAR YEARS FROM 1923*

(*Million bushels*)

Year	China	Brazil[a]	Uruguay[a]	Chile[a]	South Africa[a]	New Zealand[a]	Morocco[b]
	NET IMPORTS (NET EXPORTS IN PARENTHESES)						
1923..	22.13	22.97	(.01)	(1.49)	7.00	.00	(.16)
1924..	31.50	28.91	(5.18)	(7.20)	7.70	3.55	(1.66)
1925..	9.11	27.74	(2.28)	(5.12)	6.13	2.64	(.72)
1926..	22.45	31.52	(1.32)	(1.05)	4.54	2.97	(.78)
1927..	14.42	32.60	(1.94)	.30	5.81	1.42	(2.42)
1928..	16.73	36.53	(6.05)	(.54)	8.81	1.21	(4.05)
1929..	48.61	35.94	(4.28)	(.29)	7.70	.52	(4.09)
1930..	22.55	31.79	(2.69)	(1.90)	2.80	.73	(1.01)
1931..	66.03	32.46	.62	(.11)	3.41	.74	(5.62)
1932..	51.48	28.64	....	.58	1.09	1.97	(3.94)
	APPARENT DOMESTIC UTILIZATION						
1923..	....	25.92	5.14	24.45	13.27	8.40	19.89
1924..	....	33.23	8.16	20.89	13.67	7.73	27.09
1925..	....	32.06	7.63	19.35	13.26	8.09	23.15
1926..	....	37.19	8.70	25.62	13.75	7.59	19.80
1927..	....	37.56	8.30	23.60	13.85	9.37	21.13
1928..	....	41.17	9.35	30.07	14.49	10.75	20.70
1929..	....	40.57	8.02	29.39	14.94	9.35	27.67
1930..	....	38.06	10.47	31.63	13.43	7.97	20.29
1931..	....	37.44	7.99	21.08	12.71	8.32	24.16
1932..	....	....	....	21.77	14.80	8.55	24.03

* Trade data from *International Yearbooks of Agricultural Statistics*, U.S. Department of Agriculture, and *Foreign Trade of China* (Maritime Customs).

[a] Crop of 1922 plus *net* imports or minus *net* exports of 1923 and following.

[b] Crop of 1923 minus *net* exports of 1923 and following.

TABLE XXV.—OCEAN FREIGHTS ON WHEAT TO EUROPE, ANNUAL AND MONTHLY AVERAGES*

(*U.S. gold cents per bushel*)

Period	Canada[a]	New York[b]	Northern Pacific[a]	Black Sea[c]	La Plata down river[a]	Karachi[a]	Australia[a]
Jan.–Dec. 1913	8.3	5.8	25.7	...	10.6	12.2	20.4
Aug.–July 1922–23 ...	9.2	5.5	22.2	...	14.3	15.4	23.6
1923–24 ...	9.4	6.8	21.2	...	13.7	15.0	21.8
1924–25 ...	9.4	6.3	21.3	...	12.0	14.7	25.2
1925–26 ...	9.0	7.0	20.0	...	10.9	13.1	22.3
1926–27 ...	12.0	9.7	23.9	...	19.9	15.8	28.5
1927–28 ...	7.7	5.6	19.5	...	13.9	13.2	23.2
1928–29 ...	8.5	6.1	19.6	...	14.9	13.1	23.1
1929–30 ...	5.5[d]	4.7	14.7	...	8.3	9.9[e]	16.7
1930–31 ...	5.6[f]	4.6	14.5	7.1	10.9	12.5	19.3
1931–32 ...	4.9[g]	3.9	12.1[h]	5.5	8.2	11.2[i]	13.2
1932–33 ...	3.8[f]	3.1	9.5[j]	4.5	6.3	n.q.	11.1
July	3.5	3.3	8.6[k]	4.4[l]	6.3	n.q.	9.9[m]
Aug.	3.7	3.2	9.8[k]	4.4	6.1	n.q.	11.0
Sept.	4.4	3.2	10.5[m]	4.5	6.7	n.q.	12.2
Oct.	4.3	3.2	10.1[m]	4.6[m]	5.7[m]	n.q.	12.1
Nov.	4.0	3.1	10.0[k]	4.5	5.6[l]	n.q.	11.7[l]
Dec.	5.0[k]	3.1	10.0	4.4	7.0	n.q.	12.0[n]
Jan.	n.q.	3.1	10.5	4.9	7.2	n.q.	12.3
Feb.	n.q.	3.2	10.2	4.8	6.6	n.q.	11.8
Mar.	n.q.	3.2	9.0	4.6	6.1	n.q.	10.5
Apr.	3.8	3.2	8.5	4.4	6.0	n.q.	10.2
May	3.3	3.1	8.3	4.3	6.4	n.q.	9.7
June	2.8	3.2	7.8	4.5[n]	6.0	n.q.	9.6
July	2.6[l]	2.7	n.q.	4.5	6.2	n.q.	10.3

* Averages of Friday rates published in *International Crop Report and Agricultural Statistics*. New York–Liverpool rates are for parcels in liners; others for cargoes.

[a] To United Kingdom. [b] To Liverpool.

[c] To Antwerp and Hamburg. Not available before August 1930. [d] April–July. [e] May–July.

[f] August–December and April–July.

[g] August–November and March–July.

[h] August and October–July.

[i] August–October and May–June.

[j] August–June. [k] One week only.

[l] Two-week average. [m] Three-week average.

[n] Four-week average in month containing five Fridays.

TABLE XXVI.—NET EXPORTS AND NET IMPORTS OF WHEAT AND FLOUR, MONTHLY FROM AUGUST 1932*

(Million bushels)

A. NET EXPORTS

Month or period	United States[a]	Canada	Argentina	Australia	Four exporters	USSR	Hungary	Yugoslavia	Rumania	Bulgaria	Poland	Algeria	Tunis	India
Aug.	5.57	19.76	3.94	3.85	33.12	(.87)	.81	.22	.08	.31	.05	2.27	1.22	.10
Sept.	3.86	28.60	3.46	7.24	43.16	4.89	1.36	.13	.03	.17	(.04)	1.16	.79	.13
Oct.	4.23	42.55	3.34	8.14	58.26	3.30	.85	.08	.00	.36	(.02)	1.12	.78	.08
Nov.	5.29	29.88	4.10	7.50	46.77	4.73	.35	.14	.01	.70	(.03)		.12	.09
Dec.	3.79	29.94	7.30	12.46	53.49	2.55	.43	.21	.00	.46	(.02)	.84	.44	.11
Jan.	2.84	16.48	16.17	21.64	57.13	1.22	.33	.13	.00	.06	(.13)	.18	.14	.06
Feb.	1.90	12.41	16.85	27.40	58.56	.33	.52	.00	.00	.01	.12	.06	.18	(.56)
Mar.	1.51	17.00	18.29	22.82	59.62	.38	.64	.02	.00	.03	.14	.45	.12	(.60)
Apr.	.87	5.51	15.63	11.62	33.63	.22	.17	.01	.00	.12	.10	.69	.13	(.05)
May	.77	23.97	14.30	11.63	50.67	.11	.44	.00	.00	.49	.34	.61	.26	(.19)
June	1.35	19.44	13.80	6.73	41.32	.04	.98	.00	.00	.24	.44	1.07	.30	(.13)
July	.66	18.57	14.70	9.17	43.10	(.17)	.61	.01	.00	.29	.21		.82	.07

B. NET IMPORTS

Month or period	United Kingdom	Irish Free State	British Isles total	Three variable importers				Belgium[c]	Netherlands	Denmark	Norway	Sweden	Scandinavia total	Switzerland
				Total	France[b]	Germany	Italy							
Aug.	17.76	1.64	19.40	11.77	9.60	2.15	.02	2.94	2.24	1.62	.40	.85	2.87	1.82
Sept.	16.00	1.68	17.68	1.09	3.64	(2.40)	(.15)	2.61	1.82	1.27	.71	.43	2.41	1.64
Oct.	20.15	1.32	21.47	.59	1.76	(1.61)	.44	4.33	3.09	1.21	.73	.41	2.35	1.82
Nov.	16.89	1.29	18.18	2.14	1.97	(.74)	.91	2.46	1.99	.89	.74	.23	1.86	2.19
Dec.	15.46	1.72	17.18	5.39	3.34	.75	1.30	4.52	2.28	1.06	1.00	.21	2.27	1.42
Jan.	16.04	.90	16.94	1.55	1.30	(1.45)	1.70	3.09	2.75	.78	.58	.21	1.57	1.42
Feb.	15.03	1.28	16.31	2.36	1.48	(.52)	1.40	2.32	1.97	1.11	.62	.10	1.83	1.24
Mar.	23.35	2.10	25.45	4.22	1.09	1.32	1.81	3.83	2.07	.90	.42	.17	1.49	1.87
Apr.	20.19	1.65	21.84	3.65	1.52	.82	1.31	5.26	2.00	.71	.84	.20	1.75	1.45
May	20.11	1.84	21.95	5.03	1.94	2.32	.77	4.20	1.65	.81	.98	.21	2.00	1.32
June	17.93	1.51	19.44	4.57	1.62	2.29	.66	2.33	2.21	.79	.85	.10	1.74	1.41
July	17.67	1.13	18.80	4.35	2.16	1.75	.44	2.59	3.26	1.01	.84	.10	1.95	1.51

B. NET IMPORTS (*Continued*)

Month or period	Austria	Czechoslovakia	Greece	Spain	Portugal	Finland	Latvia	Estonia	Lithuania	Four Baltic States	Egypt	Japan	New Zealand	South Africa
Aug.	.69	.49	1.70	.84	.23	.41	.02	.00	(.01)	.42	.04	(.09)	.44	.16
Sept.	.76	.29	1.54	5.38	.26	.41	.00	.00	.00	.41	.17	.12	.23	
Oct.	.95	.16	1.73	.15	.03	.40	.00	.00	(.01)	.39	.03	.24	.09	.04
Nov.	.95	.03	1.75	.35	.23	.50	.00	.00	.00	.50	.03	.03	.13	.02
Dec.	1.24	.24	1.69	.00	.07	.44	.00	.00	(.01)	.43	.04	.43	.33	.02
Jan.	1.11	.93	1.55	.00	.07	.20	.00	.00	.00	.20	.01	(.07)	.27	.02
Feb.	1.00	.75	1.24	.00	.07	.23	.00	.00	(.01)	.22	.02	.60	.03	
Mar.	1.11	.79	2.34	.00	.12	.37	.00	.00	(.01)	.36	.04	1.30	.03	.00
Apr.	.96	1.02	1.07	.00	.18	.31	.00	.00	.00	.31	.02	.35	.06	.02
May	1.37	1.94	1.77	(.00)	.09	.39	.00	.00	(.00)	.39	.02	.30	(.19)	.00
June	2.17	2.63	1.58	.00	.06	.39	.00	.00	(.00)	.38	.02	.25	(.37)	.01
July	1.04	2.75	1.72	(.00)	.06	.42	.00	.00	(.01)	.41	.01	.28	.08	.00

* Data from official sources and International Institute of Agriculture. Dots (...) indicate data are not available. Figures in parentheses represent: Under A, net imports; under B, net exports.

[a] Includes shipments to possessions.

[b] Net imports in "commerce général."

[c] Including Luxemburg.

TABLE XXVII.—WORLD WHEAT STOCKS EX-RUSSIA (APPROXIMATE), ABOUT AUGUST 1, 1922–33*

(Million bushels)

Year	Total	Four chief exporters	Total North America	United States grain	Canadian grain	Australia	Argentina	Lower Danube	India	Algeria, Morocco, Tunis	Egypt	Importing Europe	Afloat to Europe	Afloat to ex-Europe	Japan
1922...	618	244	159	118	41	24	61	26	29	10	6	240	49	5	9
1923...	560	277	180	147	33	33	64	36	36	4	5	150	39	8	5
1924...	685	291	191	143	48	34	66	45	56	11	7	214	42	8	11
1925...	529	233	147	117	30	28	58	20	51	11	5	165	33	6	5
1926...	611	237	146	106	40	24	67	40	49	18	6	206	39	7	9
1927...	647	276	172	119	53	35	69	46	36	21	5	202	46	9	6
1928...	705	346	215	123	92	36	95	25	35	16	6	213	45	13	6
1929...	970	543	372	245	127	41	130	75	29	15	5	241	38	16	8
1930...	922	549	435	308	127	49	65	44	29	22	9	217	39	7	6
1931...	1,007	619	479	339	140	60	80	57	71	13	5	184	38	14	6
1932...	996	650	535	398	137	50	65	49	51	7	5	184	31	10	9
1933...	1,106	744	609	390	219	60	75	29	29	8	5	243	32	11	5

* Based so far as possible upon stocks reported either officially (North America) or unofficially (afloat to Europe); see Tables XXVIII, XXIX, XXXIII, and WHEAT STUDIES, February 1933, IX, No. 5. The data here given are revised throughout, notably with reference to stocks in the United States, Australia, and France, for which pertinent new or revised official statistics have appeared in recent months. United States stocks as of July 1; others as of August 1 or nearest date possible.

TABLE XXVIII.—WORLD WHEAT VISIBLE SUPPLIES, AUGUST 1, 1922–33, AND MONTHLY 1932–33*

(Thousand bushels)

Date	Total	U.S. grain		Canadian grain		Total North America	Afloat to Europe	U.K. ports	Total U.K. and afloat	Australia	Argentina
		United States	Canada	Canada	United States						
August 1											
1922	103.6	23.1[a]	1.1	17.1	1.1	42.4	48.9	7.1	56.0	3.0	2.2
1923	124.4	40.5[a]	2.0	11.5	1.0	55.0	38.9	8.1	47.0	18.0	4.4
1924	167.5	46.2[a]	.9	28.9	3.0	79.0	41.7	10.0	51.7	30.0	6.8
1925	116.6	34.0[a]	2.4	18.5	3.0	57.9	33.4	9.2	42.6	8.4	7.7
1926	119.2	34.6[a]	.3	27.1	3.7	65.7	38.6	4.3	42.9	6.2	4.4
1927	150.9	33.7	1.3	37.8	4.8	77.6	46.1	8.2	54.3	12.8	6.2
1928	200.2	63.1	2.3	52.4	13.6	131.4	43.6	9.8	53.4	9.5	5.9
1929	325.4	136.4	2.3	83.8	22.9	245.4	37.6	6.2	43.8	20.0	16.2
1930	358.0	161.9	4.0	89.5	16.1	271.5	39.2	6.8	46.0	33.5	7.0
1931	447.8	233.6	22.9	105.8	5.5	367.8	37.9	10.6	48.5	24.5	7.0
1932	385.5	175.9	15.4	116.8	4.7	312.8	31.4	9.1	40.5	26.0	6.2
1933	423.2	135.0	3.7	190.4	6.7	335.8	31.6	11.4	43.0	31.5	12.9
1932–33											
Sept. 1	374.3	188.3	11.3	111.1	5.6	316.3	24.5	8.3	32.8	18.5	6.6
Oct. 1	454.8	194.8	8.5	187.2	11.0	401.5	29.7	7.6	37.3	9.8	6.2
Nov. 1	485.8	191.9	7.7	222.6	13.9	436.1	31.9	8.8	40.7	3.5	5.5
Dec. 1	480.6	176.4	7.0	221.1	15.2	419.7	39.6	7.6	47.2	7.0	6.7
Jan. 1	549.7	168.5	6.9	224.2	13.6	413.2	36.4	7.5	43.9	83.0	9.6
Feb. 1	586.5	155.6	6.7	219.1	11.0	392.4	48.9	6.8	55.7	127.0	11.4
Mar. 1	561.7	147.1	6.6	216.2	7.7	377.6	60.4	7.2	67.6	104.0	12.5
Apr. 1	525.8	135.6	6.4	220.7	6.0	368.7	52.4	10.0	62.4	81.5	13.2
May 1	478.9	124.4	5.4	217.3	2.5	349.6	40.9	12.5	53.4	61.5	14.4
June 1	440.2	117.5	4.8	196.5	4.6	323.4	39.4	12.4	51.8	50.3	14.7
July 1	427.7	123.6	4.1	195.0	4.3	327.0	31.7	12.3	44.0	42.0	14.7
Aug. 1	423.2	135.0	3.7	190.4	6.7	335.8	31.6	11.4	43.0	31.5	12.9

* Data from *Commercial Stocks of Grain in Store in Principal U.S. Markets; Canadian Grain Statistics;* and *Corn Trade News,* except as noted.

[a] Bradstreet's visible supplies from *Bradstreet's.*

TABLE XXIX.—WHEAT CARRYOVERS IN THE UNITED STATES AND CANADA, 1922–33*

(Million bushels)

Year	United States (July 1)						Canada (August 31, 1922–23; July 31, 1924–33)						
	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	Total in five positions	Canadian grain in U.S.[c]
1922.....	32.5	28.8	20.3[d]	35.0[e]	116.6	0.5	2.4	4.6	6.4	4.6	2.6	20.6	1.6
1923.....	35.2	37.1	29.4[d]	44.0[e]	145.7	1.2	1.4	2.4	2.7	2.8	2.4	11.7	0.5
1924.....	29.3	36.6	38.6[d]	38.0[e]	142.5	0.3	7.4[f]	4.7	22.7	5.9	4.5	45.2[f]	3.0
1925.....	28.6	25.3	29.3[d]	30.6	113.8	2.7	2.7	2.7	15.2	3.9	2.0	26.5	3.0
1926.....	27.1	29.5	16.5[d]	31.9	105.0	1.0	3.9	1.3	24.1	3.2	3.9	36.4	3.7
1927.....	26.7	21.8	21.1	48.3	117.9	1.4	4.2	1.5	35.6	2.3	4.2	47.8	4.8
1928.....	19.6	19.3	38.6	42.8	120.3	2.5	4.2	4.7	48.9	13.7	6.1	77.6	13.6
1929.....	45.4	41.5	90.4	64.5	241.8	3.3	5.6	6.3	76.3	8.7	7.5	104.4	22.9
1930.....	59.5	60.2	109.3	73.9[g]	302.9	4.7	5.3	16.8	69.3	12.8	6.9	111.1	16.1
1931.....	37.3	30.3	204.0	52.4[g]	324.0	15.3	19.5	34.1[h]	71.1	7.3	2.1[i]	134.1	5.5
1932.....	90.3	41.6	168.4	81.8[g]	382.1	15.9	7.5	33.5[h]	78.6	9.3	2.9[i]	131.8	4.7
1933.....	79.6	61.5	123.6	121.2[g]	385.9	4.1	12.3	77.9[h]	109.3	9.0	3.2[i]	211.7	6.7

* Official data of U.S. Department of Agriculture and Dominion Bureau of Statistics, chiefly from *Agriculture Yearbooks, Canada Yearbooks, Canadian Grain Statistics,* and press releases.

[a] Wheat stocks in, and in transit to, city mills reported to the Census Bureau (see Table XXX), here raised to 100 per cent to account for stocks in non-reporting mills.

[b] Strictly "in country, private, and mill elevators in the Western Division," but see note *h*.

[c] In bond for export as wheat, excludes some bonded wheat in transit by rail.

[d] Bradstreet's visible.

[e] Rough approximations published and designated as "unofficial" by the U.S. Department of Agriculture in *Wheat Facts,* Part I, July 1930, p. 18.

[f] Farm stocks as of August 31, 1924.

[g] Includes wheat "stored for others" in this position, as follows, in million bushels: 1930, 12.5; 1931, 18.4; 1932, 7.2; and 1933, 10.0.

[h] Including stocks in flour mills, Western Division.

[i] In the Eastern Division only.

TABLE XXX.—CITY MILL STOCKS IN THE UNITED STATES, JUNE 30, 1925–33*

(Million bushels)

Year	Percentage of census flour output represented[a]	Wheat in						Flour as wheat[d]	Grand total	Wheat in and in transit to mills[e]
		Country elevators	Public terminals	Private terminals[b]	Transit to mills	Mills[c]	Total			
1925.....	87.4	2.16	3.44	....[f]	....[f]	26.72[f]	32.32	15.73	48.05	.....[f]
1926.....	87.4	2.52	3.00	1.14	6.73	22.44	35.83	14.67	50.50	29.17
1927.....	90.1	2.56	3.88	1.61	10.39	34.15	52.59	16.76	69.35	44.54
1928.....	90.4	1.91	3.68	.55	10.16	29.78	46.08	17.08	63.16	39.94
1929.....	93.6	3.52	8.32	2.16	15.44	45.91	75.35	17.98	93.33	61.35
1930.....	91.8	3.50	3.80	1.79	13.79	43.78	66.66	16.61	83.27	57.57
1931.....	96.3	2.70	1.48	1.85	11.74	21.00	38.77	13.30	52.07	32.74
1932.....	93.5	2.55	2.33	3.30	9.43	60.33	77.94	15.00	92.94	69.76
1933.....	95.5	6.91	8.12	10.61	15.08	91.13	131.85	14.07	145.92	106.21

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

[a] Derived from biennial census data as follows:

Census of	Total output (bbls.)	Period applied
1923	114,438,544	6-30-25 to 12-31-26
1925	114,689,930	3-31-27 to 9-30-28
1927	118,132,027	12-31-28 to 12-31-30
1929 (preliminary)	117,369,505	3-31-31 to 6-30-31
1929 (final)	120,039,673	9-30-31 to 12-31-32
1931 (final)	115,364,274	3-31-33 to .....

[b] In private terminal elevators not attached to mills.

[c] In mills and elevators attached to mills. In addition to wheat owned, there was reported stored for others 17.73, 6.73, and 9.50 million bushels in 1931, 1932, and 1933, respectively.

[d] In wheat equivalent (4.7 bu. = 1 bbl.).

[e] Summation of columns 5 and 6.

[f] In 1925 a single figure was reported for wheat in mills, in private terminal elevators not attached to mills, and in transit to mills.

TABLE XXXI.—UNITED STATES FLOUR PRODUCTION, NET EXPORTS AND SHIPMENTS, AND DOMESTIC DISAPPEARANCE, MONTHLY FROM JULY 1923*

(Thousand barrels)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
	A. REPORTED PRODUCTION, ALL REPORTING MILLS												
1923–24.....	7,805	9,642	9,760	10,983	9,403	8,137	8,970	8,433	8,355	7,682	7,896	7,797	104,863
1924–25.....	8,465	9,842	10,459	11,371	9,187	8,855	9,853	8,248	7,347	6,781	6,942	7,745	105,095
1925–26.....	8,840	9,293	9,938	10,728	9,128	8,948	8,679	7,429	8,289	7,589	7,418	8,005	104,284
1926–27.....	9,570	10,447	10,843	10,678	9,618	8,909	8,624	8,023	8,936	8,309	8,497	8,528	110,982
1927–28.....	8,388	9,617	10,470	10,817	9,735	9,235	9,242	8,975	9,772	8,507	8,712	7,758	111,228
1928–29.....	8,516	10,370	10,512	11,587	9,909	9,269	10,014	9,026	9,207	8,636	9,334	8,912	115,292
1929–30.....	9,337	11,058	10,372	10,968	9,538	8,905	9,510	8,783	9,347	9,071	8,981	8,687	114,557
1930–31.....	9,466	10,313	10,674	10,816	9,184	8,973	9,233	8,242	8,724	8,494	8,015	7,762	109,896
1931–32.....	9,852	9,658	9,735	10,399	9,890	8,148	8,180	7,692	8,483	8,196	7,739	7,820	105,792
1932–33.....	7,828	9,005	9,395	9,382	8,719	8,323	8,077	7,216	8,867	9,298	8,777	8,579	103,466
	B. ESTIMATED TOTAL UNITED STATES PRODUCTION												
1923–24.....	8,965	11,069	11,123	12,442	10,604	9,184	10,081	9,477	9,394	8,657	8,898	8,780	118,674
1924–25.....	9,503	11,022	11,694	12,691	10,249	9,870	10,968	9,215	8,217	7,606	7,780	8,655	117,470
1925–26.....	9,869	10,374	11,094	11,957	10,181	9,974	9,671	8,276	9,213	8,438	8,242	8,868	116,157
1926–27.....	10,572	11,520	11,940	11,761	10,582	9,800	9,471	8,809	9,801	9,100	9,334	9,358	122,048
1927–28.....	9,196	10,506	11,417	11,766	10,565	10,009	9,971	9,696	10,526	9,166	9,365	8,377	120,560
1928–29.....	9,186	11,164	11,327	12,449	10,577	9,905	10,682	9,648	9,840	9,236	9,974	9,568	123,556
1929–30.....	9,988	11,810	11,084	11,715	10,179	9,510	10,182	9,411	9,993	9,690	9,602	9,289	122,453
1930–31.....	10,128	11,013	11,395	11,534	9,808	9,575	9,891	8,840	9,351	9,107	8,599	8,331	117,572
1931–32.....	10,548	10,342	10,424	11,128	10,588	8,741	8,774	8,257	9,096	8,792	8,307	8,393	113,390
1932–33.....	8,401	9,649	10,062	10,049	9,346	8,926	8,666	7,752	9,503	9,960	9,397	9,198	110,909
	C. NET EXPORTS AND SHIPMENTS TO POSSESSIONS												
1923–24.....	918	1,289	1,592	2,118	1,817	1,853	1,765	1,573	1,452	1,095	1,012	1,227	17,711
1924–25.....	831	994	1,511	1,909	1,653	1,510	1,059	975	1,426	1,013	746	858	14,485
1925–26.....	821	910	854	1,060	935	1,047	726	696	733	884	737	699	10,102
1926–27.....	848	1,403	1,617	1,429	1,399	1,270	1,084	905	934	1,062	1,162	914	14,027
1927–28.....	836	1,096	1,317	1,558	1,383	1,172	1,289	1,000	1,053	1,044	905	724	13,377
1928–29.....	683	1,001	1,066	1,436	1,261	998	1,429	1,273	1,245	1,118	986	1,051	13,547
1929–30.....	1,127	1,161	1,200	1,376	1,150	1,165	1,298	971	1,101	985	1,085	997	13,616
1930–31.....	989	1,266	1,461	1,387	1,203	945	996	808	775	811	838	840	12,319
1931–32.....	1,048	692	768	825	905	942	903	753	652	582	388	469	8,927
1932–33.....	400	460	420	416	537	447	392	344	391	282	384	424	4,897
	D. CALCULATED DOMESTIC DISAPPEARANCE												
1923–24.....	8,047	9,780	9,531	10,324	8,787	7,331	8,316	7,904	7,942	7,562	7,886	7,553	100,963
1924–25.....	8,672	10,028	10,183	10,782	8,596	8,360	9,909	8,240	6,791	6,593	7,034	7,797	102,985
1925–26.....	9,048	9,464	10,240	10,897	9,246	8,927	8,945	7,580	8,480	7,554	7,505	8,169	106,055
1926–27.....	9,724	10,117	10,323	10,332	9,183	8,530	8,387	7,904	8,867	8,038	8,172	8,444	108,021
1927–28.....	8,360	9,410	10,100	10,208	9,182	8,837	8,682	8,696	9,473	8,122	8,460	7,653	107,183
1928–29.....	8,503	10,163	10,261	11,013	9,316	8,907	9,253	8,375	8,595	8,118	8,988	8,517	110,009
1929–30.....	8,861	10,649	9,884	10,339	9,029	8,345	8,884	8,440	8,892	8,705	8,517	8,292	108,837
1930–31.....	9,139	9,747	9,934	10,147	8,605	8,630	8,895	8,032	8,576	8,296	7,761	7,491	105,253
1931–32.....	9,500	9,650	9,656	10,303	9,683	7,799	7,871	7,504	8,444	8,210	7,919	7,924	104,463
1932–33.....	8,001	9,189	9,642	9,633	8,809	8,479	8,274	7,408	9,112	9,678	9,013	8,774	106,012

* 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. The figures for total United States production represent estimates, believed to be accurate to within about one per cent, of output of those commercial mills included in biennial censuses, plus an allowance of 100,000 barrels per month for custom and very small commercial mills. This allowance, clearly about correct during 1923–28, but too low in the latest years, has been retained for lack of any adequate basis for revising the figure. If the output of these custom and very small commercial mills has been doubled or trebled since 1928, the foregoing figures on total annual flour production and domestic disappearance for the last three years should be increased by 1–3 million barrels annually. Annual estimates of the output of custom mills which appear reasonable are as follows, in million barrels, from 1928–29: 1.6, 1.4, 2.1, 3.0, 3.3 (cf. *Northwestern Miller,* October 11, 1933, p. 105).

TABLE XXXII.—WHEAT SUPPLIES AND DISPOSITION IN FOUR CHIEF EXPORTING COUNTRIES, FROM 1922–23*

(Million bushels)

A. UNITED STATES (JULY–JUNE)

Year	Supplies			Domestic disappearance					Surplus over domestic use	Net exports[g]	Shipments to possessions[g]	End-year stocks[a]
	Initial stocks[a]	Crop[b]	Total[c]	Milled (net)[d]	Seed use[b]	Fed on farms[b]	Residual[e]	Total[f]				
1922–23.....	117	847	964	468	84	70	−12	610	354	205	2.9	146
1923–24.....	146	759	905	475	74	95	−17	627	278	132	3.0	143
1924–25.....	143	840	983	479	81	56	− 5	611	372	255	2.9	114
1925–26.....	114	669	783	498	80	28	−23	583	200	92	2.7	105
1926–27.....	105	834	939	501	85	34	− 8	612	327	206	3.1	118
1927–28.....	118	875	993	503	93	44	+40	680	313	190	2.7	120
1928–29.....	120	926	1,046	510	85	55	+ 9	659	387	142	3.2	242
1929–30.....	242	813	1,055	508	85	57	−41	609	446	140	3.0	303
1930–31.....	303	859	1,162	492	82	159	−10	723	439	112[h]	2.9	324
1931–32.....	324	900	1,224	485	81	167	−18	715	509	124[h]	2.8	382
1932–33.....	382	744	1,126	487	80	138	0	705	421	32	3.0	386

B. CANADA (AUGUST–JULY)

Year	Supplies			Domestic disappearance						Surplus over domestic use	Net exports[g]	End-year stocks[a]
	Initial stocks[a]	Crop[b]	Total[c]	Milled (net)[d]	Seed use[b]	Unmerchantable[b]	Loss in cleaning[b]	Residual[e]	Total[f]			
1922–23.....	40	400	440	41	40	10	12	+26	129	311	279	32
1923–24.....	32	474	506	42	39	19	12	+ 3	115	391	346	45
1924–25.....	45	262	307	42	38	12	10	−14	88	219	192	27
1925–26.....	27	395	422	42	40	11	6	−37	62	360	324	36
1926–27.....	36	407	443	43	39	12	19	−11	102	341	293	48
1927–28.....	48	480	528	42	42	28	7	− 2	117	411	333	78
1928–29.....	78	567	645	44	44	30	13	+ 4	135	510	406	104
1929–30.....	104	305	409	43	44	7	7	+12	113	296	185	111
1930–31.....	111	421	532	42	39[i]	45[j]	8	+ 6	140	392	258	134
1931–32.....	134	321	455	42	37[i]	28[j]	6	+ 3	116	339	207	132
1932–33.....	132	455	587	42	36[i]	39[j]	7	−12	112	475	263	212

* Based on official data so far as possible.

[a] See Table XXIX.

[b] Latest official estimates of U.S. Department of Agriculture and Dominion Bureau of Statistics, respectively. Feed estimates for the United States, 1922–23, are our tentative figures.

[c] Exclusive of imports, which are taken into account in arriving at net exports.

[d] Wheat equivalent of flour production less flour exports. For the United States, Food Research Institute estimates corresponding to final column in Table XXXI; for Canada, official estimates of "wheat milled for food." Estimates for the United States are probably too low in the last three years by amounts rising roughly from 4 to 9 million bushels; see footnote to Table XXXI.

[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 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.

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

[g] Official trade data, as in Tables XIV, XXI.

[h] Too low; does not include some wheat shipped to Canada.

[i] Probably too low for close comparison with figures of earlier years on account of a change in the estimated seed requirement per acre.

[j] Including merchantable wheat fed to livestock on farms estimated at 41 million bushels in 1930–31, 27 million in 1931–32, and 37 million in 1932–33.

TABLE XXXII (*Continued*).—WHEAT SUPPLIES AND DISPOSITION IN FOUR CHIEF EXPORTING COUNTRIES, FROM 1922–23*

C. AUSTRALIA (AUGUST–JULY)

Year	Supplies			Domestic disappearance				Surplus over domestic use	Net exports[h]	Estimated end-year stocks		
	Initial stocks[a]	Crop[b]	Total[c]	Milled (net)[d]	Seed use[e]	Residual[f]	Total[g]			Aug. 1 total[a]	Aug. 1 exportable[i]	Nov. 30 total[j]
1922–23.....	24	109	133	28	10	+12	50	83	50	33	24	6
1923–24.....	33	125	158	28	11	— 1	38	120	86	34	25	7
1924–25.....	34	165	199	30	11	+ 6	47	152	124	28	18	5
1925–26.....	28	115	143	33	12	— 5	42	101	77	24	13	7
1926–27.....	24	161	185	31	12	+ 4	47	138	103	35	25	12
1927–28.....	35	118	153	32	15	— 1	46	107	71	36	25	9
1928–29.....	36	160	196	29	15	+ 2	46	150	109	41	31	16
1929–30.....	41	127	168	32	18	+ 6	56	112	63	49	38	14
1930–31.....	49	214	263	34	14	+ 3	51	212	152	60	49	16
1931–32.....	60	191	251	32	15	— 3	45	206	156	50	40	12
1932–33.....	50	212	262	33	14	+ 4	52	210	150	60	49	25

D. ARGENTINA (AUGUST–JULY)

Year	Supplies			Domestic disappearance				Surplus over domestic use	Net exports[h]	Estimated stocks		
	Initial stocks[a]	Crop[b]	Total[c]	Milled (net)[d]	Seed use[e]	Residual[f]	Total[g]			Aug. 1 total[a]	Aug. 1 exportable[i]	Dec. 31 total[j]
1922–23.....	61	196	257	44	21	—11	54	203	139	64	44	10
1923–24.....	64	248	312	49	21	+ 3	73	239	173	66	44	10
1924–25.....	66	191	257	53	23	+ 2	78	179	121	58	35	10
1925–26.....	58	191	249	54	23	+ 7	84	165	98	67	43	35
1926–27.....	67	230	297	57	25	0	82	215	146	69	44	15
1927–28.....	69	282	351	60	25	— 8	77	274	179	95	70	15
1928–29.....	95	349	444	60	23	+ 9	92	352	222	130	105	20
1929–30.....	130	163	293	60	26	— 9	77	216	151	65	40	20
1930–31.....	65	232	297	63	21	+ 9	93	204	124	80	54	20
1931–32.....	80	220	300	65	24	+ 6	95	205	140	65	38	14
1932–33.....	65	235	300	65	22	+ 6	93	207	132	75	48	15

* Based on official data so far as possible.

[a] Australia: November 30 official estimates of total stocks (last column), plus August–November net exports, plus 1/12 of net mill grindings (column 4). Argentina: stocks on December 31 (last column), plus August–December net exports, plus 5/12 of net mill grindings (column 4).

[b] Official data.

[c] Exclusive of imports, which are taken into account in arriving at net exports.

[d] Australia: official data for July–June years to 1930–31; our estimates thereafter. Argentina: our estimates based on official data of flour milled minus flour exports in calendar years 1922–32.

[e] Australia: official data prior to 1928–29, for sowings of wheat both for grain and for hay; our estimates from 1928–29. Argentina: based on official data on acreage sown and average seed requirements.

[f] See footnote *e*, p. 137; here including feed use.

[g] Total supplies less net exports and end-year stocks.

[h] Official trade data, as in Table XXI.

[i] Preceding column minus 1/12 of net mill grindings for Australia, 5/12 of net mill grindings for Argentina.

[j] Australia: official estimates 1925–31; our approximations 1923–24 and 1932–33. Argentina: rough approximations to December 31 stocks of old-crop wheat, based largely upon estimates by the *Times of Argentina*.

TABLE XXXIII.—APPARENT DOMESTIC UTILIZATION OF WHEAT (CARRYOVERS DISREGARDED) IN OTHER IMPORTANT COUNTRIES, FROM 1923–24*

(Million bushels)

Aug.-July	India	Hungary	Yugoslavia	Rumania	Bulgaria	Poland	Algeria	Tunis	Egypt	British Isles	France	Germany	Italy	Belgium[a]
1923–24	352.3	50.9	55.3	93.1	26.7	57.5	29.0	7.1	49.2	300.3	343.7	137.1[b]	294.6	53.7
1924–25	322.5	38.1	48.2	67.2	26.4	54.6	17.7	4.9	44.1	280.1	326.8	170.1[b]	258.8	52.3
1925–26	323.0	51.9	67.8	94.8	37.0	59.3	28.1	9.2	49.0	261.9	354.9	175.6[b]	308.7	54.2
1926–27	313.2	53.0	61.7	99.7	34.3	60.6	25.2	12.7	46.0	288.1	315.4	187.2[b]	307.2	52.9
1927–28	326.5	55.1	56.0	89.2	40.1	69.7	23.0	7.5	50.9	289.4	318.6	209.0[b]	283.5	58.8
1928–29	315.9	73.2	94.5	113.9	48.9	61.6	27.0	8.4	50.9	270.1	347.9	219.2	316.3	59.8
1929–30	320.1	45.0	72.1	97.0	34.6	65.7	28.7	6.5	56.5	274.8	342.8	170.9	302.2	55.9
1930–31	395.7	66.0	74.7	114.7	51.4	77.9	22.8	4.6	50.0	288.3	290.1	170.4	291.3	62.2
1931–32	345.4	54.3	83.9	97.9	52.5	79.3	19.7	5.5	53.5	299.6	343.2	178.7	277.4	60.6
1932–33	337.8	57.0	52.4	55.4	47.5	48.3	20.8	12.1	53.1	278.5	364.9	188.5	287.8	56.6
Average 1927–32	340.6	58.7	76.2	102.5	45.5	70.8	24.2	6.5	52.4	284.4	328.5	189.6	294.1	59.5

Aug.-July	Netherlands	Denmark	Norway	Sweden	Spain	Portugal	Switzerland	Austria	Czechoslovakia	Finland	Latvia	Estonia	Lithuania	Greece
1923–24	32.9	18.2	6.70	23.4	156.8	18.0	20.9	27.0	57.4	5.81	3.44	1.71	....	27.6
1924–25	31.4	12.5	6.06	17.4	122.6	14.7	17.2	23.2[c]	53.7	5.33	3.52	1.40	....	28.5
1925–26	32.9	15.7	7.19	19.5	161.9	17.6	19.4	25.4	61.0	6.16	3.72	1.76	....	30.0
1926–27	33.9	16.0	6.81	18.2	145.6	14.7	20.3	26.3	60.0	6.06	3.54	1.79	....	31.8
1927–28	37.2	20.4	7.38	23.7	147.7	21.4	22.5	28.5	68.6	7.10	4.15	2.20	....	32.5
1928–29	37.3	28.9	9.95	26.3	139.8	16.4	20.8	27.5	70.3	7.93	5.49	2.29	6.37	35.1
1929–30	36.1	19.8	7.71	26.3	157.6	17.2	20.2	31.2	66.6	6.69	4.78	2.45	9.23	33.1
1930–31	41.5	21.9	9.25	25.7	146.5	16.5	22.1	28.0	68.2	6.14	5.61	2.46	10.37	33.8
1931–32	38.0	27.7	9.29	23.8	145.2	15.8	25.1	24.7	66.0	5.63	4.35	2.18	8.81	34.9
1932–33	40.1	22.9	9.39	29.7	184.2	19.5	23.3	26.3	65.7	5.98	5.31	2.09	8.06	40.0
Average 1927–32	38.0	23.7	8.72	25.2	147.4	17.5	22.1	28.3	67.9	6.70	4.88	2.32	8.70[d]	33.9

* Computed from production and trade data given in Tables II and XXI. Dots (...) indicate that comparable production and trade figures are not available. Figures for several other countries are given in Table XXIV.

[a] Including Luxemburg.

[b] Probably too low on account of understatement of crops, and also (up to 1924–25) of net imports.

[c] Includes trade figures for eleven months only.

[d] Average 1928–32.

TABLE XXXIV.—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	Russian exports	Total supplies	Disappearance	Initial stocks	Crops	Total supplies	Disappearance	Initial stocks	Crops	Net imports	Total supplies	Disappearance
1923–24	560	3,441	22	4,023	3,338	277	1,606	1,883	1,592	150	997	594	1,741	1,527
1924–25	685	3,055	...[a]	3,740	3,211	291	1,458	1,749	1,516	214	853	630	1,697	1,532
1925–26	529	3,302	27	3,858	3,247	233	1,370	1,603	1,366	165	1,101	522	1,788	1,582
1926–27	611	3,364	49	4,024	3,377	237	1,632	1,869	1,593	206	922	679	1,807	1,605
1927–28	647	3,580	2	4,229	3,524	276	1,755	2,031	1,685	202	1,002	656	1,860	1,647
1928–29	705	3,917	...[a]	4,622	3,652	346	2,002	2,348	1,805	213	1,042	667	1,922	1,681
1929–30	970	3,414	9	4,393	3,471	543	1,408	1,951	1,402	241	1,146	505	1,892	1,675
1930–31	922	3,677	114	4,713	3,706	549	1,726	2,275	1,656	217	1,009	610	1,836	1,652
1931–32	1,007	3,637	65	4,709	3,713	619	1,632	2,251	1,601	184	1,064	606	1,854	1,670
1932–33	996	3,703	17	4,716	3,610	650	1,647	2,297	1,553	184	1,266	442	1,892	1,649
1933–34	1,106	.....	...	.....	.....	744	.....	.....	.....	243	.....	...	.....	.....

* Summarized from Tables I, XX, and XXVII.

[a] Net imports.

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

(U.S. cents per bushel)

Year and month	United States (July-June)[a]							Winnipeg[b]			Buenos Aires 78-kilo[c]	Melbourne f.a.q.[d]
	Farm price	All classes	Basic cash (Chicago)	No. 2 H. W. (K. C.)	No. 2 R. W. (St. L.)	No. 1 N. S. (Mnpls.)	No. 1 White (Seattle)	Wtd. average	No. 1 Man.	No. 3 Man.		
Average 1909–14	89	...	96	95	103	100	...	...	95	...	97	92
1923–24	94	108	105	107	111	119	...	96	104	97	101	102
1924–25	140	155	154	151	172	157	...	152	168	159	157	146
1925–26	146	156	159	162	171	161	...	139	151	142	146	148
1926–27	123	139	138	136	137	147	...	130	146	135	133	137
1927–28	122	135	137	138	159	140	...	119	146	130	130	133
1928–29	99	111	116	111	136	120	...	103	124	115	108	114
1929–30	101	116	117	113	126	124	114	126	124	118	108	115
1930–31	62	75	82	73	82	80	69	66	64	58	56	53
1931–32	41	58	55	50	49	70	60	50	53	46	44	43
1932–33	39	56	54	51	57	58	55	47	48	45	43	43
1932–33	*38*	*53*	*52*	*49*	*54*	*55*	*51*	*43*	*44*	*41*	*40*	*40*
July	36	48	49	45	47	57	51	46	48	43	44	43
Aug.	38	55	53	48	53	58	56	48	49	46	48	45
Sept.	37	55	53	48	54	58	53	46	47	43	48	46
Oct.	35	51	49	45	50	54	50	43	44	41	46	42
Nov.	33	49	45	43	47	49	45	40	41	38	41	40
Dec.	32	46	46	42	46	48	44	35	37	32	37	36
Jan.	33	48	47	44	50	50	46	38	39	35	35	37
Feb.	32	48	47	44	49	49	45	37	38	35	34	36
Mar.	34	53	51	48	55	53	50	40	41	38	34	36
Apr.	45	64	63	60	69	63	58	45	45	43	36	40
Apr.	*44*	*61*	*60*	*57*	*66*	*60*	*55*	*43*	*43*	*41*	*35*	*38*
May	59	73	72	70	81	74	62	55	55	53	44	48
May	*50*	*62*	*61*	*60*	*69*	*63*	*53*	*47*	*47*	*45*	*38*	*41*
June	59	78	79	76	82	80	64	60	60	57	46	51
June	*49*	*64*	*64*	*62*	*67*	*65*	*52*	*49*	*49*	*47*	*38*	*42*
July	87	100	100	98	101	108	83	78	79	74	60	62
July	*61*	*72*	*72*	*70*	*73*	*78*	*60*	*56*	*57*	*53*	*43*	*45*

* 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. Figures in italics represent approximate *gold* cents per bushel, based on the prices of the French franc in New York.

[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 Northern Spring at Minneapolis, and No. 1 Western White at Seattle. See especially *Agriculture Yearbook*, 1933, pp. 415 and 418–19, *Crops and Markets*, and *Foreign Crops and Markets*. Monthly prices of the foregoing series (except farm prices and No. 1 White at Seattle) are weighted by car-lot sales. Prices of basic cash wheat (Chicago) are simple averages of weekly average prices of the cheapest wheat deliverable on Chicago contracts (basic data from Chicago *Daily Trade Bulletin*).

[b] Based on data from *Canadian Grain Statistics, Grain Trade of Canada, Monthly Review of the Wheat Situation* (Dominion Bureau of Statistics), and for pre-war years, *Agriculture Yearbook* (U.S.), 1923, p. 628. Monthly average prices of No. 1 Manitoba are as reported by the Dominion Bureau of Statistics; Winnipeg weighted averages are simple averages of weekly average prices weighted by inspections; 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;* pre-war data from *Estadistica Agro-Pecuria.* For 1923–24, prices computed by deducting 6 cents per bushel from Friday prices of Barletta wheat reported in the *Times of Argentina.* From March 16 to December 11, 1932, 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." Pre-war data furnished by John Darling and Son, Melbourne.

TABLE XXXVI.—ANNUAL AND MONTHLY AVERAGE PRICES OF IMPORT AND DOMESTIC WHEAT IN EUROPE*

(U.S. cents per bushel)

Year and month	United Kingdom import wheats					Domestic wheats							
	All imports[a]	British parcels[b]	No. 3 Manitoba[c]	Argentina Rosafé[a]	Australian f.a.q.[c]	Great (Britain)[d]	France (Paris)[e]	Germany (Berlin)[f]	Italy (Milan)[g]	Hungary (Budapest)[h]	Yugoslavia (Novi-Sad)[i]	Rumania (Braila)[j]	Bulgaria (Bourgas)[i]
Average 1909–14 ..	108	...	...	...	...	99	142	135	150[k]	...	...	...	...
1923–24 ..	121	123	119[l]	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[l]	176	158	145	161[l]	208	149	...	...	...
1926–27 ..	164	163	164	160	167	149	186	177[l]	208	152	...	...	...
1927–28 ..	155	152	154	151	160	129	173	162	191	152	...	...	...
1928–29 ..	132	129	138	128	140	127	167	142	187	118	...	...	...
1929–30 ..	130	127	137	122	133	112	147	165	187	109	...	92	...
1930–31 ..	79	76	77	72	78	81	184	168	156	72	79[l]	57	63
1931–32 ..	57	59	62	56	61	61	172	152	149	58	77	50	51
1932–33 ..	56	56	58	53	58	56	124	135	151	69	77	95[l]	56[l]
1932–33 ..	*52*	*52*	*54*	*49*	*54*	*52*	*116*	*126*	*143*	*65*	*71*	*88*[l]	*52*[l]
July	57	53	53	54	53	61	179	154	137	63	65	51	51
Aug.	56	57	58	58	60	59	135	136	137	67	70	69	54
Sept.	56	58	58	59	62	53	123	135	145	66	60	78	51
Oct.	55	55	54	56	58	51	120	129	146	66	60	88	51
Nov.	53	52	52	49	53	48	119	128	152	62	57	103	51
Dec.	52	49	48	46	50	47	116	122	153	60	58	98	54
Jan.	52	50	50	46	51	48	115	120	156	67	76	93	54
Feb.	50	48	49	44	50	49	114	125	150[m]	72	84	n.q.	56
Mar.	49	48	51	44	49	47	110	129	148	72	82	97	53
Apr.	51	51	54	45	51	50	109	130	147	69	79	n.q.	n.q.
Apr.	*49*	*49*	*52*	*44*	*49*	*47*	*104*	*124*	*140*	*66*	*76*	n.q.	n.q.
May	58	61	63	54	61	61	123	147	158	68	94	109	n.q.
May	*50*	*52*	*54*	*46*	*52*	*52*	*105*	*125*	*134*	*58*	*80*	*93*	n.q.
June	63	63	68	59	67	71	125	150	154	76	96	124	59
June	*51*	*51*	*55*	*48*	*55*	*58*	*102*	*122*	*127*	*62*	*78*	*101*	*48*
July	72	80	86	74	82	83	175	170	169	78	103	91	73
July	*52*	*58*	*62*	*53*	*59*	*60*	*125*	*122*	*123*	*56*	*74*	*65*	*53*

* Data are our computations, from sources given below. Annual prices are arithmetic averages of monthly average prices. Conversions from foreign currencies at par when exchanges were near par; otherwise, at current exchange rates. Figures in italics represent approximate *gold* cents per bushel, based on the price of the French franc in New York.

[a] Based on data in *Accounts and Papers Relating to Trade and Navigation of the United Kingdom.* Monthly data represent declared values of all imported wheat divided by quantities imported.

[b] Based on data in *London Grain, Seed and Oil Reporter.* Monthly averages are of all reported sales of wheat parcels in British markets.

[c] Based on data in *Corn Trade News.* Monthly averages are simple averages of Tuesday quotations of parcels afloat or for early shipment, mainly to Liverpool. Prices of Australian f.a.q. wheat are averages of low quotations, 1931–32 and 1932–33.

[d] Monthly prices are simple averages of weekly average *Gazette* prices, taken from the *Economist* (London) and the *Agricultural Market Report.*

[e] Monthly prices are simple averages of daily prices of "blés indigènes" in Paris (marché libre) as given in the *Bulletin des Halles.* Annual prices for 1923–24 to 1925–26 are based on monthly averages of Saturday wheat prices at Chartres (furnished directly by the Federal Reserve Board); these are probably around 5 cents lower than corresponding Paris quotations. Pre-war average prices from data in *Annuaire international de statistique agricole, 1915–16,* p. 705.

[f] Monthly average prices from *Wirtshaft und Statistik;* pre-war prices from data in *Vierteljahrshefte zur Statistik des Deutschen Reichs,* and *Annuaire international de statistique agricole.*

[g] Monthly averages of Saturday prices (Friday prices prior to August 23, 1930) of soft wheat as given in *Monthly Crop Report and Agricultural Statistics;* pre-war prices from data in *Yearbooks* of the International Institute of Agriculture.

[h] See WHEAT STUDIES, VI, 288, for prices 1923–24 to 1926–27; prices 1927–28 to 1929–30 based on monthly average prices of Tisza wheat (78 kilo) as reported in *Bulletin Statistique Mensuel Hongrois;* from 1930–31 based on monthly average prices as reported in *Monthly Crop Report and Agricultural Statistics.*

[i] Data from the U.S. Department of Agriculture. See *World Wheat Prospects,* January 31, 1933, pp. 13–14.

[j] Monthly average prices of wheat of good quality from *Monthly Crop Report and Agricultural Statistics.*

[k] Average for calendar years 1910–14.

[l] Prices missing for some weeks.

[m] Three-week average.

TABLE XXXVII.—MINIMUM PERCENTAGES OF DOMESTIC WHEAT REQUIRED TO BE USED BY MILLERS IN SPECIFIED COUNTRIES, 1932–33*

Date effective	France	Italy						Germany		Sweden[c]	Netherlands	Belgium
		Durum wheat			Bread wheat			Basic	Special			
		North[a]	South[b]	Islands	North[a]	South[b]	Islands					
Before Aug. 1, 1932..	75	70	95	95	95	95	70[d]	97	70[e]	60	22½	5[f]
1932 Aug. 2	85	..	..	..	..	..	..	..	..	..	..	..
Aug. 4	97	..	..	..	..	..	..	..	..	..	..	..
Aug. 8	..	..	..	..	..	..	..	..	..	..	25	..
Aug. 15	..	..	..	..	..	..	..	..	70[eg]	..	..	..
Sept. 1	..	..	..	..	..	..	..	..	..	80	..	..
Sept. 17	..	..	..	..	..	..	..	..	..	85	..	..
Sept. 22	..	..	..	..	..	..	..	..	..	..	..	10
Oct. 16	..	..	..	..	..	..	..	..	..	90	..	..
Dec. 3	99	..	..	..	..	..	..	..	..	..	..	..
1933 Jan. 1	..	60	90	..	..	80	60	..	..	95	..	..
Feb. 13	..	..	..	..	..	..	..	..	..	..	35	..
Mar. 16	..	95	95	..	..	..	..	..	..	..	..	..
Mar. 27	100	..	..	..	..	..	..	..	..	..	..	..
Apr. 4	..	..	..	..	..[b]	90[a]	..	..	..	..	..	..
Apr. 16	..	..	..	..	..	95	95	..	..	..	..	..
June 1	..	..	..	..	..	..	..	..	..	98	..	..
July 16	..	99	99	99	99	99	99	..	..	..	..	..

* Data mainly from International Institute of Agriculture, *Monthly Bulletin of Agricultural Economics and Sociology*, July and August 1933, pp. 249–93; 297–330.

[a] Excluding Latium.

[b] Including Latium.

[c] Percentages required of millers outside an agreement to buy domestic wheat at fixed prices; percentages 10 units less required of millers within the agreement, who produce practically the total output of Swedish flour.

[d] Sicily; 95 per cent in Sardinia.

[e] For members of the Consortium of German wheat mills.

[f] Quasi-official, by agreement with millers.

[g] With use only of wheat imported against export certificates.

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