THE WORLD WHEAT SITUATION

AUGUST TO NOVEMBER, 1925

WHEAT STUDIES

OF THE

FOOD RESEARCH INSTITUTE

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WHEAT STUDIES

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The central feature of the series is a periodic analysis of the world wheat situation with special reference to the outlook for supplies, requirements, trade, and prices. The volume opens with a review of the previous crop year. Subsequently three surveys of current developments are made at intervals of about four months.

These surveys are supplemented by intensive studies bearing on the appraisal of the wheat situation and outlook and upon related matters of national policy. Typical subjects are shown in the list of studies in Volume I. (See fourth cover page of this issue.) Future issues will include the following:

Significant Developments in Wheat Grading
Argentina as a Producer and Exporter of Wheat

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SUMMARY

The present survey covers the first four months of the international crop year.

Crop developments in August and September were increasingly favorable. Estimates of the Canadian crop were successively raised by substantial amounts. Crop estimates of several important European producers were raised. Ideal conditions prevailed in Argentina. There were great expectations of exports from Russia and the Danube states. North American spring wheat crops moved to market rapidly. European importing countries, with large crops safely harvested, purchased very moderately abroad, anticipating lower prices later in the season. Prices declined.

In October the situation changed. Bad weather seriously interrupted threshing in Canada, lowered the grade and perhaps the quantity of the crop, and retarded movement to market and abroad. Exports from Russia and the Danube states disappointed expectations, and led to convictions that both crops and export surpluses had been greatly overestimated. The Australian crop was known to be seriously affected by drought. American farmers held on to their wheat, anticipating higher prices later in the year. Visible supplies generally, except in Canada, were very low. Substantial purchases were made by ex-European importers. Under these influences prices rose from early October until mid-November.

Then came the news that the Argentine crop had suffered heavy damage, through bad weather at a critical stage. Within a fortnight, the trade had to adjust its expectations to a reduction of 35 to 90 million bushels in the Argentine crop and exportable surplus. The consequence was a sharp rise in prices, especially pronounced in cash wheat and the December future, but affecting later options as well. American prices, which were above the export level except for durum and at times Pacific wheats, rose in sympathy with prices abroad. Even Liverpool prices reached, early in December, a level not far below the peak of last winter.

The size of Canadian, Russian, Roumanian, Argentine, and Australian crops is still in doubt, and there are some indications that certain crops in Western Europe have been overestimated. The recent reduction in the estimates of the United States is an unexpected bullish factor. The adjustment between export surpluses and importers' requirements, while not as close as it was last year, now appears sufficiently close to make uncertain precise estimates of the volume of trade or the normal price

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level during the rest of the season. The crop figures will be more definite by the end of January, but uncertainty regarding Russian exports may well last until spring.

Three facts, however, are fairly clear: First, the volume of international trade, and especially the volume of overseas trade, will be much smaller this year than last, chiefly because European countries generally have harvested large crops and the United States has but little grain for export. Second, the level of world wheat prices for the next few months will be definitely higher than the September level. Third, at this higher level, the import requirements of importing countries as a whole will be reduced.

The special tightness which characterized the markets around December 1 was due in part to temporary conditions affecting early deliveries, to exaggeration of bullish factors, and to the unwarranted assumption that world import requirements would not be materially reduced by higher prices. It is not sufficiently realized that even with smaller imports than we anticipate, Europe will have a bread-grain supply larger than in any year since the armistice, and that most importing countries are in a good position to restrict their imports.

On the basis of present information, we are disposed to estimate that net imports of importing countries will be around 620 million bushels, and that this amount will be forthcoming at prices materially below their recent peak. The margin between exporters' surpluses and importers' requirements, while much smaller than was expected a few weeks ago, nevertheless appears larger than last year. A good deal depends, however, on the final outturn in the Southern Hemisphere, on the exports from Russia and the Balkans, and on the effect of high prices in restricting consumption.

I. CROP DEVELOPMENTS, AUGUST TO NOVEMBER

Prospects for new crops were the dominant factor in the wheat market from April to July, 1925, affecting prices, the course of trade, and carryovers. Since August 1, crop developments have continued to exert a powerful influence. Especially important were the developments in regard to Canadian, European, Russian, and Argentine crops; and in weather conditions affecting reaping and threshing.[1]

United States

The winter wheat crop of the United States was harvested before August 1, and threshing was completed in August. Though an increased acreage had been sown, abandonment was exceptionally heavy. Unfavorable weather caused deterioration in April and May, and no improvement occurred in June. Fortunately, the harvest and threshing season was favorable. July threshings indicated a slightly higher outturn than had been forecast on July 1, but the August 1 estimate of the crop was only 416 million bushels, about 175 million bushels less than last year or the average of 1920–24. A recent revision, as of December 1, puts the figure at 398 million bushels—lower than the lowest previous estimate.

Practically all winter-wheat areas suffered. In the Pacific Northwest, a good deal of winter-killed wheat was reseeded in the spring. The soft red winter wheat crop, which had not been large in 1924, was reduced still further in 1925. The hard winter wheat crop, which furnished the bulk of the exportable surplus in 1924, was reduced from 314 million bushels in 1924 to not more than 184 million in 1925. Table 1, which gives an approximate distribution of the crop by classes, is of interest in this connection even though the revised figures as of December 1 are not yet available.

Fortunately the winter wheat crops are of high average milling quality, and they will go farther because of this fact. According to the United States Department of Agriculture, this year's crops of winter

[1] Comparative figures for wheat and rye crops of most countries are given in Wheat Studies, November 1925, II, 50, 53. The only important revisions and additions yet available are the following, in million bushels. For wheat: United States, 669; Australia (preliminary), 100; Argentina (second forecast), 215; Scotland, 2.0; for rye: Belgium, 20.9.

and spring wheat are, on the whole, a little above average in weight per bushel and in grade, though inferior in both respects to last year's excellent crops.[1]

TABLE 1.—UNITED STATES WHEAT PRODUCTION BY CLASSES, 1920–25*

(*Million bushels*)

Year	Hard red spring	Durum	Hard red winter	Soft red winter	Pacific white	Total
1920	138.9	52.2	302.4	247.3	91.2	832.0
1921	131.1	57.0	290.0	237.4	99.4	814.9
1922	169.6	90.8	280.0	247.9	79.3	867.6
1923	126.9	55.3	241.9	271.6	101.8	797.4
1924	191.4	73.6	313.5	236.8	57.4	872.7
1925	154.0	69.0	184.0	215.0	75.0	697.0
Average 1920–24	151.6	65.8	285.6	248.2	85.8	836.9

* Classification by U.S. Department of Agriculture. *Agriculture Yearbook, 1924*, p. 579, and *Foreign Crops and Markets*, October 26, 1925. Figures for 1925 are preliminary, and do not take account of the downward revision of 28 million bushels as of December 1.

The American spring wheat crop came through well, considering the vicissitudes through which it passed. The spring was early and remarkably favorable. But much damage was caused by heavy frosts in May and by rains in June followed by a week of severe hot weather. Rust became prevalent, though not as prevalent as rust-rumors. Hot dry weather in July and August, however, checked the inroads of rust, forced the plant to early maturity, and made possible early cutting and prompt threshing. By September 1 most of the grain was threshed. Yields varied greatly, even within a single district, chiefly as a result of different farming methods. The weight of the grain was highly varied. Heat and rust were responsible for some shrunken grain. But the protein content was generally high.

The spring wheat crop, now estimated at 271 million bushels, includes perhaps 67 million bushels of durum and possibly 75 million of Pacific wheats. Less than 154 million is representative milling wheat produced in the states from Montana eastward. This is much below last year's crop, but still a fair crop of hard red spring. (See Table 1.)

[1] *Crops and Markets, Supplement*, November 1925, pp. 347, 352.

The United States corn crop, which was relatively very small in 1924, is large in 1925. Consequently, though a good deal of that crop is of poor quality, corn prices have ruled, since August 1925, much below the levels that prevailed in the corresponding period of 1924. Since American wheat prices in this period have been higher than in the same months of 1924, and since most of the wheat is of good milling quality, the feed use of wheat should be smaller this year than in any recent year.

The American potato crop, however, is unusually short. It is estimated at only 347 million bushels, as compared with 455 million last year, and a 1920–24 average of 418 million. Cold weather late in October caused much loss and damage, both in the ground and in transit. Potatoes at wholesale are higher, pound for pound, than flour, and in food value potatoes are much dearer than flour. But substitution of bread for potatoes, however rational it would be under these circumstances, is not widespread in this country except among small groups of the population.

American wheat growers generally have marketed slowly. (See Appendix Tables I, II.) July receipts were fairly heavy, considering the small crops of winter wheat. August receipts were very light. In September, spring wheat was marketed in large volume. In October and early November, however, the movement slackened. Throughout the hard and soft winter wheat belt, in lesser degree in the spring wheat belt, and especially in the Pacific Northwest, farmers were reported to be holding their wheat for the higher prices which they considered justified by the short crop in this country, regardless of the international position. Part of the wheat was stored on the farms, part of it in country elevators or warehouses; part of it was shipped to transit points or central markets still unsold. Thanks to their stronger financial position, the farmers were able to hold their wheat as they were not able to do last year. In this they were encouraged by the decline in wheat prices during August and September, whereas last year rising prices tempted them to sell. This policy, coupled with the steady milling demand, is reflected in the

low figures for visible supplies. (See below, p. 88.)

CANADA

In the Canadian prairie provinces, spring wheat was seeded under highly favorable conditions, despite the fact that less than the usual amount of fall plowing had been possible in the preceding autumn.[1] The spring was early and soil moisture abundant. Favorable conditions prevailed throughout the spring and gave rise to predictions of an excellent crop. In July, however, hot dry weather forced the plant to mature too rapidly, especially in southern Alberta and generally on light soils. Rains came in time to improve the condition in most of Saskatchewan and Manitoba and parts of Alberta. On the whole, damage from rust was less than usual. Cutting began early, especially in Alberta, but in some areas was seriously interrupted by rains.

The first official forecast of the total Canadian crop, as of June 30, was 365 million bushels. This was considered too low at the time, and in spite of the deterioration caused in July, the July 31 estimate was raised to 375 million, and the August 31 estimate to 392 million. September was highly favorable for threshing, and fine progress was made in completing the harvest, especially where early cutting had been possible. Threshing returns indicated yields better than had been expected. Consequently expectations of the crop were raised, and the trade had largely discounted the official estimate as of October 31 of 422 million bushels, indicating the largest crop in Canada's history except that of 1923.

By the end of September, cutting was practically completed, considerable quantities had been threshed, and record amounts had been shipped to market. (See Appendix Tables I, II.) From late in September until late in October, threshing was seriously interrupted by a succession of showers, snows, winds, and frosts; and further delays were necessary to allow the grain to dry out.[2] For a time it was feared that large quantities of grain would remain in the stook until spring. Happily better weather in November permitted substantial completion of threshing, but this work seriously competed with fall plowing and other farm operations which were also delayed by the inclement weather. The size of the crop is still uncertain, and it is quite possible that the final estimate of the crop, to be published January 25, may be several million bushels above or below the October 31 estimate, most likely above.

Canada's 1925 wheat crop at first appeared of exceptionally high quality. The crop of 1924, though of high protein-content, had been of low average grade. As shown by Table 2, only 56 per cent of the cars inspected in the Western Division graded No. 3 or higher. The early inspections this year ran high in grade, and 83 per cent of the cars inspected in September and October graded No. 3 or higher. The bad threshing weather of October–November caused a general lowering of grades, through dampness and toughness, and the average for the year promises to be considerably lower than for the September shipments. Nevertheless, it is authoritatively asserted[3] that the injury will not result in material damage to milling quality.

TABLE 2.—SPRING WHEAT INSPECTED IN THE WESTERN INSPECTION DIVISION OF CANADA*

Crop year Sept.–Aug.	Cars inspected	Percentage No. 3 or over
1919–20	100,014	72.7
1920–21	149,669	86.3
1921–22	181,623	75.2
1922–23	228,611	92.1
1923–24	294,468	86.0
1924–25	162,702	56.2
1925–26 (Aug.–Nov.)	147,300	72.8
Aug.	1,477	63.0
Sept.	43,306	84.0
Oct.	48,320	81.3
Nov.	54,197	56.5

* Compiled from *Canadian Grain Statistics.*

EUROPE, EXCLUDING RUSSIA

In Europe, weather conditions were favorable to bread-grain crops throughout the

[1] See table in *Foreign Crops and Markets,* November 30, 1925, p. 862, citing *Monthly Bulletin of Agricultural Statistics.*

[2] So much grain was shipped damp and tough that drying facilities in Vancouver were congested, and on November 14 the railways placed a temporary embargo on westward shipments.

[3] E.g., by Dr. Charles L. Saunders, former Dominion Cerealist, the originator of Marquis wheat.

growing season, until shortly before harvest. In July and early August brief hot spells followed by violent storms or cold rainy weather caused some damage in numerous scattered areas. The crops of Southern Europe generally escaped injury because of their early harvest. The German wheat crop ripened prematurely. In August, general heavy rains caused delay in harvesting, reduction in quantity, and deterioration in quality. The damage was especially heavy in the Danube states. Indeed, it is doubtful whether the estimates now available give full weight to these adverse factors in the harvest season.

On the basis of present estimates—which may prove to be somewhat excessive—Europe's wheat crops have more than borne out the promise of the early summer. Indeed, present estimates exceed early forecasts by substantial amounts, particularly in the cases of France, Italy, and Spain. In our September survey, on the basis of incomplete forecasts and estimates available in August, we gave a figure of 1,256 million bushels as the indicated total European wheat crop. On the basis of subsequent revisions and nearly complete reports, it now appears that, if official estimates prove reliable, the total crop is about 1,385 million bushels. This is by all odds the best crop since the armistice, some 330 million bushels above the crop of 1924, some 280 million bushels above the 1920–24 average, and indeed nearly 40 million bushels above the pre-war average for the same territory. The gain is general, and is characteristic of both importing and exporting countries.

The increase in European rye crops is equally pronounced, and here also some later estimates have been higher than forecasts. According to present estimates, Europe's production of rye in 1925 is about 933 million bushels, some 285 million bushels larger than in 1924, some 240 million bushels above the 1920–24 average, and within 45 million bushels of the 1909–13 average for the same area.

Table 3 summarizes the detailed figures now available. The combined crops of wheat and rye, in terms of weight, appear to be 36 per cent larger than in 1924, 29 per cent above the 1920–24 average, 11 per cent larger than the best previous post-war crops, and practically identical with the pre-war average. The comparison with the pre-war average would be further improved if accurate allowance could be made for overestimates of German crops before the war and underestimates of these crops since the war. These excellent crops are of fair quality, on the whole considerably better than those of last year.

TABLE 3.—WHEAT AND RYE PRODUCTION IN EUROPE (EX-RUSSIA), 1920–25 COMPARED WITH PRE-WAR AVERAGES*

Year	Million bushels		Percentages of 1909–13 average		
	Wheat	Rye	Wheat	Rye	Total [a]
1920	948	532	70	54	64
1921	1,216	757	90	78	85
1922	1,044	712	77	73	76
1923	1,261	827	94	85	90
1924	1,055	649	78	66	74
1925	1,385[b]	933[c]	103	96	100
Averages					
1909–13	1,348	976	100	100	100
1920–24	1,105	695	82	71	78

* See WHEAT STUDIES, November 1925, II, 50, for sources and detailed figures.

[a] In terms of weight.

[b] Including a rough allowance of 25 million bushels for Denmark, Portugal, and Malta.

[c] Including a rough allowance of 20 million bushels for Denmark, Portugal, Greece, Luxemburg, Malta, and the United Kingdom.

In most European countries, where potatoes are commonly substitutable with wheat, crops of potatoes as well as of wheat and rye are reported large.[1] (See Table 4, p. 70.) This means that in countries like Germany and Poland, and in lesser degree, France, Czecho-Slovakia, and other countries of Northern and Western Europe, there will be no special incentive to substitute bread for potatoes, as there was in 1923–24. On the other hand, with abundant domestic cereal crops, there will be little incentive to substitute potatoes for bread grains, as there was in 1924–25. This suggests expansion of the use of potatoes as animal feed and in distillation; and of rye, likewise.

[1] This is comparatively unusual. Frequently, weather conditions which are favorable to crops of bread grains are unfavorable for root crops, such as potatoes and sugar beets. Thus in 1921 and 1923 European bread-grain crops were good, and potato crops were poor; in 1922 and 1924 the opposite conditions prevailed. See WHEAT STUDIES, January 1925, I, 115 f., and similar data for 1925.

Europe's corn crop also appears to be large. (See Table 5.) In Italy and the Danube states, where most of Europe's

TABLE 4.—EUROPEAN POTATO CROPS*

(Million bushels)

Country	1909–13 average	1922	1923	1924	1925
England and Wales	100	150	103	101	120
Netherlands	104	162	90	99	114
Belgium	111	144	104	105	95
France	527	465	364	564	538
Spain	113[a]	105	95	89	...
Germany	1,374	1,494	1,197	1,338	1,471
Czecho-Slovakia	245	333	229	239	268
Poland	890	1,221	973	987	1,049

* Official data assembled by U.S. Department of Agriculture. See *Agriculture Yearbooks* and *Foreign Crops and Markets*.

[a] Two-year average.

maize is produced and where it is highly substitutable with wheat, good crops of maize as well as of wheat are reported. Moreover, the abundant American corn crop ensures an easy international position, in

TABLE 5.—EUROPEAN CORN (MAIZE) CROPS*

(Million bushels)

Country	1909–13 average	1922	1923	1924	1925
Italy	103	77	89	106	106
Hungary	61	49	49	74	92
Jugo-Slavia	112	90	81	106	...
Bulgaria	26	15	27	27	28
Roumania	193	155	151	155	175

* Sources as for Table 4.

contrast with the tightness of last year resulting from the poor crops of 1924 in the United States and of 1925 in Argentina.

RUSSIA

Russia's cereal crops passed through several stages. The winter was very hard on fall-sown grain; winter-killed acreage was reported 8 or 10 per cent of the moderate area sown. The spring, however, was distinctly favorable; spring plantings were heavy and the crops grew well. Until about harvest time, successive reports of condition were increasingly good. The official estimates of August 1 put the wheat crop at 661 million bushels and the rye crop at 819 million bushels. At these figures, the wheat crop would be 330 million bushels above that of 1923, and the rye crop 70 million larger than that of 1923, when Russia made an appreciable contribution to world exports of both wheat and rye. But harvest weather proved very inclement. Heavy persistent rains delayed cutting and winnowing, and caused serious deterioration in quality and some reduction in quantity. In spite of these unfavorable developments, the view was generally held, until well into October, that this year's grain harvest was much the best Soviet Russia has had.

It was recognized, in Russia and outside, that large quantities of the 1925 cereal crops would be required for replenishing stocks, which were almost nonexistent before new grain was harvested. Nevertheless, official estimates indicated a huge exportable surplus. European experts discounted these estimates, but Broomhall and Sir James Wilson agreed in regarding 40 million bushels as a conservative estimate of Russia's wheat exports, and both recognized the possibility of much higher figures. For reasons presented more fully below (p. 76), the government purchasing agency, however, found itself unable to make its "collections," for internal distribution or for export, in any quantities approaching its schedules. In October, accordingly, even Russians came to question the accuracy of the official estimates of the crops. The London *Times* published a cable from Riga, dated October 31, as follows:

> After a conference held to consider the present condition of agriculture, the Gosplan (State Planning Commission) has issued orders to organize a re-estimation of the Soviet's entire harvest, because the original figures had proved misleading, exaggerating the available quantity of grain, probably by about 20 per cent, and necessitating a revision of the whole export plan.

The revised estimates have not yet become available. However, even a substantial reduction in official figures for crops would leave Russia with larger crops than in any post-war year, and especially large by comparison with 1924. Russian supplies will remain an uncertain quantity, and Russian exports unpredictable, even after the new estimates appear. Present indications are that Russia actually harvested

fairly large crops, of poor quality, and that she is still to be reckoned with as a factor in world export trade during the year.

AUSTRALIA

In Australia the wheat acreage planted was about as large as the record area of 1924–25, some 10¾ million acres. Early conditions were favorable. In the midst of the growing season, however, a prolonged drought caused serious injury. The first official forecast, published in November, put the crop at 99 million bushels, as compared with the bumper crop of 164 million harvested last year. Considerable quantities were used for fodder, so that the wheat acreage harvested for grain is likely to be much less than last year. Later rains came in time to improve part of the crop in several important districts, and the final estimate seems likely to be above the early forecast—possibly 115–120 million bushels.

ARGENTINA

Crop developments in Argentina have been of unusual importance. A record acreage, finally estimated at 19 million acres, was planted. Until November conditions were extraordinarily favorable. As the season progressed without unfavorable developments, there was increasing confidence that an excellent, if not a bumper, crop would be harvested.

On September 7 *The Times of Argentina* stated:

> Crop conditions are reported excellent from every corner of the republic, and as the government has now gone on record with an increase in estimated area sown, we have a certain right to feel very optimistic regarding the prospects for 1926. Of course it is too early to make any calculations outside of mere guesses at yield, if all continues to go well, but we can at least say that we have never known a September offering such all-round good conditions as today. November is the critical month of growth, but if the crop enters that month in hardy and healthy condition, it is very rarely that the climatic setbacks of the period have very great effect on the eventual yield, although frost when the wheat is in milk stage is the worst danger that the crop can face, and even if the plant is in splendid condition, heavy loss must occur. We are inclined to think that the main dangers for the present crop are frost and hot winds toward the end of its period of growth. There seems to be little doubt but that the crop can get along fairly well with or without rain, although, of course, a fair amount of precipitation would be of considerable benefit.

This journal proceeded to forecast the crop at 279 million bushels, and the exportable surplus at 209 million, on the assumption that favorable conditions continued up to the close of December.

On September 14 the same journal stated: "We have rarely known such an extraordinary period of 'weather as per order' as this country has been vouchsafed since April last. . . . ." On October 12 it stated: "There is not the slightest doubt but that crop conditions have never been finer than they are at this moment." It was recognized that there was danger of frosts, hot winds, and excessive rain as the crop entered the critical stage of growth in late October and November. A mid-September frost caused some damage in Santa Fé and East Cordoba, and there were excessive rains in Entre Rios; but later improvement suggested that the damage would prove merely temporary.[1]

Around October 20 a sharp fall of temperature gave rise to fears of frosts, but further rains dispelled these fears, and on October 26 *The Times of Argentina* wrote: "In general conditions have never been better at this time of year, and we are growing more and more optimistic regarding the eventual yield of both wheat and linseed." Only the weakness in the freight market for new season loadings suggested that important business interests did not accept the prevailing view that crops would be exceptionally good. On November 2 the same journal stated: "The weather during the past week has been all that could be desired, and we are now one week more closer to harvest time with conditions just about as fine as they could be."

As late as November 11 an American crop expert in Argentina cabled: "Rains assure a record wheat crop barring frost." The consensus of opinion was that the crop would probably be 250–280 million bushels.

[1] *Times of Argentina*, October 19, 1925. Some experts consider that this September frost so weakened the plant that rust was able to make much headway.

Just at this time the news turned distinctly worse, and as the days passed the reports became more and more pessimistic. Frost, hail, and hot winds took some toll in various sections. But the chief damage was caused by frequent, often heavy rains, and hot muggy weather. Much grain was lodged. Rust spread rapidly and widely, first in the north, then gradually extended into the center and south. Cordoba and Santa Fé suffered most heavily. Many fields were abandoned. Rains interfered with harvesting in the northern states. Early threshings showed disappointing yields, and grain samples were of poor quality. The preliminary official forecast, made public November 13, was 235 million bushels. This was regarded as reasonable in the light of damage then known. As late as November 16, however, one Chicago expert cabled from Argentina that no one expected less than 250 million bushels, and that there was a chance of 270 million, barring frost. Deterioration in the next few days, however, led to reduced estimates. On November 20 another Chicago expert cabled that indications pointed to a crop of less than 200 million bushels. Other experts gradually came around to a similar opinion. About November 26 Murray cabled his revised estimate of 210 million bushels, and G. C. Bryant, another American expert, cabled his view that under the most favorable conditions the crop would not exceed 200 million. Lower figures have been suggested. The uncertainty of opinion as to the Argentine wheat crop is for the moment an unresolvable conflict between the views of American experts sent down to look over the situation, forecasts of British experts resident in the country, and the official crop estimates.

It is clear that great damage was done, and no one now expects a bumper yield. Yet under such conditions, it frequently proves that the damage is overestimated. The second official forecast, published in mid-December, is 215 million bushels, but even this must be regarded as subject to considerable revision. Since the 1924–25 crop and the average for the past five years have been around 190 million bushels, the present crop will be small only by comparison with the high expectations. But much of the wheat is of poor quality, and the indications are that its movement will be delayed by dampness and the poor facilities available for handling moist grain.

World Wheat Crops Summarized

While it is still too early to present conclusive statistics of world wheat crops of the present season, it is desirable to present a tentative summary, with comparisons. Table 6 presents such an approximation, based upon latest available estimates supplemented by rough estimates for a few countries for which data are not at hand.

The indications are that, in spite of the deterioration of Southern Hemisphere crops, the world wheat crop of 1925, exclusive of Russia, is larger than in any post-war year except 1923, and is some 260 million bushels larger than in 1924 and only 144 million bushels smaller than in 1923. Subsequent revisions, for Russia and certain European countries, may possibly be downward, and the final figures for the Northern Hemisphere may prove to be somewhat smaller than are given in the table. Final estimates of Southern Hemisphere crops, on the other hand, may easily be higher than the figures suggested. Excluding Russia, therefore, the world wheat crops are by no means small. Unless the Russian estimate is heavily reduced, the grand total may be larger than that of any previous post-war year. In other words, the 1925 wheat crop is really large, except by comparison with the bumper yields of 1923. The European rye crop is even farther above the post-war average than the crop of 1923, and exceeds the crop of 1924 by 284 million bushels. In recent weeks these basic facts—if such they are—have been largely ignored.

The distribution of the 1925 wheat crop is very different from that of 1924. Among exporters, North Africa, Canada, Russia, and the Balkan States alone have crops distinctly larger. The United States, India, and Australia have small crops. South American crops, while by no means small, promise to be little if any larger than those of 1924–25. On the other hand, the wheat crops of Russia and the Danube countries are ap-

parently the best since the war, though the Hungarian and Roumanian crops are little larger than in 1923, if as large. The crops of exporting countries as a whole, exclusive of Russia, will probably be roughly 50 million bushels more than in 1924, but smaller than in any other year since 1921.

have an important bearing upon the volume and course of international trade in the present crop year.

Finally it should be added that the world carryover into the present crop year, of both wheat and rye, was much smaller than a year or even two years earlier. The re-

TABLE 6.—WHEAT PRODUCTION IN PRINCIPAL WHEAT-PRODUCING AREAS, PRE-WAR AND POST-WAR*

(Million bushels)

Year	World ex-Russia	Russia	Northern Hemisphere ex-Russia	Southern Hemisphere	United States	Canada	British India	North Africa	Europe ex-Russia	Japanese Empire	Australia	Argentina
1919.....	2,794[a]	...[b]	2,493[a]	301	968	193	280	75	919[a]	41	46	217
1920.....	2,893	318[c]	2,543	350	833	263	378	63	947	41	146	156
1921.....	3,109	205[c]	2,733	376	815	301	250	99	1,216	40	129	191
1922.....	3,158	242[c]	2,804	354	868	400	367	70	1,044	40	109	196
1923.....	3,491	330[c]	3,064	427	797	474	373	107	1,261	35	126	248
1924.....	3,088	382[c]	2,683	405	873	262	361	80	1,055	36	164	191
1925.....	3,347[a]	661	2,965[a]	382[a]	669	422	325	108	1,385[a]	41[a]	115[a]	215
Average 1909–13.....	3,005	759	2,725	280	690	197	352	92	1,348	32	90	147
1920–24.....	3,148	296[c]	2,765	382	837	340	346	84	1,105	38	135	196

* Excluding China, Turkey in Europe, Brazil, and a number of small producers. Data of U.S. Department of Agriculture, except for Russian data 1920–23 and a few supplemental estimates.

[a] Partially estimated.

[b] Data not available.

[c] Including Siberia and Kirghisia, but not complete for Asiatic Russia.

The great increase in wheat and rye crops has occurred in importing countries, notably on the continent of Europe. The wheat crops of European countries that are normally importers or barely self-sufficing, are now estimated at about 1,079 million bushels, as compared with 847 million bushels in 1924, 994 million in 1923, and 887 million for the 5-year average 1920–24. The rye crop is relatively even larger. These facts

duction was especially marked in stocks afloat and in Europe (except Germany). Still, the carryover into 1924–25 had been abnormally large, and the reduction during the year did not mean that the carryover into 1925–26 was dangerously low. Nevertheless, especially in Europe and Russia, part of the large crops of 1925 will presumably be devoted to replenishing stocks. The large rye crop is especially helpful.

II. INTERNATIONAL TRADE, AUGUST TO NOVEMBER

In view of smaller crops in exporting countries and larger crops in European importing countries, it follows that international trade in wheat and flour will be much smaller this year than in 1924–25. Equally large imports will not be required, and equally large exports could be secured only with great difficulty, if, indeed, at all. The pressing question is, *How much less will Europe and ex-Europe demand at prices which will call forth the required exports, and what will be the equating price?* Importers' requirements and export surpluses for the crop year as a whole, however, can best be discussed after a review of international trade and prices during the months of August to November.

SMALL AUTUMNAL TRADE

Considering the small carryover in importing countries on August 1, 1925, the volume of international trade since has been very small. The contrast with the corresponding period of 1924 is especially striking. Table 7 (p. 74) is illustrative. According

to Broomhall's data, total international shipments in the seventeen weeks ending November 28, 1925, were only 207.5 million bushels, or 31.6 per cent of his estimated total for the crop year. This is smaller than in any recent year or the pre-war average for the corresponding period, and almost 50 million bushels less than in August–November, 1924. Shipments to ex-European destinations were considerably larger than usual, and have been exceeded only in the corresponding period of 1923. Shipments to Europe, however, have been exceedingly light, only 167 million bushels as compared with 228 million bushels in the same period of 1924 and a low figure of 178 million bushels in the same period of 1923. The shipments to Europe in the first 17 weeks of the crop year constitute only 31.1 per cent of Broomhall's estimate of the 1925–26 total, as compared with 35.7 per cent in this period of last year and 28.3 per cent of the 53-week total for the crop year 1923–24.

TABLE 7.—INTERNATIONAL WHEAT SHIPMENTS, TO EUROPE AND EX-EUROPE, AUGUST–NOVEMBER*

Area	1909–13 average	1921	1922	1923	1924	1925
	a) MILLION BUSHELS					
Total.....	216.6	217.4	218.7	221.9	255.0	207.5
To Europe....	191.1	184.6	189.2	177.5	228.3	166.7
Ex-Europe....	25.5	32.8	29.5	44.4	26.7	40.8
	b) PERCENTAGE OF CROP YEAR TOTALS					
Total.....	34.8	33.6	32.3	28.6[a]	35.6	31.6[b]
To Europe....	35.3	33.8	32.3	28.3[a]	35.7	31.1[b]
Ex-Europe....	31.1	32.7	32.7	29.9[a]	35.3	34.0[b]

* Figures for 17 weeks, from Broomhall's *Corn Trade News*.

[a] Total for crop year includes 53 weeks.

[b] Percentage of Broomhall's estimates of 656 million, 536 million, and 120 million, respectively.

The situation thus far this year has been somewhat similar to that early in 1923–24. In 1923, as in 1925, Europe harvested excellent crops, Canada had a large crop, substantial exports from Russia and the Danube basin were expected, and a large crop was in prospect in Argentina. In both years the shipments of August–November were relatively low, especially to Europe.

The small volume of international trade in the first third of the year, especially by contrast with last year, reflects conditions both in importing and in exporting countries. The large volume of shipments to ex-European countries reflects chiefly their small initial carryovers and the early availability of Alberta wheat in Vancouver. The small volume of shipments to European importing countries reflects chiefly two things: the possession of sufficient supplies from carryovers and new crops to permit great reduction of imports; and firm expectations that imports would be obtainable at lower prices later in the season. Moreover, the small volume of total exports is explained in part by the fact that the bulk of the year's exportable wheat could not be shipped until October or later. The United States had a small surplus, and that was chiefly in durum and Pacific wheats and in flour. India, North Africa, and Australia had small quantities available for shipment after August 1. Little new grain could be secured from Canada, Russia, and the Danube countries till October. In 1924–25 the United States had the chief export surplus, and this was available early. In 1925–26 the principal surplus is in Canada, where the season is several weeks later. Europe could not have secured substantially larger supplies during August–November except at considerably higher prices.

European purchases in the fall, until November, were especially low because Europe was confident that by the late autumn the tightness of supplies characteristic of 1924–25 would disappear. The reasoning behind this view is fairly clear. Large European crops were harvested. Despite the fact that large domestic crops usually imply a heavy disappearance during the season, it was generally taken for granted that the rest of the world would certainly harvest enough wheat and rye to make easy the acquisition of required imports. Russian news was interpreted to indicate not merely the reversal of the import position of Russia of last season, but a generous export of wheat and rye, at least equaling if not notably exceeding the exports of 1923–24. North Africa had harvested a good crop in May; the prospects for good crops in the Danubian and Balkan countries were excellent. Looking abroad, the decline in the American crop was offset by the increase in the Canadian crop. The

unsatisfactory conditions in Australia were regarded as more than offset by the large acreage and promising outlook in Argentina. During August–October, therefore, Europe believed her position secure, in the possession of a better wheat crop than in 1923–24, with a world position almost as favorable as in that season. Under these circumstances, Europe's effective demand for import wheat was only moderate, there was practically a buyers' market, and the shipments to Europe in August–November averaged less than 10 million bushels a week.

European grain dealers and millers, however, would have shipped in larger amounts and taken advantage of easy ocean freight rates had they been convinced of a fair prospect of profit. In his testimony before the Royal Commission on Food Prices, Sir Herbert Robson, in describing the methods of the European grain importers, remarked: "The whole secret of the grain trade is 'When do you buy and when do you sell?' It is the time when you buy which matters and the time when you sell which matters." In view of the oncoming harvest in the Southern Hemisphere, it was apparently the view of the European grain trade that August–October was not the time to buy more than moderate supplies. This attitude was reflected in the premiums on nearer futures in the Liverpool market and was reinforced by the position of the futures prices in North America. In August, in Winnipeg, the October future was consistently above the December future. Nor were the relations of September to December futures in the United States favorable to long-time cash or speculative buying by European grain dealers. (See below, pp. 80 f.) Thus, apparently the easy position of importers was confirmed both by the short-view price relations and the long-view statistical forecast of the season. Only a sharp reversal of expectations from the Southern Hemisphere could upset this position.

Exports by Leading Exporters

It is pertinent to examine the sources of the exports during the four months under review. Tables 8 and 9 afford convenient summaries of available data.

Canada, naturally, has contributed the largest amount, 124 million bushels—in August and early September chiefly from the substantial surplus of exportable old wheat on August 1, later from the early threshings of new grain. Indeed, Canada's exports of wheat and flour have been relatively high in the early months of the crop year. Both in August and October, new records for these months were established. In August–October, 84 million bushels were exported, as compared with 56 million bushels in the corresponding period of 1923, when a larger crop was harvested. These high ex-

Table 8.—International Wheat Shipments by Export Areas, August–November*

(Million bushels)

Exporting area	1909–13 average	1922	1923	1924	1925
North America	76.6	183.6	151.1	201.5	145.3
Argentina, Uruguay	12.5	24.6	31.8	24.3	18.7
Australia	9.9	6.9	14.7	12.3	10.4
Russia	69.0	2.6	8.9	2.2	14.0
Danube basin	30.6		4.3		
British India	14.4	1.0	4.8	12.3	1.4
Other countries	3.6	...	6.3	2.4	17.7
Total	216.6	218.7	221.9	255.0	207.5

* Figures for 17 weeks, from Broomhall's *Corn Trade News*.

Table 9.—Net Exports of Wheat and Flour from Principal Exporting Countries, August to November, Pre-War and Post-War*

(Million bushels)

4-month period	Total	United States	Canada	Argentina	Australia	British India
Average 1909–13	125.5	47.8	36.2	14.9	10.2	16.4
1920	198.9	118.4	58.9	10.9	9.4	1.3
1921	254.2	147.7	71.8	6.3	30.8	(2.4)[a]
1922	270.8	105.0	128.8	27.3	7.3	2.4
1923	244.1	63.0	126.2	31.5	18.0	5.4
1924	279.5	147.9	76.0	26.7	14.7	14.2
1925	192.5	34.4	123.8	19.5	12.2[b]	2.6[c]
1925 Aug.	40.6	11.2	18.4	5.8	4.2	1.0
Sept.	39.7	11.6	18.8	4.0	4.2	1.1
Oct.	60.2	5.9	46.4	5.3	2.1	.5
Nov.	52.0[d]	5.7	40.2	4.4	1.7[b]	...[e]

* Data from official sources and International Institute of Agriculture.
[a] Net import.
[b] November figure estimated from Broomhall's shipments.
[c] August–October.
[d] Excluding India.
[e] Not available.

ports were possible because of the substantial carryover, the early harvest, the heavy marketings in September, and possibly also the direct trading positions of the pools; and they were in demand because of the paucity of supplies in other export countries. November exports, 40 million bushels, were smaller than October's, and by no means a record for the month, for they were kept down both by the heavier early shipments and by adverse threshing weather in October. In these four months Canada furnished roughly 55 per cent of world exports, and 41 per cent of our preliminary estimate of Canada's exportable surplus from the 1925 crop.

The United States has ranked second among exporters, shipping out considerable quantities of durum, some Pacific wheat, some flour, and lower grades of representative milling wheats. Considering the total exportable surplus available in this country, the net exports thus far—since July 1, 42 million bushels—have been relatively heavy, though they are smaller than in the same period of any recent year. Argentina and Australia have continued to export moderately from the exportable surplus still available on August 1; Australia, indeed, has shipped far more than was thought possible in August. North African exporters, which had exported some new wheat before August 1, have continued to ship fair quantities. Even British India, which probably has no export surplus for the crop year as a whole, exported, net, about 2½ million bushels in August–October.

Russia and the exporting states of the Danube basin have exported some 25 million bushels in August–November, much more than in the same period of any recent year but far less than was expected in September.

Russian and Danube Exports

According to Broomhall, Russia shipped for export about 11 million bushels of wheat, as well as smaller quantities of rye, from August 1 to November 25, most of this in September and October. While this is a larger quantity than Russia has exported in any corresponding period since the war, it is very small in comparison with the Soviet export plan or even with importers' expectations. In August and September active chartering of steamers to load in Black Sea ports gave rise to expectations of heavy shipments, but many charters had to be canceled.

In retrospect the causes of disappointed expectations are reasonably clear. Heavy rains during harvest not only diminished the size of the crop and lowered its quality, but seriously delayed threshing and made rapid marketing impossible. The delay was greater because threshing is commonly done by very primitive methods and cannot well be speeded up. The large harvest caused a special demand for threshing machines, but few were available and these only at excessive rentals. The government purchasing agency had to compete with private traders who had assembled large stocks of grain; it refused to pay the prices they asked, and eventually was forbidden to purchase from them. Grain prices had declined substantially as the new crop became available, but the peasants refused to sell grain in large quantities. It was not merely a question of expecting higher prices later. After bitter experiences with paper roubles, the peasants were unwilling to sell for money unless they could spend it promptly. They needed and wanted to buy agricultural implements, clothing, and other supplies—shirts, in particular — but these products were scarce and high in price. Hence the peasants held on to their grain, and country prices in some sections remained so high (for example from $1.05 to $1.25 gold) that the government could not procure grain at prices which, considering the heavy handling and shipping expenses, would yield any profit. The government collecting organization was not efficient, indeed not even honest; the Soviet organ announced in October that 35 government buyers in two districts had been summarily shot for grafting.

Moreover, the government was handicapped by lack of foreign credits for purchase of textiles and machinery abroad and for financing grain exports. The Baldwin government in England was especially blamed by Soviet spokesmen for refusing credits and preventing private extensions of British credit. In October a syndicate of

German banks was prevailed upon to extend a short-term credit of 75 million gold marks ($18,500,000), to be repaid within five months from the proceeds of Russian grain exports and to be expended in part payment for Russian government orders in Germany, chiefly for agricultural and textile machinery.

Finally, there is the question as to the size of the Russian crop. As we have said, the persistence of relatively high prices and the difficulty of "collecting" grain eventually led the government, late in October, to order a re-estimation, and to acknowledge that earlier estimates were probably far in excess of the truth. It seems clear, however, that in any case the crop is large enough to make possible substantial exports if other conditions were reasonably favorable to export. In November it was reported that collections were becoming easier. The government announced that it would operate ice breakers to keep the Black Sea outlet open during the winter. With the onset of winter, roads again become passable. The rise in world prices should tend to facilitate export. Hence the disappointing volume of exports in the autumn is not a certain index of the volume of exports in the crop year as a whole, though it has been a psychological shock to the market. About the end of November, however, the Soviet government was reported to have stopped grain exports until spring.

It is now openly charged in Great Britain that the Russians "rigged" the market by buying at home and abroad at prices artificially lowered by propaganda concerning large prospective Russian exports and selling at the higher level that resulted as the consequence of revelation of the real Russian position.

From the countries of the lower Danube as a whole, the autumnal exports were low in view of the large crops, which may, however, prove to be smaller than present official estimates. According to official statistics, Hungary and Jugo-Slavia exported about 12 million bushels, net, in August–October, but Bulgaria and Roumania have exported very small quantities. There are several reasons for the low exports. Throughout the area, the harvest season was rainy. Consequently, threshing operations were delayed and much wheat was not in condition for prompt shipment. Prices, which last season had been very high, declined greatly. Buyers held back, expecting still lower prices, while peasants were reluctant to sell at the low prices prevailing. Good crops in Austria and Czecho-Slovakia made unnecessary early imports from neighboring markets, where also buyers anticipated lower prices later in the crop year. Fluctuating exchanges and prospects for reduced freight rates, at least in Roumania, made both buyers and sellers cautious. Export restrictions have been a cause for delay. Early in the season Bulgaria removed her embargo on exports, but she maintained a high export tax until October 30, when it was substantially reduced. Jugo-Slavia had twice reduced her export taxes, and in November lowered railway rates on grain to Adriatic ports. Roumania, however, has not yet reduced her export tax.

In the main, as in Russia, these factors will not necessarily cause a reduction in the year's exports from the lower Danube area, but they will throw a larger part of it into the later months of the year. The price recovery of November will remove certain obstacles to export and will stimulate sales abroad. In some quarters the probable exports of these countries, Roumania in particular, have been greatly overestimated, but the recent tendency has been to underestimate the exports which may reasonably be expected during the winter and spring months if international prices continue on a high level.

Other Interstate Trade in Europe

An interesting development in the late summer and autumn has been the appearance of interstate trade in wheat in unusual channels. Both Germany and Poland have exported considerable quantities of wheat, to numerous countries. In August, even Denmark, Sweden, and Belgium offered small lots which were shipped to England. German wheat has moved to England, France, Belgium, and Italy, as well as eastward to the Baltic States and southeast to Czecho-Slovakia. Polish wheat has moved to London as well as to nearer markets.

These unusual movements deserve explanation. One fundamental cause was the shortage of wheat for early delivery in the principal European importing markets, notably England. Cash wheat and wheat for early delivery were at substantial premiums over more distant futures. (See below, p. 82.) European importers, at least until November, generally expected lower prices to prevail later in the season. Moreover, in Germany, and even more in Poland, the large crops of wheat and rye caused domestic prices to fall heavily to a level which made exports for early delivery profitable enough to cover more than transportation costs. Exports tended to relieve the pressure of supplies on the domestic markets. This factor has been of special importance in Poland, where the drop in wheat prices in July was almost 50 per cent. (See below, p. 86.)

In the case of Germany, tariff regulations have been an important additional factor. Import duties on wheat and flour became effective September 1. On August 20 restrictions upon grain exports were removed,[1] and on October 1 there came into force a pre-war provision whereby grain and flour exporters may obtain negotiable import certificates, the holder of which may import equivalent quantities of grain free of duty. Now German wheat is characteristically soft, of low or moderate gluten quality. For satisfactory milling and baking results, Germany needs to import hard wheats, strong flours, or both. Importers of such wheats must pay the duty unless they hold such import certificates. Consequently these certificates may command a price per unit of quantity approaching that of the duty itself. Exporters, under these circumstances, virtually receive a bounty on export. Hence export of low-gluten wheat is promoted. It happens further that there is a market for such wheats in the Baltic States, which are accessible by water to all the surplus-producing areas of Eastern Germany. Geographical forces therefore contribute to promote this trade.

Financial influences, operating through rates of exchange, have also had some weight. Germany's cereal exports, except to the Baltic States, have gone chiefly to her reparation creditors. Poland has need of balances in London, and wheat and rye exports to England serve this need effectively. Poland in particular has been experiencing a marked depreciation of her currency, which stimulates exports. In Germany and Poland credit has been especially tight.

American Imports of Canadian Wheat

The movement of Canadian wheat into the United States became appreciable in September and increased in October and November. In the four months of August–November about 8 million bushels were imported, more than in the entire preceding crop year. Of this over a million bushels were imported for domestic consumption—most of it in late October and early November—and paid the duty of 42 cents a bushel; the rest was for milling in bond. Probably all of this wheat imported for domestic consumption was high-quality milling wheat which commands substantial premiums in American milling centers.

At first sight it may seem surprising that Canadian wheat can be imported for consumption, duty-paid, when prices of domestic spring wheats behind the 42-cent tariff wall have been over 20 but rarely as high as 30 cents a bushel above apparently comparable grades in Winnipeg. (See below, p. 80.) The explanation lies partly in the inherent superiority of Canadian Marquis wheat, which for apparently comparable grades of equal protein content amounts to some 10 cents a bushel, more or less. In May 1925, in a test made by the Minneapolis Railroad and Warehouse Commission, a sample of No. 3 Northern Manitoba sold in Minneapolis for the same price as a sample of No. 1 Dark Northern. These samples may not have been typical, but it is significant that on October 19, 1925, No. 1 Dark Northern sold in Minneapolis 43 cents above No. 3 Manitoba in Winnipeg.[2] No. 1 Northern Manitoba wheat, of high milling

[1] Official figures, given in Appendix Table III, show that net imports in August, before the duty became effective, were 15 million bushels, whereas in October exports practically equaled imports.

[2] *Foreign Crops and Markets,* October 26, 1925, p. 653. At that time, No. 3 was at an 8-cent discount under No. 1 in Winnipeg.

quality, may sell in Winnipeg at a price which, plus the duty, is more than No. 1 Dark Northern at Minneapolis and still be a profitable purchase for American millers.

There is practically only one point of competition—Buffalo. If Canadian wheat could be shipped direct to Minneapolis from Winnipeg or other favorable points near the border, it would facilitate imports of Canadian wheat. This is not possible because the Canadian railways practically refuse to allow their box cars to leave their country. Minneapolis mills desirous of securing Canadian wheat are practically forced to ship by water from Fort William and Port Arthur to Duluth and tranship from Duluth to Minneapolis. This means an added railroad haul for the Canadian railroads, a lake haul for Canadian or American boats, and a rail haul for an American railroad. It means also charges for elevation, loading and unloading, commissions and insurance. The sum of these added expenses is such as to make the milling of Canadian wheat in Minneapolis or other north Mississippi mills expensive. As a consequence, milling of Canadian wheat for consumption or for re-export as flour is practically centered in Buffalo.

In Buffalo the conditions are quite comparably competitive. In any season Canadian wheat will enter Buffalo for grinding for domestic consumption when the c.i.f. duty-paid prices of Canadian wheat are such as to make the flour and offal cheaper to produce than the flour and offal ground from American wheat. This varies from year to year in accordance with the premium characteristics of Canadian and American wheats. This season imports are said to have been made for consumption at c.i.f. duty-paid prices on Canadian grain ranging from 8 to 12 cents above the c.i.f. price of American hard spring wheat.

III. WHEAT PRICE MOVEMENTS AND COMPARISONS

The movement of prices in the period under review reveals so many peculiarities that it is difficult to describe it in brief compass. Cash prices moved at variance with futures prices, notably in Winnipeg. Near and distant futures in other markets showed unusual relations. In the United States, prices of red winter, hard winter, spring, and durum wheats showed marked divergences. In several countries of Europe, domestic wheat prices were far out of line with import prices, or with export prices in the case of certain surplus-producing countries like Russia and Roumania.

Certain of these peculiarities are so much an integral part of the current wheat situation that they merit attention and explanation; and they have further interest and significance in revealing the complexity of the wheat situation and the danger of excessive generalization. Before dealing with them, it is desirable to consider the general course of wheat prices in the four months August–November, and the factors responsible for the characteristic tendencies. It has been difficult for buyers and sellers to avoid being influenced by last year's experiences.

General Course of Prices

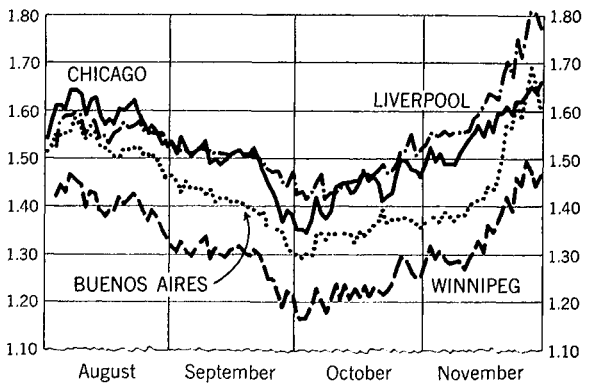
Broadly speaking, wheat prices declined from August 7 to October 3 and rose from then until early in December. This is clearly shown on page 80 by a comparison of daily prices of December futures in Liverpool, Chicago, and Winnipeg, and of several old-crop futures in Buenos Aires. The decline was preceded by a rise early in August and the fall was accentuated late in September, especially in North America. The recovery was moderate until near the middle of November and very pronounced in the second half of the month. By the close of November, prices had risen above the high points of August, and 30 to 35 cents a bushel since early October; and the advance had not yet culminated.

The reasons for the decline lay partly in the development of the general "statistical position," partly in market conditions. The apparent size of Northern Hemisphere wheat crops was increased by fresh estimates, unofficial and official, notably for Canada, France, Spain, Italy, and Russia. The condition of the Argentine crop con-

tinued excellent, though drought injured the Australian crop prospects. Accordingly the apparent margin between world crops and world requirements, and between exporters' surpluses and importers' requirements, was increased. The Canadian crop was cut early, and the September marketings established a new record. In European importing countries, considerable supplies of domestic grain became available in good season despite rains during harvest. With immediate requirements covered and a large Argentine crop in fair prospect, European importers bought moderately, and complacently waited for prices to recede to a lower level. Only the limited supplies available for early delivery prevented a more pronounced decline.

CHART 1.—DAILY PRICES OF DECEMBER WHEAT FUTURES IN LIVERPOOL, CHICAGO, AND WINNIPEG, AND OF SUCCESSIVE FUTURES IN BUENOS AIRES, AUGUST–NOVEMBER, 1925*

(Dollars per bushel)



* Compiled from *Chicago Journal of Commerce; Daily Market Record*, Minneapolis; *Daily Trade Bulletin*, Chicago; *Journal of Commerce*, New York.

The temporary advance early in August was attributed to three factors: a sharp falling off in receipts of winter wheat in the United States; reports of deterioration in the spring wheat areas of North America; and European demands for early delivery because of rains during harvest. The first two influences were short-lived. The sharp decline of late September, especially marked in North America, was due mainly to three influences: the heavy marketings of spring wheat in Canada and the United States, which resulted in a substantial increase in visible supplies; higher expectations from the Canadian crop as a whole, on the basis of current threshing reports; and evidence of increased competition of Russian wheat in European markets. The official report of American farmers' intentions to plant increased acreages of winter wheat was also regarded as a bearish factor.

The two stages of recovery had different explanations. In the first stage, the major influences were market factors rather than changes in the statistical position. Several weeks of wet weather interrupted and retarded the threshing of Canadian spring wheat, lowered its grade, and delayed its progress to mills and for export. Shipments from Russia and the Danube basin, though considerable, disappointed expectations. America's exportable surplus of good milling wheats was practically exhausted. Under these circumstances even limited demands by European importers, and increased purchases by ex-Europe, notably Brazil and the Orient, sufficed to advance prices to some degree.

In the later stage the dominant factors were changes in the statistical position, primarily on the side of exporters. The Canadian official crop estimate, as of October 31, was indeed 30 million bushels above that of August 31; but some such increase had already been discounted on the basis of September threshing returns, and its bearish influence was moderated by knowledge of damage suffered in October. There was increasing conviction that Russia could not export heavily before spring, if at all, and that the effective export surpluses of Russia and Roumania had been grossly exaggerated. Finally and most important, an unfavorable turn in the weather caught the Argentine crop at a critical stage, in mid-November, and in a few days caused a reduction of some 70 million bushels in private forecasts of Argentina's crop and export surplus. These developments caused a rush of buying orders in North America, which, reinforced by speculative purchases, drove prices sharply upward.

In Chart 1 are revealed some significant divergences among the four markets. On the decline, Liverpool prices dropped only by about 18 cents a bushel from the high point

of early August, whereas in the same period, Buenos Aires, Winnipeg, and Chicago prices declined by 29, 30, and 30 cents, respectively. It is impressive to note that although representative American wheats were not on an export basis during this period and the Chicago future sold generally 17 cents or more above the Winnipeg future,[1] these two prices ran more nearly parallel than Winnipeg and Liverpool prices. The explanation seems to be twofold. In the first place, during this period European importers, anticipating still lower prices, bought reluctantly and drew as much as possible from Continental sources. In the second place, American prices were so close to the point at which imports of premium Canadian wheats would be profitable in spite of the 42-cent duty, that they were subject to influences affecting Winnipeg prices. The Buenos Aires market followed in general the course of the Winnipeg market, but 10 or 12 cents above, though fluctuations were smaller. Arbitrages had some effect also.

In the uncertain period of moderate advance from early October to about November 10, the four futures showed numerous local peculiarities, which need not be discussed in detail. The net advance between October 3 and November 10 was greatest in Chicago (about 16 cents a bushel), a little less in Liverpool, and least in Buenos Aires (about 8 cents a bushel). Fluctuations were greatest in Chicago, where speculation was most active[2] and where there were peculiar uncertainties connected with the degree to which domestic supplies of representative wheats could meet domestic requirements.

In the later stage, the Buenos Aires market naturally showed the sharpest advance, rising over 30 cents a bushel between November 10 and November 27. Chicago prices rose least, partly because they had risen more in previous weeks, partly because of the peculiar conditions mentioned above.

The striking differences among the different markets in the advance of recent weeks is shown by the following figures:

ADVANCES FROM OCTOBER 3 TO DECEMBER 7, 1925

Kansas City May	31 cents
Minneapolis May	32 cents
Duluth May durum	34 cents
Chicago May	40 cents
Winnipeg May	45 cents
Buenos Aires February	47 cents
Liverpool December	54 cents

It will be noted that American markets advanced least; for throughout these nine weeks our prices have been above export parity, except for durum, for which the foreign demand is less influenced than the demand for milling wheats, by the crop developments of recent weeks. The substantial rise even in American markets, however, shows that these prices are by no means determined by domestic conditions but are highly responsive to developments in the international situation. That Buenos Aires prices should have risen more than Winnipeg is not surprising, and that Liverpool December should have risen most of all is explainable in part on the basis of heavier purchases for early delivery in view of reduced expectations from Argentina early next year. Low stocks in ports and afloat also strengthened the advance in Liverpool.

UNUSUAL RELATIONS BETWEEN DIFFERENT FUTURES IN INDIVIDUAL MARKETS

In the past few months, the relation between the different futures has been unusual. Under normal conditions, except in certain importing markets, the price of a given future maturing within the same crop year tends to be above the cash price of the grade of wheat deliverable on future contracts, to the extent of the carrying charge to the month of delivery. Thus in September the May future is normally higher, by several cents a bushel, than the cash price of grades of wheat deliverable without premium or discount.[3] Consequently, since the carrying charge is higher to more distant

[1] Indeed for most of August and at times in September, the Chicago future was higher than the Liverpool future.

[2] As shown by Appendix Table V, the volume of speculative trading in American futures markets has continued on a high level, averaging over 60 million bushels a day from July through November. Last year this level was not reached until October. Trading was naturally heaviest in November.

[3] The ultimate cash price in May seems to tend to be higher than the price of the May future in September–November.

delivery months, the more distant futures within a given crop year tend to be at a premium over the nearer future. As between two crop years, the relationship is different. Here the future maturing late in one crop year tends to be at a premium over the future maturing early in the following crop year. Thus in March, the May future tends to be at a premium over the September future, because the carrying charge on wheat deliverable on the May option is heavier than on wheat deliverable on the September option. But this relationship is much less regular than the relationship between futures maturing within the same crop year, for the early figures of a coming crop year are more heavily influenced by crop prospects than by carrying charges.

Even the more consistent relations between futures maturing in a single crop year are often disturbed. The disturbing factors are, in surplus-producing areas, chiefly those which restrict or accelerate the flow of wheat. A temporary restriction tends to raise the price of cash wheat and the nearer future without affecting in the same degree, if at all, the more distant future. A car shortage, or holding by farmers, or prolonged storms, may send cash prices and nearby futures to a premium over more distant futures, or at least narrow the margin between them. Conversely, acceleration of marketing may widen greatly the spread between the more distant and the nearer future, i.e., may increase the discount on the nearer option.

In importing markets, the relationships among futures prices are much more irregular, for they are determined by expectations of supplies from numerous sources with different seasons. Thus in Liverpool, in January, the March option may be at a discount under May, if large Southern Hemisphere shipments are in early prospect and small Canadian shipments are in prospect for the spring, while the March option may be at a premium if opposite conditions obtain.

European terminal merchants do not follow the practice of buying cash wheat and selling a hedge in a future month, as is the case with terminal dealers in this country; they only hedge (and this largely in the United Kingdom) to cover the period of ocean shipment. They make firm offers or accept firm tenders. Since they operate on narrow margins, they must guess the turn of prices and positions a majority of times. Keeping themselves in line with the trends, they must take advantage of all bulges and breaks, all short-time movements, all local isolated gluts and distresses of wheat. While thus operating, they largely dispense with trading in futures as we understand it; nevertheless the relations of the prices in the different large term markets of the world are of great importance to them.

The actual relations of futures prices, in the four leading futures markets, during the months of August to November, 1925, are shown in Chart 2, and deserve consideration market by market. Attention is directed primarily to the relationships obtaining in each market.

In Winnipeg, throughout the period, the May future was at a premium over the December future. This is the normal relation. The margin was about 4 cents a bushel, or a little higher, until the latter part of October. From then until the end of November the margin was somewhat narrower, frequently as low as 2 cents a bushel. The earlier margin represented roughly the minimal difference in carrying charges. The narrowing of the margin reflected the tightening position of wheat for early delivery, occasioned first by the slackening rate of Canadian marketing in October and later by the foreign demand for Canadian wheat for early delivery. From August through October, on the other hand, the October future (not shown on the chart) was above the December future, because wheat for early delivery was very limited while abundant supplies were expected for December delivery.

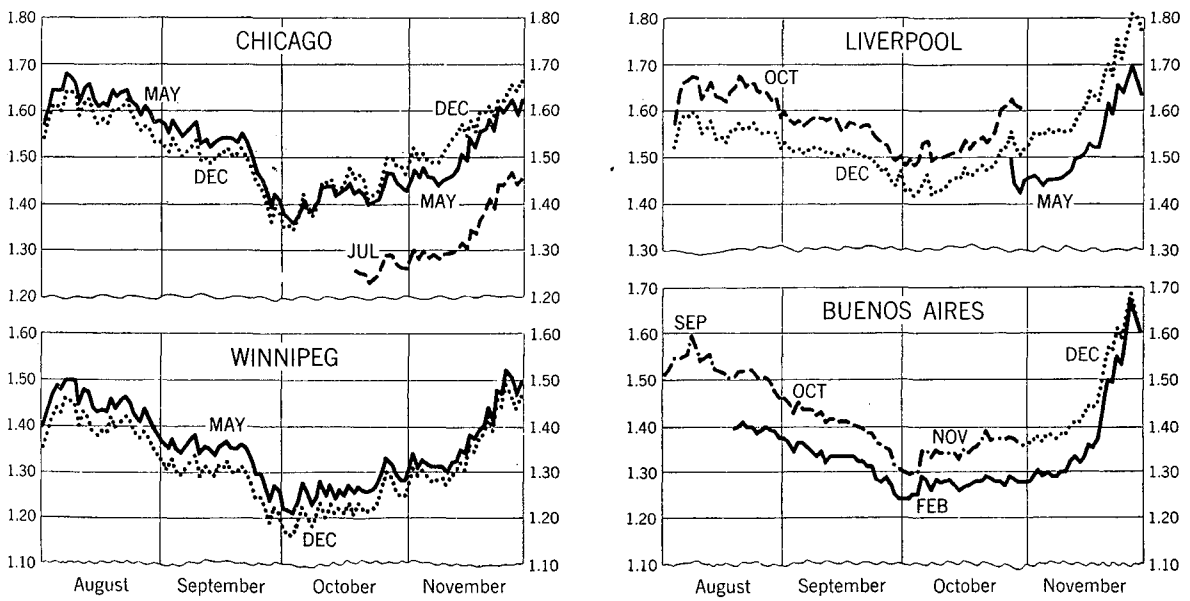
In Chicago, May wheat was at a premium over December until October 10. During much of this period the margin was around 4 cents a bushel, but before the middle of September the spread narrowed. From October 10 December wheat was at a premium over May, at times by as much as 8 cents a bushel. This unusual condition reflects the special shortage of wheat for early delivery. Visible supplies were low,

and largely in the ownership of growers and millers; farmers had been marketing slowly, and considerable quantities which had left the farm were unsold; weather conditions and pressure of farm work promised to restrict the flow from farm to market during the next few weeks. Foreign importers were increasing their demands. Yet by May ampler supplies could be expected to be available. Hence while both futures were subject to certain common influences, notably the altered prospects for Argentine crops, nearer futures felt the influence of special factors. The July future quoted in October and November was well below the May future, farther than usual because the May future shows the influence of the short American crops of 1925, while the July future reflects the reasonable prospect of larger American crops in 1926 as well as the absence of carrying charges.

pected to ease progressively during 1925–26. The margin between October and December wheat was unusually wide, because the United States had only a very small surplus of bread wheats, and little grain from Canada or any other source could be counted upon for delivery in October, whereas Canadian wheat in large quantities could be expected for delivery in December. The premium of December over March (not shown on the chart) was small until late in October, when it appeared that Canadian receipts were adversely affected by bad threshing weather, and that Russia and the Danube countries would export little in the near future. Until the bad news of the Argentine crop appeared, the March and May futures remained relatively low. This, however, adversely affected the prospects for March and May deliveries, and caused the March future especially to rise more than the De-

CHART 2.—DAILY PRICES OF PRINCIPAL WHEAT FUTURES IN FOUR LEADING MARKETS, AUGUST–NOVEMBER, 1925*

(Dollars per bushel)



* Compiled from *Chicago Journal of Commerce; Daily Market Record*, Minneapolis; *Daily Trade Bulletin*, Chicago; *Journal of Commerce*, New York.

In Liverpool, throughout the period, the nearer future was consistently above the more distant future. This reflects the fact that the tight position of wheat, which was characteristic of most of 1924–25, was excember, thus narrowing the margin between them. The March future was consistently at a small premium over May, primarily because substantial supplies of Canadian grain could be expected for delivery in May

which would not be as cheaply available in March because of the winter suspension of navigation on the Great Lakes.

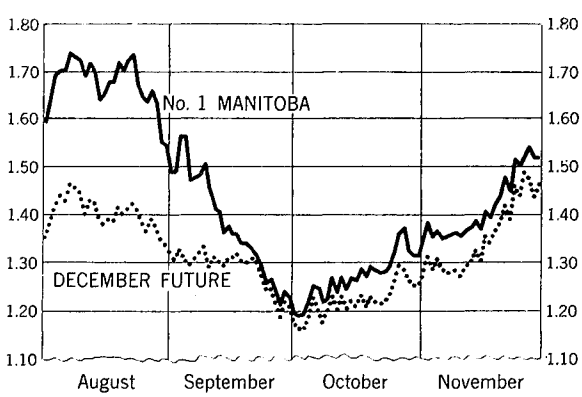
In Buenos Aires the February (new crop) future was quoted at a substantial discount under nearer futures. Until the middle of November the margin was unusually wide, because the new crop was expected to be considerably larger than that of 1924–25. Toward the end of November, however, the margin narrowed greatly. The new crop, which had been expected to be a bumper, came to be regarded as little larger than last year's crop, and this fact, while it affected supplies of old-crop wheat on hand, had special force in raising prices on deliveries from the new crop. In less than three weeks the February future rose by 37 cents.

Other Price Comparisons

A few other price comparisons may be made to show the extraordinary complexity of the recent markets. Chart 3 shows the course of cash prices of No. 1 Manitoba plotted against the December future, both at Winnipeg. During most of August the cash price was 25 to 30 cents above the future. This wide margin was due chiefly to the fact that cash prices were paid for old wheat, for which there was urgent demand for export as well as at home, while the future price was influenced greatly by the abundance of supplies in prospect. The margin narrowed rapidly after the third week in August, until late in September cash prices of No. 1 were but very little above the December future. Here the leading influence was the arrival of new wheat, selling at prices comparable to anticipated December prices; but the extreme narrowness of the margin reflected the expectation that the crop would average high in grade, indicating a slight premium on No. 1 Manitoba. The subsequent widening of the margin was due mainly to the rainy threshing season, which caused a general lowering of grade and raised the premium on No. 1 wheat.

Chart 3.—Daily Prices of No. 1 Northern Manitoba and December Future at Winnipeg, August–November, 1925*

(Dollars per bushel)



* Compiled from *Grain Trade News*.

Charts 4 and 5 cover a longer period, showing weekly average cash prices, since July 1, 1923. The first compares No. 1 Dark Northern at Minneapolis with No. 1 Manitoba at Winnipeg. In 1923–24 the United States crop of hard red spring wheat was small and of mediocre quality, while Canada had a large crop of excellent spring wheat. Hence through the entire crop year the Winnipeg price was below the Minneapolis price, and the margin was very wide after Canada's 1923 crop became available. Toward the end of the crop year the margin narrowed, as it became evident that Canada's crop of 1924 would be small and poor, while the United States crop would be good. Through much of 1924–25 No. 1 Manitoba sold above No. 1 Dark Northern, but since both were competing in European markets the margin was never very large. In July and August, 1925, the two prices were close together; but the Winnipeg price was usually lower, since it was influenced in some degree by prospects of abundant supplies for September delivery. In September No. 1 Manitoba fell to a substantial discount under No. 1 Dark Northern, as new crop wheat determined cash prices. In October–November, however, the margin narrowed as the price of No. 1 Manitoba was especially strengthened by the lowering of grade of the Canadian crop.

Chart 5 compares weekly cash prices of No. 1 Dark Northern and No. 2 Amber Durum, both at Minneapolis. Durum wheat, which is used chiefly for manufacturing semolina, and to make alimentary pastes

with a limited demand, is subject to market influences very different from those affecting milling wheats. In 1923–24, as usual, durum wheat sold on an export basis throughout the year, while Dark Northern sold generally on a domestic basis and well above export parity. Hence durum sold at a substantial discount, especially during the period of heaviest movement, before considerable supplies of Russian wheat became available. In 1924–25 conditions were most unusual. For eight months of the year No. 2 Amber Durum sold above No. 1 Dark Northern. Although both were selling on an export basis and our durum crop was good, the world shortage in durum was especially pronounced, because North Africa, Italy, and Russia, the principal competitors in durum production, had very little of this wheat. In the present crop year, on the other hand, durum wheat has fallen to a heavy discount. American hard red spring wheat is selling on a domestic basis, while our substantial surplus of durum has to compete abroad with considerable supplies from North Africa and Russia. The narrowing of the margin in October reflects the reduction in available Russian supplies of durum.

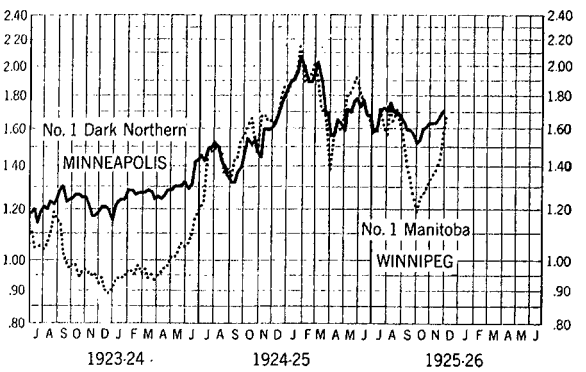
The heavy discount on durum stimulates its use in domestic milling. Despite technical difficulties in milling durum wheat, a small amount of durum flour is frequently added to commoner grades of family flour manufactured in the upper Mississippi area, and there are signs suggesting that such mixing is being done this year on a larger scale than has been customary. The effect of this upon the supply of durum, however, cannot be foreseen at the present time.

Comparing Charts 4 and 5, it will be observed that through most of the period under review, and especially in this crop year and the last, prices of No. 2 Amber Durum in Minneapolis have moved much more nearly with No. 1 Manitoba at Winnipeg than with No. 1 Dark Northern at Minneapolis. Although American durum and Canadian spring wheat are not directly competitive, both were continuously selling for export and both were subject to common influences from which No. 1 Dark Northern was comparatively free.

Chart 6 (p. 86) compares with the daily prices of the December future at Chicago the daily cash prices of No. 2 Red Winter (soft) at St. Louis and No. 1 Dark Northern (hard red spring) at Minneapolis. No. 2 Hard Winter, which is not shown, has fluctuated more or less with No. 1 Dark Northern, often above it but consistently below No. 2 Red Winter. The premium on No. 1 Dark Northern is chiefly a grade premium—due to the fact that lower grades are deliverable in fulfilment of futures contracts. No. 1 Dark Northern has moved roughly parallel

CHART 4.—WEEKLY CASH PRICES OF NO. 1 DARK NORTHERN AT MINNEAPOLIS AND NO. 1 NORTHERN MANITOBA AT WINNIPEG, FROM JULY 1923*

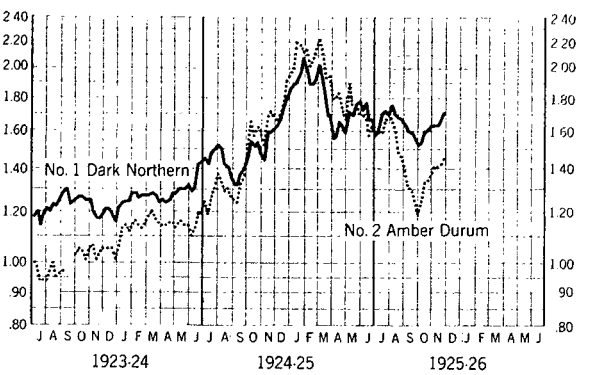
(Dollars per bushel; logarithmic vertical scale)



* For sources, see Appendix Table VI.

CHART 5.—WEEKLY CASH PRICES OF NO. 1 DARK NORTHERN AND NO. 2 AMBER DURUM AT MINNEAPOLIS, FROM JULY 1923*

(Dollars per bushel; logarithmic vertical scale)

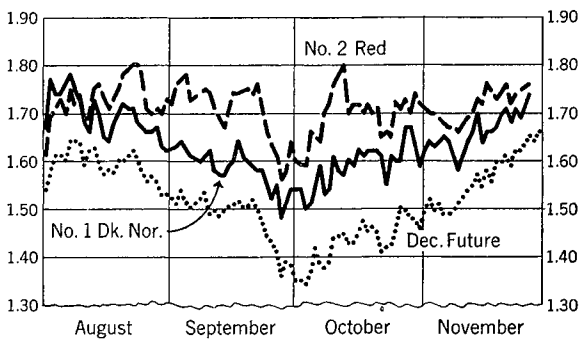


* For sources, see Appendix Table VI.

with the December future, but the cash price has varied more than futures prices, both because of temporary variations in current supplies and demands, and because winter wheats as well as spring are deliverable on futures contracts. The wider margin in October was due to the slackening rate of receipts of spring wheat, and the holding of wheat from the market, even if stored at central or terminal points.

CHART 6.—DAILY PRICES OF NO. 2 RED WINTER AT ST. LOUIS, NO. 1 DARK NORTHERN AT MINNEAPOLIS, AND DECEMBER FUTURE AT CHICAGO, AUGUST–NOVEMBER, 1925*

(Dollars per bushel)



* Compiled from *Crops and Markets* and *Chicago Journal of Commerce.*

Soft red winter wheat consistently sold higher than No. 1 Dark Northern, after new spring wheat came to market. This reflects the fact that the soft winter wheat crop is exceptionally short (see Table 1, p. 67), while supplies of hard winter wheats, though affording very little surplus for export, more nearly correspond to normal domestic requirements.

Currently available milling supplies of both hard winter and soft winter wheat have been small, because growers have anticipated a rise in prices independent of world market developments. They were financially in a position to hold their wheat, as they were not in 1924–25. Accordingly, they have marketed slowly, even considering the supplies harvested. Hence the cash market for winter wheats has been especially tight, and prices have fluctuated under the influence of variations in cash demands and current supplies. Under these circumstances, hedging has afforded millers only imperfect insurance and terminal elevators are not long on cash wheat.

CONTINENTAL PRICES

On the Continent of Europe there were striking changes in prices of both wheat and rye.[1] Poland showed the most extreme changes. Early in July old-crop rye sold at 168 cents per bushel. Four weeks later new-crop rye sold at 91 cents per bushel, and in August it declined still further. Old-crop wheat sold in Poland till mid-July at over 188 cents per bushel. Late in July and again late in August new wheat sold around 117 cents. Thus in a few weeks both wheat and rye shifted from an import basis to an export basis, and the low prices of new grain led to shipments to London, Italy, and even, it is said, to Roumania. A tariff war with Germany alone prevented shipments from Poland to her western neighbor.

In Italy, on the contrary, wheat prices rose almost as impressively as they fell in Poland. Early in July, following the good domestic harvest, wheat sold in Milan almost as low as 143 cents per bushel. Late in July, a few days after the duty became effective, it sold at 201 cents per bushel; and in mid-September even higher. Rye also rose, though less impressively, as the shift was made to a protected basis. The high duty, nearly 40 cents a bushel on wheat, is of course largely responsible for the advance, for the domestic crop is much larger than that of last year.

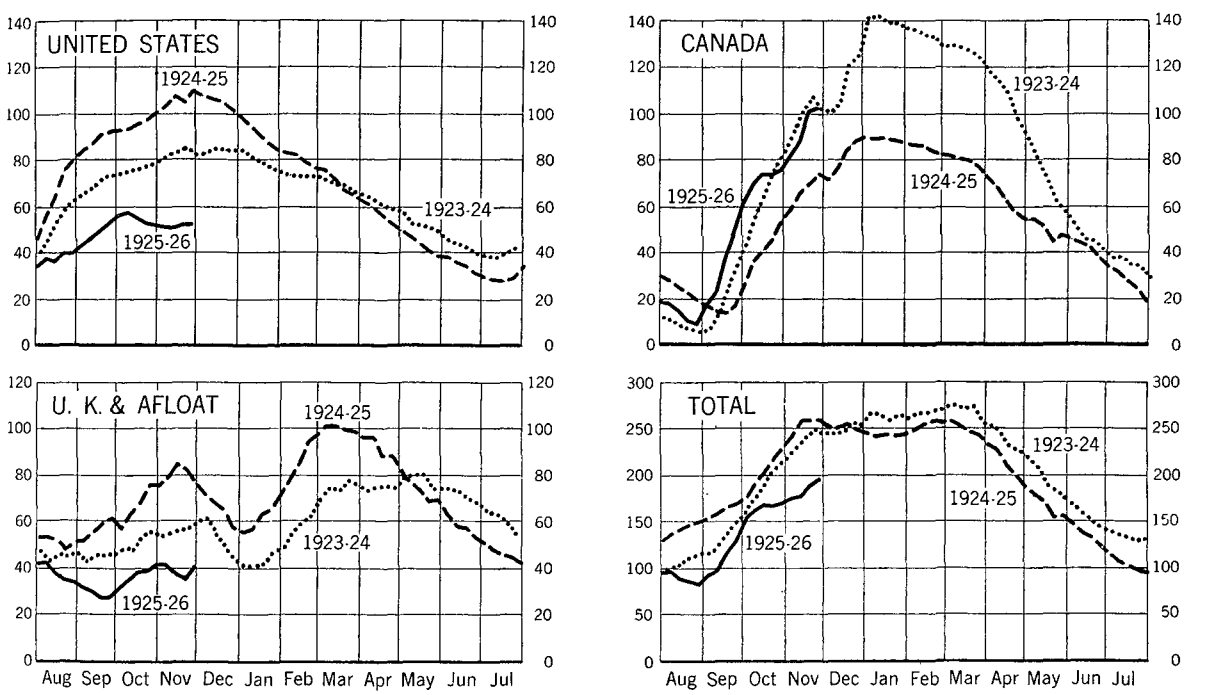
German prices paralleled more closely the international market. In Berlin, both wheat and rye declined heavily from early in July until early in October, wheat from 174 to 132 cents per bushel, rye from 149 to 95 cents per bushel. The decline was so severe, in consequence of the large crops, that in September surplus-producing areas of eastern Germany found it profitable to export low-grade wheat, as well as rye, to Baltic States, while North German wheat was shipped to London. German wheat even moved to Italy. Until November at least, the new protective duties had little effect upon prices of domestic wheat.

[1] See especially *Wirtschaft und Statistik*, August 14, October 13, 1925, V, 508 f., 639 f.

In Russia and the Danube basin (as in the Pacific northwest) prices declined under the influence of good crops and export surpluses, but growers sold reluctantly and only moderate quantities were obtainable for export at prices which would admit of profitable sale abroad. Whereas in 1924 the Danube countries overexported in the autumn under the influence of rising prices, thereby intensifying the rise in prices later in the year; in the autumn of 1925 the same countries underexported, in a sense, because of peasant resistance to price declines. But this year, thanks chiefly to the disaster to the Argentine crop, the holding policy may prove more fortunate than seemed probable some weeks ago.

CHART 7.—VISIBLE WHEAT SUPPLIES IN THE UNITED STATES, CANADA, UNITED KINGDOM AND AFLOAT, WEEKLY FROM AUGUST 1923*

(Million bushels)



* Data from *Price Current-Grain Reporter* and *Canadian Grain Statistics*.

THE SIGNIFICANCE OF VISIBLE SUPPLIES

The sharp rise in world prices after the middle of November was facilitated by the unusual lowness of visible supplies. Chart 7 shows the course of weekly visibles since August 1, in comparison with similar figures for the two preceding crop years, for the United States, Canada, Great Britain and afloat, and the total of these. The total shows a decline in August, because the small increase in the United States was more than offset by declines in the other items. From the end of August until early in October visibles rose, under the influence of rapid early marketing in Canada and heavy marketing of spring wheat in the United States, though stocks afloat continued to fall. The increase was checked by bad threshing weather in Canada and cessation of the heavy marketing of American wheat, though stocks afloat rose as Canadian shipments got under way. The notable increase in September accompanied the price declines of that month, and the slackened increase in October accompanied the price recovery. In the first half of November, the increase in Canadian visibles was nearly offset by declines in American and floating stocks. Hence when the bullish

Argentine news came, the total was only 176 million bushels, as compared with 258 million on the corresponding date last year and 240 the year before. Stocks afloat and in Great Britain were only 37 million bushels as compared with 84 million in 1924 and 56 million in 1923. Since ordinarily world visible supplies are nearly at their peak late in November, these low figures had an ominous look when the close of navigation in Canada was near at hand and when some 50 to 70 million bushels of prospective Argentine supplies had disappeared.

A broader comparison is given in Table 10, showing, as of December 1, the principal elements in a more comprehensive "world visible" table compiled jointly by Broomhall and two American grain journals. In comparison with previous years since 1920, and with pre-war and post-war averages, the 1925 figures are impressively low except for Canada; and the total is only 253 million bushels as compared with 319 million bushels last year, a 1920–24 average of 271 millions, and a 1909–13 average of 187 millions.

The low visibles afloat reflect in part Europe's expectations of securing considerable supplies from Russia and the Danube basin, but chiefly her expectation that world prices would go lower when Argentine wheat became available, if not before. In the United States, the low visibles reflect partly the small size of the 1925 crop and steady milling demand; but an important factor was the holding of wheat by farmers who were confident of higher prices later in the season and were this year in a financial position to hold their wheat.

TABLE 10.—SUMMARY OF PRINCIPAL ITEMS IN WORLD VISIBLE SUPPLIES*

(Million bushels)

December 1	United States	Canada	U.K. and afloat	Total
1920	92	52	68	212
1921	108	77	53	238
1922	125	89	61	275
1923	139	110	60	309
1924	169	77	74	319
1925	110	104	39	253
Average 1909–13	101	33	53	187
1920–24	127	81	63	271

* See Appendix Table IV for details and sources.

IV. IMPORT REQUIREMENTS AND PROBABLE EXPORTS

Having reviewed the crop developments, international trade, and price movements of the first four months of the current crop year, we may now examine the international position of demand and supply for the crop year as a whole. The appraisal of the outlook for international trade and prices in the coming months depends in considerable measure upon a correct appraisal of importers' requirements and exportable surpluses.

GENERAL CONSIDERATIONS

In attempting advance estimates of importers' requirements and probable exports during the crop year, one must take into account not merely the size of crops in the various countries, the apparent volume of wheat utilized in each during the last year or few years, and the prospects for 1926 crops, but also a variety of other factors, e.g., the amount of carryover, the size of competing food crops and their prices, the tendency (especially marked in certain importing countries) to use much more wheat in years of large crops, the economic and financial conditions affecting bread consumption and ability to finance imports, the possibility of restricting consumption through government regulation or private initiative, *and* the level of wheat, flour, and bread prices. In a year like the present, as well as the two previous years, the level of wheat prices has a powerful influence upon both importers' requirements and the available supplies of exports. While it is true that one's forecast of prices must depend upon one's estimate of the strength of importers' demands and the readiness of exporters to sell abroad, one cannot safely suggest figures for probable imports and exports except by making certain assumptions about prices. Previsions of imports,

exports, and prices are all affected by the recent change in the Argentine outlook.

The experience of each of the past two years is significant. In 1923, as in 1925, Europe harvested excellent crops, and the world crops of the two seasons are not far apart. This year, however, crops of the five principal exporters are smaller than in 1923, while crops in Russia and the Danube countries are reported as larger than in 1923. Carryovers into 1925–26 were somewhat smaller than were the carryovers into 1923–24. As compared with 1924–25, the crops available for 1925–26 are distinctly larger for the world as a whole, and in most countries except the United States, India, and the Southern Hemisphere. The price level in 1925–26, however, is much nearer to the level of 1924–25 than to the level of 1923–24. Official data show that British wheat imports in the month of August–September cost as much per bushel as the average for the crop year 1924–25; and Liverpool prices early in December were above the level characteristic of 1924–25, though below the peak price of last year.

On the basis of present information, we believe that the adjustment between export surpluses and import requirements is sufficiently close to suggest a world price level for the rest of 1925–26 almost as high as the *average* in 1924–25, but somewhat lower than the level characteristic of that year, and considerably below the high prices reached in the winter of 1924–25.[1] We state this not as a prediction—for the art of forecasting is not sufficiently developed to justify such a prophecy—but as an assumption on the basis of which to estimate import requirements and probable exports.

The Position of Importing Countries

At the close of the last crop year the world carryover of wheat was materially reduced.[2] The carryover in every exporting country, except Canada and Argentina, was definitely reduced; carryovers in most importing countries, particularly in Europe, were still more notably reduced. Nevertheless, the position of reserves in Europe was not sufficiently low to cause apprehension, even to traders. It was an impressive illustration of the objectivity of expert opinion in Europe to watch the Continent allow stocks to fall to a low level, in anticipation of bountiful crops of bread grains. These bountiful crops have been harvested. It is the objective of a discriminating scrutiny to adjudge the level of consumption of bread grains that will be maintained in Europe this year, in consideration of domestic crops, the position of reserves, the availability of supplies from Russia and overseas exporting countries, and the effect on consumption of the current or prospective price of wheat.

With the harvesting of bountiful crops of wheat and rye, the natural instinct of governments, traders, and consumers was in the direction of a return to normal practices. For the trade, this meant replenishment of depleted stocks; for the governments, it meant repeal or suspension of emergency regulations governing import or export of wheat, extraction, and stretching with other cereal diluents; for the consuming public, it meant cessation of substitution and an increase in the bread ration.

These things are not done as quickly as said. Traders will not repair depleted stocks as insurance to their countries; they will do so only if they see profit in the transactions. In August it was the common belief in the European grain trade that further declines of bread-grain prices were probable. Consequently, little attempt was made to replenish stocks by overseas importations, though urban stocks were to some extent repaired with bread grains secured through interstate European trade.

Governments were loth to suspend the regulations that had been devised to safeguard the bread-grain position during the previous year until they were convinced that the prospect of supplies was so generous as to make it certain that these emergency measures could be dispensed with. Some of these measures, such as the provision for higher extraction and dilution in France, were promptly modified or abolished. Others remained technically in effect for the time, though some of these were more or less suspended by nonenforcement in the interval.

[1] See Wheat Studies, November 1925, II, 35, 63, 64.
[2] See Wheat Studies, November 1925, II, 29 ff.

So far as consumers were concerned, they wanted not only better flour and bread, but also more flour and bread. Nevertheless, the internal prices of wheat and rye in most countries of Europe since the first of August have not been sufficiently lower than those of the last year to afford notable leeway for retreat from substitutes and expansion of the bread ration. Not until the potato and cereal crops of the year were harvested and the relative prices of the different staple foods became evident, did it lie within the power of the population of the continent greatly to expand the bread ration.

Broadly considered, Europe had been marking time between the first of August and the first of December, and found herself in November in the adaptable position of being able to expand the use of bread grains if economic conditions should make this feasible, or to return to something like the restricted bread-grain ration of last year if this should prove to be necessary. It is important to bear in mind, therefore, that Europe occupies a different position, a more advanced position, with respect to the management of her bread problem during the coming year than she did in the autumn of 1924, when she faced a prospect of shortage for the first time after several seasons of wheat plethora in the world, during which European imports were limited only by European purchasing power. It will be easier for Europe to practice economies during 1925–26 than it was during 1924–25, if the final outcome of Southern Hemisphere crops should make economies desirable or imperative, as defense against higher prices.

A comparison of the autumnal price level of 1925 with that of 1924 indicates that wheat import prices were relatively low in 1924 (largely because of overmarketing of the American crop), in view of the position of supplies as they later developed; while in 1925 the early price has been relatively high, from the standpoint of European supplies. The average price per bushel of wheat imported into the United Kingdom during August–November was very little below the average for the year 1924–25, and between 10 and 20 cents higher than the corresponding average for August–November, 1924. Despite good domestic crops, therefore, Europe has not realized what consumers regard as a substantial cheapening of bread grains. It is partly from this internal standpoint of the European consumer that the prospective level of consumption of bread grains in Europe during the present crop year must be considered.

Certain other general considerations also deserve passing mention. It seems reasonable to assume that the level of employment and income of the European peoples, and also Europe's ability to finance essential imports, will be at least as high in 1925–26 as in 1924–25, and higher than in 1923–24. On the other hand, even apart from the reassurance given by possession of large domestic crops, European importers may be assumed to have learned something from the experiences of last season; hence even if pessimistic reports of Russian, Argentine, and Australian surpluses should be confirmed, we need not expect a repetition of the panicky buying that occurred in the autumn of 1924, or of the speculative purchases that they made last winter. With respect to ex-Europe, it must be remembered that the demand of several leading importers is highly responsive to price changes, and that their purchases will be much smaller at current prices than they would be at the prices of September–October, 1925. Furthermore, it is assumed that the 1926 world crops will be of average size, smaller than in 1925 in Europe, and larger in the United States.

In the light of these facts and assumptions, we may proceed to estimate the import requirements, first of European importing countries, then of importing countries outside of Europe.

European Import Requirements

Since European crops of bread grains were so much larger in 1925 than in 1924, the imports in 1924–25 afford no safe basis for estimating European imports this year. Even if world prices of wheat should be higher in 1925–26 than in 1924–25, Europe will not reduce imports to an extent corresponding to the increase in her crops. Substantially larger quantities of wheat and rye will be utilized in 1925–26 than appear to

have been utilized in 1924–25.[1] Domestic utilization in both exporting and importing countries tends to vary directly with crops to a greater extent than it varies inversely with prices. The comparison with 1923–24 is more helpful, so far as Europe is concerned, for in both 1923 and 1925 Europe harvested large crops of bread grains. The wheat crops of European wheat-importing countries (including Poland and Spain) are now reported 85 million bushels larger than in 1923, and rye crops about 103 million bushels larger. This fact alone would lead one to expect substantially smaller imports in 1925–26 than in 1923–24. Two other factors will operate in the same direction. Most important, world prices of wheat and rye are, and are certain to remain, on a level distinctly higher than they were in 1923–24. Furthermore, Germany and Italy, two leading importers, now enforce high tariffs on bread grains and their flours, as they did not in 1923–24, and several other countries have adopted more moderate but appreciable tariff charges. The principal forces operating in the opposite direction are the rising trend of European bread-grain requirements, and the tendency to replenish stocks, which in several countries were probably more depleted in 1924–25 than in 1922–23. The net effect of these various influences, other things being equal, will be to restrict imports to quantities below the imports of 1923–24.

It is hardly feasible to forecast European import requirements by reference to aggregate figures. Rather it is necessary to consider the several importing countries one by one, in conjunction with the general factors mentioned above and the circumstances peculiar to each country. While estimates for individual countries are subject to a considerable margin of error, the errors are in some degree compensating. Table 11 summarizes our tentative estimates for the principal importing countries of Europe, in comparison with actual net imports in the three preceding crop years.

Table 12 (p. 92) shows the estimated volume of domestic utilization indicated by these estimates for net imports plus estimated crops, in comparison with similar data for apparent domestic utilization in previous years. To our estimates as shown should be added 10 million bushels for European importing countries not listed here.

TABLE 11.—NET IMPORTS OF PRINCIPAL EUROPEAN IMPORTING COUNTRIES, 1922–25, WITH TENTATIVE ESTIMATES OF THEIR IMPORT REQUIREMENTS FOR 1925–26*

(Million bushels)

Country	1922–23	1923–24	1924–25	1925–26 estimates
British Isles	210.2	240.6	227.9	230
Italy	115.7	69.9	88.7	40
Germany	37.5	30.7	80.9	40
France	45.6	53.4	30.4	16
Belgium	39.5	39.8	39.0	39
Netherlands	23.9	26.7	26.8	26
Scandinavia	22.0	27.6	22.7	22
Switzerland	15.6	17.1	13.9	15
Austria	13.3	24.1	16.0[a]	16
Czecho-Slovakia	10.2	21.2	21.1	20
Poland	2.5	2.6	17.1	...
Baltic States	7.5[b]	8.3[b]	7.4[c]	6
Spain and Portugal	5.3[d]	2.7[d]	6.4[d]	...
Greece	17.4	20.1	20.8	20
TOTAL	566.2[e]	584.8[e]	619.1[e]	490

* Data from International Institute of Agriculture. Estimates by Food Research Institute.

[a] Including estimate of 1.3 for July 1925.

[b] Calendar year for Esthonia and Lithuania, 1922–23, and for Lithuania, 1923–24.

[c] Data not available for Lithuania; imports are very small.

[d] Includes estimates for Portugal as follows: 5.5; 3.0; 5.0.

[e] As modified by previous notes.

On the whole we are disposed to conclude that net imports of European importing countries in 1925–26 will be around 500 million bushels, some 130 million bushels less than in 1924–25, and nearly 100 million bushels less than in 1923–24. The reduction from 1924–25 seems small in view of the greatly increased size of the 1925 crops; but we anticipate that freer use of grain for food, feed, and restocking will be fairly general, and important in the case of several countries.

Early in November Sir James Wilson raised to 552 million bushels his August estimate of imports of 520 millions. Broomhall, who on August 4 had estimated Europe's purchases for the season at 506 million bushels, raised this on October 20 to 535 million. As conditions appeared early in September, we considered Broomhall's first

[1] See WHEAT STUDIES, June 1925, I, 209–215.

estimate too low and even Sir James Wilson's August estimate conservative.[1] But subsequent increases in European crop estimates, together with the prospects of a higher level of wheat prices in consequence of the reduced expectations from Russia and the Southern Hemisphere, lead us to believe that the later substantial upward revisions will prove unjustified. Broomhall's latest estimate is 536 million bushels.[2]

TABLE 12.—APPARENT DOMESTIC UTILIZATION OF WHEAT IN PRINCIPAL EUROPEAN IMPORTING COUNTRIES, AND TENTATIVE ESTIMATES FOR 1925–26*

(Million bushels)

Country	1920–25 average	1923–24	1924–25	1925–26 estimates
British Isles	278.8	299.0	280.6	284.0[a]
Italy	273.2	294.7	258.8	281.0
Germany	147.3	137.2	170.1	147.0
France	305.1	329.0	311.6	345.0
Belgium	50.6	53.2	52.0	53.0
Netherlands	29.6	33.0	31.4	31.0
Scandinavia	38.5	48.2	36.0	44.5[d]
Switzerland	18.0	20.7	17.0	18.5
Austria	24.7	32.9	24.5[b]	28.0
Czecho-Slovakia	49.9	57.4	53.4	57.0
Poland	46.4[c]	52.4	49.6	54.0
Baltic States[e]	11.5	14.4	13.6	15.0
Spain and Portugal	158.4	172.8	136.8	176.0
Greece	27.5	33.4	30.4	31.0
TOTAL	1,459.5[c]	1,578.2	1,465.8[b]	1,565.0

* Based upon crop figures reported by U.S. Department of Agriculture and trade figures reported by International Institute of Agriculture. Estimates by Food Research Institute.

[a] Production partially estimated.

[b] Net imports for Austria, July 1925, estimated.

[c] Four-year average 1921–25 for Poland.

[d] Net exports for Poland not included in total.

[e] Net imports for Lithuania not included in 1920–22 and 1924–25, and calendar-year trade figures for several years used for Esthonia and Lithuania.

For certain countries, which produce less than they import, import requirements can usually be forecast without serious error. In these countries, domestic utilization of wheat varies little from year to year. This is true, for example, of Great Britain, Belgium, Holland, and Switzerland. In the case of certain other countries, notably the Scandinavian and Baltic States, the rye position is especially important in determining wheat import requirements. The principal variations in consumption and imports occur in countries which produce well over half their total supplies, notably France, Italy, Germany. Our estimates for these countries therefore call for more special explanation.

Italy, which is ordinarily second only to Great Britain as a wheat importer, has harvested a bumper crop of good quality. In 1923–24, after a crop 16 million bushels smaller, Italy's net imports were 70 million bushels. This year, however, wheat prices are expected to operate to restrict imports. Not only are world prices much higher than in 1923–24, but Italian prices are exceptionally high because of the imposition of a duty on wheat of about 40 cents a bushel. It is by no means certain that public opinion will admit of the retention of this duty throughout the year. Imports since August 1 have been small. The stabilization of the lira will tend to force restriction upon high-priced imports. All things considered, we doubt if Italy's net imports in 1925–26 will exceed 40 million bushels. Even this would give her larger supplies than on the average before the war and since, and only about 14 million bushels less than in 1921–22 or 1923–24, if we assume the crop not to have been overestimated, as has been recently suggested in the trade.

Germany harvested in 1925 a good crop of wheat and an excellent crop of rye. Last year wheat imports were exceptionally increased for three reasons: the rye crop was very poor; Germany's improved credit put her in a position to finance much larger imports; and the expected imposition of tariff duties led to stocking up of imported grains and flour. This year, Germany has harvested a good crop of wheat and an excellent crop of rye; the tariff has been in effect since September 1; the ability to finance imports is no greater, if as great, as in 1924–25; and substantial import stocks have been available. Accordingly, we are inclined to estimate Germany's net imports of wheat in 1925–26 as around 40 million bushels, as compared with 81 millions in

[1] WHEAT STUDIES, September 1925, I, 350.

[2] It should, however, be remarked that Broomhall's estimates, while apparently prepared for comparison with net import figures for previous years, are compared with actual shipments to Europe. Shipments to Europe often run substantially higher than net imports of countries for which data are available—to the extent of 40 million bushels or considerably more. Hence, properly interpreted, Broomhall's recent estimate is not as much higher than our estimate as it appears, though possibly a little above it.

1924–25. This would give a larger wheat supply (disregarding carryovers) than in any post-war year except 1921–22 and 1924–25, and larger bread-grain supplies than in any post-war year except 1921–22. Germany has imported little since September 1, and has been exporting wheat since the embargo was lifted on October 1, using her rye instead.

The French wheat crop, according to the latest official estimate, is 329 million bushels, the largest since the armistice and approximately the same as the five-year pre-war average. The quality was injured by the rainy harvest, but is better than last year. There is some reason to believe the crop is overestimated. Although the reported crop is larger than France's average consumption since the war, France will be a small net importer of wheat. In 1921–22, after a crop nearly as large as the present, net imports were 17 million bushels. This year they may be expected to be around 16 million. (The Saar Valley is now included in France in respect to trade statistics.) More wheat will be used for feed and for food, because it is abundant. Presumably, some additions will be made to stocks. Milling in bond has been developing in France, and flour exports command higher prices if made of a mixture including foreign wheat. Nevertheless, large exports either of wheat or of flour are improbable, and a certain flow of imports is inevitable because of the need for particular types or qualities of wheat, especially because of price considerations. Net imports in the months of August–October have been fairly heavy,[1] at a higher rate than will probably continue after November, both because foreign wheats were comparatively low in price and because the movement of new domestic supplies was delayed by rains during harvest. Latterly, also, the decline of the franc has discouraged imports, and export sales of imported wheat have been reported.

These examples are perhaps sufficient to indicate the procedure by which our estimates for individual countries have been reached. While we have ventured to suggest specific figures rather than a wide range, each figure must be regarded as subject to error. Each figure is also subject to revision downward if the price advances further. It is to be noted that the recent advance in the price of wheat is under inquiry in Great Britain by the Royal Commission on Food Prices.

[1] The precise amount is not known, for the cumulative figures for January–September include some 28 million bushels on which refunds of duty were made. The great bulk of this wheat came in before August 1, and to this unascertainable extent the figures for net imports in 1924–25 have apparently been understated.

Ex-European Import Requirements

The import requirements of ex-European importers are always difficult to estimate in advance, and the recent rise in wheat and flour prices increases the difficulty. During the past four months, especially at the moderate prices of September and October, purchases for ex-Europe ran heavy. In the light of these facts and the price outlook late in October, Broomhall raised his estimate for ex-European requirements from 96 million on August 4 to 112 million on October 20. On December 1 he raised it again to 120 million. He also allows about 16 million bushels for grain and flour exports from Europe. Sir James Wilson in August estimated ex-European takings as 120 million bushels, early in November as 168 million. The United States Department of Agriculture, on October 26, suggested a range of 100–145 million bushels. In the light of more recent developments we believe the higher estimates will not prove warranted, and that ex-European requirements are unlikely to exceed 120 million bushels, if they are as high.

The demand for flour in countries like the West Indies is relatively inelastic, stocks were presumably not greatly reduced at the beginning of the crop year, and imports are likely to continue in fairly normal volume unless the price becomes excessive. Rice is expensive, but corn is cheap, and some substitution for wheat flour with corn meal is practicable with the colored working classes. The demand for wheat in the Orient is relatively elastic, stocks of domestic wheat were low at the beginning of the crop year, and distressed foreign wheat and flour had been fairly well cleared up. Outside of Japan, little is definitely known as to the

wheat crop of Pacific Asia, though China's crop is said to be poor; nor of the position of rice and the cheaper cereals, though rice crops are reported fairly large. But a world wheat price corresponding to $1.60 Chicago means very dear import wheat for Oriental consumption. Under these circumstances, and particularly in view of the experiences of the past two years, it is hardly to be expected that ex-European countries will continue importation at the same rate as in the past four months.

Summarizing, then, we believe that the import requirements of importing countries in 1925–26 may be estimated at something like 620 million bushels, or even somewhat less. This is a smaller figure than was generally accepted as probable, as late as October and early November. In October, Broomhall suggested a total of 664 million bushels, and the International Institute a figure of 650 million. The range suggested by the United States Department of Agriculture on October 26 was 575–723 million, while Sir James Wilson's estimate in early November was 720 million. All of these experts, however, may be expected to reduce their estimates in the light of recent supply and price developments. Reference to Table 12 (p. 92) will show that, even if no more is imported than we suggest, importing Europe as a whole will apparently have available for consumption nearly as much wheat as in 1923–24, and about 100 million bushels more than in 1924–25 or the average for 1920–25; while ex-European imports will be as large as the average. Further reduction in imports would be possible without causing a shortage of wheat, much less of bread grains.

Even experienced grain dealers have not given adequate weight to these considerations. Sir Herbert Robson, for instance, is reported to have stated recently before the British Food Council: "Unless the world economizes in wheat, there will be barely enough to go round."[1] This was even more true last year. History shows that high prices then led to substantial economies, and Robson was one of the men who first pointed out that the economies proved much greater than the trade had expected.

[1] *New York Times*, December 16, 1925.

Export Surpluses and Probable Exports

If we regard 620 million bushels as a reasonable estimate of net imports by importing countries, from what sources can these be obtained?

Canada will presumably furnish nearly half, some 300 million bushels. On the basis of the latest official estimate, this quantity could be exported without reduction of carryover even if domestic utilization should reach the high level of 1922–24. Even if the crop should be less than was officially estimated on October 31, this quantity could be exported without reducing consumption and carryovers below normal levels. Since 124 million bushels have already been exported, to November 30, the export of the balance indicated will put no excessive burden on transportation and handling facilities. More than this was exported in the last eight months of the crop year 1923–24, when the United States was exporting more than it will this year. Not all of Canada's exports will go overseas; the United States has already imported 8 million bushels of Canadian wheat, and this movement will probably continue. But the United States will presumably export in flour and wheat more than the equivalent of the imports from Canada.

Net exports from the United States may be as low as 55–65 million bushels if the crop is really as small as the recent revision indicates. In the five months of July–November, net exports were 42 million bushels. Little if any representative milling wheat remained to be shipped, but the exportable surplus of durum wheat was still large, and little Pacific wheat had yet been shipped. Substantial flour exports in ensuing months must be expected. On the other hand, offsetting imports of Canadian wheat for consumption and milling in bond for export may reach considerable proportions during the winter and spring. A net export of 13 million bushels in the last seven months of the crop year will be very small, and our figure of 55 million bushels for the year is conservative. This implies larger millings but less feeding of wheat than last year, and no great change in carryover.

Little wheat can be expected from British India. Net exports April–October, largely of old wheat, were 9.2 million bushels; but imports from Australia have already been arranged for, and for the Indian crop year ending March 31, 1926, the net export is not likely to exceed 6 or 8 million bushels if it is that high. Net exports August–October have been only about 2½ million bushels. The autumn has not been especially favorable for the new crop, and while it is premature to predict its size, it now seems reasonable to expect that in the international crop year ending July 31, 1926, India will make no appreciable net export contribution.

Some 15 million bushels may be expected from North Africa, chiefly from Algeria. Over a million bushels of this year's exportable surplus from this area was shipped out before August 1, 1925, but the bulk of it still remains to be shipped.

In short, some 370 million bushels can be expected from Northern Hemisphere exporters outside Europe and Soviet Russia, and the final figure may indeed possibly be above rather than below this figure. This would leave 250 million bushels to be secured from the Southern Hemisphere, European exporters, and Soviet Russia.

The size of Southern Hemisphere crops is still quite uncertain. The first official forecast of the Australian crop, 99 million bushels, has been revised to 100 million bushels. Late rains came in time to improve part of the crop, and the final estimate seems certain to be above rather than below the early forecast. In the light of this fact, it seems reasonable to assume that Australia will export some 60 million bushels, possibly more.

The Argentine crop was so seriously injured in November, after ideal conditions in earlier months, that no one now expects the bumper crop which had been freely predicted before this adverse development. Nevertheless, the damage may have been overestimated. The December 15 official forecast is about 215 million bushels. This may be too high. At present, however, it seems fairly safe to say that considering the substantial carryover, 130 million bushels could be exported during the crop year.

Crops in Chile and Uruguay have been reported fairly good, but may have recently suffered from causes similar to those in Argentina. At present these countries seem likely to contribute at least 5 million bushels to world exports.

On the basis of most recent information, therefore, the Southern Hemisphere can be counted upon for net exports of around 195 million bushels in the year ending August 1, 1926.

If our estimate of importers' requirements is sound, this would mean that all but 55 million bushels of those requirements will be provided for outside of the continent of Europe. It is important to add that these supplies will probably be forthcoming even if world prices rule lower than on December 1, 1925, and that at such a price level somewhat more may be expected; but the recent revision of the American crop estimate introduces a qualification to this view.

Can European exporters and Russia furnish 55 million bushels? We do not doubt this. We have not credited the huge estimates of exportable surpluses in these areas which were current in September last. Nevertheless we believe the year's totals are more likely to exceed this figure than to fall short of it. From the four countries of the Danube basin, at least 40 million bushels can be counted upon with reasonable certainty. Poland has exported considerable wheat, is unlikely to import much, and her net export is not likely to be less than 5 million bushels. Soviet Russia has already exported over 11 million bushels and may reasonably be counted upon for at least 15 million bushels more, even though her crop was radically overestimated in August.

In some such fashion world import requirements in 1925–26 can apparently be met, even at a lower price level than prevailed early in December. Since at such a level exports would be somewhat stimulated and imports somewhat further restricted, we are disposed to regard that level as above the crop-year normal on the present data.

It is necessary to add, however, that crop prospects next spring will again be an important price factor. Their influence will probably be lessened because European

carryovers may be expected to be larger than on August 1, 1925. On the basis of present information, the prospects are that the Northern Hemisphere will not harvest as large a crop in 1926 as in 1925. There are few instances of large crops in Europe following as large a crop as that of 1925. Weather conditions interfered with fall plowing in Canada and with planting of winter-wheat acreage in the United States. The autumn was not especially favorable in India. On the other hand, on general principles it is unlikely that abandonment of winter-wheat acreage in the United States will be as large, or the winter-wheat yield as low, in 1926 as in 1925.

Outlook for Trade and Prices

According to Broomhall, exporters' shipments in the first seventeen weeks of this crop year were about 207 million bushels. The net export totals for August–November will probably show a figure about as large. In short, approximately two-thirds of the year's net exports remain to be shipped. What appeared to be abnormally low exports in the autumn of 1925 may prove, in the light of the radical change in the outlook for the Argentine crop, a fairly normal fraction of the crop-year total. Europe, however, will presumably have to import at a somewhat more rapid rate in the last eight months than in the first four.

The recent tightness of position is due primarily to the fact that Canada is the only source from which considerable supplies are obtainable, until Southern Hemisphere crops move to market. The tension is accentuated by the market tightness incident to the closing out of the December future. Last year, when world prices reached the high level again attained in December 1925, unexpected supplies appeared on the market from numerous sources. The same may be expected this year. Likewise this level of prices will presumably revive economies of consumption practiced last year. The outlook is by no means clear and certain, and much will depend upon further developments in crops and trade; but on the basis of present information it would appear that the high level of world prices reached early in December was determined in considerable degree by temporary circumstances. A new element in the situation is the fact that the Canadian pool controls well over half of the Canadian crop. In the present situation, they possess unique power. The more Europe depends on Canada for wheat supplies, the greater the opportunity of the pool to exact high prices. Their policy may be a determining factor in the market of the next few months. At the close of navigation on the Great Lakes some 30 million bushels of wheat were in storage at lower lake ports.

Throughout the season, prices of representative wheats in American markets have been more or less above export parity. While influenced by world conditions, indeed to a marked degree, their level has been determined in large measure by the degree of domestic shortage behind the tariff wall. American market prices, except for durum and Pacific wheats, seem certain to remain on a domestic basis, and therefore especially subject to internal developments.

On December 22 the United States Department of Agriculture issued a revised estimate of the American crop. This estimate lowered the figure for winter wheat by 18 million bushels, that for spring wheat by 10 million, and the total by 28 million. This revision was a surprise to the trade, and is difficult to reconcile with the buying experiences of mills during the past four months. This unexpected reduction introduces a new influence upon developments here and abroad.

It indicates that our short crop is even shorter than had been supposed, and suggests that our surplus for net export, already regarded as small, is practically exhausted. As was to be expected, the revision has found prompt reflection in price increases. The low visible supplies in this country have been accounted for as the result of wheat-holding by farmers and the premium of cash over the May future; to these must now be added the possible additional factor that the farmer has less to market than had been believed. The reduction of 30 million bushels is more ominous qualitatively than quantitatively because it applies principally to flour wheats east of the Rocky Mountains; the estimate

for the Pacific region is reduced only 2 million bushels, and the estimate for durum wheat is unchanged. If the present estimate is correct, it is not to be expected that mill grindings for domestic consumption will be materially reduced, but gross exports will be smaller and imports from Canada, for re-export of flour as well as for consumption, will be larger that was expected on the basis of a crop of about 700 million bushels.

On the other hand, the December crop report of the Northwest Grain Dealers' Association of Canada is 424 million bushels for the three prairie provinces, as against the earlier official figure of 399 million bushels. Should this increase in the estimate of the Canadian crop be confirmed, it would equalize the reduction in the estimate of the American crop.

If the crop is only 669 million bushels and we anticipate no reduction in grindings for domestic consumption, it would seem that in the next six or seven months our imports from Canada should almost balance our exports of durum, Pacific wheat, and flour, except as there is further reduction of wheat fed to animals or of the carry-over on July 1, 1926, as against July 1, 1925. The latter is clearly feasible, indeed probable to a certain extent, under the stimulus of high prices. If, with the abbreviated crop, our net exports from this time on should prove to be negligible, this would mean that importing countries, price permitting, would seek 20 or 25 million bushels more imports from Canada, Argentina, Australia, the Danube states, and Russia. The downward revision of the United States crop increases the importance of the exact determination of exportable supplies elsewhere. It also increases the importance of the rye crop here and in Europe. If the trade becomes convinced that the government revision corresponds to the facts, this will make for higher prices, in part as the expression of reflection back to this country of a higher world price that may result from this curtailment in the figure of available exportable surpluses, and in part from increased competition between millers.

This issue has been written by Joseph S. Davis and Alonzo E. Taylor, with the aid of Margaret Milliken and the statistical staff of the Institute

APPENDIX

TABLE I.—MONTHLY WHEAT RECEIPTS AT PRIMARY MARKETS IN THE UNITED STATES AND AT FORT WILLIAM AND PORT ARTHUR, CANADA*

(Million bushels)

Month	United States primary markets						Fort William and Port Arthur					
	1920–21	1921–22	1922–23	1923–24	1924–25	1925–26	1920–21	1921–22	1922–23	1923–24	1924–25	1925–26
Aug.	39.6	68.6	60.6	65.3	93.0	43.3	4.9	3.2	3.7	2.0	1.3	1.2
Sept.	42.7	61.4	57.7	45.3	82.1	57.9	12.6	27.5	37.0	28.3	7.1	45.7
Oct.	44.6	41.6	48.3	40.5	88.0	36.0	32.0	46.2	65.1	67.0	40.9	53.2
Nov.	37.2	25.6	42.5	37.2	60.5	35.3[a]	33.4	40.8	56.8	72.5	42.7	51.5
Aug.–Nov.	164.1	197.2	209.1	188.3	323.6	172.5	82.9	117.7	162.6	169.8	92.0	151.6
Dec.	31.6	24.0	45.3	28.4	36.3	....	27.9	23.0	32.0	51.9	20.3	....
Jan.	29.0	17.5	37.6	15.9	24.7	....	7.8	7.7	11.6	12.7	4.1	....
Feb.	21.2	22.7	21.6	19.8	19.9	....	4.5	4.2	3.2	3.9	6.2	....
Mar.	22.6	20.2	21.7	18.0	17.3	....	4.4	9.0	6.0	2.5	8.5	....
Apr.	23.3	15.6	21.9	10.1	10.4	....	3.7	6.1	7.6	6.4	8.1	....
May	27.0	29.1	16.7	15.4	17.7	....	4.4	11.7	10.6	15.8	7.1	....
June	30.2	21.0	18.2	16.4	21.9	....	3.6	5.6	6.9	21.2	4.1	....
July	62.0	39.5	33.8	35.1	41.8	....	4.2	5.4	6.0	13.1	6.7	....
Dec.–July	246.9	189.6	216.8	159.1	190.0	....	60.5	72.7	83.9	127.5	65.1	....
Aug.–July	411.0	386.8	425.9	347.4	513.6	....	143.4	190.4	246.5	297.3	157.1	....

* United States data based upon unofficial weekly statistics from *Survey of Current Business;* Canadian official data from *Canadian Grain Statistics.*

[a] Preliminary figure.

TABLE II.—WEEKLY WHEAT RECEIPTS AT PRIMARY MARKETS IN THE UNITED STATES, AND AT FORT WILLIAM AND PORT ARTHUR, AND VANCOUVER, CANADA*

(Million bushels)

Month	United States			Fort William and Port Arthur			Vancouver		
	1923	1924	1925	1923	1924	1925	1923	1924	1925
July	3.80	1.34	4.95	1.94	4.32	1.33	.11	.42	.05
	4.30	6.92	7.59	1.84	4.55	1.80	.04	.62	.05
	6.71	8.57	7.75	1.18	3.03	1.90	...	.30	.06
	13.67	10.05	11.67	.81	1.73	1.31	.01	.13	.03
	15.95	17.52	13.77	.63	1.41	.97	...	.11	.03
Aug.	15.97	22.86	11.04	.54	.47	.38	...	...	.28
	14.33	22.32	10.15	.29	.29	.23	...	...	.23
	13.16	21.89	8.98	.31	.11	.24	.04	.19	.02
	13.47	20.08	8.99	....	.14	.15	.06	.02	.02
Sept.	10.65	19.45	11.29	.90	.15	.59	...	.01	.02
	11.57	20.37	13.13	1.93	.41	6.20	...	.01	.01
	11.41	18.88	14.15	8.32	.87	13.27	.01	.04	.09
	9.44	17.54	14.99	13.20	3.09	15.83	.05	.17	.17
Oct.	9.37	17.52	12.37	16.17	7.92	16.39	.35	.48	.29
	7.70	20.48	9.42	13.73	10.64	15.73	.85	1.12	1.12
	9.77	20.11	7.53	15.32	8.67	10.72	.62	.84	1.86
	7.47	19.85	6.19	15.41	7.64	9.85	.77	.91	1.93
	8.35	19.09	6.72	14.66	10.07	10.35	1.01	.79	1.64
Nov.	9.32	17.05	7.95	17.04	9.88	8.88	.34	.94	2.46
	9.83	13.61	7.18	16.82	9.88	10.80	.58	1.73	2.53
	8.06	13.37	8.68	17.16	9.41	13.67	.68	1.50	2.10
	6.96	13.29	8.70	17.19	10.61	14.42	1.14	.75	2.69

* United States data are unofficial figures compiled from *Price Current-Grain Reporter;* Fort William and Port Arthur data are official figures for *net* receipts furnished by Canadian Board of Grain Commissioners; Vancouver data are official figures compiled from *Canadian Grain Statistics.* United States and Fort William and Port Arthur figures begin with weeks ending July 7, 1923, July 5, 1924, and July 4, 1925; Vancouver figures are for weeks ending one day earlier.

TABLE III.—INTERNATIONAL TRADE IN WHEAT AND FLOUR*

(Million bushels)

A.—NET EXPORTS

Month	United States	Canada	India	Australia	Argentina	Chile	Hungary	Jugo-Slavia	Algeria	Tunis
1925 Aug.	11.2	18.4	1.0	4.2	5.8	.10	2.32	.76	1.16	.38
Sept.	11.6	18.8	1.1	4.2	4.0	(.03)[a]	3.16	2.01	.53	.13
Oct.	5.9	46.4	.5	2.1	5.3	...	2.54	1.50	...	...
Nov.	5.7	40.2	...	1.7[b]	4.4	...	....	....	...	...

B.—NET IMPORTS

Month	Egypt	United Kingdom	France	Germany	Italy	Nether-lands	Scandi-navia	Switzer-land	Czecho-Slovakia	Baltic States
1925 Aug.	.83	12.58	3.64	14.95	1.68	1.92	23.2	.99	1.17	.72[c]
Sept.	1.10	13.99	23.57[d]	6.56	1.38	2.56	13.3	1.42	1.83	.59[c]
Oct.	....	15.64	5.10	.30	1.88	3.73	13.6	1.55	2.76	...

* Data from official sources and International Institute of Agriculture.

[a] Net import.

[b] Estimated from Broomhall's shipments.

[c] Finland, Latvia, Esthonia.

[d] Figure greatly overstates September net imports. Cumulative figures for January–September are officially stated to include 28 million bushels imported and used for bread-making under the decree of December 30 permitting refund of duty. Most of this had been imported in previous months, but not included in import statistics.

TABLE IV.—VISIBLE WHEAT SUPPLIES ON DECEMBER 1, 1920–25, WITH PRE-WAR AND POST-WAR AVERAGES*

(Million bushels)

	1920	1921	1922	1923	1924	1925	1909–13 average	1920–24 average
U.S., East of Rockies—wheat	78.1	96.2	112.0	119.9	154.2	94.3	85.6	116.1
U.S., West of Rockies—wheat	3.6		3.7	8.2	4.5	4.4	6.5	
Canada—wheat	51.2	76.3	89.0	110.2	76.8	104.2	31.9	80.7
U.S.—flour as wheat	10.4	11.7	9.7	11.2	10.0	10.9	9.4	10.6
Canada—flour as wheat	.7	.3	.3	.3	.3	.3	.7	.4
Argentina	.2	3.1	3.0	3.0	4.8	3.7	.6	2.8
Australia	6.5	6.8	10.0	1.0	2.0	.7	....[a]	5.2
United Kingdom—wheat	28.2	8.1	3.5	6.3	13.0	3.8	13.4	11.8
United Kingdom—flour as wheat	3.4	3.0	1.0	1.4	1.3		3.6	2.0
Afloat for United Kingdom	6.8	10.3	16.0	15.9	13.6	12.5	12.7	12.5
Afloat for Continent	27.3	20.7	34.6	28.4	28.3	18.4	16.1	27.8
Afloat for orders	2.6	11.5	5.7	7.5	17.3	4.3	6.8	8.9
TOTAL NORTH AMERICA	144.0	184.5	214.7	249.8	245.8	214.1	134.0	207.7
TOTAL ARGENTINA AND AUSTRALIA	6.7	9.9	13.0	4.0	6.8	4.4	....[a]	8.1
TOTAL UNITED KINGDOM AND AFLOAT	68.3	53.6	60.8	59.5	73.5	38.9	52.7	63.1
GRAND TOTAL	219.0	248.0	291.5	313.3	326.1	257.4	....[a]	279.6
EXCLUDING AUSTRALIA	212.5	241.2	278.5	312.3	324.1	256.7	187.3	273.7

* A joint compilation by Broomhall, the *Daily Market Record*, Minneapolis, and the *Daily Trade Bulletin*, Chicago, here compiled from Broomhall's *Corn Trade News*, and the *Daily Trade Bulletin*.

[a] Data incomplete.

TABLE V.—AVERAGE DAILY VOLUME OF TRADING IN WHEAT FUTURES IN UNITED STATES MARKETS*

(Million bushels)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Year
1920–21	....	....	....	....	....	....	39.1	44.1	39.5	52.5	46.1	49.8	45.2[a]
1921–22	45.5	39.6	57.1	54.0	53.7	43.3	36.5	67.9	61.3	48.9	37.4	41.8	48.5
1922–23	34.4	36.2	33.5	32.5	37.6	42.1	36.6	37.0	27.9	48.0	41.0	40.9	37.0
1923–24	32.3	31.4	28.3	30.2	27.1	21.1	14.3	18.1	22.8	18.0	14.4	34.0	24.2
1924–25	53.3	50.0	42.7	61.4	60.9	58.8	73.4	81.0	87.4	59.3	60.3	67.6	62.9
1925–26	56.2	60.0	59.0	60.4	65.2	....	....	....	....	....	....	....	....

* Data of Grain Futures Administration, U.S. Department of Agriculture. No data compiled for period prior to January 1921.

[a] Six-months' average.

TABLE VI.—WEEKLY CASH PRICES OF REPRESENTATIVE WHEATS IN LEADING EXPORTING AND IMPORTING MARKETS, AUGUST TO NOVEMBER, 1925*

(U.S. dollars per bushel)

Month	United States				Canada		Argentina	Liverpool					
	No. 2 Red Winter (St. Louis)	No. 2 Hard Winter (Kansas City)	No. 1 Dark Northern (Minneapolis)	No. 2 Amber Durum (Minneapolis)	No. 1 Manitoba (Winnipeg)	No. 3 Manitoba (Winnipeg)	Barletta (Buenos Aires)	No. 1 Manitoba	No. 3 Manitoba	South Russian	No. 2 Winter	Argentine Rosafe	Australian
Aug.	1.70	1.63	1.75	1.67	1.74	1.67	1.71	1.88	1.76	1.70	1.73	1.82	1.75
	1.72	1.67	1.70	1.61	1.64	....[a]	1.71	1.90	1.78	1.68	1.74	1.85	1.78
	1.74	1.63	1.68	1.48	1.72	1.65	1.69	1.92	1.85	1.64	1.74	1.81	1.78
	1.75	1.64	1.67	1.46	1.63	1.54	1.65	1.92	1.87	1.62	1.74	1.81	1.77
Sept.	1.74	1.60	1.63	1.40	1.56	1.49	1.60	1.68	1.87	1.52	1.67	1.77	....[a]
	1.73	1.58	1.60	1.31	1.41	1.34	1.55	1.67	1.64	1.51	1.62	1.74	1.82
	1.71	1.58	1.59	1.30	1.34	1.29	1.54	1.64	1.54	1.42	1.58	1.71	1.77
	1.71	1.58	1.57	1.25	1.26	1.21	1.47	1.55	1.53	1.45	1.55	1.68	1.66
	....	....	....	....	....	....	....	....	1.44	....	....	1.57	....
Oct.	1.60	1.51	1.52	1.19	1.19	1.15	1.43	1.46	1.43	1.39	1.48	1.54	1.60
	1.66	1.55	1.53	1.24	1.24	1.19	1.51	1.50	1.44	....[a]	....[a]	1.53	1.56
	1.73	1.60	1.59	1.33	1.27	1.18	1.50	1.51	1.46	....[a]	....[a]	1.53	1.56
	1.69	1.58	1.60	1.34	1.28	1.20	1.52	1.51	1.51	1.54	1.53	1.53	1.57
	1.70	1.60	1.63	1.37	1.32	1.23	1.53	1.56	....	1.61	....[a]	....	1.59
Nov.	1.70	1.60	1.63	1.41	1.35	1.28	1.57	1.61	1.53	1.64	....[a]	1.62	1.60
	1.68	1.61	1.63	1.41	1.38	1.31	1.60	1.64	1.54	....[a]	....[a]	1.65	1.61
	1.73	1.63	1.67	1.42	1.44	1.36	....	1.77[b]	1.60	1.75[b]	....	1.70	1.76[b]
	1.75	1.66	1.71	1.45	1.54	1.48	....	1.84[b]	1.71	....	....	1.80	1.83[b]

* U.S. prices from *Crops and Markets;* foreign prices from *International Crop Report and Agricultural Statistics,* except Rosafé and No. 3 Manitoba at Liverpool, which are from Broomhall's *Corn Trade News* and No. 3 Manitoba at Winnipeg, which is from the *Grain Trade News.* U.S. prices are weekly averages of daily weighted prices for weeks ending Friday. Foreign prices are for Friday of each week, except Rosafé and No. 3 Manitoba at Liverpool, which are for Tuesday.

[a] No quotation. [b] Tuesday prices, November 24 and December 1, from Broomhall's *Corn Trade News.*

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