WORLD WHEAT SURVEY AND OUTLOOK SEPTEMBER 1935

June–August 1935 witnessed the most striking reversal in wheat-crop prospects in more than a decade. In mid-June it was reasonable to expect a world wheat crop ex-Russia large enough, with stocks carried over, to yield world wheat supplies for 1935–36 so heavy that the year-end carryover would be nearly up to its post-war peak.

By mid-August this prospect was reversed. The North American spring-wheat crop was cut in half by a rust epidemic without parallel in modern times, and severe and protracted drought prevailed in Argentina. The world crop ex-Russia is now appraised at 3,290 million bushels, practically the same as the small crop of 1934. Stocks carried into 1935–36 were much smaller than those carried into 1934–35, and world supplies this year now seem likely to be the smallest since 1926–27. Disappearance may be as large as in 1934–35, partly because so much spring wheat in North America is of very low quality. Hence the world carryover, which has been abnormally high for eight years, at last seems likely to fall about to normal proportions by the end of 1935–36. In the United States, mid-June prospects for an exportable surplus vanished in July; and a good deal of Canadian wheat will be imported for milling. The striking reversal of supply prospects, both domestically and internationally, was due not to economic planning but to adverse weather.

Leading futures markets up to September 14 responded feebly to the drastic change in the statistical position of wheat. Prices declined in May–June, with favorable crop prospects; dropped sharply in early July, when adoption of an export-promoting policy by the new Canadian Grain Board seemed probable; and rose rapidly in July and more gradually in August. Yet prices were not much higher in mid-September than in mid-June. From May through mid-September, uncertainties about the prospective policy of the Canadian Grain Board tended to discourage speculative enthusiasm.

We tentatively forecast world net exports in 1935–36 at 560 million bushels; European supplies are large enough to hold the international movement to a level not much higher than in 1934–35. Of this amount about 90 million bushels may be furnished by minor exporting countries, including Russia; the remainder will probably move from Canada, Argentina, and Australia. The two latter have prospective supplies so small that Canada will probably export at least 270 million bushels, perhaps more; hence a substantial reduction of the Canadian carryover is in prospect. The Canadian Grain Board, controlling as it does over half of the prospective Canadian export surplus, especially the old-crop wheat, is in a position (by accident rather than design) to exert a governmental influence on world trade and price unprecedented in times of peace.

Given the relatively short world wheat supplies of 1935–36, the narrow margin of export surpluses above import requirements, the unlikelihood of low world disappearance of a wheat crop so poor in quality, the prospect for reduction of world stocks to a normal level, and the surprising apathy of futures markets from July to mid-September, we regard rising world prices as probable between mid-September and the end of December, with continuation of present prospects in the Southern Hemisphere. Much will depend upon the policy of the Canadian Grain Board; but agrarian pressure on any political administration in Canada to support or raise wheat prices seems to us likely to prevail in 1935–36 as in recent years. Some of the anticipated price rise came on September 16–17 (see p. 28).

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Crop Developments

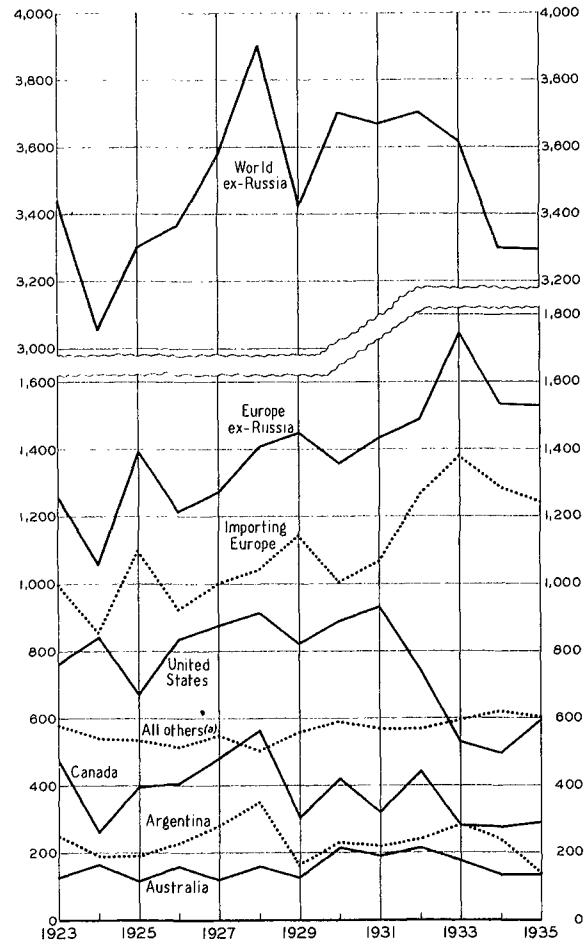
The outstanding feature of crop developments during May–August 1935 was the decided reversal of crop prospects in North America, due mainly to abrupt onset and rapid development of a severe rust epidemic. Early in May, the available indications gave reason to anticipate that the world ex-Russian wheat crop of 1935 might turn out 300 to 400 million bushels larger than the crop of 1934; and that world ex-Russian supplies for 1935–36, from carryover and new crop, would substantially exceed those of 1934–35 and again lead to an increase in the world carryover surplus. In mid-June, a world wheat crop even larger seemed indicated, though still vaguely. In mid-July, even after the rust infestation had begun, the United States Department of Agriculture still forecast the 1935 world crop ex-Russia and 1935–36 supplies much above those of the preceding year.[1] But by late August, the Department tentatively appraised the new world crop only 60 million bushels above that of 1934, and world supplies for 1935–36 ex-Russia some 240 million bushels below those of 1934–35.[2]

Our tentative appraisals as of mid-September tend broadly to confirm the Department's late-August forecast, though recent advices have somewhat reduced the probable outturn. Unless official and trade forecasts of Northern Hemisphere crops now standing are revised upward, and unless present appraisals of probable outturn in the Southern Hemisphere prove considerably too low, the 1935 world wheat crop ex-Russia will approximate 3,290 million bushels (Chart 1), or practically the same as the short crop of 1934 and otherwise the smallest since 1926. This implies that total supplies for 1935–36, including fair-sized exports from Russia as well as initial stocks (see p. 21), will fall some 250 million bushels short of supplies last year.

The distribution of the present crop (as of the two preceding crops) is unfavorable for international trade, since importing Europe has a large crop, though much smaller than that of 1933. In this area the 1935 crop stands higher in relation to the 1923–34 average than in any other area. The Danubian crop is larger than in 1934, but somewhat below average. The United States crop is again strikingly small, though larger than in the two preceding years; but on account of much wheat of light test weight, the flour value is relatively smaller than the crop estimate suggests. The Canadian crop is also much below average, but short crops roughly similar in size had been harvested in 1924, 1933, and 1934. Argentina and Australia together seem likely to harvest the smallest crop in more than a decade, 1929 perhaps excepted. The prospective outturn in the "other countries" differs little from those of the past five years.

Chart 1.—Wheat Crops, 1923–35*

(*Million bushels*)



* See Table I, which includes some later revisions.

[1] *World Wheat Prospects*, July 24, 1935.

[2] *Ibid.*, Aug. 27, 1935.

Of important wheat-producing countries for which no data are included in the chart, it is generally supposed that Russia has a large crop, Manchuria a fairly large one, Turkey one above average, and China (excluding Manchuria) a rather poor one.

United States.—The winter-wheat crop of the United States, though sown on the largest area in four years, never promised to be large. Condition was below average last December; and continued drought in the western part of the Great Plains later took heavy toll, so that abandoned acreage up to May 1 (31 per cent) was strikingly large. Private and official forecasts and estimates of probable outturn from early May ran as follows, in million bushels:

Date	Private[a]	Official
May 1	(435–463) 449	...
May 10	...	432
June 1–4	(456–484) 469	...
June 10	...	441
July 2	(432–466) 451	...
July 10	...	458
August 1–2	(407–420) 413[b]	...
August 9	...	432

[a] Range and average of five forecasts except as noted.

[b] Four estimates.

With abundant rainfall, prospects improved during May. The early part of June also appears to have been favorable, but in the latter part rainfall was excessive in some areas and in others rust took some toll. Deterioration occurred in July, mainly because of rust damage; early threshing returns proved to be below expectations. The crop was cut later than usual, and threshing was delayed by wet weather.

The official estimate as of August 1 (subject to revision next December) points toward a winter-wheat crop of only 432 million bushels—a crop larger than those of 1933 and 1934 but otherwise the smallest since 1925. The trade regards this estimate as too high. Of the principal types of wheat in the crop, the crop of hard red winter is the smallest in seven years except for 1933 and is relatively low in test weight, though early milling experience was unexpectedly favorable. Soft red winter made the largest crop in seven years, 1931 excepted; and Pacific white wheat made nearly an average crop.

The spring-wheat crop was sown late, partly because of weather and partly because of delay in distribution of seed. Farmers' intentions to plant, as of March 1, had (according to official analysis) pointed toward an area for harvest of 17.8 million acres; but the first official appraisal of area for harvest, as of July 1, was much larger at 20.8 million acres. This was slightly above the 1928–32 average. Relaxation of restriction of sowings under the AAA was partly responsible for the higher July appraisal of sown area.

Early prospects were brilliant, owing to the abundance of rainfall in May. As of June 1, private forecasts of probable outturn averaged 240 million bushels, and the official forecast on June 10 was 230 million. The course of private and official forecasts was as follows, in million bushels:

Date	Private[a]	Official
June 1–4	(232–248) 240[b]	...
June 10	...	230
July 2	(219–272) 256	...
July 10	...	273
August 1–2	(170–238) 190	...
August 9	...	176
August 20	145[c]	...
September 4	(151–166) 155	...
September 10	...	163

[a] Range and average of five forecasts except as noted.

[b] Four estimates.

[c] B. W. Snow's forecast, reduced from 238 million as of August 2.

Forecasts as of July 1 averaged larger than in June. The forecasts issued prior to July 10 appear to have been based upon appraisals of acreage below the official one issued on that date; and in late June experienced observers felt that the appearance of the stand warranted expectations of an outturn as large as 300 million bushels. It was not until June 28 that rust infestation was generally regarded as a serious menace to spring wheat, and not until July 9 did severe damage appear to be definitely in progress, except to the experts in wheat-rust infestation.

The sharp reduction in crop forecasts between early July and early September reflects

mainly rust damage, though heat and drought contributed to westerly areas of the belt. Prospective outturns were cut in half. The standing official estimate of the spring-wheat crop is only 163 million bushels, whereas around July 1 most observers expected between 250 and 300 million bushels. As now appraised, the crop is larger than the notably poor ones of 1931 and 1934, but much below average. Durum wheat resisted the rust better than bread wheat, as usual; and the crop of durum is, in relation to average, much better than the crop of hard red spring. A very large proportion of the crop of hard red spring consists of shriveled kernels and the average weight per measured bushel is very low.[1]

Partly on this account, partly because of the reduced total inward carryover, and partly because of the short crop of hard winter wheat and the rather poor quality of much of it, there exists a shortage, probably unprecedented, of bread wheats measuring up to customary milling standards. One must go back to 1904 to find a situation at all comparable. This shortage tends to stimulate imports of Canadian wheat for consumption over the tariff wall; and the tendency is exaggerated because, by official ruling, the processing tax will continue to be levied on the 60-pound bushel ground, not on the flour produced. The large quantity of domestic wheat light in test weight will produce considerably less flour per bushel of 60 pounds than high-quality Canadian wheats, so that payment of the processing tax on a basis of bushels of wheat ground tends to act, from the standpoint of millers, as a reduction in the tariff rate. The extent of importation from Canada, however, will depend partly upon the adaptations which millers may make in utilizing the poor-quality domestic wheat,[2] as well as upon the discounts which such wheats carry on the markets.

The infestation of black stem rust in the spring-wheat belt was the third major epidemic in American history. Experience with the earlier ones, of 1904 and 1916, is not readily applicable this year under the changed conditions. The infestation of 1935 can now be readily traced, since scientific data are available. Black stem rust "over-winters" in the soft-wheat region of Texas. In ordinary years when the spores are brought north by wind in the spring, the hard winter wheats of northern Texas, Oklahoma, and Kansas are too far advanced to be affected. Usually, the winds are not strong enough to carry the spores in large numbers to the spring-wheat states; in any event, the time of the year when the spores would be taken from the soft-wheat fields of Texas and carried by wind to northern states is too early to affect the spring-wheat crop in the Northwest. This year the spores were brought by winds from central Texas to central Kansas in April and May. The winter wheat in Kansas had suffered from drought; with the belated appearance of rain came a second growth, particularly late in May and early in June. This second growth of the winter wheat in Kansas was ideal for growth of the rust spores brought from Texas.

Late in June heavy winds carried the rust spores from central Kansas and eastern Nebraska into Minnesota and the Dakotas, and beyond the international border into Canada. The south winds in the last ten days of June were exceptionally heavy, and the spores were given an exceptionally intensive and extensive

[1] The crop in Montana, however, is unexpectedly good, much better than in the Dakotas and Minnesota.

[2] Rust-damaged wheat is light in weight, owing to excess of coat and deficiency of endosperm. The starch content is relatively lower than that of protein—indeed the protein of the rusted Marquis berry may be high (16 to 18 per cent) and the protein of the flour relatively high (12 to 14 per cent). The yield of flour is low. Probably 6, or even 7, bushels of wheat will be required to produce a barrel of straight flour from rusted wheat—that is, the mill may recover no more flour than offal. The rusted wheat tempers and grinds abnormally; the color of the flour is high, and the fiber is heavy. Sometimes the protein behaves as in normal wheat; or it may behave erratically.

The blending of such wheat with other wheats is, for most mills, an unknown art; circumstances were different in 1904 and 1916, the other two "rust years." In any event, the other wheats are not currently available to the desired extent, particularly on account of the short crop and light weight of hard winter wheat; while attempts to ship soft red winter wheat back into the spring-wheat belt are impracticable on the basis of rates, prices, and blends. Possibly half of the wheat in the Dakotas and Minnesota will not grade higher than No. 4; much of the wheat will not grade even as high as No. 4, that is, will weigh under 50 pounds per measured bushel. Next spring a new seed problem will emerge, since little of the present crop will be desired for seed.

distribution. Direct tests of the atmosphere in the spring-wheat region, at different heights, showed almost unbelievable numbers of rust spores. These fell upon a spring-wheat crop delayed by late seeding. The infestation was heavy in number of spores; and two of the most virulent strains were unusually prevalent. The weather was favorable to rust—high humidity, widespread rain, heavy dews, and high temperature. With every influence favoring the spread of rust, the epidemic advanced rapidly, spreading into Canada.[1]

At least up to the end of June, the United States seemed likely to harvest a total crop in 1935 of more than 700 million bushels. Since the carryover seemed likely to lie between 150 and 175 million bushels, there was then a prospective total domestic supply of not less than 850 million and perhaps 900 million bushels for the crop year 1935–36. Traders appear generally to have felt, or hoped, while the spring-wheat crop was progressing so favorably in May and June, that a supply as large as this would necessitate approach or return to an export basis in 1935–36, for normal domestic requirements could hardly be set above 650 million bushels, and 200 million bushels or even considerably more would remain for export and carryover, while a normal carryover from 1935–36 would not exceed 150 million bushels. This widely held opinion—whether or not warranted in view of the historical tendency of the United States to withhold wheat from export—was an important factor in the decline of futures prices at Chicago in May–June (see p. 9). With the subsequent reversal of spring-wheat crop prospects, active return of the United States to an export basis became distinctly improbable. This reversal of the prospective wheat-trade status of the United States was doubtless the dominant reason for the AAA announcement, on August 15, that contracting farmers would be required to reduce their sown acreage for 1936 by only 5 per cent from their base acreage rather than 15 per cent as announced on July 31.[2]

Canada.—As in the United States spring-wheat belt, early Canadian prospects for a good or perhaps an excellent wheat crop were altered as the rust infestation extended into the eastern portion of the Prairie Provinces while drought prevailed in parts of the western portion. Wheat was sown late throughout western Canada, but under relatively favorable conditions. The area sown to spring wheat, appraised officially in May as likely to fall some 3 per cent below the 1934 level and some 14 per cent below the peak of 1932 (and during May–July many observers reckoned upon a reduction from 1934 ranging from 5 to 10 per cent), was officially estimated in August as practically the same as in 1934. Official estimates of crop condition as of May 31 and June 30 were distinctly high, and were widely but variously interpreted as indicating a probable crop for all Canada considerably exceeding 350 million bushels and perhaps reaching 450 million or even more, in contrast with crops approximating 275 million in 1933 and 1934.

Rust infestation was first observed in Manitoba in the first week of July, but it seems not to have affected wheat seriously before the

[1] It is appropriate to point out that numerous comments in the public press are evidently based upon misapprehension of the comparison between sporadic rust and epidemic rust. Sporadic rust is due largely to the presence of barberry, which serves as an intermediary host. For years, persistent efforts have been made by federal and state governments to eradicate barberry bushes, and this has had an unquestioned effect in reducing the occurrence of sporadic rust. The barberry has also an important rôle in the occurrence of rust in the southern states, where the fungus survives the winter. Once a heavy infestation occurs in Texas, and later from Texas into the hard winter-wheat region, infestation of the spring-wheat region depends on southern winds, and not on local barberry bushes. The lesson of this epidemic runs to the effect of continuation and intensification of efforts for eradication of barberry bushes in the United States.

[2] Another governmental action affecting American agriculture may be noted here. Recent legislation by Congress placed on rye a processing tax of 30 cents per bushel. Two things at once strike the observer: the relatively high tax on so unimportant a foodstuff as rye; and the disproportion between the processing taxes on rye and wheat in relation to the final prices of bread. On the last day of August, the processing tax on wheat stood in a relation to the Chicago wheat price that corresponded to an increase in raw material costs to mills of 41 per cent; but the tax on rye corresponded to an increase of over 70 per cent in raw material costs. As an illustration of planned economy in respect of cereals, the difference can hardly fail to be less interesting to the limited number of rye-bread consumers than to the limited number of farmers raising rye.

middle of the month. At this time crop damage from drought in southwestern, west-central, and northwestern Saskatchewan and in southern Alberta appears to have been more important than rust damage. By the end of July, severe loss from rust was apparent in Manitoba, the infestation had spread into adjacent areas of Saskatchewan, and the droughty areas farther west had not been relieved. By August 1, few trade observers seem to have expected the crop to be larger than 325 million bushels. Further deterioration from rust and drought occurred in early August; perhaps partly for this reason, many traders were disturbed by the official report of wheat condition (issued August 12, but strictly applicable to July 31), which was widely interpreted as implying an outturn of 300–325 million bushels or possibly more. Frost occurred in northern and central portions of Saskatchewan and Alberta on August 16–17; and, the crop being late, damage was done in areas where earlier conditions had been favorable.

Private crop estimates as of about September 1 ran close to 300 million bushels; and the first official estimate (as of August 31, issued September 11) was 291 million for all Canada. These appraisals differ little from trade opinions current early in August, but the area sown was then thought to be smaller than it is now officially appraised. At the stated figure, the crop of 1935 barely exceeds the poor crops of 1933 and 1934, and undoubtedly contains much less millable wheat. The fraction which will grade below No. 3 Manitoba is certain to be the largest at least since 1928, though by how much is still uncertain. Standing estimates may undergo more extensive revision than usual, for the harvest was late, yields are varying widely even within small localities, and as of September 1 many farmers still had to decide whether stooked grain of low quality would return threshing costs. Indeed, some unharvested wheat fields in Manitoba were burned in order to secure the benefit of a partial fallow for next season.

Other Northern Hemisphere.—Outside of North America, changes during May–August in the general outlook for Northern Hemisphere wheat crops were not spectacular. Without significant exceptions, such comments as have come to our attention have consistently included expectations of a large crop in importing Europe, though smaller than that of 1934; of a good crop in Russia, at least after significant information concerning rate and extent of seeding began to be available in June; of a second successive big crop in Japan; of a crop in India moderately larger than that of 1934; and of a small crop in northern Africa, much below that of 1934. Among individual countries,[1] the outstanding unexpected developments seem to have occurred in France and Italy; the French crop was earlier appraised above estimates now current,[2] and the first Italian official forecast was above trade expectations. In general, the tendency has been somewhat to reduce early forecasts of European production as the season progressed; although prospects improved in June, threshing returns in several countries during July and August were disappointing, notably in France.

The crop of 1935 in importing Europe is now appraised only 44 million bushels below the 1934 crop, but it is substantially larger than any post-war crop prior to 1932. The reduction from 1934 does not necessarily involve an increase in overseas shipments to Europe between 1934–35 and 1935–36, for the decline in crop occurred mainly in France, Spain, and Portugal, where stocks at the beginning of 1935–36 were heavy. The increase of output in the Danube basin, some 38 million bushels, probably does not involve correspondingly larger net exports in 1935–36 than in 1934–35; for in this area consumption may expand and stocks may be built up. The small increase of crop in India probably does not involve significant increase of Indian exports, unless world wheat prices should rise. The bumper crop in Japan means little further reduction of imports, which were already very small in 1934–35. Northern Africa will probably have less wheat to export than in 1934–

[1] See Table I for crop appraisals now current.

[2] Private estimates of the French crop run approximately between 256 and 275 million. The forecast of the Paris office of the U.S. Department of Agriculture, however, was 294 million on August 27 (*World Wheat Prospects*) but was 275 million on September 16. In our calculations we use 275 million bushels.

35, for the reduction of crop is apparently heavy, especially in Morocco.

The crop changes particularly significant for international trade have occurred in Russia, China, and Manchuria. The Russian crop will permit larger exports in 1935–36; the Manchurian crop will probably give rise to reduction of imports, and the Chinese crop may tend to increase imports. The outlook for international trade rests, however, upon other considerations than size of crops, and these are discussed below (pp. 22–25).

Southern Hemisphere. — In the principal producing countries of the Southern Hemisphere the wheat crop progressed unfavorably during May–August — more so in Argentina than Australia. In both countries rainfall was inadequate.

The area sown to wheat in Australia for the 1935 crop appears to have been close to that for 1934, which was the smallest since 1927. During May the rainfall was scanty; during June and July, more ample in most areas; during August, again rather scanty. Opinions concerning the probable crop, which will not be harvested until December, seem mostly to have ranged between 130 and 150 million bushels during the past four months and nearer to the lower figure, and even below it, in recent weeks. Although reliable forecasts cannot yet be formulated, we assume in our calculations an Australian crop of 135 million bushels, practically the same as the crop of 1934. This implies a prospective yield per acre about 10 per cent below the 1924–34 average.

Throughout the wheat belt of Argentina, except in most of Buenos Aires province, rainfall was seriously deficient throughout May–July. Prospects for the 1935 crop worsened from week to week in the droughty areas, where sowings were restricted and sown fields germinated poorly and progressed unfavorably. There were no rains of consequence in the dry areas during July, and in August appreciable relief did not arrive until the 7th and again on the 17th and 18th. By July 22, the *Times of Argentina* counted upon a reduction of Argentine sown area of 15 per cent from the 1934 level; by July 29, on a reduction of 15 to 25 per cent; by August 6, on a reduction of more than 25 per cent. In late August and early September, opinions of probable reduction ranged widely, from 25 to 50 per cent, implying a sown area of 9–14 million acres. Drought continued through September 17.

The average yield per sown acre over the past eleven years is 12.6 bushels; the lowest (1929) is 7.9 bushels; the highest (1928) is 15.3 bushels. The highest of these yields, applied to the largest current forecast of sown area, would result in a crop of 214 million bushels; this would be nearly 10 per cent below the crop of 1934. But high yields per sown area are not to be expected in view of present unfavorable plant condition in the dry areas. The eleven-year average yield applied to the largest acreage forecast would result in a crop of only 176 million bushels. Yet few observers count upon even as large a crop as this, since the area sown may not reach 14 million acres and the yield per acre may not equal the average. Current opinions of probable outturn appear to range between 125 and 165 million bushels. We employ 140 million bushels, the middle of this range, as an approximation to the probable outturn reasonable in the light of information now available. Latest advices suggest reduction.

At 140 million bushels, the Argentine wheat crop of 1935 would be the smallest since 1916 and nearly 100 million smaller than the crop of 1934.[1] The combined crops of Argentina and Australia, at 275 million bushels, would be the smallest since 1919 and 100 million smaller than in 1934.

Little can be said of probable 1935 crops in other countries of the Southern Hemisphere —South Africa, New Zealand, Chile, and Uruguay—which enter into our calculations of the world wheat crop ex-Russia. For these countries we tentatively assume a total of 60 million bushels (details in Table I).

Prices and Price Spreads

Influenced heavily by the favorable crop developments in North America, wheat fu-

[1] Chance plays an important rôle in political developments. Had the Argentine crop prospects in the summer of 1933 been as bad as the prospects this year, the outcome of the International Wheat Agreement would have been very different from what occurred with the large 1933 crop in Argentina.

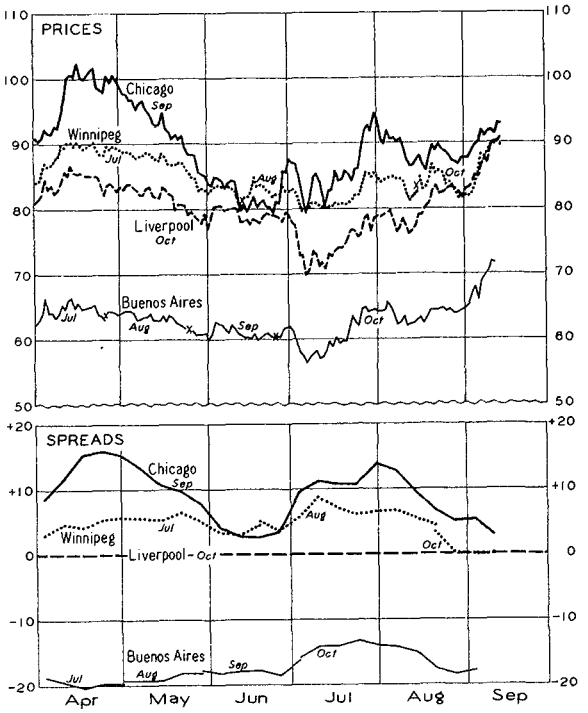
tures prices in world markets declined in May–June; broke sharply in early July in reaction to fears of export pressure from Canada following enactment of the Canadian Grain Board bill; and tended to rise, irregularly in the several markets, during the remainder of July and August as crop prospects turned strikingly unfavorable. The advance, though surprisingly small in view of the crop developments, continued into early September. Large changes in price spreads—between futures in the several different markets, between near and distant futures in the same markets, between cash prices and futures, and between the prices of various grades of cash wheat—were a feature of the period under review. The circumstances surrounding the formation and early activities of the Canadian Grain Board, endowed with wide powers, were important influences both on price movements and on price spreads.

Decline to July 3.—Prices of futures in the leading markets declined from May 1 to July 3 (Chart 2). The decline was much larger at Chicago than at Winnipeg, and slightly larger at Winnipeg than at Liverpool. The decline of Chicago prices between May 1 and July 3 (12 cents) was less than the decline between May 1 and June 25 (19 cents); for Chicago prices bulged late in June when the first alarming reports of rust in the western wheat belt reached the markets. With the exception of these rust reports, of weather too rainy for United States winter wheat in the latter part of June, and of continuing (but not yet alarming) drought in Argentina, the news concerning the progress of 1935 wheat crops was generally distinctly favorable throughout May–June, especially in North America.

The downward drift of prices, little in evidence after mid-June, was mainly a reflection of the favorable crop developments. The decline tended to be more severe because it was preceded by a sharp rise that had earlier culminated late in April, and because of a growing conviction that, within a few months, Canadian policy would be shifted from one of maintaining prices and curtailing exports to one of export promotion, possibly with support of prices to producers but not with governmental support of the Winnipeg price to exporters.

CHART 2.—WHEAT FUTURES PRICES AND SPREADS, APRIL–SEPTEMBER 1935*

(U.S. cents per bushel)



* Daily closing prices from *Daily Trade Bulletin*, Chicago; *Grain Trade News*, Winnipeg; *London Grain, Seed and Oil Reporter*, and *Revista Oficial;* conversions at noon cable transfer rates of exchange.

But price-strengthening influences existed as well, for the international supply position for old-crop wheat was distinctly tight. Supplies available for export from the Southern Hemisphere were reduced; poor new-crop prospects tended to maintain the prices asked for export wheat from that area; Russia and the United States were out of the export market; and Winnipeg prices of near futures were not permitted to fall below 80 cents,[1] which

[1] Under pressure from the Dominion government, regulations of the Winnipeg Grain Exchange forbade dealings in the Winnipeg May future below 80 cents (Canadian currency) in May. Meanwhile the minimum price of the July future was 81¼ cents. When the May future was closed out, the minimum price of the July future was lowered to 80 cents. An August future was opened on June 14, and its minimum was also 80 cents.

kept c.i.f. British prices of Canadian wheats at high though diminishing premiums over competing wheats. Under these circumstances, futures prices at Liverpool were notably firm during the trading sessions. Cumulative open-to-close changes in price in the Liverpool October future amounted, between May 1 and July 3, to an increase of more than a cent; on the other hand, the loss in price shown by the close-to-open changes—the response made to price changes in North America while the Liverpool market was closed—exceeded by this amount the net decline in Liverpool closing prices between those dates, as shown in Chart 2. Further evidence of increasing tightness in the international cash wheat position lies in the fact that the July future at Liverpool stood at a discount of around 3 cents below the October early in May, but was quoted at a discount never larger than a cent between May 29 and June 26, and sometimes at a small premium. This discount widened temporarily when, late in June, fears of possible Canadian export pressure influenced traders.

In retrospect, the reduction of the premium of Chicago futures prices over Liverpool prices (from 15 cents early in May to 3 cents late in June, as shown in Chart 2) seems surprisingly large. To judge by comments quoted in Chicago trade journals, however, traders seem to have felt that crop prospects pointed fairly clearly to return of the United States to a net-export basis for wheat early in the crop year 1935–36, which in turn would mean that Chicago futures must fall to a discount under Liverpool.

Yet the winter-wheat crop was never in these weeks thought to be large, the probable carryover was generally admitted to be the smallest in seven years, and, even with the then excellent prospects for spring wheat, total supplies in prospect for 1935–36 were not appraised above 900 million bushels. In May–June of the two preceding years the premium of Chicago over Liverpool had been maintained consistently above 10 cents, although in those months of 1933 and 1934 the domestic supplies in prospect were also large enough to provide not only for domestic use and normal carryover, but also for significant net exports. To judge by these facts, the heavy reduction in the Chicago–Liverpool spread this year seems somewhat anomalous. The behavior of the spread suggests that a "bull market" at Chicago based on unfavorable domestic new-crop developments may be necessary in these months if Chicago futures are not to fall lower in relation to Liverpool than they stood in March–April. Over the past twelve years, there appears to be a strong tendency for Chicago prices to fall in relation to Liverpool prices during March–June, except in years when domestic crop prospects turn distinctly unfavorable. Writing last May,[1] we perhaps ascribed too little weight to this general tendency.

In seven trading days from June 26 to July 3, the Chicago September future advanced 7 cents, a rise canceling all of the loss between May 25 and June 25. Most of the rise came on June 28 and July 1, in response to reports of the presence of rust in winter-wheat areas and of intensive diffusion of rust spores to the vulnerable spring-wheat area. On the 28th the Minneapolis market led the Chicago market. Heavy rains in the winter-wheat belt were a contributory cause to strength at Chicago in several days of the period. There was little response in foreign markets, and the Chicago–Liverpool spread widened.

July 4–6.—In the three days ending July 6, futures prices at Liverpool and Chicago broke nearly 8 cents; at Buenos Aires, more than 3 cents; and at Winnipeg, less than 3 cents. The break clearly originated at Liverpool during trading sessions, and was larger in the July than in the October future. The full response at Chicago was aided by profit-taking after the sharp rise of June 26–July 3, partly also by publication of some expert advices in which threats of rust damage were minimized. The limited response at Winnipeg was due largely to the fact that prices fell to the minimum level on July 5 and therefore could not decline further; and the partial response at Buenos Aires rested largely on local unfavorable crop conditions.

The break at Liverpool seems to have represented no other important factor than

[1] See WHEAT STUDIES, May 1935, XI, 351.

the distinctly bearish interpretation placed by traders upon enactment of the Canadian Grain Board bill. This bill, first introduced into the House of Commons on June 11, was later referred to a special committee headed by Premier Bennett. On July 2 an amended form of the bill was reported back to the House, and was passed by the House July 4 and by the Senate July 5, receiving assent on the same day.

In its earlier form, the bill contemplated a governmental grain control similar to the monopoly control exercised during the war, with abolition of trading in wheat futures. So far as we are aware, it did not include provisions which warranted the interpretation that Canadian official policy would be reversed, with emphasis on exportation of wheat rather than on maintenance of domestic prices even at the expense of exports. Nevertheless Canadian public sentiment in favor of enlargement of export and reduction of carryover had been growing for some months, notably when May and early June crop prospects were so favorable; and traders in the world's wheat markets appear to have anticipated that the original bill would be modified at Ottawa so as to include an export-promotion policy. News reports of the hearings before the special committee, June 18–28, foreshadowed probable modification.

As finally enacted — before the brilliant crop prospects had vanished—the bill established a Canadian Grain Board of three members with an advisory committee of not more than seven members. The Board has wide discretionary powers; it may even create—always with governmental assent—a virtual government monopoly of the grain trade. It is not generally expected to exercise this authority, however, during the crop year 1935–36. Rather, it is generally expected (*a*) to take over cash wheat and futures contracts held up by the Canadian Co-operative Wheat Producers, Limited, and accumulated under the government - sponsored dealings conducted by John I. MacFarland; (*b*) to sell this wheat domestically and abroad, not within any specified time, "for such price as it may consider reasonable, with the object of promoting the sale and use of Canadian wheat in world markets" and "having regard to economic and other considerations"; (*c*) to establish a fixed minimum price for wheat, basis Fort William, at which it will stand ready to purchase wheat from producers but not other persons, whenever producers choose to sell to the Board rather than to private traders, and to sell this wheat; and (*d*) to exercise more or less control over the grain exchanges by virtue of its authority to establish a monopoly. The plan resembles that operative in Argentina, but with two prominent differences: (1) provision is made in Canada that any profits which the Board may earn through sales of grain bought from producers must be distributed back to the producers who sold the wheat, whereas, under the Argentine plan, profits made by the Grain Regulating Board accrue to the government, so that Canadian producers will have incentive to sell to their Board even when prices on the exchanges rule above the fixed minimum, as Argentine producers have not; (2) the Canadian Board begins its operations with a huge accumulation of wheat stocks, whereas the Argentine Board did not.

The members of the Canadian Board were appointed on August 15.[1] The next day trading in October and December futures began at Winnipeg, but under restrictions.[2] Presumably the new Board shortly took over all cash wheat and futures held by the Canadian Co-operative Wheat Producers, Limited. How much wheat the old agency may have bought or sold between July 6 and August 15 is not of public record; nor are the operations of the new Board after August 15, though it is generally supposed that "switching" of a large volume of August futures to the October was permitted before the end of August, and that the Board has acquired a still larger volume of cash wheat first from the old agency

[1] John I. MacFarland, David L. Smith, and Henry C. Grant.

[2] At the outset, short selling beyond a trading session was forbidden; later (September 7) it was allowed within limits of 350,000 bushels per trader. Price fluctuations were and still are limited to a range of 3 cents per bushel from the previous day's close. On the new futures, however, no minimum prices were fixed.

(including much Garnet wheat) and second by accepting delivery on August contracts.[1]

There is no evidence that export pressure from Canada actually existed on the import markets either in early July, when Liverpool prices broke so sharply in anticipation of such pressure, or up to the end of August. Announcement of the minimum price was deferred until September 7, when it was fixed at 87½ cents per bushel, basis No. 1 Northern at Fort William. Now that this is known, one uncertainty that had tended to restrain speculative operations in Chicago and Liverpool is removed. But up to September 17 the Board had made public no clear-cut statement of its sales policy, and what that policy will be constitutes one of the prominent uncertainties in the outlook for world trade and prices (see p. 26). Specifically, the Board's objective with reference to the size of Canadian carryover on August 1, 1936, has not yet been made clear, and perhaps will not be even after the Canadian elections scheduled for mid-October. These may bring a change of the political party in power, perhaps followed by a change in the personnel and export-and-carryover policy of the Board. It remains to be seen whether or not the break in prices at Liverpool early in July represented a just forecast of future developments in policy, though up to mid-September it had not.

July 6 to August 31.—Futures prices tended to advance, though not without interruption and not on parallel courses in the several markets, from July 6 to the end of August. The range of fluctuations was 16 cents at Chicago, 13 cents at Liverpool, 10 cents at Buenos Aires, and only 8 cents (measured in the August future alone) at Winnipeg. The net advance of prices from July 6 to August 31 was smaller—only 11 cents at Liverpool, 9 cents at Chicago, and 2 cents at Winnipeg.

[1] This was presumably reflected in the practical absence of carrying charges between the October and December futures, a situation not likely to prevail if the trade had owned significant supplies of old-crop wheat.

[2] This is indicated by the fact that the Liverpool July future ruled at a rising premium over the October after July 19, and the October carried a rising premium over the December throughout August.

[3] We exclude monetary influences that were so influential in the United States in June–July 1933.

Both the range and the net advance of prices during this period were astonishingly small. They occurred within a two-month period which included the worst rust epidemic in a generation and a practically continuous stream of bullish crop reports from North America, the Southern Hemisphere, and Europe; a reversal of the world wheat-supply position from one of prospective surplus to one in which prospective scarcity was foreshadowed more clearly than in any year since 1926–27; a reversal of the United States supply position from one which foreshadowed an export surplus to one which foreshadowed the necessity of net imports on a considerable scale; and increasing tightness in the international cash wheat position.[2]

We venture to declare that July–August 1935 witnessed the most bullish developments within the world wheat situation that have occurred in any two-month period in nearly a decade.[3] Yet the response of the futures markets was feeble, as judged by price movements in earlier years. One need only recall the bull markets of the spring of 1927, the summer of 1929, the autumn of 1931, and the summers of 1933 and 1934.

The relatively insignificant response of futures prices to the extremely bullish developments seems to have been associated with lack of speculative interest in the wheat futures markets. The average daily volume of wheat futures trading at Liverpool, for example, was much smaller in July–August 1935 than it had been during the rise of prices culminating in early August 1934. In United States markets, the daily volume of trading in July–August 1935 was far smaller than it had been in June–July 1933 and 1934. At Winnipeg, where such data are not available, there can be no question that trading in futures was reduced to a bare minimum.

In the several markets, diverse reasons existed for the apathy of speculators who might under other circumstances have absorbed eagerly the routine volume of hedges. But in all markets one factor was dominant: speculators feared to participate in a market wherein at any moment arbitrary decisions as to fixed minimum price and as to export policy might be announced by the new Cana-

dian Grain Board; from the point of view both of "shorts" and of "longs," too much depended upon the course which the Board might choose to follow.

At Liverpool other circumstances tended to restrain bullish enthusiasm. Memories of overenthusiastic appraisal of prospective change in the world supply position in the summer of 1934 seem to have acted as a check upon price increase this year; and in addition, after July 25, offers of Russian wheat for sale on European markets appeared, though with little indication of the volume to be offered in the future. Rains in Argentina on August 7 and 17–18 caused prices to dip temporarily. Throughout the period, less attention fell this year than last on prospects for gross change in the world surplus position of wheat, and more upon short-run prospects for relations between import requirements and export surpluses.

At Chicago, the checks upon bullish enthusiasm included not only the uncertainties arising from the Canadian situation, but also (*a*) the existence of a bull market in industrial stocks, which (contrary to what sometimes occurs) may this year have diverted speculative attention from wheat; (*b*) the presence of a possibility that the legal framework of agricultural adjustment might be ruled unconstitutional, with repercussions at least initially unfavorable to wheat prices; and (*c*) the existence of a "ceiling" or upper limit on Chicago futures prices, brought into being by the interrelationships of Minneapolis, Winnipeg, and Chicago futures prices and their effect upon imports of Canadian wheat for consumption into the United States.

This "ceiling" began to assume importance as a factor restraining price advance at Chicago early in August, the more so because hedging sales against fairly heavy marketing of new-crop wheat then began to be a factor. On the steep upturn of July 6–31, Minneapolis futures (and cash) prices had risen much more than Chicago prices, since the threat of shortage of hard spring wheats deliverable on Minneapolis futures was much greater than the threat of shortage of the wider range of wheats (including soft red winter) deliverable on Chicago futures. With the shortage of millable grades of hard red spring wheat, Minneapolis prices had to rise far enough in relation to Winnipeg prices to enable wheat to flow in from Canada over the tariff wall (see Chart 3, opposite). As the premium of Minneapolis over Winnipeg increased, a point was reached late in July when importation from Canada was possible. When importation from Canada began, the effect at Chicago was inevitably bearish, because importations tended to weaken the domestic supply position. Despite bullish crop reports during August, Chicago operators therefore had little reason to bid up the price of Chicago futures.

We know of no comparable situation in recent years. Rarely, if ever, has a bull market at Chicago tended to be restrained by a still more bullish market at Minneapolis. This was an effect of the poor quality rather than the small quantity of the United States crop of hard red spring wheat. Had there been prospects for a larger supply of millable grades of this wheat, Minneapolis prices might have risen considerably less during July–August; and Chicago prices (perhaps also Liverpool and Winnipeg prices, since weakness at Chicago in August was a bearish influence at Liverpool) might have risen more. As a result of relative price developments at Chicago and Minneapolis, Chicago prices at the end of August stood only 6 cents above Liverpool, despite the emergence of the tightest wheat-supply position known in the United States in more than a generation.

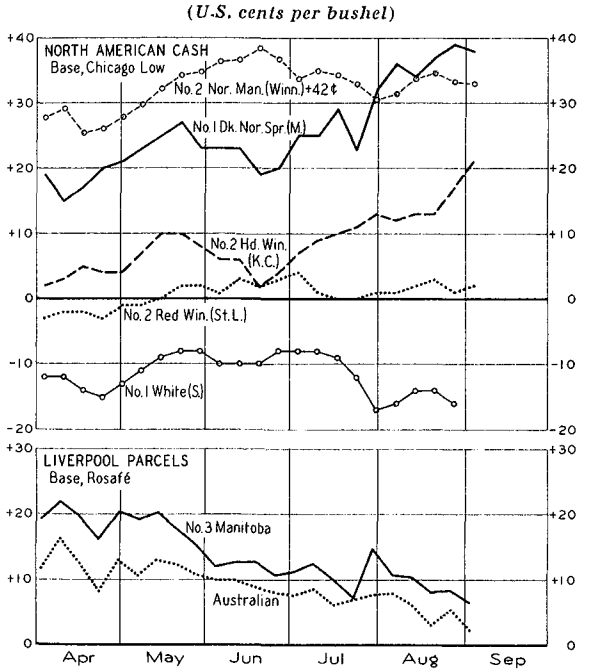
September 1–14.—During the first week of September, futures prices in all markets again rose steeply. Private estimates of North American crops were bullish; the international cash wheat position continued tight; and, on the 7th, announcement by the Canadian Grain Board of the fixed minimum price at which it would stand ready to purchase wheat from farmers was given a bullish interpretation on the markets. Except in Chicago, advance of prices continued through the week ending September 14, more as belated recognition of the change in the world supply position than as reflection of new types of bullish news, though prospects for war tended also to strengthen prices. With all this additional

advance, Liverpool futures on September 14 were only 12 cents higher than in mid-June, Chicago futures only 14 cents higher, and Winnipeg futures only 9 cents higher. In comparison with price advances of earlier years stimulated by adverse crop prospects, the response this year seems strikingly feeble even including the rather sharp rise in the first half of September. Price movements in the third week of September are mentioned briefly below, p. 28.

Other price spreads.—Certain spreads between cash prices of wheat appear in Chart 3. Cash prices of representative grades of the several important types of wheat in the United States (top tier) in general responded

CHART 3.—SIGNIFICANT WHEAT PRICE SPREADS, WEEKLY, APRIL–SEPTEMBER 1935*

(*U.S. cents per bushel*)



* See Table VIII.

to changes in regional crop prospects. Thus from mid-May to mid-June, when local crop prospects were favorable, premiums on hard red spring wheat and hard red winter wheat declined, while there was little change in the price position of soft red winter wheat and Pacific white wheat. With subsequent unfavorable progress in the Northwest, spring wheat increased its premium. Meanwhile, early in July durum wheat definitely lost the premium over hard red spring which it had enjoyed during May and earlier months of 1934–35 (Table VIII). Premiums on hard red winter wheat also increased, but less rapidly than spring-wheat premiums. Late in July white wheats tended to fall to heavier discounts, and indeed approached an export basis (a firming influence on Chicago futures); this reflected movement of the good-sized new crop with resulting augmentation of available stocks already substantial in volume. By mid-September, discount types of white wheat in the Pacific Northwest were reported only 3–4 cents above an export basis, while premium types were far above and were moving East in substantial volume.[1]

In order to illustrate roughly the price developments whereby Chicago futures tended to be held back from advancing in August (see p. 12), we have inserted in this chart the cash price of No. 2 Northern Manitoba at Winnipeg plus the American import duty of 42 cents. Comparison of this curve with that referring to the price of No. 1 Dark Northern at Minneapolis serves roughly to indicate the time when imports of Canadian wheat, actual or threatened, became a significant price-depressing factor at Chicago. This comparison is not sufficiently exact, however, to serve as more than a crude indicator of the days when imports from Canada for consumption were commercially feasible.

On the British import market (lower tier, Chart 3), the prices of parcels of Canadian and Australian wheats tended to fall, though rather irregularly, in relation to the prices of Argentine wheat. This reflected the relatively short supplies, actual and prospective, in Argentina. From mid-May to mid-August, the premium on Canadian wheat declined about 12 cents. This decline, however, failed to promote heavy import purchases of Canadian wheat, for importers apparently hoped for still further reduction in premiums following formulation of export policy by the Canadian Grain Board.

[1] *Commercial Review*, Sept. 10, 1935.

In European countries where new crops began to be marketed in July, prices of domestic wheat tended to fall in June–July (Table IX). The general levels remained high in most countries, since few were exposed to competition from import wheats. The outstanding feature of the European situation was perhaps a steep decline of French domestic wheat prices (of free wheat) in July, despite rather unfavorable crop prospects. In order to check this decline, the proportion of stored wheat subject to official price guarantee which millers were obliged to use in their mix was reduced, so as to enlarge demand for the free wheat without price guarantee. Prices of free wheat responded. On September 3 all direct official controls of price were abolished, though the indirect ones—high tariff and limitation of the amount of foreign wheat used in mill mixes—remained. In Italy, in the face of a 1935 crop officially estimated much above the crop of 1934, domestic wheat in July stood substantially higher this year than last. We are not clear to what extent this reflects military activities, stricter governmental control of prices, relative deficiency of other crops, or (possibly) relative deficiency of wheat supplies, given the much lower level of inward carryover this year and the possibility that the crop of 1934 was underestimated or that of 1935 overestimated. In any event, the prospects for war in Ethiopia may be regarded as a basically firming influence in Italian grain markets.

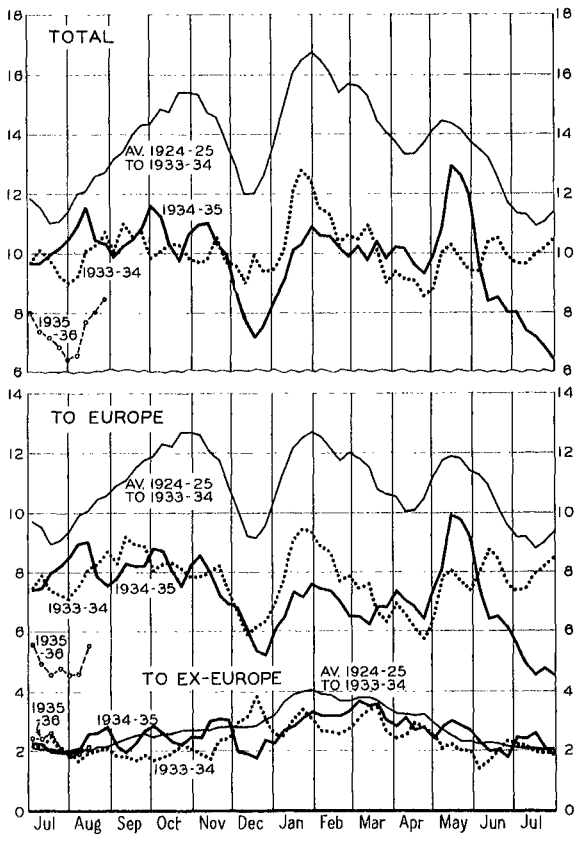
International Trade

European importers tended to purchase sparingly during May–July, choosing to draw down stocks afloat and arrived. Consequently, the total volume of trade both in May–July 1935 and in the crop year 1934–35 as a whole failed to reach expectations current last May. Overseas shipments in 1934–35 closely approximated the extremely small shipments of 1933–34, which had been the smallest since 1917–18. Net exports in 1934–35 compared even less favorably than shipments with the records of earlier years. Hand-to-mouth purchasing by importers continued into the first few weeks of the crop year 1935–36.

End-season movements. — Overseas shipments of wheat and flour during the closing quarter of 1934–35 (13 weeks, approximately May–July) fell to the lowest level in more than a decade. At 120 million bushels, the shipments in May–July 1935 were about 45 million below the 1925–34 average, though only 8 million below those of 1934. The reduction, with reference both to the average and to 1934, was in shipments to European destinations; ex-European shipments were relatively large (Chart 4). In view of the ample supplies of wheat available in European countries from crops and inward carryovers, and of continued stringent import restrictions, a level of total shipments much below average both in August–July and in

Chart 4.—Shipments of Wheat and Flour by Destinations, Weekly from July 1934, with Comparisons*

(Million bushels; 3-week moving average)



* See Table VI.

May–July had been generally anticipated. May–July shipments also proved to be of about the magnitude that could be expected statistically by reference to average seasonal tendencies over the past decade.[1]

Shipments of only 120 million bushels in May–July, however, were surprisingly small in view of special circumstances existing this year. These circumstances included, as of May 1, a rather low level of wheat supplies in such European countries as were active importers; small stocks afloat to Europe; and a reasonable prospect that Italy and Czechoslovakia, whose imports had been distinctly small prior to May, might enlarge their takings substantially in May–July because of exhaustion of domestic supplies. It seemed probable last May that stocks afloat to Europe would be maintained to August 1 close to their May 1 level, already below the August 1 average; that import requirements would be large enough to call forth shipments slightly larger in May–July than in February–April; and hence that the seasonal reduction characteristic of shipments from the third to the fourth quarter of the crop year would not occur this year.

European importers, however, chose to reduce stocks afloat (and in lesser degree stocks arrived); and by August 1, afloat stocks at 17 million bushels had been reduced to a level unprecedentedly low in post-war years. In addition, supplies in Czechoslovakia proved to be larger than we had earlier assumed; and Italian importation of wheat was brought directly under governmental control, with the result that the quantities admitted were strikingly small in relation to statistically calculated requirements.

The hand-to-mouth purchasing policy of European importers was particularly prominent in June–July; earlier, indeed, rising prices in March–April had stimulated purchases for May shipment, resulting in an unusually high seasonal peak of shipments in mid-May (Chart 4). Especially in June and early July, favorable Northern Hemisphere crop prospects and fears of "dumping" of Canadian wheat, with attending gradual decline of international wheat prices, appear to have motivated the purchasing policy of European importers. In this policy ex-European importers appear not to have participated, in some part because a short new crop was in prospect in China. Principally because of the policy followed by European importers, overseas shipments in May–July fell below forecasts current last May, and there was an extraordinarily steep decline in shipments from mid-May to the end of July. Actual May–July arrivals of wheat in Europe, however, were somewhat larger in 1935 than in 1934, and accorded more closely than shipments with analyses of European import requirements current last May.

Striking features of the flow of shipments from exporting countries (Chart 5, p. 16) were the maintenance of Argentine and Australian shipments close to an average level, the extremely small North American shipments, and the notably large shipments from other countries.

Within the limits imposed by restricted import demand, Argentina as usual shipped freely, though not so freely as to bring August 1 stocks to an average level and with some restraint when growing conditions for the new crop became increasingly unfavorable in July. Australia also shipped rather freely, but retained moderately heavy stocks on August 1.

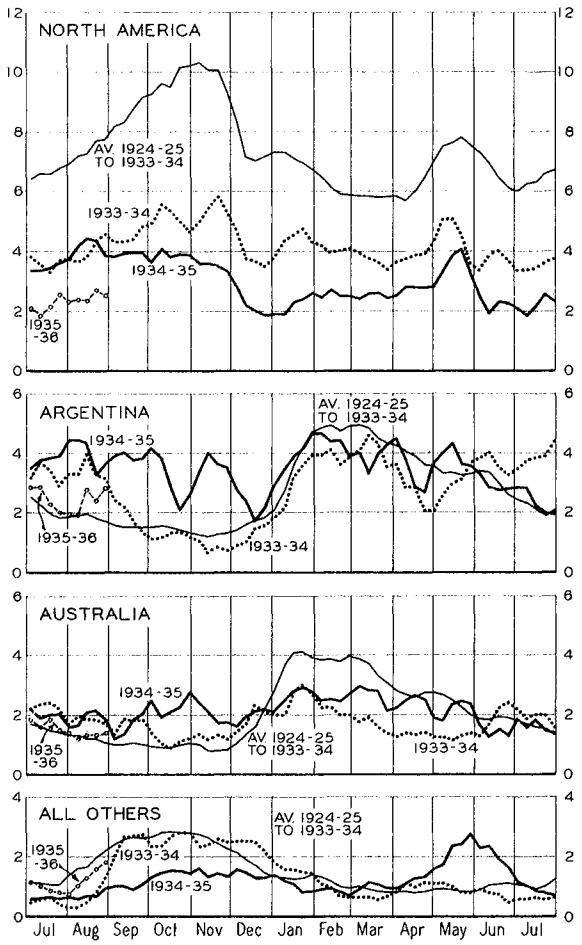
North American shipments — almost entirely from Canada, since the United States was a net importer on balance in May–July, though on a smaller scale than in September–April preceding—were held as far as they were below average largely because government-sponsored dealings in futures at Winnipeg kept the prices of Canadian wheats on the European import market too far above prices of competing wheats. Canadian net exports in May–July 1935 (*a*) were smaller than in these months of any of the preceding ten years, and only half of the ten-year average; (*b*) constituted a smaller percentage of May–July world shipments than in any of the past ten years — only 28 per cent as against an average of 40 per cent; and (*c*) constituted a smaller percentage of April 1

[1] Last-quarter shipments, which on the average over the past decade have run 84 per cent as large as third-quarter shipments, were 87 per cent this year.

Canadian stocks than in any of the past ten years—only 12 per cent as against an average of 29 per cent. More Canadian wheat could have been sold for export if Canadian wheat prices had been allowed to fall more

CHART 5.—SHIPMENTS BY SOURCES, WEEKLY FROM JULY 1934, WITH COMPARISONS*

(Million bushels; 3-week moving average)



* See Table VI.

nearly "into line" at Liverpool; and adjustment of the prices of Canadian wheats to competing wheats so as to enlarge Canadian exports was probably feasible.[1] How large a reduction of Canadian prices might have been required in order to achieve a given enlargement of Canadian exports, however, is altogether conjectural.

The relatively heavy shipments from other countries in May–July represented in part the outflow of substantial quantities of subsidized French wheat, for which governmental licenses on a large scale were issued in May, and in part outflow of wheat from the Danube basin in execution of barter arrangements concluded early in or prior to the opening of the crop year. Northern African countries continued to ship out wheat, though not in exceptionally large volume for the season. No shipments were recorded from Russia and India in May–July, though there were small net exports (Table VII). Stocks acquired by governmental agencies in Sweden were exported in sufficient volume to place that country among the ranks of the net exporters in 1934–35 for the first year in more than half a century. Poland, Latvia, Estonia, and Lithuania continued to ship out subsidized exports in small volume.

Crop-year shipments, net exports, and net imports. — Crop-year shipments (August–July 1934–35) are now reported as 527 million bushels, and crop-year net exports may be tentatively appraised as 529 million.[2] Comparisons are as follows, in million bushels:

August–July	Shipments			Net exports
	To Europe	To ex-Europe	Total	
1929–30	483	130	613	626
1930–31	608	179	787	834
1931–32	582	188	770	792
1932–33	449	166	615	629
1933–34	402	122	524	556
1934–35	381[a]	146[a]	527[a]	529

[a] 53 weeks.

Total shipments, even including the data for 53 weeks in 1934–35, barely exceeded the

[1] We do not accept, either for the period May–July 1935 or for earlier months of the crop year, the contention advanced by certain witnesses in the *Minutes of Proceedings and Evidence* of the Canadian House of Commons Special Committee on Bill 98, Canadian Grain Board Act, June 18–27, 1935. The contention was that the price-supporting policy of the Canadian government had in general no effect in curtailing Canadian exports, because import demand was insufficient to absorb more wheat than had actually been absorbed from all exporters, and Canada could not have obtained a larger share of world trade in wheat even at sacrifice of prices because Argentina would have cut prices as much and as rapidly as Canada could have done, thus maintaining Argentine wheat exports. The contention, however, that material expansion of Canadian exports would have involved international price reductions, perhaps severe, appears well founded.

[2] Table VII shows what monthly data are lacking.

strikingly small shipments of 1933–34. Shipments to Europe fell to the lowest level recorded in the present century, 1917–18 excepted; but shipments to ex-Europe were larger than in 1933–34, and had been exceeded in only five years of the present century. Measured by net exports of net-exporting countries, the volume of trade in 1934–35 compared even less favorably with earlier years; on this method of measurement international trade in wheat and flour fell to a new post-war low level in 1934–35, some 5 per cent below the level of 1933–34. Net exports exceeded shipments by a much smaller margin than usual, partly because 1934–35 shipments cover 53 weeks and (contrary to the usual procedure) they also include some Canadian wheat exported to the United States. Excluding the shipments from Canada to the United States and the fifty-third week of the crop year, the statistics of shipments would show a reduction of 14 million bushels between 1933–34 and 1934–35 and, like net-export statistics, would indicate a new post-war low level of trade in 1934–35.

Reported shipments and net exports fell much below early-season forecasts, which in August–October 1934 were ranging around 575 million bushels for shipments and 600–610 million for net exports. Even as late as May 1935, Broomhall's forecast of shipments was 544 million bushels and our forecasts were 545 million for shipments and 555 million for net exports. Prior to May, forecasts had to be reduced in accordance with upward revisions of 1934 wheat crops in importing Europe and with accumulating evidence which suggested that in some European countries import restrictions were being maintained even in the face of reduction of wheat consumption. Our May forecasts proved too high in some degree for these same reasons, but mainly because we failed to allow for the possibility that import requirements might be filled in some part by drafts upon stocks afloat during May–July. In general, successive forecasts of 1934–35 trade issued during the crop year tended to overestimate the import takings of most countries in Europe, and therefore total European and world trade.

The outstanding misjudgments of import requirements, however, concerned only four countries—France, Poland, Italy, and Czechoslovakia. Writing in September 1934, we expressed the opinion that these four countries together would import net some 36–60 million bushels more wheat in 1934–35 than in 1933–34, with increase of 30–50 million in Italy and Czechoslovakia, 6–10 million in Poland, and practically no change in France, whose imports were 17 million bushels in 1933–34. A large part of the substantial discrepancy between forecasts of world trade in 1934–35 and reported trade is explicable by reference to these countries, whose net imports eventually proved to be even smaller in 1934–35 than in 1933–34.

Poland, contrary to our expectations, remained in the ranks of the net-exporting countries in 1934–35. The present official estimate of the 1934 crop, 76 million bushels, is 26 million above unofficial forecasts current in September 1934. France, instead of importing net some 17 million bushels in 1934–35, exported net about 20 million bushels under heavy governmental subsidy and despite heavy gross imports from her northern African colonies; the policy of export subsidization was pressed more strongly than we had anticipated in September 1934.

Italian net imports in 1934–35 proved to be only about 11 million bushels, an increase of only 3 million from the low level of 1933–34. Our forecast (September 1934) of an increase of 20–40 million bushels therefore was wide of the mark, as were forecasts of other observers. Such forecasts usually involve the assumption, sound for many countries in the light of experience, that the amount of wheat actually consumed will not vary much in successive years. Yet the 1934 Italian crop, plus our estimate of a heavy inward carryover, plus the small 1934–35 net imports, minus our estimate of a minimum outward carryover, yields a quantity of wheat statistically available for Italian consumption in 1934–35 of only about 260 million bushels. Consumption calculated similarly was 290 million in 1933–34, 297 million on the average in five earlier years, and not lower than 280 million bushels in any year between 1921–22 and 1927–28. If the statistics are

reliable, Italian wheat consumption in 1934–35 must have fallen some 10 per cent below the level of 1933–34, perhaps 15 per cent below the peak levels of 1928–29 and 1929–30.

If this actually occurred, it constitutes a striking phenomenon in a country where wheat is a very important component of the national diet, very little wheat goes for other uses than food and seed, extraction rates run to roughly 75 per cent, and the population is increasing with relative rapidity. If the statistics are reliable, the inference is inescapable that governmental restrictions of wheat imports into Italy in 1934–35 resulted in large-scale substitution of other cereals (mainly corn and rice) for wheat in the national diet. Whether or not the statistics reflect the facts is not now ascertainable. In any event, no reason existed when the crop year opened, and even in the closing months, to suppose that Italian net imports in 1934–35 would or could be held to barely more than 10 million bushels.

In Czechoslovakia also the assumption of stability in consumption used in forecasting net imports may perhaps have proved unsound; for consumption as statistically calculated fell to about 51 million bushels, in contrast with estimates ranging above 65 million in each of the seven preceding years. Artificial support of wheat prices possibly gave rise to extensive substitution of other cereals for wheat. But the existence of year-end stocks of some 12 million bushels in the hands of the grain monopoly hardly points toward physical shortage or need of imports; and it seems probable, as some observers have asserted, that the crop of 1934 is much underestimated in the official statistics. If so, it is possible that consumption suffered much less than the indicated reduction, that net imports of under 2 million bushels amply covered requirements, and that over-large forecasts of net imports are traceable merely to incorrect official estimation of the 1934 crop.

Crop-year imports into other European countries were only moderately smaller in the aggregate than our early-season forecasts. British and Irish imports at 218 million bushels declined 20 million from the 1933–34 level, but, with the big 1934 crop, the heavy inward carryover, and drafts upon stocks, appear to have provided for a new high level of consumption. Except for 1933–34, these imports constituted the largest fraction of world net exports in post-war years—about 41 per cent. Relatively heavy imports of subsidized wheat for feed appear to have contributed to the high level of consumption. Feed use of such wheat was also large in Denmark, whose net imports rose to a new peak in 1934–35; but Belgium and Holland imported somewhat less than was forecast, partly (with Britain) because of the hand-to-mouth purchasing policy followed in the closing months of the year.

Recent trade developments. — Overseas shipments continued at a very low level in the first six weeks of the crop year 1935–36 (Chart 4, p. 14, and Table VI). The total, 48 million bushels, was 17 million below the small shipments of corresponding weeks of 1934–35. This represented continuation of the hand-to-mouth import purchasing policy earlier in evidence, and probably does not foreshadow smaller crop-year trade in 1935–36 than in 1934–35. Russian exports were first reported in the week ending August 17; their volume for the period extending from August 1 to mid-September was larger than in most corresponding periods of the preceding decade, but much smaller than in 1930 and 1931. We doubt if distinctly large exports are likely to come from Russia in 1935–36, though the basis for prediction is slender.

Visible Supplies and Year-End Stocks

Visible supplies.—"World" visible supplies declined substantially during the crop year 1934–35. Comparative statistics are as follows, in million bushels:

About August 1	Total	U.S. grain[a]	Canadian grain[b]	U.K. and afloat	Australia	Argentina
1923–27	136	39	28	48	15	6
1928–32	343	164	102	46	23	8
1933	423	139	197	43	31	13
1934	423	116	187	48	52	20
1935	302	35	197	26	32	12

[a] Including United States grain in Canada.
[b] Including Canadian grain in the United States.

The reduction during August–July 1934–35 was about 120 million bushels, some 29 per

cent, and constituted nearly half of the reduction in "world" year-end total stocks (see p. 20). The total visible was brought to the lowest level since 1928. Despite the heavy reduction during 1934–35, world visibles about on August 1, 1935, were over twice as large as the five-year average applying to years before the world wheat surplus accumulated, and not much smaller than the average for 1928–32. These data suggest that the world carryover surplus has not yet disappeared, though substantial inroads have been made upon it and more will occur in 1935–36.

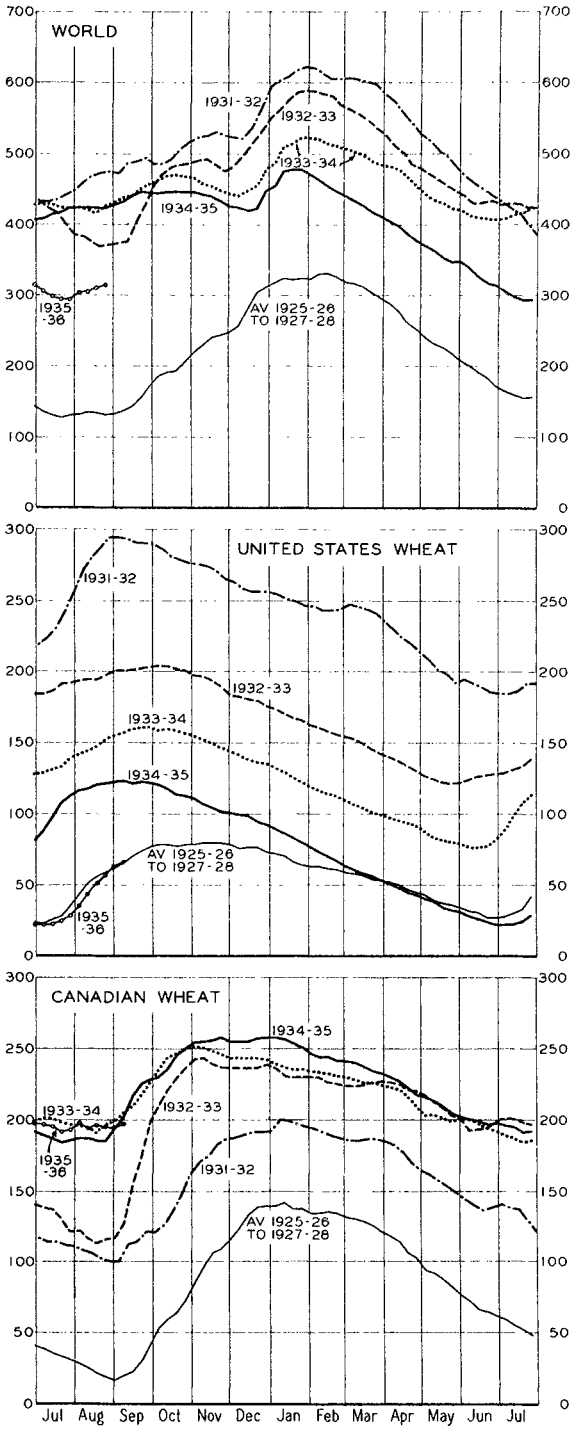
The weekly course of visible supplies during May–July 1934–35 (Chart 6 and Table III) was, so far as concerns the total, much like the average pre-depression course. The May–July reduction, however, was slightly less than average mainly because Canadian visibles declined by only about half the average amount, a reflection of the notably small Canadian export movement. The decline of United States visibles to the low point in late June was somewhat more than average and the rise in July distinctly less than average (because the new crop was late), so that the gross May–July decline was relatively large; this helped to offset, in the world total, the small reduction of Canadian visibles. May–July reduction in other components of the world visibles was also above average in the aggregate, though only slightly.

Aside from the strikingly small reduction of the Canadian visible, the outstanding development during May–July was reduction of visibles afloat and in British ports from 41 million bushels early in May to 26 million early in August. Although these stocks usually decline during May–July when the May level is high, they have never before in postwar years declined when the May 1 level was low, as it was in 1935; and only once before in the 44 years since Broomhall began to publish these statistics have visibles as of August 1 fallen so low.[1] These facts suggest that European importers in general tended much more strongly than usual to be content to draw on supplies in near positions, and to

[1] The lowest previously recorded figure was 26 million bushels in 1897. On only three other occasions (1896, 1898, and 1902) have August visibles fallen below 40 million bushels. Data were not published for 1917 and 1918.

CHART 6.—WORLD AND NORTH AMERICAN VISIBLES, WEEKLY FROM JULY 1934, WITH COMPARISONS*

(Million bushels)



* See Table III.

defer purchases for later shipments. Canadian exports naturally suffered most from this policy, since the question prominent in the minds of importers concerned the probability that the relative price of Canadian wheat on import markets might fall if and when the Canadian Wheat Board should come into being.

As of August 1, the Canadian visible constituted the largest fraction of the world visible (nearly two-thirds) on record; and amongst the several components of the world total, only the Canadian visible was larger than in 1934 and approximately at its post-war peak. Australian visibles were above average but well below their 1934 peak; the United States visible was the smallest, as of August 1, since 1927. Like visibles afloat and in British ports, the United States visible was below the 1923–27 average. Except for the huge Canadian visible, the level of world visible supplies on August 1, 1935, was close to the average for pre-surplus years and certainly below rather than above a "normal" level.

"World total" stocks, August 1.—Our present appraisal of total year-end stocks (approximately in the world ex-Russia and China as of about August 1, 1935) is 875 million bushels. This estimate points toward a reduction of world carryover surplus stocks of about 275 million bushels[1] in the course of the crop year 1934–35, but toward maintenance of these stocks at a level roughly 45 per cent above the average for 1923–27, when stocks were about of "normal" size—some 600 million bushels. Early in the crop year many observers had looked forward to practically complete elimination of world surplus carryover stocks during 1934–35; but only about half to three-fifths of the surplus seems to have been absorbed.

Our present appraisal of August 1 stocks in the several positions is as follows, with comparisons, in million bushels:

Position	1923–27 average	1934 revised	1935 May forecast	1935 Sept. appraisal
United States[a]	125	286[b]	175	150
U.S. in Canada....	1	0	0	0
Canada	38	194[b]	168	203
Canadian in U.S. ..	3	10	10	11
Australia	31	85	55	55
Argentina	65	118	80	80
Afloat to Europe ...	40	35	35	17
Total above	303	728	523	516
Importing Europe.	187	315	265	270
Danube basin	37	54	20	20
India	46	29	29	29
Northern Africa ..	19	10	15	24
Japan	7	5	5	5
Afloat to ex-Europe	7	11	11	11
Total above	303	424	345	359
Grand total	606	1,152	868	875

[a] As of July 1.
[b] Slightly revised since May 1935.

In relation to the 1923–27 averages, stocks on August 1, 1935, were conspicuously large only in Canada and importing Europe.[2] These regions had held larger year-end stocks only once before in post-war years. Australian, Argentine, and northern African stocks were apparently above average in size, but much less strikingly so than in several earlier years. Stocks in other positions, including the United States (July 1), were below average or only slightly above. Within importing Europe, the countries which held notably heavy stocks as of August 1, 1935, were France, Germany, Spain, Czechoslovakia, and Portugal. Countries wherein stocks were low—at a minimum or not much above, according to our calculations—were the British Isles, Italy, Belgium, Holland, Switzerland, Austria, Denmark, and Norway, a list which covers

[1] Estimates of the reduction of "world" stocks during 1934–35 by the Canadian Dominion Bureau of Statistics and the United States Department of Agriculture are respectively 285 and 300 million bushels (*Monthly Review of the Wheat Situation*, Aug. 20, 1935, p. 2; *World Wheat Prospects*, Aug. 27, p. 1). The Canadian estimates now seem to include practically the same items as our series, while the American is similar in composition but omits Indian and Japanese stocks and deals with surpluses rather than total stocks on August 1 in the Southern Hemisphere.

[2] Appraisals of the year-end stocks in importing Europe, Australia, and Argentina are as yet tentative, and may require fairly substantial revision when further information is available. At present, however, there appears to be a narrower range in available estimates than is commonly found at this season. Our appraisals of Argentine and Australian stocks now seem more likely to prove too high than too low.

nearly all of the countries which were active net importers of wheat in 1934–35.

It now appears that wheat disappearance in the world ex-Russia and China in 1934–35 was the smallest in five years, despite growth of population. Pertinent approximations are as follows, in million bushels:

August–July	Initial stocks	Crops	Russian exports	Total supplies	Disappearance
1930–31 ..	922	3,705	114	4,741	3,734
1931–32 ..	1,007	3,669	65	4,741	3,743
1932–33 ..	998	3,703	17	4,718	3,621
1933–34 ..	1,097	3,616	34	4,747	3,595
1934–35 ..	1,152	3,299	2	4,453	3,578
1935–36 ..	875	3,291	30	4,196	....

There can be no doubt that disappearance, especially per capita disappearance, was significantly smaller in 1934–35 than in the two earliest of these five years. Differential governmental support of wheat prices practically throughout Europe has undoubtedly been largely responsible for reduction of world disappearance; but reduction of flour consumption in the United States, the causes of which remain somewhat obscure, has been another factor. It is too early to say whether or not world disappearance actually declined between 1933–34 and 1934–35; for uncertainties still attach to some of the 1934 crop estimates (notably of Italy and Czechoslovakia; see p. 17), and the estimates of year-end stocks are still tentative.

Present appraisals of total stocks differ but little from our May forecasts, but for certain components the differences are large. Thus our May forecast of the Canadian carryover proved to be much too low, mainly because Canadian exports in May–July fell below our expectations. The Canadian price-pegging policy on the one hand and the hand-to-mouth purchasing policy of European importers on the other tended strongly to curtail Canadian exports and enlarge the carryover. This purchasing policy was also the unexpected development mainly responsible for our overestimate of the probable level of stocks afloat for Europe on August 1.

Available official estimates of the components of the United States carryover on July 1, 1935, yield a total 25 million bushels below our May forecast. Stocks held by mills and visible supplies showed larger reductions in 1934–35 than stocks on farms or in country mills and elevators (Table IV); only the visible fell to the lowest level since 1928, though the other components had been lower only in 1931, following the Farm Board stabilization operations which attracted wheat from all other positions into visible positions. At 150 million bushels, the total carryover suggests, when compared with other items of disposition (Table X), either that the 1934–35 supplies from inward carryover and new crop were somewhat overestimated or that feed use of wheat was substantially larger than could be inferred from official estimates of stocks last April 1 and July–March disappearance. Our May forecast of the July 1 carryover rested on the assumption that in April–July 1935, as in the three preceding years, disappearance of wheat calculated from official April 1 and July 1 stocks estimates would prove to be too small to cover actual disappearance by a substantial margin. But for the first time in five years, April–July disappearance so calculated appears to have exceeded what must actually have disappeared for spring-wheat seed, net exports (net imports this year), feed use, and mill grindings.

The quantity of wheat ground into flour for domestic use in the United States in July–June 1934–35 we now calculate as 459 million bushels (Table X), 10 million bushels above the level of 1933–34. Flour produced for domestic use (Table V) was 99.1 million barrels, an increase of 2.6 per cent. In view of uncertainties still attaching to appraisal of total flour production and of changes in flour stocks, it cannot be asserted without qualification that this increase in domestic retention of flour represented a reversal of the declining trend in consumption of flour since 1928–29. But the presumption seems to us to be in this direction, for unreported stocks of flour seem more likely to have been reduced than maintained or increased during 1934–35.

Recent movement of visibles.—During August world visibles increased somewhat, reflecting enlargement of the United States visible while other components declined or rose only slightly. Stocks afloat to Europe remained low. Canadian visibles declined

only a little, though considerable wheat was shifted out of Canada into export positions in the United States. The increase in the United States visible during August and early September was strikingly large in view of the small 1935 crop.

Summary of Wheat Supplies

The tabulation on page 21 shows, with comparisons, total prospective world supplies of wheat for 1935–36, taking supplies to consist of inward carryover, new crop ex-Russia, and prospective Russian exports. The total comes to only about 4,200 million bushels. This is some 250 million bushels smaller than the supplies of 1934–35, which were in turn about 290 million below the average for the four preceding crop years. The supplies in prospect for 1935–36, therefore, appear to be some 540 million bushels (over 11 per cent) below the average for 1930–34, and are the lowest since 1926–27. They compare unfavorably with the average mainly because of deficiency in crop, but with supplies of 1934–35 mainly because of the lower inward carryover.

The relative quantitative reduction in domestic supplies in 1935–36 as compared with 1934 – 35 appears mainly in the Southern Hemisphere, despite the ravages of rust in North America. This is illustrated by the following tabulation, in million bushels (initial stocks plus new crops), with comparisons:

Year	United States, Canada	Argentina, Australia	Importing Europe	Danube basin	Others[a]
1930–31	1,726	560	1,223	397	590
1931–32	1,712	551	1,248	427	587
1932–33	1,706	570	1,453	271	567
1933–34	1,414	593	1,613	394	553
1934–35	1,253	575	1,599	305	577
1935–36	1,239	410	1,510	309	581

[a] India, northern Africa, Japan.

Argentina and Australia together have prospective supplies around 165 million bushels smaller than in 1934–35. The North American supply is quantitatively not much reduced, but the quality is immeasurably worse. Importing Europe has prospective supplies roughly 80 million bushels smaller this year than last, but large in comparison with the first three of the five preceding years, while North American and Southern Hemisphere supplies show a very heavy reduction. The magnitude of supplies in importing Europe militates against heavy imports in 1935–36; indeed, the prospective increase in imports over those of 1934 – 35 is much smaller than the reduction in supplies, because the change in supply has developed largely in France and Spain, where the supplies of 1935–36 will involve reduction of stocks rather than enlargement of imports. This tabulation, however, tends somewhat to minimize European import requirements, for it omits stocks of wheat afloat to Europe, which were 18 million bushels smaller on August 1 this year than last. In the Danube basin and "others," the prospective supplies of 1935–36 do not significantly differ from those of 1934–35.

Outlook for Trade

Import requirements. — The Wheat Advisory Committee under the moribund International Wheat Agreement of 1933 has not issued this year a forecast of "world import demand"; and the forecast of net exports by the International Institute of Agriculture usually does not appear until October. At present, trade attention focuses upon Broomhall's estimate of probable shipments.

This forecast, issued in mid-August, places total import requirements at 540 million bushels, comprising 396 million bushels to Europe and 144 million to ex-Europe. In 1934–35, reported shipments were respectively 527, 381, and 146 million (for 53 weeks). Broomhall thus counts upon a slight enlargement of the total in the span of 52 weeks in 1935–36. His forecast includes allowance for some reconstruction of stocks in European ports and afloat to Europe. In detailed calculations, he specifies moderate enlargement of imports by the British Isles, Italy, Belgium, Holland, and Greece, and slight reduction or no change in the takings of other European countries. Allowance for net imports into the United States is included.

The changes of appreciable magnitude likely to occur in international trade between

1934–35 and 1935–36 will presumably involve, on the importing side, only the British Isles, Denmark, the United States, China and Manchuria, and perhaps Italy, especially in event of war. Most other countries have either withdrawn from the import market, without prospect of immediate return, or now import quantities that can be expected to vary only slightly from year to year. France is difficult to classify; latest advices, however, suggest that small net imports, mostly from northern Africa, are in prospect.

We regard Broomhall's analysis as probably underestimating the magnitude of American imports from Canada, and possibly underestimating the amount by which stocks of import wheat afloat and in European ports may be reconstructed. On the other hand, we are disposed to believe that, with less cheap soft wheat available on the import markets this year than last because of prospective withdrawal of France from the ranks of the net exporters, and with abundance of feed grains, the British Isles as well as Denmark will import appreciably less wheat this year. We also expect that Chinese and Manchurian takings will fall somewhat further below those of 1934–35 than Broomhall reckons; in this appraisal weight is given to what seems to us a fair prospect for firmer prices at higher levels in the winter this year than last.

These adjustments of Broomhall's calculations, however, affect details rather than totals; and at present his forecast of shipments of 540 million bushels in 1935–36 seems as well founded as an early forecast can be.

If world shipments approximate 540 million bushels, net exports (measured by summation of net exports from net-exporting countries) seem likely to approximate 560 million bushels. The excess of net exports over shipments is variable and difficult to foresee in any year; it proved unexpectedly large in 1933–34 and unexpectedly small in 1934–35, when it was only about 2 million bushels. This year the discrepancy will presumably rise more nearly to normal proportions. In employing 560 million bushels as a forecast of net exports, we regard the figure as the middle of a range, but a range not wider than 530–590 million bushels. To speak in terms of import requirements expressed as net exports, we count upon an increase of about 30 million bushels between 1934–35 and 1935–36; and the increase seems likely to arise mainly from increase of American imports and of stocks afloat sufficient in volume to exceed reductions of imports especially into the Orient, the British Isles, and Denmark.

For purposes of recording forecasts formulated in a period of extreme uncertainty, we set forth here our calculations concerning domestic supply, domestic disposition, and net imports into the United States in July–June 1935–36.[1] These are as follows, in million bushels of 60 pounds:[2]

Inward carryover	150
New crop	595
Total domestic supply	745
Net mill grindings	475
Seed use	75
Feed and waste	100
Outward carryover	125
Total domestic requirement	775
Net imports to balance	30

Detailed discussion of such forecasts is without purpose; no student would suppose that a sound basis existed for forecasting within a range of 5 million bushels any of the six items of supply and disposition except perhaps inward carryover and seed use. In other years more reliable bases existed for appraising probable mill grindings and *minimum* outward carryover, but not yet this year because of the huge volume of rusted wheat, with which milling experience

[1] These net imports will represent as usual the difference between gross imports of wheat and flour and gross exports of wheat and flour. The gross imports will consist practically entirely of wheat from Canada; the gross exports will probably consist predominantly of flour ground from Canadian wheat, though exports of some Pacific club wheat and some low-grade wheats may occur; and the net import will therefore represent broadly the wheat imported from Canada, duty-paid. Shipments to possessions are included in the exports.

[2] The official statistics uniformly refer to 60-pound bushels, not to measured bushels.

has barely begun. There is never a reliable basis for appraising probable feed use; and appraisal is doubly uncertain this year because on the one hand low-grade wheat ought to be fed heavily, while on the other the good crops of feed grains might discourage feed use of wheat. Since the items of supply and disposition are predictable only within a considerable margin of error, the forecast of net imports is subject to large error. At the moment, we regard the forecast of net imports as more likely to prove below than above the facts, because our appraisal of supplies stands high in relation to trade appraisals, while our appraisal of disposition allows conservatively for the immense quantities of low-grade wheat. In any event, we include in present calculations of world import requirements 30 million bushels for net imports of the United States, either in August–July or in July–June 1935–36.

Export surpluses and probable sources of exports.—There is not much question that enough wheat exists, or will exist, in exporting countries to satisfy import requirements of 560 million bushels. The pressing question in the minds of importers probably does not concern the existence of adequate export surpluses, but the price at which exports will be made. The margin between export surplus and import requirements is much narrower than has been witnessed in nearly a decade.

Some 90 million bushels, perhaps less rather than more, will be exported from the minor exporting countries—including Russia, the four Danube countries, northern Africa, India, Poland, and Chile, with possibly negligible quantities from other countries. At the moment neither France nor Germany seems likely to export net in 1935–36, as the one did last year and the other in 1933–34. Nor does it seem appropriate to count upon accession of Spain and Czechoslovakia to the list of net exporters, though both countries appear to have export surpluses and might export net if policies of export subsidy should be adopted. We allow for probable net exports of 30–40 million bushels from Russia; 20–30 million from the Danube countries, whence Broomhall expects shipments of 40 million; and 30 million from all other minor exporters, the northern African countries supplying perhaps 20 million of this despite the short crops in Algeria and Morocco, where inward carryovers were large.

If 90 million bushels are exported net from the minor exporters, the three major exporters may find markets for some 470 million bushels—perhaps 440 million, perhaps 500 million, depending on the intensity of import demand. More wheat than this will probably be available over and above requirements for domestic consumption and year-end stocks in Canada, Argentina, and Australia together. The following tabulation, in million bushels, deals with supplies and disposition in those countries, with requirements for stocks at the end of 1935–36 taken as the lowest (our basis of calculation) on record for each country since 1922:

	Canada	Australia	Argentina	Total
Initial stocks ...	203	55	80	338
New crop	291	135	140	566
Total supply ..	494	190	220	904
Domestic use[a] ..	113	54	95	262
Year-end stocks[b].	27	24	58	109
Domestic requirement ..	140	78	153	371
Export surplus..	354	112[c]	67[c]	533

[a] Average of 5 years ending 1934–35; our appraisals as in Table X.

[b] Lowest since 1922; our basis of calculation.

[c] The lowest net export from Australia in the past decade was 63 million bushels (1929–30); the lowest from Argentina was 97 million (1925–26).

Thus calculated, the aggregate export surplus in these three countries amounts to roughly 535 million bushels, from which importing countries appear to require 440–500 million. Consequently, unless the above appraisals of import requirements and exports from minor countries prove considerably too low, and/or the appraisal of export surplus in the three major exporters proves too high, the wheat available in the world for export exceeds the import requirements by about 35–95 million bushels. But this margin would be much narrower than the margins of earlier years. Importers apparently cannot obtain imports of 560 million bushels without draw-

ing carryover stocks in the three major exporting countries down to the lowest level in many years. Year-end stocks in these three exporting countries averaged 134 million bushels in 1923–27, rose to a peak of 397 million bushels on August 1, 1934, and were 338 million bushels on August 1, 1935. If exports from these countries range between 440 and 500 million bushels in 1935–36 and domestic use is equal to the five-year average, stocks on August 1, 1936, cannot range much above 200 million bushels, might fall as low as 140 million—at the average, to about 170 million bushels. If so, the outward carryover in these countries would be the smallest since 1927, and the reduction from 1935 would be nearly 170 million. The carryover in Canada alone at the end of 1934–35 was some 30 million bushels larger than year-end stocks in all three exporting countries may prove to be at the end of 1935–36.

It is important to observe that, if the three major exporting countries together are to be called upon to export about 470 million bushels, heavy drafts must be made upon Canadian stocks. If Argentina and Australia should harvest 1935 crops of the size used in our calculations, they could not export more than about 200 million bushels in 1935–36, even by reducing stocks next August to a level sufficient merely to provide for domestic food use from then until their harvests of 1936. Canada therefore might be called upon for exports of 270 million bushels at least; and, if so, could not provide so much without reduction of carryover from 203 million bushels in 1935 to 110 million in 1936. Under the circumstances, the Canadian Wheat Board may be said to appear to possess a potential control of world wheat trade and prices never before exercised by a governmental organization in times of peace. Upon its future policy the developments in world trade, prices, and distribution of year-end stocks depend heavily.

At this time, partly because this policy remains unclarified, we do not propose to attempt to foresee how much wheat may be exported in 1935–36 from Argentina, Australia, and Canada respectively. The prospective total from these countries we place at 470 million bushels, of which Canada seems likely to export 270 million bushels or more, Argentina and Australia 200 million or less. Something depends on European and perhaps Chinese takings of low-weight Canadian wheat.

Outlook for Year-End Stocks

In preceding sections enough has been said of the prospective 1935–36 wheat supply in the world ex-Russia to suggest that, without drastic reduction in world wheat disappearance, the world carryover at the end of 1935–36 now seems likely to fall about to a "normal" level.

As shown in the tabulation on page 21, total wheat supplies of the world ex-Russia in 1935–36 (from crop, carryin, and prospective Russian exports) appear to be some 250 million bushels lower than in 1934–35, and some 540 million below those of the four preceding years. With so heavy a reduction in total supplies, either disappearance must fall below the reduced levels of recent years, or year-end stocks must be heavily cut down.

The probabilities are against reduction of disappearance, for two reasons: because 1935 crops are not short in areas where consumption usually adjusts itself to domestic supplies (eastern Europe and India); and because the large volume of poor-quality wheat in North America should tend to stimulate feed use as well as to enlarge the quantities required in flour milling. These factors would probably suffice to offset any reduction due to increased substitution of other grains for wheat in western Europe. World wheat disappearance has averaged about 3,650 million bushels during the past 5 years, ranging from 3,740 in 1931–32 to 3,580 in 1934–35. If supplies for 1935–36 are 4,200 million bushels, and if disappearance proves to be as large as in 1934–35 (3,580 million bushels), the stocks remaining at the end of 1935–36 would amount to only 620 million bushels.

It may be somewhat misleading, however, to appraise the probable level of world year-end stocks in terms merely of gross supplies and gross disappearance in the world ex-Russia as a whole. Analysis of the prospective position country by country, however, yields a similar picture. In some countries of Europe — notably Germany, France, Spain,

and Czechoslovakia—it seems probable that domestic supplies are so abundant that some excess of stocks must remain at the end of the crop year, barring unexpected developments in consumption or export policy. In other countries stocks were probably so low when the crop year opened that, given the domestic crops, no further reduction can occur during 1935–36, and consumption and/or net imports must suffer some reduction. The prospective stocks position, when appraised country by country, seems to confirm the prospect for a level of world ex-Russian stocks in the neighborhood of 620 million bushels, perhaps a little more. The prospective distribution is about as follows, in million bushels, compared with year-end stocks of 1934:

Position	Estimated 1934	Prospective 1935
United States grain	150	125
Three major exporters[a] ..	349	180
Afloat to Europe.....	17	25
Importing Europe	270	210
Danube basin	20	25
Others[b]	69	60
Total	875	625

[a] Canada, Argentina, and Australia; includes Canadian wheat in bond in the United States.
[b] India, northern Africa, Japan, afloat to ex-Europe.

Except in the Danube basin and afloat to Europe, stocks are likely to be reduced during 1935–36 in all of the principal positions. The largest reduction will presumably appear in stocks held by the three major exporters. As between these, we expect Argentina and Australia together to hold very small stocks, perhaps anywhere from 65 to 100 million bushels. Canadian stocks (including grain under bond in the United States) might fall somewhere in the range of 80–115 million bushels. Either figure would represent a large reduction from the 214 million bushels carried into 1935–36.

A large fraction of the prospective reduction of stocks in importing Europe is likely to occur in France, where for the first time in four years the crop and inward carryover appear to be smaller than domestic requirements, but not enough smaller to warrant expectation of significant net imports from countries other than the northern African colonies.

At 625 million bushels, world wheat stocks next August would be the smallest since 1926 and only slightly above the 1923–27 average. Even if appreciable upward revisions are made in crop forecasts now standing, there appears to be little probability that stocks at the close of 1935–36 will appreciably exceed 700 million bushels. Accordingly there is reason to believe that the current crop year will witness shrinkage of year-end stocks to or close to a normal level; and perhaps, if much of the poor-quality wheat is fed, even below. The virtual disappearance of the persistent carryover surplus would represent an event earnestly desired by wheat producers and governments in many countries for more than five years. If it transpires, it will represent dominantly the effects of weather conditions upon wheat yields, and only insignificantly the diverse, numerous, and sometimes conflicting efforts of governments.

Outlook for Prices

Any formulation of the prospects for price developments between mid-September and the end of December must lean heavily upon appraisal of the policy likely to be adopted by the Canadian Grain Board. This involves political as well as economic appraisal, and involves the wheat market in a field in which training, experience, and information are lacking.

The Board probably now controls an amount of wheat in excess of the margin of world export surpluses above world import requirements. As now constituted, it may be said to represent agrarian interests to whom the price level of wheat is of vital concern. After the Canadian elections of mid-October, the Board may change complexion somewhat, to include representation of interests concerned more to move wheat out of Canada than to maintain or elevate farm price. We cannot foresee the outcome.

We infer, however, that pressures are likely to be exerted upon the Board, however constituted, such as to cause it to move more slowly in the direction of disposal of surplus than in the direction of maintenance or en-

hancement of price. It seems to be inherent in the agrarian mind to emphasize price rather than volume of sales. The past decade has provided ample evidence of desire in Canada to resist decline and to enhance the world wheat price. Whether the elections are won by Liberals or Conservatives, it seems probable that agrarian pressure upon the Board, to which it must be alert though perhaps only reluctantly responsive, will be persistently in the direction of withholding sales in order to force up prices at Winnipeg. Agrarian leaders can presumably be counted upon to provide a basis for pressure to raise prices by analyses of the current world wheat situation; it will probably be easy to convince Canadian farmers that their wheat is "worth more." Within a few weeks, it seems that the Winnipeg price regarded as "satisfactory" by farmers has risen from 80 to 95 cents. Internally, the Board itself, however constituted, will presumably look more favorably upon making a profit than incurring a loss on the stocks taken over from the old agency,[1] and a large profit rather than a small one; and it may well be swayed in the direction of profit-making by arrays of bullish analyses of the world wheat position. In view of the external and internal pressures that seem likely to be exerted upon the Board, we suspect that its export policy will lean toward "holding" rather than toward "dumping." Announcement on September 7 of a fixed minimum price of 87½ cents per bushel[2] for No. 1 Northern, basis Fort William, was a step in the first direction rather than the second, given the Winnipeg futures quotations of preceding days and the prevailing relationship of Winnipeg and Liverpool futures.

On the assumption that the Canadian Board will exert some influence toward price enhancement, we take it (barring sharp reversal of Southern Hemisphere crop prospects) that the Liverpool December future is likely to stand higher—perhaps considerably higher—in late December than in the second week of September. The world supply position of 1935–36 in itself should tend to lend support to prices, since the surplus carryover seems likely gradually to disappear. The narrow margin between import requirements and export surpluses seems already in Great Britain to have caused a sellers' market to replace the buyers' market that has been in evidence, with interruptions, since 1928–29 or earlier. For the first time since perhaps 1926–27, importers appear to have cause to scan closely the possibility that imports adequate to requirements may be difficult to obtain, though less in the sense of physical availability than in the sense of price availability. The advance of Liverpool futures prices since the low of early July has been gradual and not at all large in relation to the change in the world statistical position. We believe that this advance has been restrained by widespread belief that the Canadian Wheat Board would focus attention upon disposal of surplus. Our guess is that this belief will prove untenable, whether suddenly or gradually; and that further price advance at Liverpool will ensue.

The foregoing paragraphs concerning the price outlook were written on September 10, and, despite an advance in Liverpool prices of about 4 cents on September 11–14, seemed also a reasonable appraisal as of September 15. On the 16th and 17th a further advance of Liverpool prices occurred, amounting to over 5 cents; this appears at the date of writing (September 18) to have represented belated recognition of the tight international position rather than new bullish developments. The elements of the situation appear to remain unchanged, except that the speculative activity so conspicuous by its absence in August and early September seems lately to have appeared in the markets. Further advance of Liverpool prices seems to us to be in prospect even from the level of September 17.

The timing, extent, and rapidity of price advance to be expected must depend largely on unpredictable events. Reports of favorable crop developments in the Southern Hemisphere, heavy offering of Russian wheat, and

[1] By chance, there will presumably be little or no loss on the holding operation.

[2] Even if the Board changes in personnel after the elections, this price still holds good; it is determined for the year, barring adverse parliamentary action.

other bearish influences might produce severe price reactions in the course of a broad upward price trend determined by the strong underlying supply situation. A more probable contingency is that at some time during the autumn a series of bullish developments will provide the immediate basis for a major price rise that would carry the Liverpool December future to the neighborhood of $1.00 a bushel or higher. At the date of writing it seems not improbable that such a movement may already be in progress.

In several respects the present situation suggests comparison with that of 1896, when the price of Liverpool December wheat rose from about 75 cents a bushel on the first of September to over $1.00 a bushel in early November. On that occasion the upward price movement was led by Liverpool and the price increase was well sustained until January, when a prolonged reaction set in. At the present time Southern Hemisphere crop developments may influence the course of prices more strongly than they could in 1896, when the acreage in wheat in Argentina and Australia was relatively small. Severe damage to Southern Hemisphere crops during the coming months might generate widespread fear of world shortage of wheat and induce such active public participation in speculative trading as to carry prices to excessive heights from which a sharp reaction would occur, somewhat along the lines of the price movements of 1924–25.

If Liverpool futures prices advance, certain readjustments of international futures price relationships seem reasonably in prospect. Liverpool may rise to a premium over Winnipeg, in order that substantial imports from Canada may be secured on a commercial basis, unless in some unforeseeable contingency the Board chooses to sell wheat directly, without reference to the Liverpool–Winnipeg spread. It seems probable that this adjustment may involve advance both at Liverpool and at Winnipeg, but larger at Liverpool, rather than moderate advance at Liverpool accompanied by stability or decline at Winnipeg. Minneapolis must follow Winnipeg up, if imports from Canada into the United States are to be effectuated on a substantial scale. This sort of a rise at Minneapolis would raise the "ceiling" now imposed on Chicago prices. But significant enlargement of the present premium of Chicago over Liverpool might not occur, if Liverpool rose more than Winnipeg, Minneapolis by the same amount as Winnipeg, and Chicago by the same amount as Minneapolis. The price situation and outlook, always obscure, is extraordinarily so with reference to spreads between futures markets. It is not inconceivable that Chicago futures should fall below Liverpool futures on a rising British market; even, perhaps, to an extent that would permit exportation of some low-grade wheats as well as Pacific club wheats from the United States.

If extreme speculative enthusiasm should develop in the United States, however, prices of Chicago futures during the autumn might rise relative to Minneapolis and Winnipeg and maintain or even increase present premiums over Liverpool. Recent premiums of hard wheat over soft provide a strong incentive for substitution of soft-wheat flour in all uses to which it can be adapted and it appears not unlikely that premiums on hard wheat may decline.

This study is by M. K. Bennett, with the advice and assistance of Joseph S. Davis and Alonzo E. Taylor

APPENDIX

TABLE I.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING AREAS AND COUNTRIES, 1929–35*

(Million bushels)

Year	World ex-Russia[a]	Northern Hemisphere ex-Russia[a]	Four chief exporters	United States			Canada	Australia	Argentina	USSR	Lower Danube[b]	Other Europe	Northern Africa[c]	India
				Total	Winter	Spring								
1929.....	3,424	3,070	1,417	822	586	236	305	127	163	694	303	1,146	77	321
1930.....	3,705	3,214	1,757	890	631	258	421	214	232	989	353	1,006	64	391
1931.....	3,669	3,206	1,664	932	818	114	321	191	220	786	370	1,064	69	347
1932.....	3,703	3,193	1,644	746	478	267	443	214	241	744	222	1,269	75	337
1933.....	3,616	3,082	1,274	529	351	178	282	177	286	1,019	367	1,379	70	353
1934[d]....	3,283	2,843	1,145	496	405	91	276	135	238	.....	249	1,279	91	349
1934[e]....	3,299	2,862	1,145	497	406	91	276	134	238	.....	251	1,284	97	351
1935.....	*3,291*	*2,965*	*1,161*	595	432	163	291	*135*	*140*	.....	*289*	*1,240*	*68*	363

Year	Hungary	Yugoslavia	Rumania	Bulgaria	Morocco	Algeria	Tunis	Egypt	British Isles	France	Germany	Italy	Belgium[f]	Netherlands
1929.....	75.0	95.0	99.8	33.2	31.8	33.3	12.3	45.2	50.9	337.3	123.1	260.1	13.5	5.5
1930.....	84.3	80.3	130.8	57.3	21.3	32.4	10.4	39.8	43.4	228.1	139.2	210.1	13.7	6.1
1931.....	72.6	98.8	135.3	63.8	29.8	25.6	14.0	46.1	38.6	264.1	155.5	244.4	14.2	6.8
1932.....	64.5	53.4	55.5	48.1	28.0	29.2	17.5	52.6	44.4	333.5	183.8	276.9	16.1	12.8
1933.....	96.4	96.6	119.1	55.5	28.9	32.0	9.2	40.0	64.4	362.3	205.9	298.5	16.1	15.3
1934[d]....	61.4	68.3	77.3	41.6	31.8	43.5	16.0	37.3	73.6	330.7	166.5	232.7	15.4	17.2
1934[e]....	64.8	68.3	76.6	41.6	39.7	43.5	13.8	37.3	73.6	338.5	166.5	233.0	15.5	18.0
1935.....	74.0	68.0	97.4	*49.6*	17.8	32.4	17.3	43.1	*66.1*	*275.0*	171.2	280.6	*14.6*	*15.7*

Year	Scandinavia[g]	Baltic States[h]	Spain	Portugal	Switzerland	Austria	Czecho-Slovakia	Poland	Greece	Mexico	Japan, Chosen	South Africa	Chile, Uruguay	New Zealand
1929.....	31.5	13.7	154.2	10.6	4.21	11.6	52.9	65.9	11.4	11.3	38.8	10.6	46.7	7.24
1930.....	31.8	15.6	146.7	13.5	3.60	12.0	50.6	82.3	9.7	11.4	38.5	9.3	28.6	7.58
1931.....	27.7	14.6	134.4	13.0	4.04	11.0	41.2	83.2	11.2	16.2	39.2	13.7	32.4	6.58
1932.....	38.2	18.3	184.2	23.8	4.00	12.2	53.7	49.5	17.1	9.7	39.9	10.6	34.2	11.06
1933.....	41.7	19.8	138.2	16.3	4.96	14.6	72.9	79.9	28.4	12.1	49.3	11.6	49.9	9.04
1934[d]....	43.2	23.7	180.0	20.1	5.07	13.2	50.0	76.4	31.4	10.1	54.4	14.0	*46.3*	6.50
1934[e]....	42.1	25.0	173.6	24.7	5.34	13.2	50.0	76.4	28.8	11.0	56.9	15.3	42.4	6.50
1935.....	*37.5*	*21.4*	149.5	15.9	5.82	15.4	59.4	*80.8*	30.9	10.6	58.0	*15.0*	....	....

* Data of U.S. Department of Agriculture and International Institute. Figures printed in italics are unofficial estimates, mainly by the Foreign Service of the U.S. Department of Agriculture. Dots (...) indicate no data available.

[a] Excluding also China and southwestern Asia.
[b] Hungary, Yugoslavia, Rumania, Bulgaria.
[c] Morocco, Algeria, Tunis.
[d] As of about May 15, 1935.
[e] As of about September 15, 1935.
[f] Including Luxemburg.
[g] Denmark, Norway, Sweden.
[h] Finland, Latvia, Estonia, Lithuania.

TABLE II.—WHEAT RECEIPTS IN NORTH AMERICA, MARCH–AUGUST 1935, WITH COMPARISONS*

(Million bushels)

Year	United States (14 primary markets)							Canada (country elevators and platform loadings)						
	March	April	May	June	July–June[a]	July	Aug.	March	April	May	June	July	Aug.	Sept.–Aug.[a]
1929.....	27.2	17.5	18.6	25.7	531.2	94.2	101.7	21.0	9.0	5.5	8.2	4.1	14.2	486.6
1930.....	16.7	13.4	16.5	18.7	425.4	99.0	85.5	5.5	2.7	4.0	4.4	3.0	21.2	244.4
1931.....	30.8	21.2	30.9	29.7	494.9	104.0	61.5	9.6	8.4	6.4	8.2	5.4	11.9	297.6
1932.....	13.4	13.2	15.3	13.5	374.7	41.0	40.7	12.9	6.0	8.2	15.0	3.8	17.6	270.9
1933.....	12.7	15.8	23.3	28.6[b]	281.9	37.2	26.7	20.8	10.3	10.8	19.5	10.5	25.6	378.5
1934.....	9.1	8.4	12.5	23.4	199.1	49.7	23.0	9.1	7.3	8.3	12.3	10.9	30.8	232.7
1935.....	4.7	6.4	8.3	10.0	160.1	28.9	48.2[c]	8.4	6.3	5.6	9.3	13.3	10.9[c]	209.1[c]

* United States data unofficial, from *Survey of Current Business;* Canadian data computed from official figures given in *Canadian Grain Statistics; Monthly Review of the Wheat Situation;* and press releases of the Board of Grain Commissioners.

[a] From 1928–29 to 1934–35. [b] Toledo not included, June 1933 and following. [c] Approximate.

TABLE III.—WHEAT VISIBLE SUPPLIES, MAY-AUGUST 1935, WITH COMPARISONS*

(*Million bushels*)

Date	Total	United States grain		Canadian grain		Total North America	Afloat to Europe	U.K. ports	Total U.K. and afloat	Australia	Argentina
		United States	Canada	Canada	United States						
May 1, 1930	422.2	135.5	5.4	159.2	18.3	318.4	34.6	9.6	44.2	50.0	9.6
1931	503.4	206.5	5.9	156.1	2.8	371.3	48.1	9.9	58.0	67.5	6.6
1932	525.7	186.5	26.9	159.7	4.6	377.7	54.9	14.4	69.3	62.5	16.2
1933	478.9	124.4	5.4	217.3	2.5	349.6	40.9	12.5	53.4	61.5	14.4
1934	454.1	88.8	2.2	207.4	1.5	299.9	30.5	14.4	44.9	88.0	21.3
1935	370.1	39.5	1.0	203.9	11.9	256.3	30.1	10.8	40.9	54.5	18.4
Sept. 1, 1930	380.2	201.3	3.8	79.0	12.2	296.3	47.7	6.1	53.8	23.5	6.6
1931	475.2	261.7	32.2	95.2	5.3	394.4	46.9	12.5	59.4	15.5	5.9
1932	374.3	188.3	11.3	111.1	5.6	316.3	24.5	8.3	32.8	18.5	6.6
1933	430.1	151.7	3.7	194.1	4.8	354.3	34.7	10.2	44.9	19.5	11.4
1934	427.5	122.4	.0	183.7	10.1	316.2	37.9	13.0	50.9	40.5	19.9
1935	316.8	62.5	.0	175.3	18.6	256.4	18.6	7.6	26.2	23.2	11.0
1935											
Apr. 20	386.2	43.8	1.0	207.8	13.9	266.5	32.8	11.5	44.3	57.0	18.4
27	377.3	42.0	1.0	204.5	12.2	259.7	31.9	11.3	43.2	56.0	18.4
May 4	370.1	39.5	1.0	203.9	11.9	256.3	30.1	10.8	40.9	54.5	18.4
11	363.4	37.0	.8	201.6	11.0	250.4	32.3	10.8	43.1	51.5	18.4
18	353.1	33.7	.5	198.3	10.5	243.0	33.0	11.0	44.0	48.5	17.6
25	346.3	31.7	.2	194.5	10.2	236.6	36.4	10.9	47.3	45.5	16.9
June 1	348.1	30.8	.2	192.7	9.4	233.1	36.2	10.6	46.8	52.0	16.2
8	338.6	28.0	.2	190.8	9.6	228.6	34.1	10.5	44.6	50.0	15.4
15	326.2	25.5	.1	189.9	9.3	224.8	30.3	10.9	41.2	45.5	14.7
22	316.4	23.8	.0	187.5	9.3	220.6	28.2	10.2	38.4	43.0	14.4
29	312.9	22.0	.0	189.0	9.3	220.3	27.5	9.8	37.3	41.0	14.3
July 6	305.2	21.8	.0	187.4	8.6	217.8	24.1	10.2	34.3	39.0	14.0
13	298.3	22.4	.0	186.8	8.3	217.5	20.7	10.0	30.7	36.5	13.6
20	294.1	24.5	.0	182.7	8.3	215.5	19.1	9.8	28.9	36.5	13.2
27	294.4	28.5	.0	183.4	8.5	220.4	17.4	9.2	26.6	34.5	12.9
Aug. 3	302.2	34.7	.0	186.8	10.5	232.0	16.9	8.8	25.7	32.0	12.5
10	304.4	43.4	.0	181.8	12.0	237.2	16.7	8.4	25.1	30.0	12.1
17	309.6	50.9	.0	178.0	17.9	246.8	15.8	8.1	23.9	27.5	11.4
24	313.4	57.2	.0	177.0	17.7	251.9	17.6	7.9	25.5	25.0	11.0
31	316.8	62.5	.0	175.3	18.6	256.4	18.6	7.6	26.2	23.2	11.0
Sept. 7	.....	65.5	.0	179.3	17.9	262.7	19.1	...	....	21.5	10.7

* *Commercial Stocks of Grain in Store in Principal United States Markets; Canadian Grain Statistics; Corn Trade News.*

TABLE IV.—UNITED STATES AND CANADIAN CARRYOVERS OF WHEAT, FROM 1929*

(*Million bushels*)

Year	United States (July 1)						Canada (July 31)						
	On farms	In country mills and elevators	Commercial stocks	In city mills[a]	Total in four positions	U.S. grain in Canada	On farms	In country mills and elevators	In terminal elevators	In transit	In flour mills	Total in five positions	Canadian grain in U.S.[b]
1929	45.0	41.5	90.4	64.5	241.4	3.3	5.6	6.3	76.3	8.7	7.5	104.4	22.9
1930	60.1	60.2	109.3	73.9[a]	303.5	4.7	5.3	16.8	69.3	12.8	6.9	111.1	16.1
1931	38.0	30.3	204.0	52.4[c]	324.7	15.3	19.5	34.1	71.1	7.3	2.1[d]	134.1	5.5
1932	92.8	41.6	168.4	81.8[c]	384.6	15.9	7.5	33.5	78.6	9.3	2.9[d]	131.8	4.7
1933	82.3	64.3	123.7	121.2[c]	391.5	4.1	12.3	77.9	109.3	9.0	3.2[d]	211.7	6.2
1934	60.3	48.2	80.5	97.2[c]	286.2	0.0	8.7	70.4	104.7	7.7	2.5[d]	194.0	10.0
1935	41.9	31.5	22.0	54.1[c]	149.5	0.0	7.9	53.8	126.6	12.9	2.0[d]	203.2	11.7

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

[a] In and in transit to mills.

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

[c] Includes wheat "stored for others" as follows, in million bushels: 1930, 12.5; 1931, 18.4; 1932, 7.2; 1933, 10.0; 1934, 7.5; 1935, 3.5.

[d] In Eastern Division only. Stocks in Western Division mills included with stocks in country mills.

TABLE V.—UNITED STATES FLOUR PRODUCTION, EXPORTS, AND NET RETENTION, MONTHLY, JULY–JUNE 1934–35, WITH COMPARISONS*

(Thousand barrels)

Month	Production						Exports and shipments to possessions			Estimated net retention		
	All reporting mills			Estimated total								
	1932–33	1933–34	1934–35	1932–33	1933–34	1934–35	1932–33	1933–34	1934–35	1932–33	1933–34	1934–35
July	7,828	8,275	7,325	8,401	8,875	7,868	400	337	322	8,001	8,538	7,546
Aug.	9,005	6,719	8,654	9,649	7,225	9,278	460	416	486	9,189	6,809	8,792
Sept.	9,395	7,540	8,822	10,062	8,096	9,455	419	362	489	9,643	7,734	8,966
Oct.	9,382	8,181	9,181	10,049	8,776	9,836	417	352	434	9,632	8,424	9,402
Nov.	8,719	8,116	8,211	9,346	8,706	8,807	537	338	432	8,809	8,368	8,375
Dec.	8,323	7,332	7,547	8,926	7,875	8,103	446	428	354	8,480	7,447	7,749
Jan.	8,077	8,719	8,316	8,667	9,347	8,918	392	415	318	8,275	8,932	8,600
Feb.	7,216	7,867	7,599	7,752	8,442	8,159	344	325	315	7,408	8,117	7,844
Mar.	8,867	8,362	7,986	9,503	8,967	8,569	392	422	359	9,111	8,545	8,210
Apr.	9,298	7,455	7,786	9,960	8,006	8,357	392	469	333	9,568	7,537	8,024
May	8,777	8,103	7,806	9,407	8,693	8,378	384	322	347	9,023	8,371	8,031
June	8,577	7,507	7,381	9,195	8,060	7,927	425	265	320	8,770	7,795	7,607
July–June	103,464	94,176	96,614	110,917	101,068	103,655	5,008	4,451	4,509	105,909	96,617	99,146

* Reported production and trade data from U.S. Bureau of the Census press releases, *Monthly Summary of Foreign Commerce*, and U.S. Department of Commerce, *Statement No. 3009*. The estimates of total production represent the monthly census reports raised by the estimated output of unreporting merchant mills and by a constant allowance of 100,000 barrels monthly for custom mills, and are probably 2–3 per cent too low.

TABLE VI.—INTERNATIONAL SHIPMENTS OF WHEAT AND FLOUR, WEEKLY FROM APRIL 1935*

(Million bushels)

Week ending	Total	Shipments from							Shipments to Europe				Shipments to ex-Europe		
		North America	Argentina[a]	Australia	South Russia	Danube	India	Other countries[b]	Total	United Kingdom	Orders	Continent	Total	China, Japan	Others
Apr. 20	10.62	2.95	2.83	3.67	...	.22	...	.95	6.38	3.41	1.49	1.48	4.24	2.10	2.14
27	8.23	2.74	2.34	1.69	...	.39	...	1.07	6.66	3.16	1.79	1.71	1.57	.41	1.16
May 4	8.99	2.56	2.83	2.19	...	.30	...	1.11	6.31	2.55	1.22	2.54	2.68	.91	1.77
11	12.46	3.21	5.61	1.76	...	.67	...	1.21	9.32	3.70	3.22	2.40	3.14	1.30	1.84
18	11.22	4.18	3.58	1.53	...	.42	...	1.51	8.66	4.32	1.53	2.81	2.56	.66	1.90
25	15.15	4.23	3.72	3.86	...	1.24	...	2.10	11.81	5.50	2.59	3.72	3.34	1.97	1.37
June 1	11.47	3.80	3.58	2.05	...	.56	...	1.48	8.79	2.64	2.57	3.58	2.68	1.15	1.53
8	9.22	1.77	3.36	1.20	...	1.04	...	1.85	7.09	2.14	2.18	2.77	2.13	.83	1.30
15	8.46	1.86	3.05	1.66	...	.65	...	1.24	6.35	1.15	1.74	3.46	2.11	1.26	.85
22	7.47	2.12	2.11	.90	...	1.19	...	1.15	5.77	1.84	.89	3.04	1.70	.61	1.09
29	9.58	2.93	3.12	2.02	...	.65	...	.86	7.37	3.24	1.75	2.38	2.21	.77	1.44
July 6	6.91	1.72	3.14	.95	...	.66	...	.44	5.33	1.46	1.77	2.10	1.58	.53	1.05
13	7.45	1.57	2.30	2.56	...	.59	...	.43	3.90	1.71	1.20	.99	3.55	1.88	1.67
20	7.66	2.29	3.10	1.32	...	.40	...	.55	5.56	2.33	1.50	1.73	2.10	.42	1.68
27	6.32	2.63	1.38	1.67	...	.16	...	.48	4.20	2.10	.97	1.13	2.12	1.54	.58
Aug. 3	6.49	2.72	1.50	1.47	...	.18	...	.62	4.52	1.93	.92	1.67	1.97	.82	1.15
10	6.40	1.56	2.95	1.01	...	.14	...	.74	4.94	1.75	1.40	1.79	1.46	.59	.87
17	6.76	2.88	1.31	1.19	.65	.16	...	.57	4.40	2.46	.56	1.38	2.36	.94	1.42
24	9.93	2.64	4.02	1.71	.87	.46	...	.23	7.31	3.06	2.48	1.77	2.62	.23	2.39
31	7.11	2.59	1.89	1.08	1.14	.18	...	.23	5.27	2.49	1.07	1.71	1.84	.59	1.25
Sept. 7[c]	8.01	2.16	2.43	1.39	1.30	.09	...	.64	....	....	....	....	....	...	....
14[c]	9.40	2.63	3.43	1.56	.59	.46	...	.73	....	....	....	....	....	...	....

* Here converted from data in Broomhall's *Corn Trade News*. Dots (...) indicate no shipments reported.

[a] Including Uruguay.

[b] Mainly northern Africa, France, Sweden, and Baltic countries.

[c] Preliminary.

TABLE VII.—NET EXPORTS AND NET IMPORTS OF WHEAT AND FLOUR, MONTHLY FROM AUGUST 1934, WITH SUMMATIONS AND COMPARISONS*

(*Million bushels*)

A. NET EXPORTS

Month or period	United States[a]	Canada	Argentina	Australia	USSR	Hungary	Yugoslavia	Rumania	Bulgaria	Poland	Morocco	Algeria	Tunis	India
Aug.	2.60	16.44	18.99	8.52	(.54)	.88	.21	.00	.00	.39	1.00	3.32	.54	.28
Sept.	(1.35)	19.16	15.79	7.30	.47	.90	.73	.00	.00	.12	.50		.35	.10
Oct.	(.25)	23.93	14.05	10.38	.73	.92	.93	.00	.00	.12	.70	1.37	.40	.11
Nov.	(.30)	20.85	14.45	7.85	.51	1.45	.69	.00	.00	.07	.47	1.16	.29	.09
Dec.	(1.31)	18.82	10.97	8.59	.11	1.26	.54	(.00)	.00	.12	.31	.73		.07
Jan.	(.39)	6.91	17.84	12.45	.07	.83	.07	.00	.00	.16	.46	.58	.57	(.11)
Feb.	(.38)	8.56	17.60	9.20	.14	.96	.01	.00	.00	.13	.30	1.02		.06
Mar.	(1.17)	11.10	17.79	10.94	.04	1.50	.49	.00	.00	.21	.38	.98	.22	.08
Apr.	(1.12)	6.23	14.50	11.06	(.02)	1.43	.22	.24	.00	.17	...	1.36	.33	.05
May	(.20)	13.59	15.95	9.46	.07	1.34	.23	1.59	.37	.35	...	.89	.35	.06
June	.02	8.35	12.25	5.72	.05	.90	.09	1.62[b]	.00	.66	...	.73[b]	...	.07
July	(1.32)	10.90	11.35	7.63	...	.42[b]	...		.00[b]	1.40[b]	...	...	...	...
1934-35[c]	(5.17)	164.84	181.53	109.10	1.70	12.79	4.50	3.45	.37	3.90	6.00	13.00	4.00	1.00
1933-34	29.18	194.37	147.11	86.15	34.28	29.32	1.05	.23	4.49	2.49	8.57	12.15	(.06)	.41

B. NET IMPORTS

Month or period	British Isles			Three variable importers				Belgium[c]	Netherlands	Denmark	Norway	Sweden	Switzerland	Austria
	U.K.	I.F.S.	Total	Total	France[d]	Germany	Italy							
Aug.	16.39	1.84	18.23	2.56	.89	1.43	.24	4.72	1.20	1.17	.62	(.02)	1.28	.65
Sept.	18.59	1.26	19.85	3.85	2.54	.97	.34	5.18	1.66	.98	.89	.04	1.36	.67
Oct.	16.49	1.84	18.33	.77	(.64)	1.47	(.06)	4.17	2.09	1.72	.63	.15	1.81	.72
Nov.	16.01	1.11	17.12	.61	(1.15)	1.08	.68	2.67	2.09	1.94	.68	.16	1.44	.74
Dec.	17.86	1.96	19.82	(1.76)	(3.17)	1.06	.35	3.56	1.97	2.40	.95	.14	1.96	.71
Jan.	11.20	.22	11.42	(1.12)	(3.14)	.89	1.13	2.06	1.71	2.73	.80	.14	1.25	.64
Feb.	15.59	.95	16.54	(1.04)	(2.32)	.92	.36	2.90	1.78	1.91	.71	.11	.91	.45
Mar.	17.80	2.16	19.96	.02	(1.56)	.87	.71	3.76	2.00	1.89	.43	(.31)	1.06	.79
Apr.	16.02	1.16	17.18	.94	(.72)	.57	1.09	2.23	1.38	1.20	.49	(.60)	1.36	1.03
May	20.41	1.87	22.28	(2.43)	(3.81)	.48	.90	2.45	1.38	1.04	.94	(.54)	1.46	1.05
June	17.26	1.19[b]	18.45	(.26)	(4.46)	.30	3.83	2.80	.61	.85	1.03	(.37)	2.12	1.22[b]
July	17.13	....	.....	...	...	.16	...	3.25	1.60	1.15	.72[b]	...	1.93	1.20[b]
1934-35[c]	200.75	17.25	218.00	...	(20.00)	10.20	11.10	39.75	19.47	18.98	8.89	(1.50)	17.94	9.87
1933-34	218.31	19.73	238.04	20.20	17.47	(5.43)	8.13	41.86	22.35	12.62	8.47	1.22	17.59	10.47

B. NET IMPORTS (*continued*)

Month or period	Czechoslovakia	Greece	Spain	Portugal	Finland	Latvia	Estonia	Lithuania	Egypt	China	Manchoukuo	Japan	New Zealand	South Africa
Aug.	.00	1.12	.00	.08	.39	.00	.00	(.00)	.04	.41	1.71	.06	.06	.02
Sept.	.01	.97	.00	.06	.30	.00	.00	.00	.04	.54	3.43	(.29)	.04	.23
Oct.	.01	.67	.00	.05	.34	.00	.00	(.04)	.15	.33	2.58	.02	.03	.61
Nov.	.00	.68	.00	.03	.38	(.04)	.00	(.02)	.02	.46	3.81	(.02)	.05	
Dec.	.08	.90	.00	.05	.33	(.05)	.00	(.04)	.02	.77	2.88	.29	.04	.01
Jan.	.21	.99	.00	.00	.29	(.01)	(.12)	(.08)	.45	2.94	2.50	(.17)	.05	.00
Feb.	.39	.74	.00	.05	.22	(.00)	.00	(.08)	.34	1.45	2.14	.49	.07	(.00)
Mar.	.11	1.25	.00	.03	.26	.00	.00	(.23)	.76	3.26	1.56	.43		.01
Apr.	.18	1.32	.00	.13	.32	(.03)	(.03)	(.38)	.33	3.89	3.52	.13	.05	.01
May	.10	2.34	.00	.06	.52	...	.00	(.09)	...	3.26	2.46	.02	...	.00
June	.12	....	.00	...	.47	...	(.04)	(.01)	...	2.18[b]	2.87	(.14)	...	...
July	...	....	...	...	...	...	...	...	...	...	...	.26	...	...
1934-35[c]	1.50	13.00	.00	.70	4.20	(.20)	(.20)	(1.00)	3.00	21.50	30.00	1.09	.50	.90
1933-34	.18	10.51	(.08)	.98	4.56	(.00)	.00	(.05)	.23	21.09	23.77	3.46	.39	.08

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

[a] Includes shipments to possessions.

[b] Preliminary.

[c] Including our approximations to data missing in the monthly figures.

[d] Net imports in "commerce général."

[e] Including Luxemburg.

TABLE VIII.—PRICES OF REPRESENTATIVE WHEATS, WEEKLY FROM MAY 1935*

(Cents per bushel)

Week ending	British parcels[a]	Liverpool (Tuesday prices)				United States						Winnipeg		Buenos Aires 80-kilo
		No. 1 Manitoba	No. 3 Manitoba[b]	Argentine Rosafé	Australian f.a.q.[c]	Basic cash Chicago	No. 2 Hard Winter Kansas City	No. 2 Red Winter St. Louis	No. 1 Dark Nor. Spring Minneapolis	No. 2 Hard Amber Durum Minneapolis	No. 1 White Seattle	Wtd. average	No. 3 Manitoba	
May 4.....	80 *48*	102	92	72	85	99	103	98	120	130	86	84	80	64
11.....	86 *51*	101	91	72	82	96	103	95	119	123	85	83	79	63
18.....	80 *47*	100	90	70	83	93	103	93	118	117	84	82	78	62
25.....	81 *48*	99	89	71	84	90	100	92	117	119	82	81	77	61
June 1.....	82 *49*	96	87	72	82	86	94	88	109	108	78	79	74	60
8.....	81 *48*	94	84	72	82	85	91	86	108	105	75	80	75	61
15.....	82 *48*	95	86	73	83	83	89	86	106	104	73	79	73	60
22.....	76 *45*	94	84	71	80	83	85	85	102	100	73	80	74	60
29.....	80 *48*	94	83	72	80	83	87	86	103	104	75	79	73	59
July 6.....	74 *44*	94	84	73	80	86	93	90	111	102	78	78	73	58
13.....	69 *41*	93	80	68	76	84	93	85	109	101	76	78	72	57
20.....	75 *44*	93	80	70	76	85	95	85	114	107	76	78	72	59
27.....	77 *46*	94	81	74	81	88	99	88	111	104	76	80	74	63
Aug. 3.....	78 *46*	99	89	74	82	93	106	94	125	120	76	83	77	64
10.....	86 *51*	100	88	78	86	92	104	93	128	117	76	82	76	63
17.....	84 *50*	96	85	75	81	89	102	91	123	118	75	80	75	...
24.....	79 *47*	98	86	78	81	90	103	93	127	118	76	84	78	...
31.....	84 *50*	98	87	79	84	90	107	91	129	113	74	80	76	...
Sept. 7.....	.. ..	97	87	81	83	91	112	93	129	108	..	..	..	...

* For sources and methods of computation, see WHEAT STUDIES, December 1934, XI, 194–95. Dots (...) indicate no quotations. Figures in italics are expressed in pre-devaluation gold cents, based on London prices of gold.

[a] Parcels of French denatured wheat not included.

[b] Parcels from Vancouver to London.

[c] Lowest price among the several types of Australian wheat.

TABLE IX.—MONTHLY PRICES OF DOMESTIC WHEAT IN EUROPE, MARCH–JULY, FROM 1930*

(Cents per bushel)

Year	Mar.	Apr.	May	June	July	Mar.	Apr.	May	June	July	Mar.	Apr.	May	June	July
	GREAT BRITAIN					FRANCE					GERMANY				
1930.....	108	113	114	111	108	141	141	135	140	171	155	175	187	195	187
1931.....	67	69	75	78	82	190	197	195	199	186	186	187	183	176	155
1932.....	59	60	61	62	61	178	182	184	180	179	161	170	176	165	154
1933.....	47	50	61	71	83	110	109	123	125	175	129	130	147	150	170
1934.....	60	61	66	74	72	228	232	235	237	216	204	206	207	203	204
1935.....	59	63	71	73	73	140	139	145	145	131	226	227	228	229	228
	ITALY					HUNGARY					RUMANIA				
1930.....	186	194	196	202	177	...	...	...	...	93	...	...	...	...	79
1931.....	149	152	160	143	131	76	76	73	71	65	51	54	58	50	46
1932.....	167	166	169	157	137	67	65	61	59	63	52	54	56	53	48
1933.....	148	147	158	154	169	73	70	70	77	83	104	...	110	126	100
1934.....	201	205	197	193	191	83	83	91	108	129[a]	94[a]	100[a]	123	113[a]	114[a]
1935.....	227	243	256	243	206[b]	142	135	135	137	128[b]	119	112[a]	108	...	93[b]

* For sources and methods of computation, see WHEAT STUDIES, December 1934, XI, 195, except Hungary and Rumania for which prices are furnished by the U.S. Department of Agriculture. Dots (...) indicate no quotations.

[a] Three-week average.

[b] Two-week average.

TABLE X.—WHEAT DISPOSITION ESTIMATES, ANNUALLY FROM 1929–30*

(Million bushels)

Year	Domestic supplies			Domestic disappearance				Surplus over domestic use[c]	Net exports	Year-end stocks
	Initial stocks	New crop	Total	Milled (net)	Seed use	Balancing item[a]	Total[b]			
	A. UNITED STATES (JULY–JUNE)									
1929–30	241	822	1,063	509	84	+ 23	616	447	143	304
1930–31	304	890	1,194	493	81	+180	754	440	115[d]	325
1931–32	325	932	1,257	486	80	+179	745	512	127[d]	385
1932–33	385	746	1,131	493	83	+128	704	427	36	391
1933–34	391	529	920	449	72	+ 85	606	314	28	286
1934–35[e]	290	496	786[f]	460	78	+103	641	145	(10)[g]	155
1934–35[h]	290	496	786[f]	460	80	+ 75	615	171	(4)[g]	175
1934–35[i]	286	497	783[f]	459	75	+101	635	148	(2)[g]	150
	B. CANADA (AUGUST–JULY)									
1929–30	104	305	409	43	44	+26	113	296	185	111
1930–31	111	421	532	42	39	+59	140	392	258	134
1931–32	134	321	455	42	37	+37	116	339	207	132
1932–33	132	443	575	42	36	+21	99	476	264	212
1933–34	212	282	494	44	33	+29	106	388	194	194
1934–35[e]	193	276	469	44	34	+31	109	360	210	150
1934–35[h]	193	276	469	43	34	+34	111	358	190	168
1934–35[i]	194	276	470	44	33	+25	102	368	165	203
	C. AUSTRALIA (AUGUST–JULY)									
1929–30	41	127	168	32	18	+ 6	56	112	63	49
1930–31	49	214	263	34	14	+ 3	51	212	152	60
1931–32	60	191	251	32	15	− 2	45	206	156	50
1932–33	50	214	264	33	15	+11	59	205	150	55
1933–34	55	177	232	33	13	+15	61	171	86	85
1934–35[e]	85	137	222	33	13	+ 6	52	170	120	50
1934–35[h]	85	135	220	33	13	+ 4	50	170	115	55
1934–35[i]	85	134	219	33	13	+ 9	55	164	109	55
	D. ARGENTINA (AUGUST–JULY)									
1929–30	130	163	293	60	26	− 9	77	216	151	65
1930–31	65	232	297	63	21	+ 8	92	205	125	80
1931–32	80	220	300	65	24	+ 6	95	205	140	65
1932–33	65	241	306	65	24	+10	99	207	132	75
1933–34	75	286	361	67	22	+ 7	96	265	147	118
1934–35[e]	118	252	370	67	23	+ 5	95	275	190	85
1934–35[h]	118	238	356	67	23	+ 6	96	260	180	80
1934–35[i]	118	238	356	67	19	+ 8	94	262	182	80

* Based on official data so far as possible; see WHEAT STUDIES, December 1934, Table XXIX.

[a] Total domestic disappearance minus quantities milled for food and used for seed.

[b] Total domestic supplies less surplus over domestic use.

[c] Summation of net exports and year-end stocks.

[d] Too low; does not include some wheat shipped to Canada and eventually exported from there.

[e] Estimates as of January 1935.

[f] Not including estimated net imports.

[g] Net import.

[h] Estimates as of May 1935.

[i] Estimates as of September 1935.