WHEAT STUDIES

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WORLD WHEAT SURVEY AND OUTLOOK SEPTEMBER 1934

SEVERE spring and summer drought now appears to have made the world wheat crop of 1934 (ex-Russia) the smallest since 1924; and crops of feedstuffs are also short. Wheat supplies are nevertheless adequate for consumption because of the huge stocks of wheat carried into the new crop year. Wheat prices have already responded substantially to the changed supply position, and now run moderately higher than those of a year ago. But the general level of wheat prices in free markets is still low as compared with pre-depression years—gold prices more so than currency prices.

A large and practically world-wide reduction of surplus stocks is in prospect for 1934–35. The reduction is not likely to prove large enough to eliminate the statistical world wheat surplus, but will probably more than cut it in half. The United States carryover may fall practically to a normal level by the end of 1934–35.

The prospective volume of international trade in wheat during 1934–35 is only about 600 million bushels, less than 10 per cent larger than the very small net exports of 1933–34. Many European countries will use up surplus stocks, or use substitutes, rather than expand imports. The net exports of 1934–35 will be furnished more largely than usual by Canada, Argentina, and Australia; other countries, including the United States, have only small export surpluses.

Relatively unfavorable crop developments in the Southern Hemisphere between now and the end of December would probably give rise to a moderate advance in Liverpool futures prices, while favorable developments would probably cause a somewhat smaller decline. Chicago futures prices will presumably continue to rule above Liverpool, and the spread prevailing in August seems more likely to widen somewhat than to narrow in the next few months.

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WORLD WHEAT SURVEY AND OUTLOOK SEPTEMBER 1934

Overshadowing all other developments in the world wheat situation during the past four months was a severe spring and summer drought, almost world-wide in extent, which has greatly reduced yields per acre of cereal crops and hay in many areas. The world wheat crop ex-Russia now seems likely to prove the smallest since 1924, between 350 and 450 million bushels below the moderate-sized crop of 1933. Very small crops have been harvested in the United States, Canada, the Danube countries, Poland, and Czechoslovakia. Good wheat crops have been harvested only in northern Africa, the Iberian peninsula and Greece, the northern fringe of Europe, Japan, and China (where, however, the rice crop is small). The outturns in Russia, Argentina, and Australia are as yet unmeasured, but present indications point toward crops moderate or somewhat small in size.

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Supplies of old-crop wheat about on August 1 in the world ex-Russia, however, now seem to have been of record size—about 1,150 million bushels according to our present tentative appraisal. Of this amount, 400 to 550 million bushels represent surplus above the reserves necessary for transition from one crop year to another. The world crop deficiency therefore will not entail reduction of human consumption of wheat except in a few European countries where short crops and low stocks coexist with governmental restrictions of imports and with lack of purchasing power.

Except in markets where governmental price-fixing prevailed, wheat prices generally tended to rise with the adverse crop news. On the world's leading futures markets, the upward movement began early in May and persisted to early June; it was interrupted through June (when Chicago prices indeed fell considerably); it was resumed from early July and culminated about August 10. Thereafter prices first fell sharply and then moved within a moderately narrow range up to September 10.

From the early-May lows to the August highs, Liverpool near futures rose 27 cents, Winnipeg 30 cents, Chicago 33 cents, and Buenos Aires 20 cents. The amount of advance retained by September 10 was between 12 and 28 cents in the several markets. The May–August advance this year was much smaller in Chicago than last year's April–July advance, when speculative activity (stimulated largely by news and rumors of inflation) was much more in evidence. But Liverpool prices rose more this year than last and held most of the gain into September rather than losing it as in 1933. Chicago futures prices have continued to rule above Liverpool throughout the last four months; but Winnipeg prices, which stood above Liverpool practically throughout May–July, fell to a discount in the latter half of August.

Rising prices tended to stimulate import purchases toward the close of 1933–34, and the volume of international trade for the crop year reached about 558 million bushels, as measured by net exports. This was above our expectations expressed last May, but very close to the "world import demand" as set forth under the International Wheat Agreement in August 1933. This correspondence, however, was only in a very small degree due to control of exports by governments party to the Agreement. Argentina exported much more than her original quota. There is little prospect that international agreement will appreciably affect the flow of exports in 1934–35.

The volume of international trade in 1934–35 now seems likely to approximate only 600 million bushels or a little more, an increase

from 1933–34 equal to barely a fourth of the prospective reduction of wheat crops in European importing countries. Most of these countries will draw upon accumulated heavy stocks. A world-wide reduction of year-end stocks is in prospect for 1934–35—perhaps as much as 410 million bushels if Southern Hemisphere crops are poor and Northern Hemisphere crops do not turn out larger than now appraised; perhaps 310 million bushels or less if weather and statistical developments are in the opposite direction. The reduction of stocks seems almost certain to be important: likely to cut the "world surplus" by more than half, but quite unlikely to eliminate it. Canada, Argentina, and Australia will provide much more of the world's net exports than usual. United States net exports will fall to a new low, probably around 10 million bushels, and the domestic carryover will be reduced to a level lower than any since 1928. No domestic shortage, however, can be anticipated.

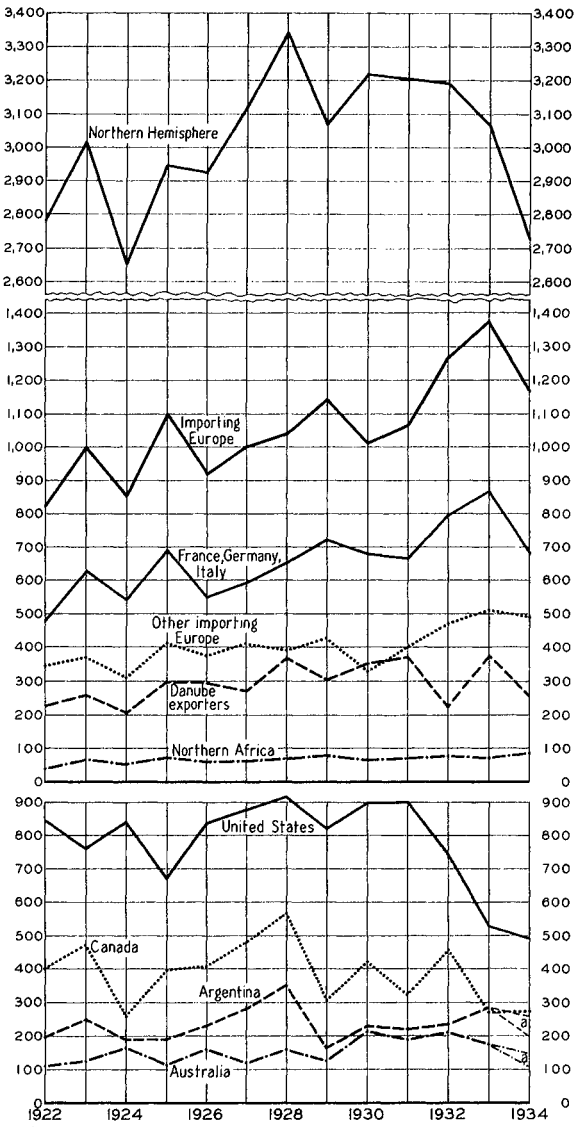
Wheat price movements at Liverpool between the second week of September and late December will probably respond chiefly to news of wheat-crop developments in the Southern Hemisphere, especially Argentina. With weather conditions continuing to point toward crops close to 240 and 125 million bushels in Argentina and Australia, respectively, Liverpool prices through December seem somewhat more likely to rise than to fall. Even with unfavorable crop prospects, however, an advance would probably not suffice to maintain the average price of British parcels over sixteen weeks at a level of 63 pre-devaluation gold cents or above—the level at which importing countries have agreed to begin to reduce import restrictions. Whatever the course at Liverpool, Chicago futures seem likely to sell at somewhat larger premiums than those prevailing in August.

Crop Developments

Mainly as the result of widespread and persistent drought, the world ex-Russian wheat crop of 1934 now promises to be the smallest crop since 1924 and 350 to 450 million bushels smaller than last year's moderate outturn (Table I). The distribution of the 1934 crop as it appears in preliminary statistics is shown in Chart 1.

Chart 1.—Wheat Production in Principal Producing Areas, 1922–34*

(*Million bushels*)



* See Table I, which includes some later revisions.

[a] Indicated ranges (see p. 7); as plotted, the Argentine range is 10 million bushels too low.

Among the principal wheat-producing areas, importing Europe stands out as having the largest decrease in production from 1933—a circumstance attributable mainly to the fact that importing Europe was the only major producing area to harvest a 1933 crop con-

siderably in excess of the previous post-war record.

European importing countries.—The big reduction in wheat output in importing Europe between 1933 and 1934 came principally in the three variable importing countries of western Europe—France, Germany, and Italy. Standing estimates of these and other western European crops are shown below, with comparisons, in million bushels:

Area or country	Average 1928–32	1933	1934
France	288.9	362.3	305.0[a]
Germany	148.6	205.9	165.7[a]
Italy	244.0	297.6	224.1[b]
Total	681.5	865.8	694.8
England, Wales	42.4	58.8	59.8[a]
Belgium	14.6	15.1	14.1[a]
Netherlands	7.7	15.3	15.6[a]
Total	746.2	955.0	784.3
Spain	148.4	138.2	173.7[a]
Portugal	13.7	16.0	20.5[a]
Total	908.3	1,109.2	978.5

[a] Official.
[b] Estimate of the Paris office of the U.S. Department of Agriculture.

The aggregate 1934 crop of France, Germany, and Italy now appears to be about 171 million bushels smaller than last year's huge outturn and only a little above the 1928–32 average. In all three of these countries there was some reduction in wheat acreage this year as compared with last; but reductions in yield per acre, reflecting less favorable weather conditions, were more significant. Winterkilling was heavier, at least in France; all three crops emerged from the winter in lower condition than last year; and prolonged drought in the spring and early summer months wrought considerable damage in France and Germany. These, as well as most other European countries, however, were favored by good harvesting weather.

In other western European countries 1934 wheat crops were about as large as or larger than last year. Official estimates (still preliminary) suggest that in these countries there was a net aggregate increase in production of around 40 million bushels, largely accounted for by the increase in Spain, where (as in Portugal) growing conditions were favorable. Although England and Wales and Holland are reported to have produced more wheat this year than in 1933 they, along with other northwestern European countries, suffered reduced yields per acre apparently mainly as a result of drought. In these two areas, wheat acreage was increased in 1934 as compared with 1933, and even more so as compared with the 1928–32 average.

Standing appraisals of the 1934 crops of the remaining European importing countries are shown below, with comparisons, in million bushels. As a group, the importing countries

Area or country	Average 1928–32	1933	1934
Austria	11.9	14.6	12.8[a]
Switzerland	4.0	4.8	5.0[a]
Poland	68.0	79.9	49.9[a]
Czechoslovakia	50.3	72.9	47.4[a]
Total	134.2	172.2	115.1
Greece	12.5	24.7	27.6[b]
Scandinavia	32.1	41.5	40.4[a]
Baltic	15.1	19.8	22.5[a]
Total	193.9	258.2	205.6

[a] Estimates of the Berlin office of the U.S. Department of Agriculture, except for Finland, Lithuania, and Sweden.
[b] Estimate of the Belgrade office of the U.S. Department of Agriculture.

of central Europe harvested a crop smaller not only than that of last year, but also than the average for 1928–32. The reduction is largely a reflection of extended severe drought, though at least in Poland it apparently also reflects some decrease in planted acreage. The Scandinavian and Baltic crops, in contrast with those of central Europe, now appear to be well above average, with the Baltic crop even larger than last year's.

Danube exporting countries.—In the Danube basin, as in central Europe, cereal crops suffered severely from prolonged drought in the spring of 1934. Moderate rains late in May and in early June allayed fears of extreme wheat shortage (particularly in Rumania) in 1934–35, but were too late to result in complete recovery of the crops. As now officially estimated, the outturn of wheat in the Danube basin this year is almost 120 million bushels

lower than in 1933 and about 70 million bushels below the 1928–32 average. These facts are apparent from the following tabulation, in million bushels:

Country	Average 1928–32	1933	1934
Bulgaria	50.3	58.9	46.3
Hungary	79.1	96.4	61.7
Yugoslavia	86.2	96.6	73.5
Rumania	107.4	119.1	73.5
Total	323.0	373.2	255.0

Of the four crops listed above, that of Rumania suffered the greatest reduction as compared with last year and also with the average for 1928–32. However, Rumania, like Yugoslavia and Bulgaria, harvested a smaller crop once before during the previous six years, whereas Hungary's 1934 crop is now estimated to be the smallest in a decade—about 3 million bushels smaller than the poor crop of 1932. The wheat area harvested in the Danube basin in 1934 was apparently smaller than in any of the five preceding years. Reductions in acreage were largest in Hungary and Rumania, where winter-wheat sowings were restricted by a late corn harvest and by subsequent unfavorable seeding conditions which were most marked in Rumania. Moreover, abandonment of planted acreage on account of drought was relatively heavy in all four countries.

United States.—For the second successive year, the United States wheat crop has turned out to be a near-failure. Estimated as of September 1 at 493 million bushels, the 1934 crop is the smallest one in 49 years according to the adjusted crop estimates of the Food Research Institute,[1] or in 41 years, according to official estimates. It is only 35 million bushels smaller, however, than the poor crop of 1933.

The area sown to winter wheat for the 1934 crop is officially reported to have been approximately 1,690 thousand acres smaller than that planted in the preceding year—a decrease largely attributable to the acreage-control program of the United States government. Seeding and early growing conditions were somewhat unfavorable in the fall of 1933, but apparently better than a year earlier. Winterkilling took only a little more than an average toll from the 1934 crop. Abandonment subsequent to May 1, however, was this year much heavier than usual because of persistent drought; and the July official estimate of winter-wheat acreage remaining for harvest was 6 per cent lower than the May estimate.

The widespread drought and abnormally high temperatures which prevailed throughout the central and Great Plains areas of the United States in the spring and early summer not only tended to reduce winter-wheat acreage, but lowered yields per acre of both winter and spring wheat, curtailed spring-wheat plantings, and resulted in heavy abandonment of spring-wheat acreage. Coarse grains and pastures also suffered heavy damage; and in many districts there was not enough food and water to provide for livestock.

By the end of May, the 1934 drought was rated as the "most extensive drought in the climatological history of the United States."[2] In a number of the states affected (particularly the spring-wheat states) the past three to five years have been years of deficient rainfall; and in these and many other wheat-producing states precipitation was below average in the summer and fall of 1933. Subsoil moisture reserves were therefore unusually low at the beginning of March 1934. The following three months, March–May, were characterized by lower aggregate precipitation than the same months of any preceding year for which records are available in the two Dakotas, Minnesota, Nebraska, Iowa, and Illinois. In several other important wheat-growing states, namely, Ohio, Indiana, Wisconsin, Missouri, and Kansas, the spring of 1934 was the second driest spring on record. Moreover, in many localities record high temperatures were reported in May; and loss of moisture through evaporation was unusually heavy. June weather was more favorable, though again temperatures were abnormally high. Rains were frequent and widespread, but in general they were moderately light and in many areas

[1] See Holbrook Working, "Wheat Acreage and Production in the United States since 1866," WHEAT STUDIES, June 1926, II, 237–64.

[2] U.S. Department of Agriculture, Weather Bureau, "The 1934 Drought Situation to the End of May," Supplement, *Weekly Weather and Crop Bulletin*, June 5, 1934.

they arrived too late to improve the crop outlook appreciably. Over the United States as a whole July 1934 "was the hottest month ever known, with all-time maximum temperature records exceeded in many places."[1] The unprecedentedly severe drought of March–June was largely unrelieved in July, and the growing crops, particularly corn, suffered further marked deterioration. August was a month of relatively heavier rainfall east of the Mississippi River and in Missouri and Oklahoma; but elsewhere there continued to be a deficiency of moisture. This weather was favorable for the wheat harvest, but unfavorable for the corn crop.

The general course of development of the United States winter- and spring-wheat crops is apparent from the successive average private and official crop forecasts and estimates presented below, in million bushels.

	Winter wheat		Spring wheat		All wheat	
	Private	Official	Private	Official	Private	Official
Dec. 10.....	...	435	...	..	...	...
Apr. 2, 10...	506	492	...	..	...	...
May 2, 10...	486	461	...	..	...	...
June 1, 8...	417	400	125	..	542	...
July 2, 10...	407	394	109	89	516	483
Aug. 2, 10...	404	401	78	90	482	491
Sept. 1, 10...	401	401	83	93	484	493

Official forecasts of the winter-wheat crop in April–July were in every instance lower than corresponding private estimates. In the main, this simply reflected the fact that the official forecasts represented crop conditions several days later than the private forecasts. The July official crop report, however, was a distinct surprise to members of the trade, who had generally anticipated more optimistic forecasts of both winter and spring wheat following the June rains. Subsequent threshing returns from the Southwest indicated that the winter-wheat crop had been somewhat underestimated in the official July report; and the fact that the spring-wheat crop was officially placed at a slightly higher figure in August, after an additional month of excessively hot, dry weather suggests that the July forecast of spring-wheat production may also have been somewhat too low.

[1] U.S. Department of Agriculture, Weather Bureau, *Weekly Weather and Crop Bulletin*, August 8, 1934.

As of September 1, the United States wheat crop of 1934 was officially estimated to be distributed by classes as indicated below in million bushels, with comparisons. The greatest relative shortage this year is of hard red spring and durum wheats. But when the large carryover of domestic wheat is taken into account, only durum wheat appears to be so limited as to warrant expectation of imports in significant amounts. Importers fear to contract for notable imports of Marquis wheat on account of fear of increase of duty through executive action.

Year	Hard red winter	Soft red winter	Hard red spring	Durum	White
1929.....	370	166	145	56	84
1930.....	403	179	161	59	88
1931.....	516	254	70	21	70
1932.....	277	149	191	42	84
1933.....	170	147	104	17	89
1934.....	201	163	58	7	64

The quality of the hard winter-wheat crop is unusually high, with protein content reported to be the highest ever known. The spring-wheat crop is also high in protein, but relatively less so than the winter crop.

Canada.—The Canadian winter-wheat crop, always relatively small, is this year smaller than in any year since 1908, when official production records begin. Winterkilling was unusually heavy and a dry spring did much damage to the crop. On May 31 and again on June 30, reported numerical condition of the Canadian winter-wheat crop was only 45 per cent of the long-time average—by far the lowest condition figure ever reported for these months.

As of May 1, Canadian farmers were officially reported as "intending" to sow approximately 23.3 million acres to spring wheat, as compared with a sown acreage of 25.4 million in 1933. Although the weather in May was notably unfavorable, farmers apparently seeded the "intended" acreage. But because of the unfavorable weather, the reported condition of Canadian spring wheat on May 31 was only 79 per cent of the long-term average —the lowest numerical condition figure on record for that date. Only in 1931 did the Canadian spring-wheat crop get approximately as bad a start.

Subsequent development of the 1934 crop, with past-year comparisons, is shown by the official condition figures in the tabulation below, in terms of percentages of a long-time

Date	1931	1932	1933	1934
May 31.....	80	96	99	79
June 30.....	56	99	77	82
July 31.....	54	88	57	63

average yield per acre. Rains during June tended to improve the condition of this year's crop, in sharp contrast with developments in June 1931 and June 1933. But renewed drought, heat, and high winds wrought heavy damage during July and early August. As of August 31, the Canadian spring-wheat crop was estimated at only 270 million bushels and the total Canadian crop at 277 million. The total outturn now indicated for 1934 does not differ significantly from the standing estimate of the crop of 1933. This year's crop was affected somewhat less than last year's by adverse weather conditions, but the smaller acreage planted this year kept production from being significantly larger.

Russia.—No trustworthy numerical indications of the size of the Russian wheat crop of 1934 have yet appeared. However, it is generally believed that the crop is considerably smaller this year than last, despite the probability of increased sowings of both winter and spring wheat and the advantage of earlier spring planting. Abandonment of winter acreage, estimated at 8 to 10 per cent, was unusually heavy owing to winterkilling and spring drought. And the drought, which continued into the summer, is reported to have lowered the condition of both winter and spring wheat to a considerable extent. Indication that yields per acre of grain were not expected to be satisfactory this year is afforded by a Soviet decree, issued in July, which reduced the former official plan of grain deliveries of the state-owned Soviet farms by 18 per cent. Although the area sown to wheat may have been somewhat larger than in most recent years, the acreage planted to all bread grains was probably no larger and may have been slightly smaller because of reduced plantings of rye.[1]

[1] See data in *Foreign Crops and Markets*, February 26, June 25, and July 23, 1934.

Other Northern Hemisphere exporting countries. — The 1934 wheat crop of the three French dependencies of northern Africa is, according to estimates now standing, about 9 million bushels larger than the previous record crop of 1929 (Table I). Of the three individual countries, only Algeria appears to have had a record crop; but the other two countries secured outturns of near-record size. Present estimates indicate that the aggregate wheat acreage harvested by these countries in 1934 was somewhat smaller than that harvested last year, a large reduction in Morocco more than offsetting increases in Tunis and Algeria.

The Indian crop, now estimated at 349 million bushels, was harvested from the largest area ever reported—an area larger even than that of 1918. The yield per acre was relatively low mainly because of deficient rainfall in certain important areas in January–February.

Argentina and Australia. — The Southern Hemisphere crops are still in early stages of growth and their size cannot yet be well predicted. Seeding and early growing weather was particularly unfavorable in Australia, and even in Argentina wheat sowings were delayed and in some localities reduced by lack of sufficient rainfall. In both countries the acreage now reported as sown to wheat for the 1934 crop is below the final estimate of acreage sown in 1933. These anticipated reductions have been attributed partly to the more attractive prices prevailing for competitive products and partly to inadequate precipitation in certain areas at seeding time.

Until July the Australian crop was adversely affected by continued drought. Rains during the first half of that month brought substantial improvement, but were not heavy enough nor sufficiently long continued to prevent drought conditions from returning at least in South Australia and Victoria later in July. Since then there have been further reports of deterioration from drought; but the extent of the damage which has occurred cannot yet be judged.

Although spring drought curtailed wheat plantings in the Pampa district and in part of Buenos Aires province, the wheat actually sown in Argentina developed under moderately favorable conditions during April–Au-

gust. Some observers claim that the winter has been too mild for strong development of the wheat plants, but as yet the weather has not been such as to test the strength of the crop. The final outturn of wheat in both Argentina and Australia will depend largely upon weather conditions during September–December. If standing estimates of the acreage sown in these two countries are reasonably accurate and if yields per acre should turn out to be about average, the Argentine crop would approximate 240 million bushels and the Australian crop would approximate 175 million. To judge by early-season developments and by current trade expectations, it seems likely that the Argentine crop will fall between 210 and 270 million bushels, and that the Australian crop will fall between 110 and 150 million. In considering the outlook for supplies and trade in 1934–35, we utilize these ranges; a closer approximation seems unwarranted on the basis of evidence now available.

Non-European importing countries.—Japan has harvested a wheat crop of record size this year—the result of a relatively high yield per acre on the largest wheat acreage reported in recent years. The wheat crop in China proper is apparently of good size and about 5 per cent above last year's good outturn, but the Manchurian crop is much smaller than in 1933. The Chinese rice crop has recently been estimated to be about 20 per cent below average, as a result of drought and hot weather. The poor outlook for rice and for other food crops has tended to restrict marketing of wheat during the past two or three months, as farmers have been tempted to hold their wheat for higher prices. In the lower Yangtze valley the quality of this year's wheat crop is reported to be the highest in years.

The Egyptian crop of 1934, like that of 1933, turned out to be relatively small mainly because the acreage under wheat was considerably below average.

Rye and feed grain crops. — The world wheat situation of 1934–35 is likely to be affected to an unusual extent by the world rye and feed grain positions. Not since 1926, and perhaps not since 1924, has the world rye crop been so short as this year, when reduction of acreage and widespread drought combined to curtail the final output. And although estimates of the feed grain crops of a number of countries are not yet available, it seems reasonably clear that in 1934–35 the feed grain position in Europe will be as tight as or tighter than in 1931–32 and the feed grain position in the United States will be tighter than it has been known to be recently, not excepting the year 1930–31.

The most significant available data on rye and feed grain production in 1934 are summarized in the following tabulation, with comparisons, in million bushels:[1]

	Rye		Corn	
Year	Europe[a]	United States	Danube[b]	United States
Av. 1925–29	873	40	275	2,671
1930	923	46	264	2,058
1931	775	32	342	2,589
1932	932	41	367	2,907
1933	981	21	292	2,344
1934	756	17	302	1,485

	Barley		Oats	
Year	Europe[c]	United States	Europe[d]	United States
Av. 1925–29	480	242	824	1,216
1930	471	304	759	1,276
1931	412	199	746	1,127
1932	475	302	802	1,247
1933	477	157	823	732
1934	419	123	657	546

[a] Figure for 1934 production partly estimated from *Foreign Crops and Markets*, July 16, 1934.
[b] Hungary, Bulgaria, Rumania.
[c] Eleven countries: England and Wales, the Netherlands, Belgium, Spain, Italy, Germany, Hungary, Yugoslavia, Bulgaria, Rumania, Finland.
[d] Ten countries: as above, excluding Belgium.

Among the various European countries (ex-Russia), Germany, Czechoslovakia, and perhaps Poland seem to be in the worst position as regards food and feed crops in 1934, whereas Belgium, Holland, and the Baltic and Scandinavian countries appear most favored. The Danube exporting countries have short crops of all cereals except corn; but because these countries are normally grain-exporting countries and, in addition, have sizable carryovers of grain from last year they presumably will not be faced with shortage of domestic supplies.

[1] Data of the U.S. Department of Agriculture.

In the United States practically all crops were reduced as a result of the severe and widespread drought of the spring and summer of 1934. To judge by September official crop forecasts, it appears that not since 1874 has the United States produced so little rye; not since 1882 has oats made so short a crop; not since 1900 has the outturn of barley been so low; and not since 1881 has the corn crop turned out to be so small. In addition, the pastures in many states are in strikingly poor condition, and the United States hay crop is expected to be around 25 per cent lower than in any of the fifteen previous years for which comparable estimates are available.

Prices

Wheat price movements in the relatively free markets of the world were dominated by weather and crop news during May–August. As a result of adverse crop developments in the Northern Hemisphere, Argentine wheat prices, which in January–April had remained stationary at legal minimum levels, rose above those levels in June; and Argentine wheat markets once again assumed the aspect of free markets. Thereafter, wheat was bought and sold in Argentina on a regular commercial basis; export wheat prices were no longer determined by the selling policy of the national Agrarian Board; and leadership in international wheat price movements was transferred from Argentina[1] to North American and British markets. In the principal continental European importing countries, wheat prices remained far above international levels and wheat price movements continued to be dominated by governmental policies.

Course of futures prices.—The course of prices in leading wheat futures markets in May–August is shown in Chart 2, with foreign prices converted to United States cents at current exchange rates. Since the international exchanges involved in these conversions fluctuated but little during the period under review, this chart pictures fairly closely the course of prices as actually recorded in domestic currency in each market.

Of particular interest in May–August were (1) the price upturns recorded during May in all futures markets except Buenos Aires, (2) the general strength apparent at Liverpool, Winnipeg, and Buenos Aires in June, when Chicago prices were drifting downward, (3) the spectacular advances scored in all futures markets during July 10–August 10, and (4) the sharp drop between August 11 and 17, followed by relative stability to the end of the month.

During May, wheat futures prices in North American markets and at Liverpool rose sharply in two distinct periods—May 1–10 and May 21–31. There is reason to question whether the price advance of early May should be considered as an integral part of the upward movement which culminated at the end of that month or as a more or less separate movement, mainly reflecting recovery from the slump of prices in mid-April. At present we are inclined to accept the former interpretation. We believe, however, that wheat prices, particularly at Chicago, would not have advanced as much as they did during May if there had been no decline in April. Indeed, under such conditions it is doubtful whether Chicago wheat prices would have increased enough to warrant classification of the May movement as a "crop-scare advance."[2] In contrast with most crop-scare advances in recent years, the one in May was not associated with significant increase in the open interest in Chicago wheat futures. In fact, open commitments in Chicago futures declined during the first ten days of May, then increased so slightly that at the end of the month they were still substantially smaller than on May 1.

Throughout May the attention of traders in North American markets was centered upon weather developments and crop reports. In both the United States and Canada, excessive heat, continued drought, and dust storms hindered seeding of spring wheat and damaged the growing crops. There were also reports of serious drought in the Danube basin and in central Europe. Liverpool prices responded

[1] See "World Wheat Survey and Outlook, May 1934," Wheat Studies, May 1934, X, 266–69.

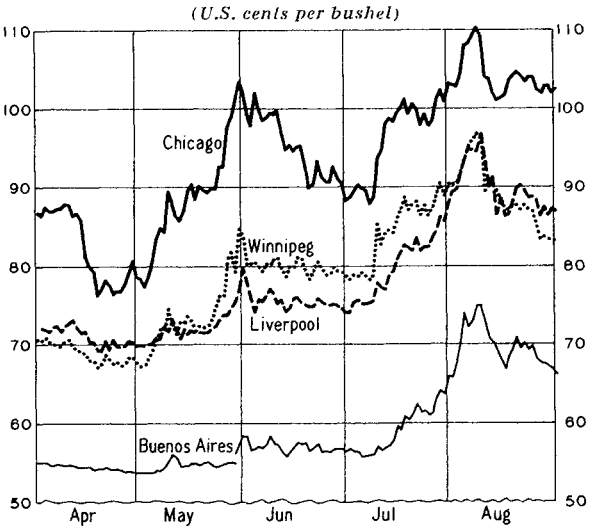
[2] See Holbrook Working, "Cycles in Wheat Prices," Wheat Studies, November 1931, VIII, 18–27.

but feebly to the bullish influences of early May, partly because traders recognized that improvement in weather conditions could still bring about a notable improvement in the world crop outlook, partly because supplies of wheat on hand were abundant and offers of wheat for future shipment were available at only slightly increased prices. But late in May, when North American winter- and spring-wheat crops continued to deteriorate and it became reasonably clear that the European crop would be substantially smaller than in 1933, British importers and merchants bid more actively for foreign wheat, and prices rose fairly rapidly at Liverpool, as well as in North American markets. Throughout May, Buenos Aires wheat futures remained at, or rose only a little above, the legal minimum prices; but Argentine export prices were apparently increased by about 5 cents (Table VIII).

The May price advance in North American and British markets was only once interrupted—in the middle week of May. This was due to a combination of factors including moderate rains in the United States and Canada, failure of Canadian export business to revive as much as had been expected, and reports that Argentina had refused to enter into an international agreement to fix a minimum export price for wheat and that she did not intend to confine her exports for 1933–34 within the limits of the specified quota. But after May 20, bearish factors of this sort were generally ignored in the excitement over the sensational crop reports emanating from both the United States and Canada.

In view of the character of the weather and crop news in May, the price increases at Liverpool, Buenos Aires, and even Winnipeg appear surprisingly small. Moreover, if part of the early May advance at Chicago simply reflected recovery from the mid-April slump, the May price response to crop news in that market also appears to have been relatively small. That Chicago prices did not rise more than they did is probably in large part attributable to the fact that they were already far above prices in foreign markets and hence to an unusual degree dependent upon the price responses of less sensitive markets. With a tariff of 42 cents a bushel on wheat imported into the United States, Chicago wheat prices cannot stand much over 40 cents above Buenos Aires prices without American traders facing the threat of importation. An additional factor in May was that speculative buying of wheat by the general public was not heavy. Why this was true is not entirely clear. Whatever the underlying reasons may have been, there is no doubt that May crop and price developments attracted less public speculation in the Chicago wheat market than less sensational crop news and price advances of similar magnitude have often attracted in the past.

CHART 2.—WHEAT FUTURES PRICES IN LEADING MARKETS, APRIL–AUGUST 1934*



* Daily closing prices mainly from *Daily Trade Bulletin*, Chicago; *Grain Trade News*, Winnipeg; *London Grain, Seed and Oil Reporter*, and *Revista Semanal;* conversions at noon cable transfer rates of exchange. September future at Chicago; October at Winnipeg and Liverpool; July, August, and September at Buenos Aires.

In all markets, the May price advance was limited because traders could not fail to be impressed with the abundance of wheat immediately available. In Argentina, there were complaints that storage space for maize was not adequate because wheat was piled up in large quantities at the various railway stations. British port stocks were large, and British importers and merchants felt they could afford to await more definite crop and price developments before buying additional wheat

at higher prices. Canadian traders were facing the prospect of another huge carryover of wheat and were concerned over the failure of a better demand for exports to develop. Moreover, press reports indicate that as prices rose the selling agency of the Canadian government took advantage of the opportunity to liquidate some part of its large holdings. Finally, traders everywhere seemed more concerned than is frequently the case in bull weather markets with the possibility that the weather might change—that rains might come and bring substantial improvement to the North American crops. This fear led to profit-taking as prices advanced and prevented the accumulation of notable long lines of wheat.

June and early July witnessed a marked decline of wheat prices at Chicago coincident with relative price stability in foreign markets. During the first two days of June all wheat futures markets broke sharply on reports of widespread rains in various dry areas of the Canadian Prairie Provinces. On June 4 the Winnipeg wheat market was closed, but further declines were recorded at Liverpool and Chicago, mainly as a result of continued long liquidation encouraged in part by reported showers in some of the important wheat states of the United States and also in parts of Europe.

From June 5 to July 10 there was no significant change in the level of wheat prices at Liverpool, Winnipeg, or Buenos Aires. Further good rains in Canada and in the United States spring-wheat belt were about offset as market factors by bullish crop news from Europe, occasional good export buying of Canadian wheat, reports of reduced acreage and drought in Australia, and low official and private forecasts of the North American crops. At times when prices dipped at Winnipeg, buying orders of substantial volume, attributed rightly or wrongly to the government agency, tended to support the market.

Chicago prices drifted downward during this period, as was to have been expected in view of the magnitude of the May advance. Most of the market reviews attributed the fairly heavy selling of Chicago futures to rains and anticipated improvement in crop prospects in the United States Northwest and Canada, and after mid-June to hedging pressure as the new crop began to move.

The official United States crop report issued July 10 was unexpectedly bullish. It did not show the improvement in crop prospects which had been expected to result from the June rains, but instead indicated that the crop had previously been too badly damaged to respond properly to the improved weather conditions in June. Wheat futures prices rose sharply on July 11—by the allowed 5 cents at Chicago, by almost 7 cents at Winnipeg, by 2½ cents at Liverpool, and by 1 cent in Buenos Aires.

These advances represented the beginning of an upward price movement which continued through August 10. Renewed drought, excessive heat, and grasshoppers took heavy toll of the Canadian crop during July; reports of the various European crops (particularly the Russian) continued bullish; and record-breaking heat and abnormally light rainfall in the United States threatened further damage to spring wheat and greatly reduced the prospects for a satisfactory corn crop. This combination of developments, together with continued complaints of drought in Australia, induced European importers to buy wheat more actively than before and at the same time prompted Argentine exporters to raise prices. These features in turn encouraged increased speculation in wheat futures in all markets and prices rose rapidly.

From July 10 to August 10 Liverpool near futures advanced about 22 cents, Chicago futures 21 cents, and Buenos Aires futures 20 cents, while Winnipeg near futures rose slightly less than 18 cents. Thus, in a crop-scare advance dependent in large measure upon unfavorable crop developments in North America, and particularly Canada, Winnipeg prices increased less than prices at Buenos Aires and Liverpool—a most unusual situation (Charts 2 and 3). Why did not Winnipeg prices, which are usually more volatile than prices in other markets,[1] advance at least as much as prices at Liverpool and Buenos Aires during July 10–August 10? The factor of

[1] See Robert D. Calkins, "Price Leadership and Interaction among Major Wheat Futures Markets," WHEAT STUDIES, November 1933, X, especially 55–57.

primary importance was that Winnipeg prices were already very high in relation to Liverpool, and even in the face of fairly heavy European import buying only moderate quantities of Canadian wheat were being purchased. Under conditions of short Canadian wheat supplies this would not have been disturbing to traders at Winnipeg; but since estimates then current suggested that the Canadian wheat carryover as of July 31, 1934, would approximate 185–200 million bushels, Canadian speculators operated with more caution than has frequently been the case in the past. Finally, well-timed sales of Winnipeg futures by the selling agency of the Canadian government, and weakness of Chicago prices late in July (partly reflecting declining stock prices) probably also tended to restrict the price advance in Canadian markets. Over this entire interval, the fact that official policy in Canada was undisclosed had the effect of restraining trading on the grain exchanges.

Leadership in the upward price movement of July 10–August 10 rested partly with Chicago, partly with Liverpool. Liverpool was not a significant originator of rising prices until the last week of July. From then until about August 9 the demand for wheat in Great Britain was surprisingly well maintained in the face of advancing c.i.f. offers, and there were many indications that British importers and speculators believed that the world wheat position warranted a higher level of prices than had previously prevailed. The strength at Liverpool was reflected at Winnipeg in opening prices. Session price movements in that market were generally downward, with concurrent strength at Chicago more or less disregarded or at least not acted on until the following opening. We assume that the same factors that were responsible for the limited total price rise at Winnipeg were also responsible for the weakness in prices apparent during the sessions of that market.

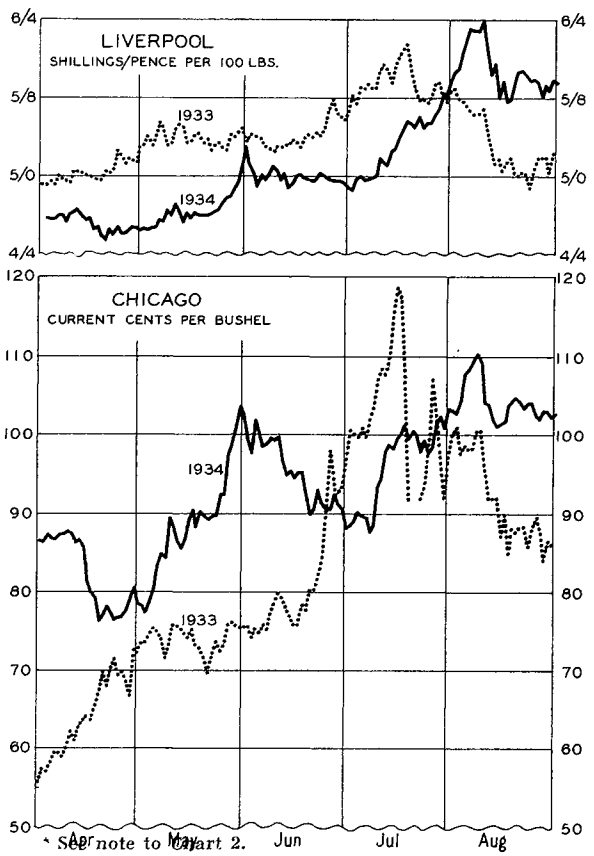
Just as the July crop report of the United States Department of Agriculture started wheat prices upward, the August report was one of the principal factors to determine the timing of price reaction. Other factors mentioned in various market reviews as partly responsible for the sharp break in all wheat futures markets on August 11 were: (1) press reports implying that Secretary Wallace had stated that the AAA might not ask farmers to reduce wheat acreage seeded for the 1935 crop below the average in 1927–32, (2) a report that the French government planned to subsidize sizable exports of wheat in 1934–35, and (3) reported heavy shipments of wheat from Argentina to Europe during the week ending August 11. Actually, these factors probably would not have brought about so sharp a reaction if wheat prices had not already been vulnerable as a result of fairly heavy speculative buying on the preceding advance.

After August 11, wheat futures prices in leading markets continued more or less sharply downward to August 17. No new bearish factors assumed importance during this period; but liquidation of wheat futures continued fairly heavy, with traders inclined to distrust the new high price levels. From August 18 to September 10, Liverpool, Buenos Aires, and Chicago futures remained relatively firm, while Winnipeg futures weakened under the influence of hedging pressure induced by the movement of the new Canadian crop and by competitive selling pressure from Argentina on the international market.

It is interesting to compare wheat price developments in April–August 1934 with developments in the same months of 1933. Chart 3 (p. 12) has been drawn to bring out the similarities and contrasts between price movements in these two periods at Chicago and Liverpool. Liverpool wheat prices advanced more and reached a higher peak this year than last, whereas Chicago prices advanced less and attained a peak about 8 cents below that of July 1933. This contrast is attributable mainly to the different character of market news in these two periods, but perhaps partly also to the fact that in April 1934 Chicago prices were higher, and Liverpool prices lower, than they had been in the same month of 1933. Last year a dominant factor in the Chicago advance was news and rumors bearing on inflation prospects. This year, with the possible exception of President Roosevelt's move to "nationalize" silver, there was little in the way of political or financial developments

which might appear to warrant purchase of commodities in anticipation of price inflation. On the other hand, the outlook for the various wheat crops of the world was considerably worse this year and the world wheat statistical position for 1934–35 was early recognized to be much less easy than that for 1933–34. In addition, daily price changes in Chicago wheat futures have been limited to 5 cents and margin requirements have been more stringent since the spectacular break in prices last year. Primarily on account of the different character of the influences underlying the price advance of 1934, that advance has been much better sustained, at least up to September 10, than was the advance of 1933.

CHART 3.—COMPARATIVE COURSE OF LIVERPOOL AND CHICAGO WHEAT FUTURES PRICES, APRIL–AUGUST 1933 AND 1934*

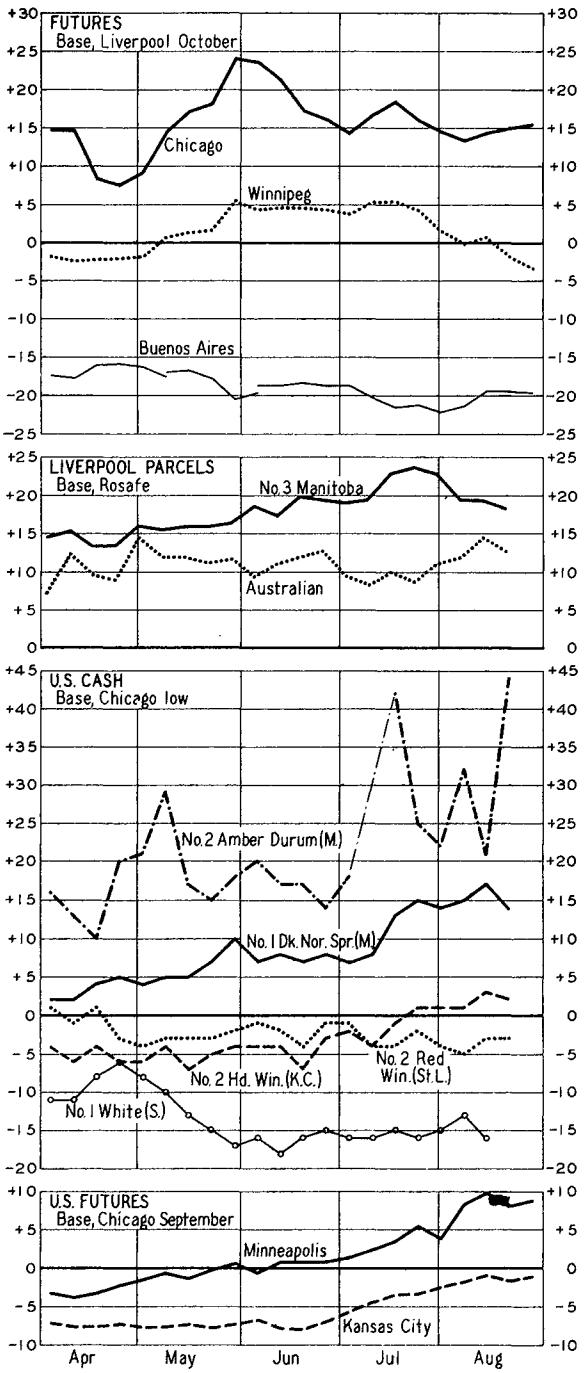


* See note to Chart 2.

Significant price spreads.—During April–June, price spreads between Liverpool and North American futures markets generally widened as wheat prices rose and narrowed as wheat prices declined (Chart 4, top tier). This also appeared to be the case when futures prices again began to climb upward after

CHART 4.—SIGNIFICANT WHEAT PRICE SPREADS, WEEKLY, APRIL–AUGUST 1934*

(U.S. cents per bushel)



* See note to Chart 2 for sources of data, and Table VIII.

July 10; but later in that advance Liverpool was relatively stronger than North American markets, and the spreads narrowed appreciably. The maximum premium on Chicago wheat futures was reached late in May. In June, when Chicago prices declined, the Chicago – Liverpool spread was reduced from about 23 to 16 cents; after temporary widening early in July, it was reduced to 14 cents in mid-August, but it increased again to 19 cents early in September. During most of April–August, Winnipeg futures also commanded a premium over Liverpool futures; but during April and from mid-August through the first ten days of September Winnipeg near futures sold below near futures at Liverpool. The Liverpool – Buenos Aires futures spread narrowed as international wheat prices rose in May, with Buenos Aires futures remaining at the fixed legal minimum price. In general, however, this spread remained fairly constant throughout the period under review.

At Liverpool, Rosafé parcels continued to sell below parcels of Australian and Canadian wheats of comparable grade (Chart 4, second tier), reflecting in large part the different selling policies of the government grain agencies of Argentina and Canada and the tendency for Australian farmers to hold back their wheat in anticipation of higher prices. The premium on No. 3 Manitoba increased gradually during April–July, but declined substantially after early August.

Significant cash wheat prices in the United States are shown in Chart 4 (third tier) as spreads from Chicago low contract cash prices, which in general fluctuated in about the same manner as Chicago futures prices during April–August. Spring wheat at Minneapolis and hard winter wheat at Kansas City advanced substantially in price relative to the softer wheats sold at St. Louis and Seattle, particularly during July – August. These changes, partly seasonal in nature at least as regards Minneapolis prices, reflected also the generally more satisfactory crop outlook for Pacific white and soft red winter wheats than for hard red winter and hard spring wheats (p. 5). The discount on No. 1 White wheat at Seattle increased markedly during May, until under ordinary circumstances it would have been profitable to ship wheat in large quantities from the Pacific Northwest to eastern markets in the United States. However, from mid-May until early August, the longshoremen's and marine workers' strike on the Pacific Coast prevented any significant movement of wheat from Pacific ports. After settlement of the strike in early August relatively heavy shipments were made to other domestic ports; these shipments and prospective future competition from the same region are reported to have had a weakening influence on prices of soft red wheat in eastern markets, including St. Louis.

Two other unusual movements of wheat occurred during the period under review. Hard winter wheat moved from Kansas City to Minneapolis and other milling points in the Northwest as a result of widening of the Minneapolis–Kansas City price spreads; and Canadian durum wheat was imported into the United States during July because of the high premiums on that wheat in northwestern markets. This movement of durum wheat was reported to be the first on record since wheat has been subject to an import duty in this country.[1] Some Marquis wheat has also been imported.

Price spreads between near and more distant wheat futures at Chicago were considerably narrower during May–August this year than last. In spite of a large domestic carryover of wheat and announced reductions in railroad rates on eastern shipments of wheat and flour to go into effect July 1,[2] the Chicago September future commanded a premium of only one cent or less over the July future through June. The failure of September wheat to go to a somewhat higher premium over July before the delivery month mainly reflected continued shortage of contract wheat stocks at Chicago — particularly of stocks which

[1] See the *Southwestern Miller*, July 31, 1934, p. 27.

[2] It was argued by some members of the trade that wheat which carried the less attractive older billing would suffer a discount as compared with wheat with billing after July 1. Since wheat delivered on the July future would probably be predominantly of the old billing, there was reason to infer that the July–September spread would widen. For discussion on this point, see the *Southwestern Miller*, May 22, 1934, p. 27.

could be purchased without payment of a premium over the near future. This shortage was due to firm holding of wheat on farms and in country elevators and to relative strength in other leading cash markets, notably Minneapolis and Kansas City.

With movement of the new crop, protein premiums were strikingly reduced because of the high protein characteristics of the new hard winter - wheat crop. In recent weeks wheats of the highest protein content have frequently sold at Kansas City without additional premiums, and there have been occasions when hard winter wheats of lower protein content have commanded slightly higher prices than the strongest hard wheats.

Wheat prices in continental Europe. — In France, Germany, and Italy wheat prices continued to rule at levels far above those prevailing in exporting countries and in relatively free importing countries such as Great Britain, Belgium, and Holland. At Paris and Berlin domestic wheat prices continued to be quoted only a little above the legal minimum producers' prices fixed by law early in 1933–34. The German price-fixing system for wheat was slightly modified as of April 1, by provisions for mill-buying prices above the basic producers' prices. On August 16 new fixed farm and mill-buying prices applicable to the 1934 crop went into effect. These prices are actually fixed prices and not simply fixed minimum prices. In the Berlin district, the farm price fixed for August 16–31 was 195 RM per quintal (approximately $2.14 per bushel) —13 RM higher than the lowest legal minimum price last year (that for October 1933).

Paris prices continued to rule at notably high levels. After mid-July new wheat was quoted at 110 fr. per quintal ($1.99 per bushel), while old-crop continued to be quoted at 133.5 fr. ($2.41 per bushel) — both prices about 2 fr. per quintal above the minimum producers' prices determined by law. Sales below these prices undoubtedly occurred (see pp. 17–18), but to an extent not demonstrable.

Bulgarian wheat prices continued unchanged at the levels set by the government monopoly—approximately 90 cents per bushel (converted at the new par of exchange) for basic wheat purchased by the government, and $1.26 per bushel for wheat sold by the government for domestic use.

In the other three Danubian countries wheat prices were influenced during April–August by three principal factors: (1) domestic crop developments, (2) the course of wheat prices in foreign markets, particularly Liverpool, Winnipeg, and Chicago, and (3) support through governmental action (p. 15). Danubian prices drifted downward during the latter part of April, mainly in sympathy with the trend of North American prices, then advanced strongly during the first half of May as a result of the extension of serious drought conditions in the Danube basin and of the strength reflected in foreign wheat markets. Rains in southeastern Europe during the latter part of May and early June tended substantially to weaken Danubian grain prices. In July, wheat prices in Rumania and Hungary recovered to distinctly higher levels, which were well maintained through the first half of August; and even in Yugoslavia, where there was no corresponding July advance, prices continued at levels substantially above those of August–April 1933–34, and in general above export parity.

Governmental Measures

In some countries the outlook for a short world wheat crop in 1934 lent support to the view that world and local wheat-surplus problems might be solved by natural shortage of supplies, and hence that the need for governmental intervention had become less pressing or indeed had disappeared. In others, however, special circumstances and/or the impetus of policies already accepted gave rise to further elaboration of governmental controls. In the following paragraphs we summarize recent developments briefly, without attempt to appraise the success of governmental operations in any country and with special reference to the outlook for wheat trade, stocks, and prices.

Major exporting countries.—In the United States, the principal specific developments during the past four months were (1) announcement on June 13 that the processing tax of 30 cents a bushel on wheat would be continued in the crop year 1934–35; and (2)

announcement on August 23 that the extent of wheat-acreage reduction required of contracting farmers sowing wheat for the 1935 crop would be 10 per cent from the base acreage (typically 1930–32), in contrast with the reduction of 15 per cent required for the crop of 1934. The present administration has therefore concretely reiterated its approval of approach to solution of the national and international wheat problem through curtailment of output, and specifically through curtailment of acreage. The change of the required acreage reduction from 15 per cent in 1934 to 10 per cent in 1935 may reasonably be interpreted as a concession to elements in the population which oppose crop reduction in general and/or which fear that the drought threatens to entrain food shortage in the current year. Thus far in the new crop year, no official announcement has been made concerning the policy to be followed by the North Pacific Emergency Export Association; it has apparently continued intact in organization, but has been inactive so far as concerns export sales.

In Canada, the short crop of 1934 has obviated the necessity of putting into active operation any of the governmental machinery for control of marketings and exports that was set up by legislative action during the spring and early summer.[1] Government-sponsored dealings in wheat futures appear to have continued, but as usual are not of public record (see p. 11). The policy to be developed is presumed to have some bearing on the national election to be held next summer.

In Argentina, advance of prices above the fixed minimum level of 5.75 pesos per quintal relieved the Agrarian Board of the necessity of making further purchases in any volume after about the end of May. Presumably the Board's activity during June–August was confined mainly to sales of stocks accumulated earlier; but its transactions are not of public record. It seems safe to infer that the Board did not attempt to withhold its accumulated stocks from export in the closing months of 1933–34, with intention to keep exports within the quota assigned under the International Wheat Agreement. In Australia, the government appears not to have chosen to inaugurate the system of export licensing authorized in October 1933; farmers held strongly enough to prevent exports from approaching the quota accepted under the International Wheat Agreement.

Minor exporting countries. — Maintenance of domestic wheat prices in the Danube countries above export parity through governmental intervention seems likely to prove easier in 1934–35 than in 1933–34, largely because of reduced exportable surpluses resulting from the short crop of 1934. On May 14, Hungary concluded agreements with the Italian and Austrian governments whereby export sales constituting a substantial fraction of the surplus are guaranteed at prices above the present international price level. The grain-ticket system was suspended from June 30; minimum prices were fixed, ranging from $1.09 to $1.17 at different country points for wheat of specified quality; and the tax on flour grindings was retained. Yugoslavia has concluded a similar bilateral agreement with Germany, in addition to existing arrangements with Austria and Czechoslovakia; here support of domestic prices is confined to purchases by the Privileged Export Company, which monopolizes the exports to the countries that agree to import Yugoslavian wheat at fixed prices. In Rumania, where the small 1934 crop probably provides no export surplus, the government acting through its wheat commission (an office abolished last December but revived in March) expects to control and stabilize prices at a high level by purchase and sale without monopoly privilege, and has prohibited admixture of other grains with wheat for flour in order to facilitate operations. Exports of unsold wheat were prohibited for a time after May 9. In Bulgaria, the full-fledged monopoly continues to operate, buying at fixed prices and selling domestically at higher fixed prices, and thus covering losses on export sales made at international price levels. Export sales were small in the closing months of the past crop year, and because of the small new crop are not expected to attain substantial volume in 1934–35.

[1] For a description of this legislation, see *Foreign Crops and Markets*, August 27, 1934, pp. 247–50.

European importing countries. — Changes in governmental measures affecting wheat in European importing countries were fairly numerous during the past four months. The adaptations to the new supply position of 1934–35, however, are mainly to be described merely as attempts to maintain the status quo of import barriers and levels of domestic wheat prices.

So far as our information extends, no changes either in policy, in form, or in detailed practices of governmental controls have been reported from a list of countries including Spain, Portugal, Belgium, Switzerland, Finland, Estonia, Lithuania, and Poland (where, however, the existing export premiums on wheat and flour which expired April 1 were prolonged unchanged).

In three countries where year-end stocks of old-crop wheat threatened to be heavy, endangering price maintenance at the advent of the new crop, recourse was taken to devices already in use. In Latvia, the Bank of Latvia granted the government a further credit for purposes of stabilizing the grain market; in Sweden, effective May 1 to June 30, millers were required to use 100 rather than 98 per cent of domestic wheat in their mixes (90 rather than 88 per cent for mills belonging to the Grain Association and producing most of the flour);[1] and in Greece, effective from June 15, millers were required to use 75 per cent domestic wheat. In Italy, where a carryover of old-crop wheat probably only of moderate size was stored by agricultural organizations financed by the government, a decree effective June 11 prescribed that mills in many regions of northern Italy must use such wheat to the extent of 70 per cent of the mill mix (40 per cent in other regions).

In Austria, where old-crop stocks were low toward the close of the crop year and unfavorable new-crop prospects tended to drive up prices already high, the problem was to restrain or prevent an advance in bread prices. Accordingly, Yugoslavian wheat was admitted at the preferential duty previously accorded only to Hungary; and the duty on rye was temporarily lowered. In the agreement concluded with Hungary in May, the amount of preferential duty accorded was increased from about 30 cents to about 68 cents per bushel, as against the regular non-preferential rate of about $1.51. Danish duties both on wheat and on flour were somewhat reduced (from 20 to 19 cents per bushel on wheat and $1.00 to $.90 per barrel on flour), effective April 23. This change, like those in Austria, was apparently designed in some part to lessen a rise in domestic prices.

Three countries announced changes in details of governmental controls. In Great Britain, the Minister of Agriculture set forth on August 14 his estimates of the average price of home-grown millable wheat obtainable in 1934–35 and of the quantity likely to be sold by registered growers; concluded that the difference between the guaranteed price of 10*s.* per cwt. and the probable obtainable price would be 5*s.* per cwt.; and initially fixed the flour levy at 4*s.* per sack of 280 pounds. This is midway between the initial levy of 3*s.* 6*d.* for 1933–34 announced in August 1933 and the levy as it stood at 4*s.* 6*d.* after November 1933. In the Irish Free State, minor alterations of "standard" prices for 1934–35 and 1935–36 were announced on July 13, together with the standard price for 1936–37. In Holland, the Grain Central ruled that from June 4 imports of grain from the Danube countries and Poland would be permitted only against compensating exports from Holland or the Dutch East Indies.

Czechoslovakia and Germany made more drastic alterations in existing methods of control.

In Czechoslovakia a complete grain monopoly began to function as of July 1, endowed with the exclusive right of purchase from farmers and of sale to first-hand buyers; of importation; and of price-fixing on monthly schedule. The level of domestic prices contemplated for 1934–35 is one rising from $1.86 per bushel from August.

Controls already rigid in Germany—involving fixed minimum prices to farmers, fixed differentials above these that must be paid by millers, compulsory admixture of domes-

[1] It appears also that governmental aid to exportation of wheat was extended in June, with resulting small shipments to Denmark; but what form this aid took is not clear to us.

tic wheat, regulation of milling extraction ratios, high tariffs, and limitation of the monthly output of flour mills—were made even more rigid by legislation of June 14 and decree of June 17. The most striking features of the new system of regulation, aside from the highly centralized control vested in the Minister of Agriculture, are that fixed minimum prices are in 1934–35 fixed maximum prices as well, and that (within limits) farmers are subjected to compulsory regulated delivery of grain and are forbidden to sell wheat and rye for feeding purposes. Unlike the earlier regulations which were designed chiefly to minimize imports and support domestic prices, the new regulations are apparently designed to provide also for "stretching" the available domestic supply of bread grain if necessary, and for preventing bread prices from rising too high. Wheat exports were prohibited after June 15. Despite the much smaller wheat crop this year than last, the 1934–35 scale of fixed prices runs less than 5 per cent higher than the corresponding scale for 1933–34. Apparently in anticipation of prospective need of importing more or less grain at low cost in 1934–35, all import duties on wheat, rye, oats, and barley were suspended, effective August 16, until July 1935; actual imports, however, will be under governmental control.

The system of control embodied in a new French law of July 9 and subsequent decrees issued under it represents a surplus-control system, regarded as essential for 1934–35 because of the huge inward carryover rather than because the new crop is of exceptional size. In its main features it is practically the same in principle as that erected under the laws of July 10, 1933, December 28, 1933, and March 17, 1934. Behind the tariff wall, provisions are made for export subsidies, compulsory limitation of use of foreign wheat in mill mixes, low percentage extraction of flour from wheat, denaturing of wheat and of low-grade flour, compulsory admixture of old-crop with new-crop wheat in milling, state aid in storage of grain, and fixed minimum farm prices. Fixation of the minimum price, however, is now determined by the Minister of Agriculture with reference to the world price plus the French duty instead of by legislation at specified levels as was the procedure under the law of July 1933. From July 16 to October 31, the minimum fixed price for wheat other than old-crop wheat stored and reported as stored was announced as 108 fr. per quintal, or 7 fr. less than the fixed minimum price for July 15–August 31, 1933. To old-crop wheat stored and reported as stored the fixed minimum price of 131.50 fr., set by the old law for July, is applicable. Use of this stored wheat in milling was placed at 50 per cent from July 1 and 65 per cent from August 1, in contrast with a fraction of 35 per cent set at the beginning of 1933–34. The rate of extraction (percentage relationship of the weight of flour produced to the weight of wheat ground) was set from August 1 at 65 per cent, slightly below the percentage presumably employed (with exemptions) since last September. The bounty on wheat exports, inoperative since last December, was revived from July 15 at a higher rate (90 rather than 80 fr. per quintal) but for the time was applicable to only about 3.4 million bushels of wheat; apparently the amount was enlarged in August, and in addition encouragement was given to exportation of low-grade flour. By early September, licenses to export about 9 million bushels of wheat had been issued.

It is asserted that illegal sales at prices below the fixed minimum continue.[1] Such sales are said to have been very common last spring,[2] and provided much support for arguments of the grain trade (particularly millers) against inclusion of provisions fixing minimum prices in the revision of the law then under discussion. Millers contended that observers of the law among them could not survive competition with violators, and that

[1] *La Cote Bodenheimer*, August 17, 1934, commented that the minimum price was nowhere observed; individual farmers were signing receipts falsely carrying the fixed price, and co-operatives were taking refuge in the fiction that their wheat as sold contained excessive dockage.

[2] The *Bulletin des halles* even carried in its comments on the wheat market, from June 3 to July 11, quotations referring to *"blé-officiel"* on the one hand and to *"blé-gangster"* on the other; the prices for *"blé-gangster"* ranged 52–71 cents per bushel below official prices.

millers were prosecuted for violation while producers and agricultural co-operatives were not. Feeling ran so high that the national federation of millers formally resolved on July 25 not to respect the new law concerning fixed minimum prices, and something like a millers' strike developed.

The International Wheat Agreement.—The Agreement, designed to endure to the end of 1934–35, has not yet been denounced by any government adherent to it; and a brief review of developments is pertinent, although at this date the allocation of export quotas for 1934–35—an outstanding if not the outstanding feature of the Agreement—has not been decided.[1] Systematic appraisal of the effects of the Agreement in 1933–34 may be deferred.

At the meeting of the Wheat Advisory Committee last May 11, "the representatives of Governments declared their attitude regarding the acceptance in principle of the minimum price plan" which had been recommended to adherent governments by the Committee after the meeting in Rome on April 5–17. "With one exception [Argentina] the exporting countries represented expressed their approval. The failure to secure unanimous agreement made necessary a reconsideration of the plan . . . ."[2] A subcommittee was appointed "to consider possible alternative plans to stabilize and improve wheat prices."[3] This subcommittee (which had no member from Argentina) met on May 14 and 15 and apparently on May 28, and was to submit its report at a meeting of the Wheat Advisory Committee scheduled for June 27. No meeting was held, however, presumably because Argentina would not accept either proposed minimum price schemes, price differentials, or such revision of her 1933–34 quota as the other three major exporting countries sought.

These developments, together with a continued flow of wheat from Argentina which by about the second week in June brought shipments above the quota limit, were generally interpreted in trade circles as an indication that, for all practical purposes, the Agreement had been abandoned. On July 17, however, announcement was made that a meeting of the Advisory Committee would be held on August 14 in London. Accompanying this announcement was a letter from the United States representative which included the following statement: "The Governments of Australia, Canada, and the United States attach the utmost importance to the maintenance of the Wheat Agreement and are reinforced in their determination to seek every possible method of international co-operation to improve the position of wheat growers throughout the world by the fact that in spite of drought in certain countries the 1934–35 crop is certain to be sufficiently substantial to leave world surplus stocks at the conclusion of the 1934–35 crop year of a size to continue to menace world wheat prices."[4] Representatives of the grain trades expressed the opinion that quotas and/or minimum price-fixing were unnecessary in 1934–35, and that the Committee would do best to confine attention to acreage reduction.[5]

At the August meeting, a proposal for quarterly adjustment of 1934–35 export quotas was considered, but no allocation of quotas was made; the conclusion was reached that import demand for 1934–35 was likely to reach 600 million bushels; and a tentative agreement was framed, for consideration of the several governments at the next meeting of the Committee on November 20, "providing for an extension of world action in balancing production to requirements for several years ahead."[6] For purposes of setting forth the outlook, we assume that there will be no appreciable effects upon trade, prices, or year-end stocks in 1934–35 traceable to new developments under the existing Agreement or to any new agreement that may conceivably

[1] Under the Agreement, world import demand for 1934–35 was assumed to be 750 million bushels, and tentative quotas were assigned which divided this amount among the exporting countries. But at present a large reduction has been made in estimated import demand—from 750 to 600 million bushels—so that discussion of the original quotas assigned to the several countries has no significance.

[2] *Wheat Advisory Committee Press Communiqué*, May 11, 1934.

[3] *Ibid.*

[4] *Ibid.*, July 17, 1934.

[5] E.g., Sir Herbert Robson, president of the London Corn Trade Association, in a letter to the editor of the *London Times*, July 19, 1934.

[6] U.S. Department of Agriculture, *AAA Press Release 450-35*, August 24, 1934.

be formulated. The trade regards the Agreement as dead, on technical as well as on political grounds.

International Trade

Prospective short 1934 wheat crops in many importing countries and rising international wheat prices stimulated wheat exports in the closing quarter of 1933–34. Largely for this reason, crop-year totals of international trade as finally reported were moderately above some earlier forecasts, but were very low in relation to reported trade in earlier years—the lowest, indeed, in the fifteen years since the war. Net exports exceeded shipments by a larger margin than usual. Shipments during the first few weeks of the crop year 1934–35 foreshadowed a larger movement of wheat in international trade in 1934–35 than in 1933–34.

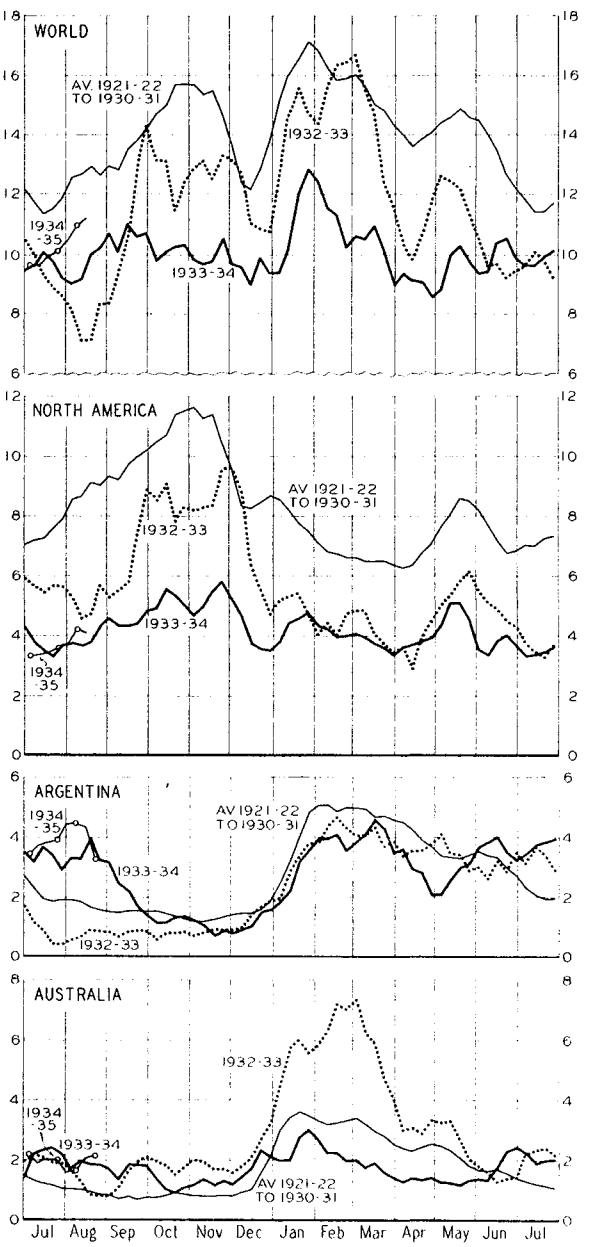
End-season movements. — At 128 million bushels, international shipments of wheat and flour during the closing quarter (13 weeks) of the crop year 1933–34 were the smallest in more than a decade. The restricted volume of trade (due mainly to low import demand resulting from bumper 1933 wheat crops in Europe, good crops in ex-European importing countries, and stringent import restrictions) was characteristic also of the first three quarters of the year (Chart 5, upper tier).

Some evidence of revival of trade appeared, however, in the closing weeks. Shipments during the last quarter, which on the average in the past decade have run about 13 per cent below third-quarter shipments, were this year only 3 per cent below. The shipments to Europe increased between the third and fourth quarters of the year instead of declining as they most commonly do, and shipments to ex-Europe declined less than usual (Chart 6, p. 20).

Argentina and Australia rather than the United States and Canada—all four countries held heavy stocks in early May—chose to enlarge their exports when this moderate improvement of import demand permitted. Thus shipments from North America in the last quarter, which usually substantially exceed third-quarter shipments, were of practically the same size as third-quarter shipments this year, and were the smallest in over a decade. This was true also of May–July net exports from the two countries combined and of those from Canada; but United States net exports had been even smaller in May–July 1933.

Chart 5.—Shipments of Wheat and Flour, Weekly from July 1933, with Comparisons*

(Million bushels; 3-week moving average)

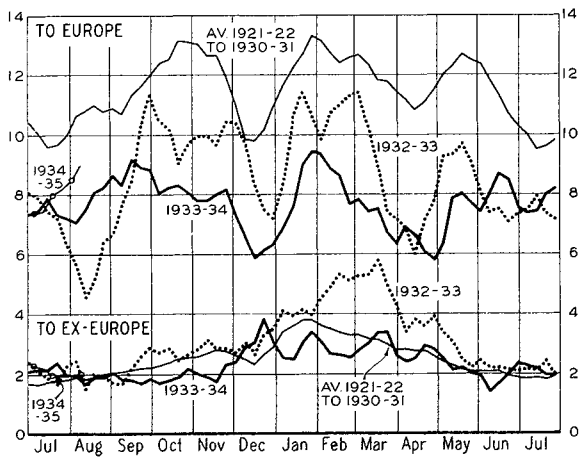


* See Table VI.

Some of the small Canadian net exports went to build up stocks of Canadian wheat stored in the United States. The United States net exports would doubtless have been 2 to 3 million bushels larger than the reported 4.3 million if shipments of wheat and flour sold for export by the North Pacific Emergency Export Association had not been held back by the strike that tied up Pacific Coast shipping from May 9 to early August. Argentine shipments and net exports, in contrast with

CHART 6.—SHIPMENTS TO EUROPE AND TO EX-EUROPE, WEEKLY FROM JULY 1933, WITH COMPARISONS*

(Million bushels; 3-week moving average)



* See Table VI.

those from North America, were relatively larger in May–July 1934 than in most earlier years, and showed less than the average seasonal decline between February – April and May–July. This seasonal movement occurred also in Australia, but Australian exports were moderately small in absolute volume. The main facts concerning levels and seasonal movements from the principal exporting areas are shown in Chart 5, lower tiers. Price relationships naturally determined the flow of wheat to export: as appears from Chart 4 (p. 12), Chicago prices continued far above export parity in May–July; Winnipeg prices moved farther out of line for export than in earlier months; while Argentine prices were held low enough to permit wheat to move freely to export within the limits imposed by import demand.

Of the minor exporters, India and Russia shipped out practically no wheat in May–July, and only Hungarian and northern African shipments were relatively sizable. German exports were prohibited after June 15, and French exports under the renewed export subsidy were not of large volume.

Crop-year shipments, net exports, and quotas.—The less-than-seasonal decline of shipments between the third and fourth quarters of the year brought the year's total to 524 million bushels, about 3 million more than our May forecast. As had earlier been generally expected, the total was the lowest in fifteen years. Shipments and net exports in 1933–34, compared with data for four preceding years and with 1933 – 34 forecasts current last May, are as follows in million bushels:

	Shipments	Net exports
August–July reported trade		
1929–30	613	626
1930–31	787	833
1931–32	770	793
1932–33	615	627
1933–34	524	558
Forecasts, 1933–34		
Broomhall	528	...
Food Research Institute	521	535
International Institute	...	525

Net exports, which can now be appraised tentatively[1] at 558 million bushels, were less strikingly small than shipments, though like shipments they were the smallest in post-war years. The excess of net exports over shipments (34 million bushels) proved to be larger in bushels than in any of the preceding five years except 1930–31, and in percentage terms larger even than in 1930–31. We had not anticipated[2] so large a discrepancy last May; hence our May forecast of total net exports was farther from the actual outcome than was our forecast of shipments.

The relation of semi-final data on crop-year

[1] Table VII indicates what monthly data are lacking.

[2] In May, partly as the result of an arithmetical error and partly through lack of complete August–March trade statistics from Algeria and Morocco, we expressed the opinion that net exports could be expected to exceed shipments by about 15 million bushels in 1933–34.

net exports[1] by sources of origin to the original quotas allocated under the International Wheat Agreement is as follows, in million bushels:

Country	Quotas	Net exports
Canada	200	194
Argentina	110	147
Australia	105	87
United States	47	31
Danube	50[a]	38
USSR	48[b]	34
Others		27[c]
Total	560	558

[a] More accurately, 50–54 million bushels.
[b] Derived by subtraction; not accepted as the Russian quota; not definitely allocated to any country; more properly, 44–48 million bushels.
[c] Algeria, Morocco, Spain, India, Poland, Germany.

The original quantitative definition of "world import demand" under the Agreement was not altered during the crop year; neither were the quotas definitely allocated to the four major exporting countries or the aggregate quota allocated to the four Danubian countries, though the sharing of this aggregate was readjusted between the individual countries. The exports of three of the four major exporting countries fell within the quota limits; but Argentine exports exceeded the quota substantially.

It is impossible here to enter upon detailed examination of such questions as whether or not Argentina plainly violated the terms of the Agreement concerning quotas and whether or not the governments of the other major exporting countries fulfilled their obligations under the Agreement concerning quotas either through force of circumstances or by design. At this time it is sufficient to record the opinion that in the main but not exclusively the total volume of trade in 1933–34 was determined by import requirements, while the distribution of exports was determined much as usual by local circumstances involving crops, stocks, international price relationships, and governmental operations independent of the International Wheat Agreement. In our view, the excess shipments of Argentina were of advantage to the price structure of 1934–35.

As had earlier been anticipated, the restricted import demand in 1933–34 held exports from all four of the major exporting countries at low levels, more so in comparison with domestic surpluses than in comparison with exports of earlier years. Only the United States exports (including shipments to possessions) fell to a fresh post-war low; these (of which in July–June 22.6 out of 29.8 million bushels were subsidized exports and shipments from the Pacific Northwest)[2] were somewhat smaller even than the exports of 1932–33, which in turn were the smallest since 1868–69. In the absence of subsidization, United States exports would probably have constituted a smaller fraction of the surplus over domestic use than in any other post-war year; with the subsidy in operation, exports constituted about 9 per cent of the surplus, a slightly larger fraction than in 1932–33. Canadian, Australian, and Argentine exports constituted a smaller fraction of the surplus in each country than in any other post-war year (Table X); but in absolute amount exports from each of these countries had been smaller than those of 1933–34 in several years of the past decade.

Crop-year imports. — The strikingly small total volume of international trade was due to restricted import demand. This demand, however, was very much more curtailed in some countries than in others. From net import statistics of European countries for the crop year[3] and Broomhall's reports of shipments to ex-Europe, it is now possible

[1] The secretary of the Wheat Advisory Committee on August 15 made public his tentative appraisal of 1933–34 net exports, amounting in total to 541 million bushels. His data for particular countries are as follows, in million bushels, with our figures in parentheses: Canada, 195 (194); Argentina, 144 (147); Australia, 90 (87); United States, 27 (31); Hungary, 30.0 (31.8); Bulgaria, 5.0 (4.5); Yugoslavia, .9 (.9); Rumania, .3 (.3); USSR, 27 (34); Germany, 6.0 (5.4); northern Africa, 16 (20). Our data for the United States include shipments to possessions, apparently not included in net exports as defined in the International Wheat Agreement; and our total includes also small net exports from Spain, Poland, and India.

[2] For a detailed discussion of the movement of subsidized wheat from the Pacific Northwest, see Joseph S. Davis, "Pacific Northwest Wheat Problems and the Export Subsidy," WHEAT STUDIES, August 1934, Vol. X, No. 10.

[3] As yet partly estimated for several countries; see Table VII.

to infer that, of all the importing countries in the world which have used as much as 5 million bushels of imported wheat on the average in the five years ending in 1932–33, none except possibly Brazil took as much wheat in 1933–34 as was taken in one or another of the past ten years. No less than ten of the twenty-one countries of Europe ex–Danube basin ex-Russia imported net in 1933–34 the smallest quantity of wheat and flour recorded in any of the preceding ten years; these countries were Germany (a net exporter in 1933–34 for the first time in many years), Italy, the Netherlands, Sweden, Portugal, Austria, Czechoslovakia, Latvia, Estonia, and Greece. Three other countries, Spain, Poland, and Lithuania, were net exporters, but not of as large quantities as in some other years. All of these thirteen countries harvested good or bumper crops in 1933; some had heavy inward carryovers; all employed import restrictions and measures designed to enforce full utilization of domestic wheat. As compared with 1932–33, the most striking reductions of net imports among these thirteen countries were recorded in Czechoslovakia, Greece, the Netherlands, and Germany (Table VII).

Of the other eight countries in Europe ex–Danube basin ex-Russia, France and Finland imported in 1933–34 less wheat than in all but one of the past ten years; Belgium, Switzerland, and Denmark imported less than the average of the five preceding years; and only the United Kingdom, the Irish Free State, and Norway imported a little more than their five-year average. The relatively liberal takings of these eight countries (France excepted) as compared with the other thirteen in general reflected somewhat less stringent import controls; France imported as much as she did only because duty-free imports from northern Africa continued to be admitted. Between 1932–33 and 1933–34, increases of net imports were recorded for the British Isles, Belgium, Denmark, Norway, and Finland; but the total net increase of imports by these countries was less than the net decline recorded for either Czechoslovakia or France. In this group of eight countries French net imports showed the largest decline between 1932–33 and 1933–34. The decline in the net imports of all countries in Europe between 1932–33 and 1933–34 was about 45 million bushels, nearly 10 per cent. Of this amount, the largest reductions were in France (15 million bushels), Czechoslovakia (12 million), and Greece (9 million).

The reduction in European takings accounts for about half of the reduction in the total volume of international trade. The other half was in the takings of ex-Europe, mainly those of China (including Manchuria). To judge by Broomhall's shipments to ex-Europe, the aggregate ex-European takings in 1933–34 were less strikingly small than European takings or total world shipments; for in five of the past fifteen years, shipments to ex-Europe were smaller than those of 1933–34, which were nevertheless somewhat the smallest since 1924–25.

For the second year since the war, the British Isles in 1933–34 imported more wheat than all other countries of Europe combined; and British and Irish imports constituted an even larger fraction of world trade than in 1932–33 (about 43 as against 37 per cent). China (including Manchuria) which in 1932–33 had occupied the unusual position of second place among the world's importers, appears to have fallen below Belgium in 1933–34.

Recent trade developments.—Total overseas shipments of wheat and flour during the first six weeks of 1934–35 (Table VI) have run about 10 per cent larger than in the corresponding weeks of 1933–34. Most of the increase was in shipments from Argentina and in shipments to continental Europe. Russia shipped only about half as much this year as last. India shipped a little in the week ending August 25 for the first time in many weeks, but this movement did not continue. France apparently exported enough this year to bring combined shipments from northern Africa, the Danube countries, and France above what was shipped last year from Germany, northern Africa, and the Danube exporters.

Visible Supplies and Year-End Stocks

Visibles to August 1.—"World" visible supplies of wheat at the close of the old crop

year and the opening of the new, about August 1, 1934, were of practically the same size as in 1933; only 20 million bushels below the peak in 1931; and about 290 million higher than the average for 1923–27, before the world wheat surplus accumulated. The figures are as follows, in million bushels:

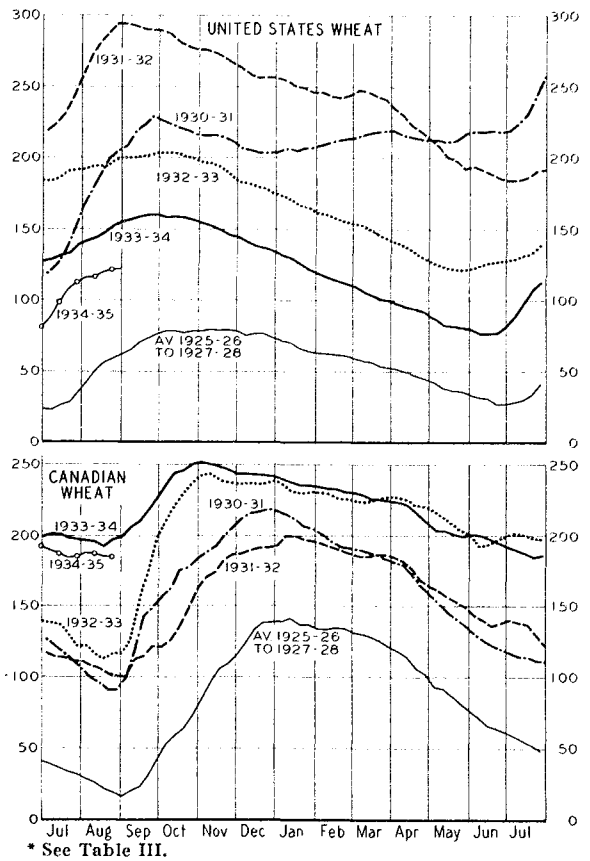
About August 1	Total	North America	Afloat to Europe	U.K. ports	Australia	Argentina
1923–27 .	136	67	40	8	15	6
1929	325	245	38	6	20	16
1930	358	272	39	7	33	7
1931	443	368	38	11	20	6
1932	386	313	31	11	25	6
1933	423	336	32	11	31	13
1934	423	298	34	15	56	20

In the several positions, these August 1 visibles were of record post-war size in British ports, in Australia, and in Argentina. North American visibles, though remaining at a high level, were the lowest in four years. Within North America, however, Canadian visibles (including Canadian grain in the United States) were smaller only than those of 1933, while United States visibles were the lowest in six years. Only the visibles afloat to Europe were below the 1923–27 average.

As of May 1, "world" visibles (Table III) had stood 12 million bushels below the 1929–33 average. By August 1, they stood 36 million above the 1929–33 average. The seasonal reduction during May–July was thus smaller than the average seasonal reduction. The principal factors responsible for the unusually small decline in world visibles during May–July 1934 were exports below average from the principal exporting countries; moderately heavy farm marketings in the United States during July (Table II), probably accompanied by moderately light mill withdrawals of stocks from the visible and increase or maintenance of visibles afloat and in British ports rather than the more usual May–July reduction. Chart 7 illustrates the weekly course of visible supplies in the United States and Canada. The sharp increase of American visibles during late June and July was particularly striking. The much larger July increase in 1934 as compared with 1933 reflects mainly the larger and earlier harvested winter-wheat crop this year and the better sustained rise in wheat prices, which tended to enlarge farm marketing; and possibly also lesser incentives of millers to accumulate stocks because of the smaller carrying charges between near and distant futures this year. In Canada, visible supplies declined during May–July by about the same amount this year and last; both farm marketings (Table II) and exports were smaller this year, by roughly similar amounts.

CHART 7.—NORTH AMERICAN VISIBLE SUPPLIES, WEEKLY FROM JULY 1933, WITH COMPARISONS*

(Million bushels)



* See Table III.

"World total" stocks, August 1. — Total stocks of wheat about as of August 1, 1934, in the countries and positions to which our estimates apply now seem at 1,150 million bushels to have reached a higher level than ever before. Our present estimates are as follows, in million bushels, with comparisons:

Position	1923–27 average	1933 revised	1934 May forecast	1934 Sept. appraisal
United States[a] ...	125	391[b]	260	290
U.S. in Canada...	1	4	2	0
Canada	38	212	185	193
Canadian in U.S..	3	7	7	10
Australia	31	55	96	90
Argentina	65	75	98	118
Afloat to Europe..	40	32	30	34
Total above	303	776[b]	678	735
Importing Europe	187	238	295	305
Danube basin ...	37	29	50	54
India	46	29	29	29
Northern Africa..	19	16[b]	10	10
Japan	7	5	5	5
Afloat to ex-Europe	7	11	10	11
Total above ...	303	328[b]	399	414
Grand total ...	606	1,104	1,077	1,149

[a] As of July 1.
[b] Slightly revised since May 1934.

The crop year 1933–34 now appears to have witnessed further upbuilding of world wheat stocks, rather than the substantial reduction which we anticipated a year ago, or the moderate reduction anticipated last January, or the small reduction still seemingly in prospect last May. Wheat disappearance in the world ex-USSR now seems to have fallen below that of 1932–33 to the lowest level since 1929–30, though it is conceivable that further increases in official North American crop estimates for 1933 may subsequently bring the total within a few million bushels of the figure for 1932–33.

The present appraisal of total stocks is 72 million bushels larger than our May forecast. Of this increase, 57 million resulted from changes in appraisals of stocks in the four major exporting countries and afloat to Europe, while only 15 million resulted from changes in appraisals of stocks in all other positions.

The recently issued official estimates both of United States and of Canadian year-end stocks substantially exceeded our May forecasts, which were based upon officially estimated April 1 stocks and our estimates of probable net exports and domestic disappearance in April–June (United States) or April–July (Canada). The official estimates of year-end stocks look high in relation to April 1 stocks and to data on disappearance from April 1 to the end of the crop year;[1] but no better alternative appears than to accept the newly published direct official estimates as the best available measure of year-end stocks of old-crop wheat.[2] Argentine year-end stocks must now be appraised about 20 million bushels above our May forecast, the change being due mainly to an upward revision of 30 million bushels in the official Argentine crop estimate for 1933 (Tables I and X). Revisions of 1933 official crop estimates have played some part in upward revisions of our estimates of stocks in the Danube basin and importing Europe; but so also have official and semi-official direct appraisals of stocks.

Although total "world" year-end stocks can now be described as probably the largest on record as of August 1, 1934, the stocks in the several positions and countries specified in the tabulation above were of record size (at least since 1922) only in Australia and in importing Europe. In the United States, Canada, Argentina, and the Danube basin, however, stocks were very high though not of record size. Only in positions quantitatively relatively unimportant—afloat to Europe and ex-Europe, in India, in northern Africa, and in Japan—were year-end stocks distinctly or moderately small. Within importing Europe, the situation differed greatly from country to country: France,[3] Czechoslovakia, Sweden,

[1] In Canada, the reduction of stocks between April 1 and August 1 was 85 million bushels. During this period Canadian net exports were 61 million, apparently leaving for domestic use as seed, food, and feed only 24 million bushels—a quantity too small to cover seed use alone. In the United States, the reduction of stocks between April 1 and July 1 was 107 million bushels, net exports 9 million, and the quantity apparently available for domestic use for spring-wheat seed, mill grindings, and feed only 98 million. Net mill grindings alone were about 109 million bushels.

[2] We do not share the opinion, commonly voiced in the trade journals, that the unexpectedly high official estimate of United States year-end stocks was due mainly to inclusion of sizable quantities of new-crop wheat, though this may have had some effect. It seems equally reasonable to suppose that April 1 official estimates of stocks were too low, both in the United States and Canada.

[3] An official inquiry as of May 16 appraised wheat-grain stocks at about 132 million bushels; and from

and Germany[1] held record stocks; stocks in the British Isles, Italy, Poland, Portugal, and Greece were well above average but not of record size; and in Austria, Denmark, Norway, Holland, Belgium, Switzerland, Spain, and the Baltic states, stocks were distinctly or moderately low.

"World" stocks about on August 1, 1934, exceeded the 1923–27 average by 544 million bushels. If the 1923–27 average should be interpreted as a "normal" level of stocks, it could be said that this 544 million bushels measures roughly the excess or surplus wheat existing at the opening of the crop year 1934–35. If "world visible supplies" are used as the basis of measurement, the surplus can be said to amount to 290 million bushels. If total stocks in exporting countries and afloat to Europe are used as the basis of measurement, the surplus can be said to amount to 433 million bushels. None of these measures is perfect, either with respect to the average which may be chosen to represent a "normal" level of stocks or with respect to positions and countries covered. None of the resulting figures — 290, 433, 544 — can properly be regarded as the exact amount of wheat in the world wheat surplus, or as the exact amount of wheat which, in addition to the 1934 crop, needs to be consumed in 1934–35 in order that return to a "normal" stocks position will be assured by the end of the present crop year. In our opinion this outcome could not be assured by consumption of as little as 300 million bushels in addition to the 1934 crop; but what the necessary amount is between a range even as wide as 400–550 million bushels is not clearly susceptible of demonstration.

The official estimate of the United States carryover seems to warrant the inference that either the crop of 1933 or the amount of wheat fed on farms in 1933–34 may have been officially underestimated; for the residual figure in disposition (Table X), which ought to cover wheat fed both on farms and elsewhere and loss and waste, is now only equal to the official estimate of wheat fed on farms alone. The principal element in domestic disposition, wheat ground into flour for domestic use, may now be appraised at 449 million bushels in 1933–34. This figure suggests that total consumption of flour in the United States declined for the fifth successive year. The extent of the decline from 1932–33, however, was much less than is suggested by our estimates of net mill grindings in Table X (493 million bushels in 1932–33 as against 449 million in 1933–34). Flour stocks, very heavy at the beginning of 1933–34, were reduced in the course of the year, probably to about a normal level;[2] and with allowance for this reduction in flour stocks, the quantity of wheat consumed as flour in 1933–34 was probably only about 5 million bushels smaller than in 1932–33.

In Canada also the official estimate of outward carryover suggests that the standing estimate of the 1933 wheat crop is too low; this was officially anticipated in July.[3]

Recent movement of visibles.—Faint indications of a prospective reduction of world wheat stocks during 1934–35 (see p. 29) appeared in August from statistics of visible supplies. "World" visibles, which were as high on August 1 this year as last, had fallen about 5 million bushels below last year's figure by September 1, despite early and heavy marketing of Canadian wheat. United States visibles, which usually increase steadily throughout August – September, remained practically unchanged after mid - August. Stocks in British ports were not built up by the fairly heavy world shipments in August, and were closer to an average level on September 1 than on August 1.

this it was officially estimated that stocks at the end of July would be about 73 million bushels. A later official figure (*La Cote Bodenheimer*, August 24, 1934) was 77 million. Trade journals, however, held generally to the opinion that a more probable figure would be 110 million. We tentatively employ 85 million, which is about 30 million bushels larger than the official enumeration of stocks as of August 1, 1933.

[1] As of July 31, German stocks of wheat on farms and of wheat and flour in second hands were officially placed at 51 million bushels, a figure about 24 million bushels larger than those of the year before.

[2] Writing in May, we anticipated an increase in the processing tax which did not transpire, and counted upon this to provide incentive for larger April–June net mill grindings than were actually reported and for larger accumulation of flour stocks on July 1 than seems to have occurred.

[3] See *Monthly Review of the Wheat Situation*, July 25, 1934, p. 35.

Summary of Wheat Supplies

Before discussing the outlook for trade, year-end stocks, and prices, it appears desirable to summarize the best evidence available regarding the probable magnitude of world wheat supplies (including inward carryovers) in 1934–35, as compared with other recent post-war years. This has been done in the following tabulation, in million bushels.

Year	World ex-Russia[a]	Importing Europe[b]	Danube basin	Canada, United States	Argentina, Australia
1927–28	4,229	1,252	318	1,527	504
1928–29	4,608	1,300	392	1,695	640
1929–30	4,403	1,435	378	1,499	461
1930–31	4,744	1,379	397	1,746	560
1931–32	4,741	1,351	427	1,732	551
1932–33	4,706	1,501	271	1,722	563
1933–34	4,721	1,678	402	1,412	590
1934–35	4,292–4,392[c]	1,544	309	1,263	528–628[d]

[a] Crop plus inward carryover, plus Russian net exports (which in the successive years indicated were as follows, in million bushels: 2, 0, 9, 114, 65, 17, 34, and for 1934–35 a maximum of 15).

[b] Including stocks afloat to Europe and Russian net exports.

[c] Including a range for Southern Hemisphere production in 1934 of 365–465 million bushels.

[d] Including a range for production of 310–410 million bushels.

Total wheat supplies in the world ex-Russia seem likely to be smaller this year than in any preceding year since 1927–28. And even if standing crop estimates and forecasts should later prove to be too low, it seems probable that the wheat supplies of 1934–35 will in any case continue to appear smaller than the supplies available in each of the four preceding crop years. They appear to be 325–425 million bushels smaller than in 1933–34.

In distribution of wheat supplies the year 1934–35 more closely resembles 1933–34 than any previous season, though the fact that supplies are smaller in importing as well as in exporting areas is significant as regards the outlook for international trade. Should wheat production in Argentina and Australia approximate the upper limit of the range we have suggested, Southern Hemisphere wheat supplies will not be reduced as compared with 1933–34 and will be larger than in any preceding year since 1928–29, because of the big stocks existing when the year opened. Canadian wheat supplies are probably not substantially different from what they were last year; but those of the United States are greatly reduced.

Outlook for Trade

All indications point toward a larger volume of international trade in wheat and flour in 1934–35 than in 1933–34, basically because the 1934 wheat crops of many European importing countries are appraised much smaller than those of 1933. The Wheat Advisory Committee has placed probable "world import demand" in 1934–35 (or its equivalent, the net exports likely to move from net-exporting countries) at 600 million bushels. This figure represents an increase over 1933–34 of 60 million bushels if the committee's latest tentative appraisal of 1933–34 net exports is taken as the basis of calculation, and an increase of 42 million bushels if our tentative appraisal of 1933–34 net exports is taken as the basis. Broomhall places probable shipments in 1934–35 at 576 million bushels, a figure 52 million bushels larger than reported shipments in 1933–34. Of this increase, 46 million is assigned to shipments destined for Europe and 6 million to shipments destined to ex-Europe.

The foregoing forecasts of the probable volume of trade in 1934–35 clearly (and properly) assume that, as in 1933–34, the volume of trade will be set by the extent of import demand, not by the size of export surpluses; that most of the increase in trade will be due to greater demand from Europe; and also that the enlargement of European demand—in the neighborhood of 50 million bushels—will by no means equal the reduction in the size of the wheat crop of European importing countries between 1933 and 1934, which is now measured at nearly 185 million bushels (Table I). No forecast formulated at this date can be more than a rough approximation. Too little is known about the exact size of European crops, the probable levels of wheat consumption and how they will be affected by short crops of rye and the feed grains, the direction and amounts of changes in wheat stocks, and the extent to which in some countries wheat imports needed to

maintain consumption can be or will be financed under existing governmental control of foreign exchange. On the whole, we regard the forecasts by the Wheat Advisory Committee and Broomhall as acceptable ones, dependent in part upon the velocity of recovery in Europe, but a little low unless the official and unofficial estimates of 1934 European crops given above (p. 3) are subsequently revised upward.

Import requirements.—Four of the twenty-one countries of Europe ex–Danube basin ex-Russia will presumably be out of the import market in 1934–35 as in 1933–34 — Spain, Lithuania, Estonia, and Latvia. Spain and Lithuania may export negligible quantities.

France may import either slightly more or slightly less this year than last. No foreign wheat is needed, other than that which will be offset by exports of French flour. But more wheat will probably come in duty-free from northern Africa; the increase in these imports may or may not be offset by increase in subsidized exports. At this time it seems reasonable to suppose that French total net imports will be practically of the same size this year as last, possibly a little smaller.

Four other countries — Sweden, Finland, Greece, and Portugal—may import a little less in 1934–35 than in 1933–34, because their supplies from inward carryovers and new crops appear to be larger. But if consumption for all purposes is to be maintained at the 1933–34 level, the aggregate reduction in net imports would not appreciably exceed 5 million bushels even if outward carryovers were to be reduced to or held at distinctly low levels.

Six other countries — Belgium, Holland, Switzerland, Denmark, Norway, and Austria —seem likely to increase their net imports slightly. These countries seem to require increased net imports of foreign wheat if consumption is to be maintained in 1934–35 at the 1933–34 level, even with reduction of carryovers about to a minimum. All told, the increase of net imports into this group of countries seems unlikely to exceed 10 million bushels.

It is in the British Isles, Germany, Italy, Czechoslovakia, and Poland that the larger changes in import demand seem likely to occur.

With a larger supply of wheat from carryover and new crop this year than last, the British Isles may import less. How much less, it is impossible to forecast with any assurance. The reduction could be as much as 40 million bushels if consumption should fall to levels prevailing before 1931–32 and if also year-end stocks should be brought to a minimum; but it could be as little as 10 million bushels if consumption should be maintained at the high level of 1933–34 and if stocks at the end of 1934–35 should be held as high as those at the beginning. We take it that a reduction of around 15 million bushels in British and Irish net imports is a reasonable forecast.

From crop and inward carryover, Germany has available in 1934–35 enough wheat to maintain consumption at last year's level, with reduction of stocks to a moderate level when the year closes. Some net imports may be made, partly in order to improve the quality of flour; but, on the other hand, every effort will presumably be made to keep net imports of wheat low. A reasonable guess at net imports in 1934–35 is 5–10 million bushels. Czechoslovakia apparently needs to import about 17 million bushels of wheat—16.5 more than in 1933–34—in order to maintain consumption at the 1933–34 level, even with reduction of stocks about to a minimum; but in view of exchange difficulties and close governmental controls, net imports nearer to 10 million are perhaps in prospect, with some decline in consumption. Poland requires even more than Czechoslovakia to maintain consumption, about 22 million bushels; but here consumption seems likely to decline, and net imports to range from 6 to 10 million bushels larger than in 1933–34. Italy, to maintain consumption at the 1933–34 level with reduction of stocks about to a minimum, seems to require net imports of around 65 million bushels. But here also it seems probable that imports will be officially discouraged and that consumption of wheat may decline. We take it that Italian net imports in 1934–35 can now be forecast only within a range of 30 to 50 million bushels, representing an increase over 1933–34 of roughly 20 to 40 million.

These calculations taken together suggest a probable increase of European takings ranging 25–50 million bushels larger in 1934–35 than in 1933–34. Like Broomhall, we anticipate a small increase in ex-European takings. Cuba, Egypt, and Manchuria will probably import more wheat this year than last, Brazil and China little or no less. It is too early to hazard the guess that Russia, India, and/or Rumania might later in the year swell world import demand. Consequently our calculations tend to confirm the Wheat Advisory Committee's appraisal of probable net exports of about 600 million bushels in 1934–35 (or Broomhall's estimate of shipments amounting to 576 million, since net exports may exceed shipments by about 25 million). These forecasts appear to us slightly below the probabilities in view of the short crops of other grains, but not to an important degree. But both political and economic developments may modify the demands.

Sources of exports.—A striking aspect of international trade in 1934–35 is likely to be the prominence of Canada, Argentina, and Australia as sources of exports, and the relative insignificance of all other countries, including the United States. The small volume of both shipments and offers from Russia thus far in the crop year suggests that Russian net exports will be unimportant, probably not exceeding 15 million bushels. India, though she shipped a little wheat in one of the past six weeks, seems unlikely to export net more than a million or two bushels, though, if international prices are high toward the close of the crop year, more important shipments may come from her 1935 crop. Rumania, Bulgaria, and Yugoslavia appear to have such short crops in 1934 that only very small net exports seem in prospect; and even with such wheat as Hungary is able to ship out, the total net exports from the Danubian countries seem unlikely to exceed 15 or 20 million bushels. Northern African countries have large crops, and will presumably ship freely to their protected French market. United States prices seem likely to continue so far above export parity that net exports and shipments to possessions may not reach 10 million bushels even with such aid as may possibly be accorded by governmental subsidy later in the crop year, unless such subsidization of Pacific wheat exports should be resumed on a large scale. All told, importing countries presumably will secure only about 60 million bushels of wheat from all countries aside from Canada, Argentina, and Australia; so that, if import demand be taken as 600 million bushels, some 540 million must come from these three countries.

It is too early to attempt to forecast how much of this quantity is likely to be exported from each of these three countries, since only the Canadian crop of 1934 seems measurable within a margin of error of about 10 per cent. Only within wide ranges can the prospects be formulated.

If the assumption is made that the 1934 wheat crops of Canada, Argentina, and Australia will approximate, respectively, 277, 210, and 110 million bushels (an assumption which counts upon low yields per acre in the Southern Hemisphere), the following calculation, in million bushels, suggests the outcome:

Item	Canada	Argentina	Australia	Total
Initial stocks	193	118	90	401
New crop	277	210	110	597
Total supply	470	328	200	998
Domestic use	100	100	50	250
Export and carryout	370	228	150	748
"Normal" carryout.	50	65	35	150
Export surplus ...	320	163	115	598
Probable exports ..	280	150	110	540
Probable carryout..	90	78	40	208

If, however, good yields per acre are secured in Argentina (a crop of 270 million bushels) and yields not far below average in Australia (a crop of 150 million bushels), the export movement might work out roughly as follows:

Item	Canada	Argentina	Australia	Total
Initial stocks	193	118	90	401
New crop	277	270	150	697
Total supply	470	388	240	1,098

Domestic use	100	100	50	250
Export and carryout	370	288	190	848
"Normal" carryout.	50	65	35	150
Export surplus ...	320	223	155	698
Probable exports ..	210	195	135	540
Probable carryout .	160	93	55	308

Under the first set of circumstances, export surpluses would exceed import requirements by a fairly small margin; year-end stocks would be reduced nearly to "normal" levels in Argentina and Australia, and, while remaining well above "normal" in Canada, would there be reduced by more than half in the course of the year. It seems altogether probable that such a set of circumstances would cause a moderate advance in international wheat prices sometime during the course of 1934–35, assuming continuation of tendencies apparent in recent years for Canada to hold for prices above the international market. The closer exporters' supplies approximate import requirements, the more likely is Canada to hold for higher prices.

Under the second set of circumstances, export surpluses would exceed import requirements by a substantial margin (narrower, however, than in 1933–34); and, though year-end stocks would probably be reduced considerably in all three countries, they would by no means be brought close to "normal" levels, especially in Canada. Hence importers would have little incentive to fear either general difficulties in obtaining supplies, or particular difficulties if Canadian wheat should be strongly held; and the probability of a large sustained rise in international wheat prices would be remote.

In both of the foregoing calculations, we assume that Argentina and Australia have not the holding power of Canada.

Probable developments with reference both to exports and to year-end stocks now seem to lie within the indicated ranges: Canada may export 210–280 million bushels and carry out stocks of 90–160 million; Argentina may export 150–195 million and carry out stocks of 78–93 million; and Australia may export 110–135 million and carry forward 40–55 million. In the belief that present crop prospects in the Southern Hemisphere foreshadow an Argentine crop no smaller than 210 million bushels and no larger than 270 million and an Australian no smaller than 110 million and no larger than 150 million, and that the Canadian crop will equal 277 million, we anticipate that reported figures will fall within the ranges specified if world trade closely approximates 600 million bushels. At the moment it seems impossible to forecast where, within the specified ranges, either net exports or year-end stocks are likely to fall. Under either set of assumptions, all three countries seem likely to export more than in 1933–34 and year-end stocks in all three countries are likely to be lower when the year closes than they were at the beginning.

Outlook for Year-End Stocks

Particular interest attaches to the prospect for reduction of the huge "world" stocks existing at the opening of the crop year 1934–35, since the supply of old- and new-crop wheat in the world ex-Russia for 1934–35 now appears likely to be 325–425 million bushels smaller than the supply of new-crop wheat available in 1933–34 (see p. 26).

We appraise the probable changes in year-end stocks as follows, using 1934 crop statistics for all countries except Argentina and Australia as specified in Table I, and taking the Argentine and Australian crops within the ranges of 210–270 and 110–150 million bushels respectively. Figures are in million bushels:

Country or position	Estimated 1934	Prospective 1935	Change
United States	290	135	–155
Major exporters[a]	402	208–308	–94–194
Danube exporters[b] ..	54	30	–24
Importing Europe...	305	260	–45
Others[c]	98	104	+6
Total	1,149	737–837	–312–412

[a] Canada, Argentina, Australia.
[b] Hungary, Yugoslavia, Bulgaria, Rumania.
[c] Canadian wheat in United States, United States wheat in Canada, afloat to Europe, afloat to ex-Europe, India, Japan, northern Africa.

The appraisal of prospective Canadian, Argentine, and Australian year-end stocks requires no further comment. Aside from some increase in northern African stocks, no change now seems reasonably in prospect in the

countries and positions included under "others." Danubian stocks will presumably be brought about to a minimum level; even so, consumption of wheat in the area as a whole must be smaller this year than last if any exports are to be shipped out. Stocks in European importing countries as a group will presumably be reduced, but not to a low or an average level (we calculate about 140 million bushels as a minimum, 190 as an average) because supplies for 1934–35 are too abundant in France, Spain, and Portugal. In our calculations we count upon heavy consumption during 1934–35 in these countries and also in the British Isles, Sweden, and Greece; but upon consumption well below the 1933–34 level in Italy, Austria, Czechoslovakia, and Poland, and about at the 1933–34 level elsewhere.

The United States carryover will almost certainly be greatly reduced; but it seems impossible to measure closely the amount of the probable reduction. One element of uncertainty lies in the crop estimate: September estimates are usually and sometimes substantially revised. Aside from this, the largest element of uncertainty is in the quantity of wheat likely to be fed to animals. Our calculations presuppose seed use of about 80 million bushels; net exports of 10 million; and net mill grindings of 480 million bushels (a figure based on the assumptions that with 1934–35 the decline in total domestic flour consumption will cease, that consumption will increase a little, and that year-end flour stocks will remain unchanged). The sum of these items of disposition is 570 million bushels; subtracted from a total supply now estimated at 783 million, it leaves 213 million for outward carryover and for feed and waste. How much will be fed and wasted cannot be foreseen. Murray's estimate of 60 million bushels[1] likely to be fed on farms, plus an allowance of about 20 million bushels for wheat fed and wasted elsewhere, seems to provide as good an indication as can be formulated on available evidence. Such a figure allows for fairly substantial feed use—much above what has been fed in some earlier years, as may be anticipated because of the shortage of feed grains,[2] but much below such years as 1930–31 and 1931–32, when wheat prices were much lower. If 80 million bushels be taken as the approximate quantity likely to be fed and wasted, and supplies and the other items of disposition be taken as given above, the calculated outward carryover would be only about 135 million bushels—practically a "normal" outward carryover for the first time since 1928.

In summary, the present outlook is for a large reduction of world wheat stocks, lying approximately within a range of 310–410 million bushels in contrast with a larger reduction of world ex-Russian supplies which may range between 360 and 460 million bushels. Reductions of year-end stocks are to be expected in practically all countries and positions except northern Africa and those wherein the level of stocks was already low when the crop year opened. If "world" year-end stocks are reduced by as much as 410 million bushels, the level at about 740 million bushels will be the lowest since 1928; and the world wheat surplus that has persisted since the crop of 1928 was harvested will—if the surplus is defined as 400 to 550 million bushels—be very heavily reduced. If the reduction approximates only 310 million bushels, the year-end level at about 840 million bushels will also be the lowest since 1928; but a substantial part of the surplus will remain unabsorbed.

We anticipate that the reduction of stocks during 1934–35 as eventually calculated will be nearer to 310 than to 410 million bushels. Experience in the past few years has indicated that the appraisals of a current year's crops formulated as early as September tend later to be raised more or less substantially. This process of enlarging early forecasts has already been in evidence with reference to the 1934 crop, and one may reasonably expect it to persist.

Outlook for Prices

If the sharp rise in wheat futures prices between July 10 and August 10 had occurred

[1] Clement, Curtis & Co., Chicago, *Monthly Crop Report*, September 1, 1934.

[2] Fairly heavy feed use may also be induced because the big inward carryover must be supposed to contain considerable wheat ill suited for flour milling.

earlier in the season, there would have been good historical basis for predicting that, in the absence of further spectacularly bullish developments, wheat prices would probably decline more or less promptly about to or below the levels prevailing prior to the advance.[1] But history furnishes little basis for anticipating the course of prices following sharp increases with peaks in August. Since 1884–85 there have been only six sharp price advances at Chicago comparable in magnitude and timing with that of July–August 1934; and of these six, four were well sustained. However, developments in these four years (1897, 1904, 1914, and 1916) were so extraordinary as to throw doubt upon the significance of the price movements then recorded. In view of this, and of the additional fact that the other two sharp increases which culminated in August were followed by gradual but sizable declines, it is impossible to say whether there is or is not a "normal" tendency for wheat prices to decline extensively after a rapid sharp advance to an August peak.[2] It is reasonably clear, however, that if such a tendency does exist, it is for a more gradual and prolonged decline than is to be expected following a similarly sharp price increase with a peak in May or June.

Whether Liverpool wheat futures prices will fall, rise, or be maintained close to their present levels during September – December will, in the absence of significant changes in international exchange relationships, presumably depend primarily upon crop developments in Argentina and Australia. If these crops should be so favored by good weather and/or acreage estimates should be revised upward so markedly that the combined outturn of Argentina and Australia should appear likely to approximate 420 million bushels—the upper limit of the production range we have suggested—we think it probable that Liverpool wheat futures prices would weaken appreciably. Under such conditions, and without offsetting bullish developments, the price of the December wheat future which stood near 90 United States cents per bushel during the first two weeks of September might fall as low as 80 cents before the end of December. Should other market factors be moderately bearish, an additional 2- or 3-cent decline might be registered. But it seems improbable that the Liverpool December future will sell as low as 75 cents per bushel for more than a couple of weeks even if Northern Hemisphere crop estimates are raised substantially and the major Southern Hemisphere crops turn out as well as can reasonably be expected at present. Strength in feed grain prices and the inherent strength of the Canadian wheat position are factors which will presumably tend to limit any decline of wheat prices at Liverpool.

If, on the other hand, the major Southern Hemisphere crops should not progress satisfactorily during the next few months and it should appear reasonably certain that in the aggregate they would not exceed 320 million bushels—the lower limit of the range we have considered—Liverpool wheat futures prices might well increase substantially. It seems doubtful, however, that an advance of over 15 cents per bushel from the level of early September would be long sustained even if other market factors should be moderately bullish. It is possible that standing estimates of Northern Hemisphere crops may be revised downward rather than upward, that wheat may be consumed more heavily in both Europe and North America than is now generally anticipated, and that the United States winter-wheat crop may get an unusually bad start because of deficient precipitation and low moisture reserves. These factors are perhaps not likely to be strong enough to influence wheat prices markedly during September–December; but they would undoubtedly tend to intensify any price advance based mainly on adverse crop developments in the Southern Hemisphere.

Winnipeg wheat futures prices, which ruled above prices of corresponding futures at Liverpool during most of June–July, have recently been selling below Liverpool futures. The spread between December futures in these two markets averaged about 6 cents during the first ten days of September. We anticipate that a spread of this magnitude

[1] See Holbrook Working, "Cycles in Wheat Prices," WHEAT STUDIES, November 1931, VIII, 18–27.

[2] *Ibid.*, particularly pp. 24–27.

or slightly larger will prevail at least throughout September – November, when Canadian exports will presumably be seasonally large.

Chicago wheat futures, on the other hand, are likely to continue to sell during September–December at prices substantially above futures at Liverpool. Moreover, in view of the strong domestic wheat position of the United States, it seems more or less reasonable to expect the premium on Chicago futures to average somewhat higher during September–December than in August (Chart 4, p. 12).

This year it is pertinent to discuss the outlook for British wheat parcels prices in gold. Under the terms of the International Wheat Agreement, importing countries signatory to the Agreement are committed to relax import restrictions (including tariffs) on wheat whenever the price of British wheat shall have been maintained at a level of at least 63.02 pre-devaluation *gold* cents per bushel for sixteen weeks. During the first four weeks of August British wheat parcels prices averaged 55.4 gold cents per bushel—93.8 cents in United States currency. To equal 63 gold cents, British parcels prices would have to average over $1.06 in United States currency. This average might actually be attained during the course of September–December if the Liverpool December future rose to $1.05, the upper limit of the price range we have suggested. But the relationship that will prevail between British parcels prices and the price of the December wheat future at Liverpool cannot be exactly predicted. And in any case, it seems quite unlikely that British parcels will average as high as 63 gold cents per bushel for as long as sixteen weeks before the middle of January.

The outlook for wheat prices in September–December as outlined above is without reference to possible changes in international exchange relationships. Should sterling exchange decline substantially in terms of other foreign currencies, as it has shown a slight tendency to do since late in August, Liverpool wheat prices expressed in English currency would probably reflect somewhat greater strength than under stable exchange relationships, whereas the same prices converted to United States currency would reflect somewhat greater weakness.

This study was written by M. K. Bennett and Helen C. Farnsworth

APPENDIX

TABLE I.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING AREAS AND COUNTRIES, 1928–34*

(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								
1928.....	3,903	3,337	1,989	913	577	336	567	160	349	807	367	1,042	69	291
1929.....	3,424	3,070	1,417	822	586	236	305	127	163	694	303	1,147	77	321
1930.....	3,708	3,217	1,757	890	631	259	421	214	232	989	353	1,009	64	391
1931.....	3,669	3,206	1,663	932	818	114	321	191	220	786	370	1,064	69	347
1932.....	3,693	3,191	1,635	744	476	268	443	214	235	744	222	1,269	75	337
1933[d]....	3,529	3,042	1,227	527	351	176	270	174	256	1,019	365	1,362	67	353
1933[e]....	3,583	3,065	1,258	528	352	176	270	174	286	1,019	371	1,374	70	353
1934[e]....	.....	*2,752*	.....	493	400	93	277	...	...	.....	255	*1,190*	86	349

Year	Hungary	Yugoslavia	Rumania	Bulgaria	Morocco	Algeria	Tunis	Egypt	British Isles	France	Germany	Italy	Belgium[f]	Netherlands
1928.....	99.2	103.3	115.5	49.2	24.7	30.3	13.7	37.3	50.9	281.3	141.6	228.6	17.9	7.3
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[d]....	90.1	96.6	119.1	58.9	25.3	32.0	9.2	40.0	63.5	362.3	205.9	297.6	15.9	14.9
1933[e]....	96.4	96.6	119.1	58.9	28.9	32.0	9.2	40.0	64.4	362.3	205.9	297.6	16.1	15.3
1934[e]....	61.7	73.5	73.5	46.3	30.8	39.7	15.8	38.6	*65.0*	365.0	165.7	*224.1*	14.2	15.6

Year	Scandinavia[g]	Baltic states[h]	Spain	Portugal	Switzerland	Austria	Czechoslovakia	Poland	Greece	Mexico	Japan, Chosen	South Africa	Chile, Uruguay	New Zealand
1928.....	31.3	10.9	122.6	7.5	4.24	12.9	52.9	59.2	13.1	11.0	39.4	7.2	42.0	8.83
1929.....	31.5	13.7	154.2	10.8	4.21	11.6	52.9	65.9	11.4	11.3	38.8	10.6	46.7	7.24
1930.....	31.8	17.9	146.7	13.8	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	23.4	4.00	12.2	53.7	49.5	17.1	9.7	39.9	10.6	31.5	11.06
1933[d]....	41.4	19.0	138.2	15.1	4.80	17.4	72.9	68.3	24.7	11.8	47.6	9.4	....	8.49
1933[e]....	41.5	19.8	138.2	16.0	4.80	14.6	72.9	79.9	24.7	12.1	47.1	10.2	....	8.49
1934[e]....	*40.4*	*22.5*	173.7	20.5	*5.00*	*12.8*	*47.4*	*49.9*	*27.6*	10.3	52.6	....	....	....

* 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, 1934.
[e] As of about September 12, 1934.
[f] Including Luxemburg.
[g] Denmark, Norway, Sweden.
[h] Finland, Latvia, Estonia, Lithuania.

TABLE II.—WHEAT RECEIPTS IN NORTH AMERICA, MARCH–AUGUST 1934, 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.–July[a]	Aug.
1928.....	26.3	17.9	25.9	15.5	496.2	72.6	84.2	16.4	10.1	11.9	12.0	6.0	409.4	3.4
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	475.6	14.2
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	237.2	21.2
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	307.0	11.9
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	265.2	17.6
1933.....	12.7	15.8	23.3	28.6	281.9	37.2	26.7	20.8	10.3	10.8	19.5	10.5	370.7	25.6
1934.....	9.1	8.4	12.5	23.4	199.1	49.7	23.0[b]	9.1	7.3	8.3	12.3	10.9	227.6	17.1[b]

* 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 1927–28 to 1933–34.
[b] Approximate.

TABLE III.—WHEAT VISIBLE SUPPLIES, MAY–AUGUST 1934, 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, 1929.....	407.3	113.4	1.7	137.1	27.9	280.1	55.2	9.6	64.8	48.0	14.4
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
Sept. 1, 1929.....	367.8	186.8	4.5	77.1	21.2	289.6	46.5	6.0	52.5	13.5	12.2
1930.....	383.8	201.3	3.8	79.0	12.2	296.3	47.7	6.1	53.8	27.0	6.8
1931.....	475.2	261.8	32.2	95.2	5.3	394.5	46.3	13.4	59.7	15.5	5.5
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.....	.....	122.4	...	183.7	10.1	316.2	38.0	....	....	38.5	19.8
1934											
May 5.....	442.6	86.1	1.3	202.0	.9	290.3	29.8	14.4	44.2	86.0	22.1
12.....	433.6	81.9	.7	201.0	1.7	285.3	29.2	14.2	43.4	82.5	22.4
19.....	430.2	81.0	.1	197.2	3.7	282.0	31.3	14.3	45.6	80.5	22.1
26.....	422.2	80.0	...	194.6	4.5	279.1	29.7	14.8	44.5	78.0	20.6
June 2.....	419.6	79.0	...	195.2	5.3	279.5	30.6	14.5	45.1	74.8	20.2
9.....	412.0	76.2	...	193.4	6.6	276.2	28.2	13.8	42.0	72.5	21.3
16.....	409.4	76.3	...	190.0	7.3	273.6	30.7	13.7	44.4	70.8	20.6
23.....	407.8	76.7	...	185.0	9.3	271.0	32.2	13.7	45.9	69.5	21.4
30.....	406.8	80.6	...	181.6	10.1	272.3	33.2	14.0	47.2	66.7	20.6
July 7.....	408.2	88.1	...	179.7	9.5	277.3	33.0	14.2	47.2	63.5	20.2
14.....	414.2	98.0	...	178.2	9.1	285.3	33.2	14.3	47.5	61.2	20.2
21.....	416.4	107.5	...	175.1	9.0	291.6	32.3	14.8	47.1	58.3	19.5
28.....	422.6	112.6	...	176.2	9.2	298.0	33.6	15.2	48.8	56.0	19.8
Aug. 4.....	423.2	115.9	...	177.6	9.8	303.3	34.8	13.6	48.4	52.0	19.5
11.....	422.5	116.5	...	177.5	9.6	303.6	37.1	13.2	50.3	49.5	19.1
18.....	422.8	119.7	...	174.7	10.4	304.8	40.4	12.2	52.6	47.0	18.4
25.....	422.3	121.3	...	174.5	10.0	305.9	40.3	11.6	51.9	45.0	19.5
Sept. 1.....	.....	122.4	...	183.7	10.1	316.2	38.0	....	....	38.5	19.8

* *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 1928*

(*Million bushels*)

Year	United States (July 1)						Canada (July 31)						
	On farms	In country mills and elevators	Commercial stocks	In city mills[a]	Total four positions	U.S. grain in Canada	On farms	In country mills and elevators	In terminal elevators	In transit	In flour mills	Total five positions	Canadian grain in U.S.[b]
1928.....	19.6	19.3	38.6	42.8	120.3	2.5	4.2	4.7	48.9	13.7	6.1	77.6	13.6
1929.....	45.4	41.5	90.4	64.5	241.8	3.3	5.6	6.3	76.3	8.7	7.5	104.4	22.9
1930.....	59.5	60.2	109.3	73.9[c]	302.9	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.....	82.2	64.3	123.6	121.2[c]	391.3	4.1	12.3	77.9	109.3	9.0	3.2[d]	211.7	6.2
1934.....	61.0	51.1	80.5	97.2[c]	289.8	0.0	8.7	70.4	107.3	5.1	1.8[d]	193.3	10.0

* 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.

[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 1933–34, 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	7,100[a]	8,401	8,875	7,629[a]	400	337	353	8,001	8,538	7,276[a]
Aug.	9,005	6,719	8,186[a]	9,649	7,225	8,680[a]	460	416	...	9,189	6,809	.....
Sept.	9,395	7,540	.....	10,062	8,096	.....	420	362	...	9,642	7,734	.....
Oct.	9,382	8,181	.....	10,049	8,776	.....	416	352	...	9,633	8,424	.....
Nov.	8,719	8,116	.....	9,346	8,706	.....	537	338	...	8,809	8,368	.....
Dec.	8,323	7,332	.....	8,926	7,875	.....	447	428	...	8,479	7,447	.....
Jan.	8,077	8,719	.....	8,666	9,347	.....	392	415	...	8,274	8,932	.....
Feb.	7,216	7,867	.....	7,752	8,442	.....	344	325	...	7,408	8,117	.....
Mar.	8,867	8,362	.....	9,503	8,917	.....	392	422	...	9,111	8,495	.....
Apr.	9,298	7,455	.....	9,960	8,006	.....	292	469	...	9,668	7,537	.....
May	8,777	8,103	.....	9,397	8,693	.....	383	323	...	9,014	8,370	.....
June	8,579	7,501	.....	9,195	8,054	.....	425	266	...	8,770	7,788	.....
July–June	103,466	94,170	.....	110,906	101,012	.....	4,908	4,453	...	105,998	96,559	.....

* 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; the preliminary estimates for July and August 1934 are based on production reported to the *Northwestern Miller.*

[a] Preliminary.

TABLE VI.—INTERNATIONAL SHIPMENTS OF WHEAT AND FLOUR, WEEKLY FROM APRIL 1934*

(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. 21	8.46	3.72	1.90	1.44	...	1.25	...	.15	5.54	2.85	.89	1.80	2.92	1.57	1.35
28	7.93	3.70	2.22	1.20	...	.63	...	.18	4.91	1.31	1.50	2.10	3.02	1.31	1.71
May 5	9.26	4.35	2.08	1.64	.25	.72	...	.22	6.81	2.86	2.01	1.94	2.45	.98	1.47
12	9.23	4.95	1.95	.95	...	1.19	...	.19	7.23	4.35	.98	1.90	2.00	1.06	.94
19	11.53	5.90	3.63	1.18	...	.60	...	.22	9.55	2.30	2.84	4.41	1.98	.59	1.39
26	9.98	4.38	3.34	1.40	...	.54	...	.32	7.27	3.18	1.59	2.50	2.71	1.00	1.71
June 2	7.72	3.19	2.42	1.40	...	.45	...	.26	6.36	1.24	2.58	2.54	1.36	.50	.86
9	10.45	3.07	5.27	1.32	...	.31	...	.48	8.59	3.53	2.81	2.25	1.86	.31	1.55
16	10.09	3.83	3.82	1.22	...	.58	...	.64	9.06	3.50	3.32	2.24	1.03	.09	.94
23	10.63	4.69	2.90	2.61	...	.23	...	.20	8.43	3.77	1.73	2.93	2.20	.42	1.78
30	10.83	3.53	3.74	2.97	...	.29	...	.30	8.05	2.36	2.95	2.74	2.78	1.22	1.56
July 7	8.22	2.89	3.12	1.66	.02	.29	...	.24	6.17	2.06	2.35	1.76	2.05	.68	1.37
14	9.86	3.61	3.54	2.01	...	.25	...	.45	7.89	2.79	2.50	2.60	1.97	.43	1.54
21	10.79	3.62	4.61	1.98	...	.33	...	.25	8.24	2.59	2.71	2.94	2.55	.94	1.61
28	9.17	3.07	3.40	2.01	...	.27	...	.42	7.79	2.78	3.35	1.66	1.38	.33	1.05
Aug. 4	10.44	4.17	3.76	2.02	...	.20	...	.29	8.54	3.39	2.36	2.79	1.90	.71	1.19
11	11.72	3.96	6.14	.82	...	.54	...	.26	9.14	3.03	3.58	2.53	2.58	1.10	1.48
18	10.67	4.49	3.50	2.19	...	.37	...	.12	9.21	2.31	3.71	3.19	1.46	.65	.81
25	12.25	4.86	3.43	3.11	.19	.30	.22	.14	8.67	2.99	2.96	2.72	3.58	1.71	1.87
Sept. 1[c]	9.42	4.62	2.88	1.14	.26	...	...	.52	....	....	....	....	....	....	....

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

[a] Including Uruguay. [b] Mainly northern Africa, Germany, and France. [c] Preliminary.

TABLE VII.—NET EXPORTS AND NET IMPORTS OF WHEAT AND FLOUR, MONTHLY FROM AUGUST 1933, WITH SUMMATIONS AND COMPARISONS*

(Million bushels)

A. NET EXPORTS

Month or period	United States[a]	Canada	Argentina	Australia	Four exporters	USSR	Hungary	Yugoslavia	Rumania	Bulgaria	Poland	Algeria	Tunis	India
Aug.	.99	10.78	16.33	8.10	36.20	2.25	1.82	.06	.01	.27	.06	1.36	.36	.05
Sept.	.72	22.13	7.15	7.26	37.26	6.23	4.37	.13	.00	.72	(.02)	1.16	.12	.07
Oct.	.57	25.60	5.79	4.79	36.75	5.74	3.67	.17	.07	.44	(.12)	1.01	(.20)	.05
Nov.	1.14	25.60	3.86	5.72	36.32	5.99	3.90	.02	.05	.51	(.17)	1.00	(.13)	(.09)
Dec.	6.21	19.32	6.30	7.57	39.40	7.04	1.67	.01	.10	.65	(.15)	1.01	(.15)	.08
Jan.	4.54	9.10	15.23	9.69	38.56	2.87	2.01	.02	.00	.12	.06	.81	(.10)	.06
Feb.	3.46	7.97	17.23	9.54	38.20	1.50	1.70	.01	.00	.10	.18	1.29	(.32)	.06
Mar.	3.90	12.28	17.40	7.00	40.58	.99	3.87	.10	(.00)	.90	.23	1.22	(.29)	.08
Apr.	4.82	5.08	10.43	5.23	25.56	.51	3.87	.08	.01	.43	.16	1.20	(.23)	.04
May	1.97	21.17	14.01	5.62	42.77	.80	1.79	.01	(.00)	.34	.42	.57	(.08)	.03
June	.75	20.33	16.38	7.89	45.35	....	1.47	.20	.00	.01	.68	....	...	.06
July	1.63	14.70	16.92	....	.....	....	....	...	...	...	...	....	...	...
1932-33	33.93	264.13	132.31	150.21	580.58	16.70	7.48	.97	.05	3.14	1.18	8.44	5.35	(.88)
1933-34[b]	30.70	194.06	147.03	87.00	458.79	34.00	31.80	.90	.30	4.50	1.50	12.00	(.50)	.60

B. NET IMPORTS

Month or period	British Isles			Three variable importers				Belgium[d]	Netherlands	Scandinavia				Switzerland
	U.K.	I.F.S.	Total	Total	France[c]	Germany	Italy			Denmark	Norway	Sweden	Total	
Aug.	17.15	2.09	19.24	2.81	1.98	.27	.56	3.89	2.69	1.38	.63	.16	2.17	1.55
Sept.	21.14	1.74	22.88	(1.05)	.89	(1.81)	(.13)	2.55	4.34	1.69	.65	.22	2.56	2.24
Oct.	20.83	2.26	23.09	.37	1.25	(1.22)	.34	3.41	3.40	1.10	1.04	.18	2.32	1.84
Nov.	20.66	1.24	21.90	.29	1.92	(2.21)	.59	4.14	2.23	1.52	1.04	.19	2.75	1.50
Dec.	16.73	1.29	18.02	.37	2.25	(2.16)	.28	2.76	.98	.97	.35	.11	1.43	1.39
Jan.	12.93	.97	13.90	1.22	1.55	(.84)	.51	3.32	.37	.71	.64	.15	1.50	1.27
Feb.	15.07	1.24	16.31	2.34	1.64	.40	.30	3.47	.55	.53	.19	.14	.86	.96
Mar.	20.05	2.15	22.20	3.35	1.76	.24	1.35	4.91	1.23	.80	.62	.14	1.56	1.05
Apr.	18.89	1.75	20.64	2.46	1.47	(.25)	1.24	3.85	1.41	.71	.57	.18	1.46	1.24
May	18.68	1.77	20.45	1.65	.25	.36	1.04	3.21	1.75	.96	1.13	.14	2.23	1.32
June	17.49	....	.....	2.10	.95	.68	.51	3.15	1.93	.66	.95	.09	1.70	1.72
July	19.17	....	.....	....	...	1.19	...	3.25	1.47	1.61	...	...	....	....
1932-33	215.97	18.16	234.13	46.94	31.71	4.68	10.55	39.29	27.31	12.16	8.69	3.23	24.08	19.10
1933-34[b]	218.79	19.50	238.29	19.50	17.00	(5.35)	8.00	41.91	22.35	12.64	9.00	1.80	23.44	18.00

B. NET IMPORTS (*Continued*)

Month or period	Austria	Czechoslovakia	Greece	Spain	Portugal	Finland	Latvia	Estonia	Lithuania	Four Baltic States	Egypt	Japan	New Zealand	South Africa
Aug.	.88	.15	1.34	(.00)	.08	.49	.00	.00	(.01)	.48	.01	.26		.00
Sept.	.37	.00	1.40	(.01)	.06	.34	.00	.00	(.01)	.33	.03	.09	(.14)	.01
Oct.	.81	.00	1.07	(.01)	.05	.39	.00	.00	(.00)	.39	.01	(.01)		.00
Nov.	.69	.01	.92	(.01)	.08	.32	.00	.00	(.01)	.31	.03	(.01)	.06	.01
Dec.	.71	.00	.52	(.01)	.09	.30	.00	.00	(.00)	.30	.02	(.51)	.04	.00
Jan.	.63	.00	.85	(.00)	.08	.33	.00	.00	(.00)	.33	.04	.68	.07	.01
Feb.	.84	.00	.75	(.01)	.08	.34	.00	.00	(.01)	.33		.96	.04	
Mar.	.72	.00	.72	.00	.12	.33	.00	.00	.00	.33	.02	.63	.05	.01
Apr.	1.14	.00	.89	.00	.09	.34	.00	.00	.00	.34	.02	.80	....	....
May	1.53	.00	.86	.00	.10	.47	.00	.00	.00	.47	.02	.68	....	....
June	....	.00	.86	(.00)	...	.42	...	.00	.00	...	...	.14	....	....
July	....	...	...	...	...	...	...	...	...	...	...	.13	....	....
1932-33	13.35	12.01	19.70	(.02)	1.36	4.46	.03	.00	(.07)	4.42	.48	3.73	1.13	.28
1933-34[b]	11.50	.50	11.20	(.06)	1.00	4.50	.00	.00	(.04)	4.46	.25	3.84	....	....

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

[a] Includes shipments to possessions.

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

[c] Net imports in "commerce général," except June and July.

[d] Including Luxemburg.

TABLE VIII.—PRICES OF REPRESENTATIVE WHEATS, WEEKLY FROM APRIL 1934*

(Cents per bushel)

Week ending	British parcels	Liverpool (Tuesday prices)				United States					Winnipeg		Buenos Aires 80-kilo
		No. 1 Manitoba	No. 3 Manitoba[ab]	Argentine Rosafé	Australian f.a.q.	Basic cash: Chicago	No. 2 Hard Winter Kansas City	No. 2 Red Winter St. Louis	No. 1 Dk. Nor. Spring Minneapolis	No. 1 White Seattle	Wtd. average	No. 3 Manitoba	
Apr. 7	72 *43*	85	75	60	68	86	82	87	88	75	64	62	54
14	71 *42*	84	74	59	71	86	80	85	88	75	64	62	54
21	74 *44*	84	73	60	69	77	73	78	81	69	62	60	54
28	66 *39*	82	72	59	68	76	70	73	81	70	62	60	54
May 5	64 *38*	81	72	56	70	80	74	76	84	72	63	61	54
12	64 *38*	82	75	59	71	87	83	84	92	77	66	64	53
19	62 *37*	84	77	61	73	89	82	86	94	76	67	65	53
26	66 *40*	84	77	61	72	91	86	88	98	76	69	66	53
June 2	70 *41*	92	..	63	75	100	96	98	110	83	77	73	53
9	73 *44*	91	82	64	73	99	95	98	106	83	76	71	53
16	68 *40*	92	82	65	76	97	93	95	105	81	76	71	53
23	67 *40*	93	84	65	76	94	87	90	101	78	76	72	53
30	72 *43*	91	83	64	76	91	88	90	99	76	76	71	53
July 7	78 *47*	91	82	63	73	90	88	89	97	74	76	72	53
14	75 *44*	90	83	63	72	94	90	90	102	78	80	75	53
21	76 *45*	97	90	67	77	100	99	96	113	85	84	80	57
28	84 *50*	100	95	72	80	99	100	97	114	83	85	81	60
Aug. 4	87 *52*	102	98[c]	75	86	103	104	99	117	88	87	84	66
11	100 *59*	109	106[c]	86	98	108	109	103	123	95	92	89	73
18	96 *56*	106	102	83	97	103	106	100	120	87	86	83	..
25	93 *54*	104	98	81	94	105	107	102	119	..	86	82	..
Sept. 1	.. ..	101	96	79	92	103	106	102	118	..	82	78	..

* For sources and methods of computation, see WHEAT STUDIES, December 1933, X, 140–41. Dots (...) indicate no quotations. Figures in italics are expressed in pre-devaluation gold cents, based on London prices of gold.

[a] Wheat shipped from Vancouver.

[b] Parcels to London.

[c] Parcels to Liverpool (Atlantic).

TABLE IX.—MONTHLY PRICES OF DOMESTIC WHEAT IN EUROPE, MARCH–JULY, FROM 1930–31*

(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
1933	*47*	*47*	*52*	*58*	*60*	*110*	*104*	*105*	*102*	*125*	*128*	*124*	*125*	*122*	*122*
1934	60	61	66	74	72	228	232	235	237	216	204[a]	206[a]	207[a]	203[a]	204[a]
1934	*36*	*36*	*39*	*44*	*43*	*136*	*138*	*140*	*141*	*129*	*121*[a]	*122*[a]	*123*[a]	*121*[a]	*122*[a]
	ITALY					HUNGARY					RUMANIA				
1930	186	194	196	202	177	110	112	104	111	109	92	95	92	88	83
1931	149	152	160	143	131	75	75	72	70	67	52	53	58	51	45
1932	167	166	169	157	137	66	64	60	59	63	53	54	56	54	51
1933	148	147	158	154	169	72	69	68	76	78	97	...	109	124	91
1933	*147*	*140*	*134*	*127*	*123*	*72*	*66*	*58*	*62*	*56*	*97*	...	*93*	*101*	*65*
1934	201	205	197	193	191[b]	80	81	91	106	...	101[c]	100[d]	121	109	...
1934	*119*	*122*	*117*	*114*	*114*[b]	*47*	*48*	*54*	*63*	...	*60*[c]	*60*[d]	*72*	*65*	...

* See WHEAT STUDIES, December 1933, X, 141, for sources and explanations. Dots (...) indicate no quotations. The 1933 and 1934 figures in italics are expressed in pre-devaluation gold cents, based on London prices of gold.

[a] Fixed prices paid to producers in the district in which Berlin is located. After April 1, mills were required to pay this basic price plus 6 RM (approximately 6.4 cents at current exchange rates).

[b] Two-week average.

[c] One week only.

[d] Three-week average.

TABLE X.—WHEAT DISPOSITION ESTIMATES, ANNUALLY FROM 1928–29*

(Million bushels)

Year	Domestic supplies			Domestic disappearance				Surplus over domestic use[d]	Net exports	End-year stocks[a]
	Initial stocks[a]	New crop	Total	Milled (net)	Seed use	Balancing item[b]	Total[c]			
	A. UNITED STATES (July–June)									
1928–29	120	913	1,033	511	85	+ 50	646	387	145	242
1929–30	242	822	1,064	509	84	+ 25	618	446	143	303
1930–31	303	890	1,193	493	81	+179	753	440	115[e]	325
1931–32	325	932	1,257	486	80	+180	746	511	126[e]	385
1932–33	385	744	1,129	493	83	+126	702	427	36	391
1933–34[f]	386	527	913	447	72	+114	633	280	40	240
1933–34[g]	389	527	916	455	76	+ 92	623	293	33	260
1933–34[h]	391	528	919	449	76	+ 74	599	320	30	290
	B. CANADA (August–July)									
1928–29	78	567	645	44	44	+47	135	510	406	104
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[f]	212	272	484	42	31	+41	114	370	215	155
1933–34[g]	212	270	482	42	31	+32	105	377	192	185
1933–34[h]	212	270	482	42	31	+22[i]	95	387	194	193
	C. AUSTRALIA (August–July)									
1928–29	36	160	196	29	15	+ 2	46	150	109	41
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	212	262	33	14	+10	57	205	150	55
1933–34[f]	60	160	220	33	14	+ 3	50	170	105	65
1933–34[g]	55	174	229	33	12	+ 3	48	181	85	96
1933–34[h]	55	174	229	33	12	+ 7	52	177	87	90
	D. ARGENTINA (August–July)									
1928–29	95	349	444	60	23	+9	92	352	222	130
1929–30	130	163	293	60	26	−9	77	216	151	65
1930–31	65	232	297	63	21	+9	93	204	124	80
1931–32	80	220	300	65	24	+6	95	205	140	65
1932–33	65	235	300	65	22	+6	93	207	132	75
1933–34[f]	75	256	331	65	22	+6	93	238	110	128
1933–34[g]	75	256	331	65	22	+6	93	238	140	98
1933–34[h]	75	286	361	67	22	+7	96	265	147	118

* Based on official data so far as possible; see WHEAT STUDIES, December 1933, Table XXXII.

[a] Including revised official data on stocks in the United States.

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

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

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

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

[f] Estimates as of January 1934.

[g] Estimates as of May 1934.

[h] Estimates as of September 1934.

[i] Too low to cover official estimates of wheat fed on farms, unmerchantable, and lost in cleaning, which suggests official underestimation (officially recognized) of the 1933 crop.

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