WORLD WHEAT SURVEY AND OUTLOOK JANUARY 1934

The 1933 world wheat crop ex-Russia, as appraised in January 1934, is roughly 190 million bushels larger than it appeared to be four months ago. Southern Hemisphere crop conditions improved, and extensive upward revisions appeared in the crop statistics particularly of European countries. Nevertheless the world crop is a small one, over 200 million bushels smaller than the crop of 1932 and over 400 million smaller than the bumper crop of 1928. Initial stocks, however, were so large that world wheat supplies for 1933–34 are only about 100 million bushels smaller than in 1932–33. The major exporting countries, particularly the United States and Canada, have total supplies much smaller than in 1932–33, while European supplies, excluding or including Russia, are much larger.

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The reduction in world wheat supplies has already affected current statistics of stocks, and especially world visible supplies. Nearly of record seasonal size last August 1, visibles fell by January 1 to the lowest January level since 1928, mainly on account of relatively small North American marketings from the short new crops. But total world stocks on January 1 (which include wheat in additional positions) were relatively higher than visibles, though probably somewhat the lowest since 1929. Inroads have been made upon the world wheat surplus; but it remains burdensome.

The bumper crops and heavy initial stocks in European importing countries, and governmental restrictions on imports more general and more stringent than ever before, brought the August–December total volume of international trade in wheat and flour to its lowest post-war level. Shipments from North America were strikingly small; the United States was practically out of the export market until subsidized exports began to move from the Pacific Northwest, and Canada continued to refrain from pressing her heavy stocks on import markets. Argentina and Australia shipped freely from sizable stocks of old-crop wheat, and Germany and France exported some wheat and flour with governmental aids. Russian, Danubian, and northern African shipments were moderate. They sufficed at times, together with offers from the Southern Hemisphere, France, and Germany, to create selling pressure on import markets because of the limited demand. India shipped almost nothing. Thus far in 1933–34 reduction of imports from 1932–33 levels has been large in ex-Europe than in Europe, mainly because Chinese purchases tended to be postponed.

In both importing and exporting countries, governmental measures affecting wheat became increasingly prominent during August–December. Despite the International Wheat Agreement, acreage restriction made little progress in Europe. The campaign in the United States committed farmers controlling about 80 per cent of the 1930–32 acreage to reductions of 15 per cent. Further steps will be required, however, if a reduction of fully 15 per cent in the total sown acreage is to be achieved. The methods to be used in reducing production in Canada, Argentine, and Australia have not yet been made public. Export quotas for 1933–34 remain as specified in the Agreement; and Australia and Argentina have formed new governmental agencies capable of controlling exports. After mid-October, subsidized exports from the United States were made through the North Pacific Emer-

gency Export Association. Since early December, Argentina has subsidized exports and enforced fixed minimum domestic prices. Wheat was subjected to import duties in China and Denmark. Germany and France fortified their defenses against wheat-price reduction by adoption of fixed minimum prices. Belgium and Holland adopted new systems of control. New measures tending to reduce wheat surpluses through expansion of consumption were adopted in France and Italy.

Wheat prices in the principal exporting markets and duty-free prices on import markets tended generally to decline during August–December, more rapidly in the first than in the second part of the period. Price movements were dominated jointly by increasing bearishness in the international statistical position of wheat and by instability in the relationships of national currencies; but reaction from the speculative boom culminating last July was an important factor for a number of weeks. Chicago prices remained far above export parity; and domestic wheat prices in protected European markets were maintained at much higher levels than prices of duty-free import wheats.

The volume of international trade in 1933–34 now seems likely to fall to about 550 million bushels, much the smallest in post-war years. Of this Argentina and Australia may furnish 215 million (the allocated quota); the United States and the Danube countries 75 million (less than the quotas); Russia 30 million; northern Africa, Poland, and Spain 15 million; and Canada 215 million (more than the quota). This distribution is based upon the assumption that quotas for Argentina and Australia will not be changed.

Wheat disappearance in the world ex-Russia will probably be somewhat larger in 1933–34 than in 1932–33, perhaps by 25 million bushels. In the United States, wheat ground into flour and retained domestically will be reduced, but rather because flour stocks will be consumed than because flour consumption is being materially curtailed under the processing tax. Feed use of wheat will also be smaller this year. Prospective increase of wheat utilization in European importing countries and in the Danube basin, mainly in response to more abundant domestic wheat crops, will more than offset prospective reduction of utilization in North America.

The prospective disappearance seems large enough to result in a reduction of world end-year stocks by roughly 120 million bushels. Such a reduction, however, would leave the level still more than 300 million bushels above normal. Redistribution of end-year stocks is clearly in prospect: more wheat will be stored in the Southern Hemisphere and Europe at the end of 1933–34 than at the beginning, and less in North America.

In the United States, the prospects are for a carryover of about 240 million bushels. As the abundance of domestic supplies becomes clearer in late winter or during the spring, prices of contract wheat and of the May future at Chicago are likely to decline relative to July and September futures until relations similar to those of last year are reached.

International wheat prices, in gold or in currency, seem somewhat less likely to rise than to decline slightly before early April; and Chicago prices may tend to weaken more than Liverpool or Winnipeg prices. After early April, new-crop prospects usually govern the course of prices; and substantial advances are possible, particularly if the United States winter-wheat crop condition fails to improve and European crops do not show exceptional promise.

Wheat Supplies

Size and distribution of wheat crops.—As now appraised, the 1933 world wheat crop ex-Russia[1] is the second smallest since 1927, not much larger than the poor crop of 1929. It falls about 420 million bushels below the bumper crop of 1928, and about 220 million below the good crop of 1932. The reduction of some 6 per cent in production between 1932 and 1933 reflects a decline of about 4.4 per cent in harvested acreage (practically all in the United States and Canada) and a decline

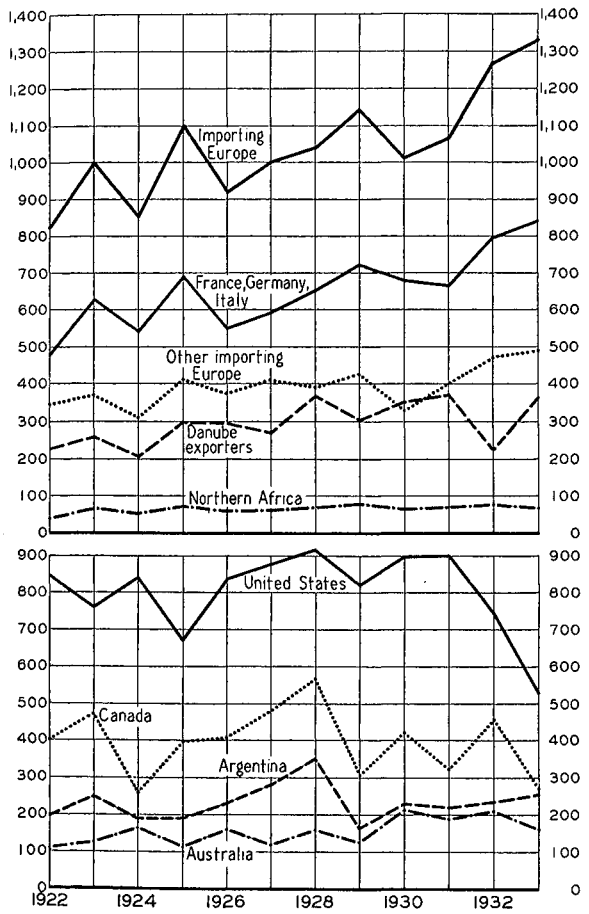
[1] This terminology is here used to include wheat crops in the countries ex-Russia for which details are given in Table I. Production in Russia, China (including Manchuria), southwestern Asia, and some minor producers is not included.

of only 1.3 per cent in yield per acre. As a result of the small world crop, the world wheat surplus will be reduced, but not eliminated, during 1933–34.

The outstanding features of the distribution of the 1933 crop appear in Chart 1. Importing Europe has a record crop, exceeding

CHART 1.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING AREAS, 1922–33*

(Million bushels)



* See Table I.

even that of 1932; and the crops of the three formerly dominant importers of continental Europe—France, Germany, and Italy—are particularly large. The four major overseas exporters together have a small crop, the smallest, indeed, since 1916; the United States and Canadian crops are particularly short. The minor exporters of the Danube basin, and also India (Table I), have large though not bumper crops, while crops in French northern Africa are rather small. This distribution, similar in its main features to that of 1929, implies low European import requirements and a small total volume of international trade in 1933–34. The minor exporters are in a better position to supply importers with wheat in 1933–34 than they were in 1929–30 or 1932–33.

In importing Europe, wheat production in 1933 was the largest in a decade, not only in France, Germany, and Italy, but also in the British Isles, Holland, Sweden, Switzerland, Austria, Czechoslovakia, Finland, Latvia, and Greece; and only in Spain and Belgium did production fall below the 1928–32 average. High acreages and high yields combined to cause the remarkably heavy outturns in importing Europe. Acreages harvested reached new high peaks for the past decade in all the countries which had record crops except France, and in Norway also; only in Belgium was the acreage below the 1928–32 average. Yields per acre were the highest in a decade in France, Germany, Italy, Switzerland, Austria, Czechoslovakia, and Greece; and in every other country of importing Europe except Belgium, Spain, Poland, and Estonia the yield per acre was above the 1923–31 average. Exceptionally dry weather when the grain was ripening was a dominant factor in the high yields, as in 1929; it also resulted in wheat of unusually good quality, promptly available for milling.

Outside of importing Europe, only the Japanese crop of 1933 was of record size. Here also both acreage and yield per acre were the highest in history. Each of the four Danube exporting countries harvested crops above the 1928–32 average; yields per acre were excellent, but acreages harvested were not high. Quality was good except in Rumania. Crops were above the average in size in India, Morocco, and South Africa; below average in Algeria, Tunis, Egypt, Turkey, Syria and Lebanon, and Mexico. The Manchurian and Chinese crops of 1933 apparently substantially exceeded the poor ones of 1932 both in quantity and in quality. Reliable indications of production in Chile, Uruguay, and New Zealand are not at present available. A prelim-

inary official estimate of the Russian crop of 1933 is 1,021 million bushels, a record post-war crop if the preliminary estimate is borne out. It is of rather poor quality, to judge by complaints of excessive weed growth, lodging, slow progress in harvesting, and adverse comments of British millers. The indicated percentage increase over the excellent crop of 1930 is only about half as large as the percentage increase in population since 1930.

The United States crop, only 527 million bushels, was the smallest since 1894 according to official estimates and since 1890 according to our revisions. The acreage harvested was the smallest since 1917; the yield per acre was the smallest since 1890. Sowings of winter wheat were curtailed because of drought and low prices; the winter was unfavorable; abandonment was extremely heavy; drought in June further reduced prospects that were already poor. Spring wheat was sown late and on a somewhat reduced acreage despite heavy sowings in the Pacific Northwest, where much abandoned winter-wheat acreage was put into spring wheat. Drought in June reduced prospective outturn and apparently led to rather heavy abandonment of spring wheat. The relative shortage of the 1933 crops is reflected chiefly in the production of durum, hard red winter, and hard red spring wheats; the crop of soft red winter is less strikingly short, and white wheats are distinctly abundant. Total production falls well below ordinary domestic requirements, and stocks are therefore certain to be much smaller at the end of the year than at the beginning (see p. 174). In quality, the bread-wheat crop is better than the good crop of 1932, with regard both to grades and to protein content.[1]

The Canadian crop, now officially estimated at 272 million bushels, was the smallest since 1924. The area sown, though lower than in the two preceding years, was otherwise the largest on record; hence the short crop resulted mainly from a very low yield per acre, the smallest since 1919. Hot dry weather during June and July was the principal cause of the poor yield. The early harvesting conditions were favorable, the later unfavorable. The crop thus far inspected has contained a relatively high proportion of the grades No. 3 Northern and above, though not so high a proportion as the exceptional crop of 1932; and the protein content and baking quality again appear to be excellent.[2]

The standing official forecast (issued in late November) of the Australian crop is 160 million bushels, about in line with earlier trade forecasts but 20 million below the first official forecast issued in late October. The reduction from 1932 is about 52 million bushels. Six of the preceding ten crops equaled or exceeded that of 1933, while four were smaller. The acreage was somewhat the smallest in six years. The yield per acre, affected principally by drought throughout the growing season, fell about 15 per cent below the 1923–31 average. Quality cannot yet be appraised, but rainy harvest weather in many districts may have adverse effects.

The Argentine crop, for which the first official estimate appeared on December 14, now appears to be a large one—at 256 million bushels it is inferior only to the crops of 1927 and 1928, and about 20 million bushels larger than the crop of 1932. Earlier prospects, rather unfavorable because of drought, were reversed by timely rainfall after early September. The area sown is now appraised higher than it was four months ago, and abandonment was probably below average; damage from locusts appears to have been kept to a minimum through energetic governmental measures; and there was apparently less damage from rust than in several recent years. The quality will presumably prove to be distinctly high.

Changes in crop estimates. — The 1933 world wheat crop ex-Russia, though relatively small, is a good deal larger than it appeared to be when appraised by reference to information available in mid-September (Table I). The changes amount to a net increase of about 190 million bushels. Early-season

[1] Federal-State Grain, Hay, and Feed Market News Service, *Special Grain Review: Quality of World Wheat Crop above Last Season*, Washington, December 15, 1933.

[2] Dominion Grain Research Laboratory, *The Milling and Baking Characteristics of the Crop of 1933*, Winnipeg, October 17, 1933.

indications have tended to be lower than semi-final and final estimates in recent years; but the change in appraisals that has occurred this year is exceptionally large.

In part this large increase merely reflects improvement of the weather in Argentina. In early September, a yield per acre below average seemed reasonably in prospect from what little information was available, and our tentative appraisal of the 1933 crop (based partly upon a lower official estimate of sown area than that now current) was 200 million bushels. Improved weather thereafter resulted in a high yield per acre, and the standing official crop estimate is 256 million bushels. But the larger part of the net increase in world crop appraisals reflects upward revisions of forecasts for Northern Hemisphere crops, which had practically all been harvested by mid-September. European crop forecasts ex-Russia have been increased no less than 125 million bushels since early September. These increases were general practically throughout Europe.[1] They seem to reflect exceptionally favorable weather conditions for harvesting and threshing, and it is seldom that weather conditions so late in the season result in such extensive changes in European crop forecasts.

Elsewhere, changes in crop statistics were smaller in magnitude. The Canadian crop is now appraised 11 million bushels lower than it was in mid-September, the Australian 8 million bushels higher. For the United States, the crop forecasts and estimates were increased from 506 million bushels as of September 1, to 515 million as of October 1, and to 527 million on December 19, when it was stated that production statistics from 1928 to 1932 "have been revised in line with data on shipments and other utilization of wheat collected by the Department in connection with the check-up of farmers' applications for benefits in connection with the wheat reduction campaign."

The new data seem to have affected the 1933 crop estimate, and also estimates for 1928–32, through revision of acreages rather than of yields per acre. The changes in wheat acreage statistics (harvested) are summarized below, in million acres:

Acreage harvested	Unrevised[a]			Revised[b]			Change in total
	Winter	Spring	Total	Winter	Spring	Total	
1928 ...	36.96	22.35	59.31	36.85	22.37	59.22	— .09
1929 ...	40.58	22.09	62.67	41.19	22.13	63.32	+ .65
1930 ...	39.46	21.68	61.14	40.93	21.73	62.66	+1.52
1931 ...	41.36	13.98	55.34	43.08	14.02	57.10	+1.76
1932 ...	33.63	21.52	55.15	35.27	21.93	57.20	+2.05
1933 ...	26.80	18.08	44.88	28.42	19.07	47.49	+2.61

[a] Data for 1931 from *Crops and Markets*, December 1932, p. 451; for 1932 and 1933, *ibid.*, October 1933, p. 370; for earlier years, *Agricultural Yearbook, 1933*, p. 404.

[b] Data for 1931–33 from *United States General Crop Report: December 1933*, p. 1; figures for earlier years furnished by U.S. Department of Agriculture.

Total supplies. — Since "world" wheat stocks about on August 1, 1933, were the largest in history, the total wheat supplies of the world ex-Russia for 1933–34 are relatively less small than the world crop itself. Pertinent statistics are as follows, in million bushels:

Year	Stocks ex-Russia	Crops ex-Russia	Stocks and crops	Russian exports	Total supplies	Disappearance
1928-29....	705	3,903	4,608	0	4,608	3,638
1929-30....	970	3,424	4,394	9	4,403	3,481
1930-31....	922	3,708	4,630	114	4,744	3,737
1931-32....	1,007	3,669	4,676	65	4,741	3,745
1932-33....	996	3,702	4,698	17	4,715	3,609
1933-34						
Sept. est..	1,113	3,288	4,401	25	4,426	....
Jan. est. ..	1,106	3,482	4,588	30	4,618	3,634

The crop of 1933 now appears to be some 220 million bushels smaller than the crop of 1932; but the total supplies of 1933–34 are only about 100 million bushels smaller than those of 1932–33. It is clear that total supplies in 1933–34 are ample to meet ordinary requirements. World wheat supplies continue superabundant, despite the short world wheat crop and a prospective reduction in end-year stocks. On account of the changes in crop statistics described above, the supplies now seem more excessive than they did in September.

In one respect the geographical distribution of 1933–34 total supplies is more favorable for

[1] The forecasts for Poland and Portugal were reduced; those for Belgium and Switzerland remained unchanged; those for all other countries were increased.

wheat consumption than was true in 1932–33. In that year Poland, Yugoslavia, and Rumania harvested such small crops that total supplies from crops and stocks were only about 200 million bushels; and low purchasing power coupled with governmental restraints on wheat imports and abundant supplies of rye and corn kept wheat consumption far below the levels of earlier years. The larger crop of 1933 has brought total wheat supplies in these countries nearly 100 million bushels above the 1932–33 level; and it may confidently be expected that domestic wheat consumption will be much larger this year than last.

Other crops.—All of the other major cereal crops of 1933 were distinctly small in the United States. Rye and oats made the smallest crops in the present century; corn, one of the four smallest in the century; barley, the smallest since 1922. The Canadian crops of rye, barley, and oats were all relatively small. On account of the low production of the feed grains in North America, world totals ex-Russia are relatively low. But rye, produced mostly in Europe, made a large crop in 1933; and the European crops of barley and oats, unlike the world crops, were distinctly large. The corn crop both in Europe and in northern Africa, however, was small, and also the potato crop in European importing countries. The distribution of rye, feed grain crops, and potatoes appears to be significant chiefly because it may tend to keep feed use of wheat in 1933–34 at a fairly high level in North America, and to swell the use of wheat for food in Rumania, Yugoslavia, Italy, and Egypt, where the corn crops are short. From the crop situation alone, European wheat-importing countries generally have probably less of an incentive to divert wheat to feed use than in 1931–32 and probably little more of an incentive than in 1932–33. Perhaps, however, new governmental measures specifically directed toward enlargement of feed use of wheat will have significant effects in 1933–34.

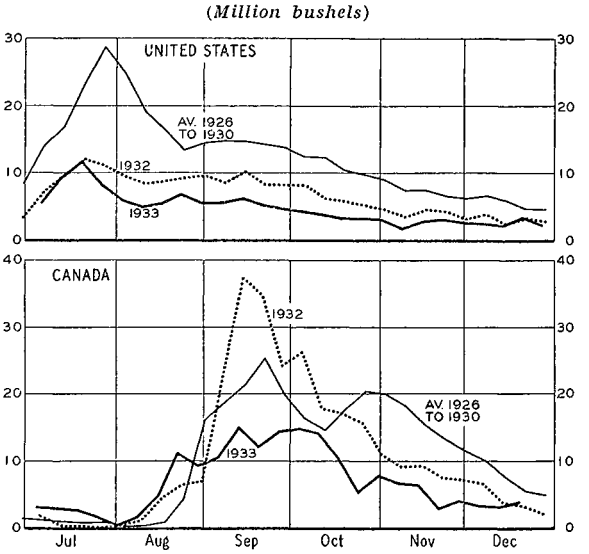
Marketing and Stocks

Marketing in North America.—Light wheat marketings in the United States and Canada during August–December reflected mainly the short 1933 crops. In addition, North American growers tended to hold wheat, probably in anticipation of higher prices. Receipts at United States primary markets during July–December were distinctly the smallest in postwar years, and represented an unusually small proportion of the crop. Canadian country elevator receipts and platform loadings were relatively large in August, when there were sizable marketings of old- as well as new-crop wheat; but in September–December they were strikingly low, and smaller than usual in relation to the size of the crop.

The seasonal course of North American marketings was extraordinary in this period (Chart 2). Receipts at United States primary markets were heavier in June 1933 than 1932, partly in response to higher wheat prices. In July, United States receipts increased less than usual, though prices continued to rise rapidly during the first two weeks; and after July 17, when wheat prices broke sharply, marketings were promptly reduced. Finally, from early August until the end of December the flow of wheat to primary markets was maintained at a strikingly slow rate. Canadian marketings increased rapidly in August,

Chart 2.—Wheat Marketings in the United States and Canada, July–December 1933, with Comparisons*

(*Million bushels*)



* See Table III.

despite declining prices. But from late August to early October, wet weather in the Prairie Provinces delayed movement of the crop, and Canadian marketings did not rise as they usually do to a peak in September. The decline in the crop movement after early October was associated with falling wheat prices; but the movement probably would have declined somewhat at this time with wheat prices stationary.

Marketing in Europe.—In most European countries, the movement of domestic wheat to market was heavy in August–December, as growers, favored by big harvests in good condition, sold their wheat freely. Deliveries of wheat by British farmers were unusually large, both in absolute quantity and in relation to the size of the crop. German marketings were also heavy, though the percentage of the 1933 crop remaining on farms December 1 was about as high as in other recent years. Pressure of domestic wheat in the Danube countries, Czechoslovakia, Austria, and Poland led to drastic price declines soon after harvest (Table VI). In contrast, fairly high fixed prices for domestic wheat in France after July 15 were reported to have influenced French millers and merchants to restrict purchases to such an extent that farmers complained of lack of demand for their grain.

World stocks. — Although world wheat stocks, excluding Russia and China, remained burdensome in December 1933, they were considerably smaller than in the same month of either of the two preceding years, and probably smaller than in 1930. With supplies unusually heavy in Europe, and North American supplies drastically reduced by small crops, stocks in *visible* positions represented a smaller proportion of total world stocks on January 1, 1934, than in any of the five preceding years.

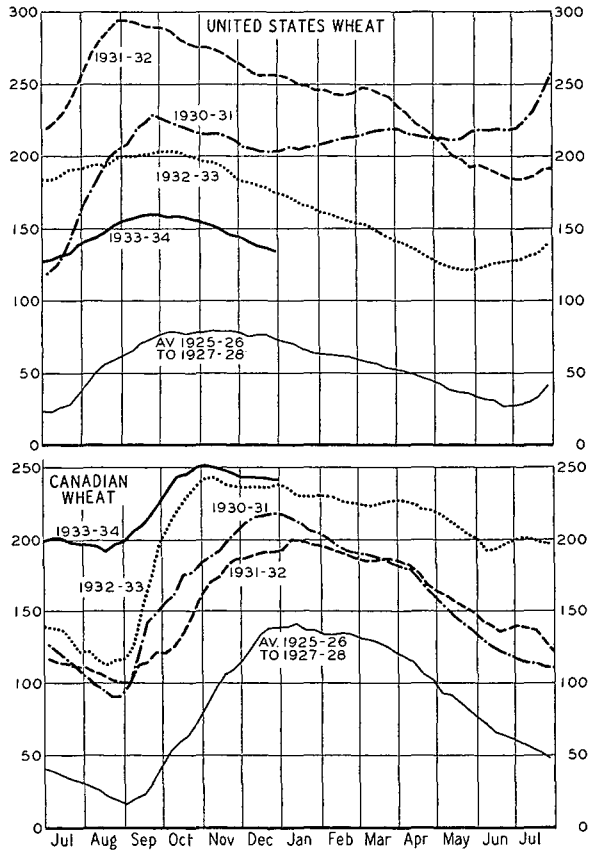
On August 1, 1933, world visible supplies were of near-record size, smaller only than in 1931; but light marketings in North America prevented world visibles from increasing as usual during the ensuing five months. On January 1 world visibles stood at the lowest level since 1928, the increase from August 1 having been smaller than in any other post-war year. Comparisons for seven years appear below, in million bushels:

Year	Aug. 1	Jan. 1	Increase
1927–28	151	334	183
1928–29	200	522	322
1929–30	325	514	189
1930–31	358	535	177
1931–32	448	594	146
1932–33	386	550	164
1933–34	423	476	53

North American stocks.—Although Canadian visibles were maintained at a record high level in August–December, they increased less than 50 million bushels over the period (Chart 3). This small increase, the smallest in post-war years, was due to light marketings, rather than to a heavy export movement. As in 1932, Canadian visibles reached a peak earlier

CHART 3.—NORTH AMERICAN VISIBLE SUPPLIES, JULY–DECEMBER 1933, WITH COMPARISONS*

(*Million bushels*)



* See Table IV.

than usual, declining after mid-November as marketings ran notably low.

Distribution of Canadian wheat stocks according to position was not markedly different on December 1 from the distribution last year, though stocks on farms were considerably lower. As compared with the average distribution in earlier years (1926–30), an unusually large proportion of Canadian wheat supplies in December 1933 was stored in elevators at the head of the lakes, while an unusually small percentage remained on farms or was stored in private interior elevators or in United States ports.

United States stocks.—United States total wheat supplies were lower at the beginning of January 1934 than in any of the five preceding years. Stocks in visible positions were smaller on January 1 than on August 1 (Chart 3), an unusual relationship, and they were smaller than on January 1 in any year since 1928. Despite notably small marketings in July–December, farm stocks on January 1 were the lowest in recent years—194 million bushels, as estimated by the United States Department of Agriculture. This figure compared with 273 and 323 million bushels, respectively, in 1933 and 1932. No estimate has been made of the quantity of wheat stored in country mills and elevators on January 1; but these stocks also were probably somewhat smaller than in other recent years. In contrast, city mill stocks were probably of record or near-record size. The official estimate of city mill stocks as of December 31 has not yet been released; but unless these stocks were reduced more in October–December 1933 than in the same period of any other recent year, they must have been strikingly large on December 31.

Southern Hemisphere stocks.—In Australia, total wheat supplies (old- and new-crop) on January 1 were smaller this year than in any of the three preceding years, because the 1933 crop was smaller. The carryover of old-crop wheat on December 1, though small in absolute quantity, was probably somewhat larger than usual. Visible supplies declined seasonally to a minimum at the end of November, but with movement of the new crop delayed by rains late in that month and in early December, these stocks did not increase as rapidly in December as they had in several earlier years when the crop was no larger.

Argentine stocks of old- and new-crop wheat on January 1 were probably moderately large as compared with previous years. Visible stocks, which represent an insignificant part of total supplies in Argentina, were slightly larger at this time than on the same date of any preceding year.

European stocks.—European domestic wheat supplies remained heavy on January 1, despite notably small August–December imports. In Germany, farm stocks on December 1 were not only larger than usual, but even larger than the previous record high stocks of 1932; and stocks in mills and warehouses were also increased from last year. Continental port stocks were larger than in 1932, but not up to the level of either of the two preceding years.

Port stocks in the United Kingdom, which were relatively large on August 1, continued to increase during the next five months. On January 1 these stocks totaled almost 18 million bushels, a notably high figure, but smaller than in January 1932 when British stocks reflected heavier pressure of Russian wheat shipments. Although Russian shipments were smaller this year, wheat shipments from Hungary, Germany, and France were also pressed at times upon British markets.

Stocks afloat to Europe declined over 10 million bushels between August 1 and January 1, in spite of the fact that they were at an unusually low level on August 1. The decline brought these supplies down to 20.0 million bushels on December 23, a new postwar low record. When British port stocks and stocks afloat to Europe are both high, or are high in the aggregate, Liverpool prices are likely to be vulnerable; but when large port stocks are offset, as in December 1933, by small supplies afloat, the immediate supply position is less depressing.

Governmental Measures

Already numerous, the various types of governmental control over wheat production, trade, and prices became during August–

December 1933 more widespread and more stringent than ever before.

Developments under the International Wheat Agreement.—The engagements of the exporting countries signatory to the International Wheat Agreement[1] appear not to have been modified from what they were when the Agreement was concluded.[2] Import demand in August–July 1933–34 for the wheat from these nine countries is apparently still assumed to be 560 million bushels. Tentative export quotas for 1933–34 still stand as follows: Argentina, 110 million bushels; Australia, 105 million; Canada, 200 million; the United States, 47 million; the four Danube countries, 50–54 million; balance for the USSR (not yet accepted as the Russian quota), 44–48 million bushels. The general quota of the Danube countries is reported to have been allotted as follows: Hungary, 39.1 per cent; Rumania and Yugoslavia, each 23.0 per cent; Bulgaria, 14.9 per cent.[3]

Agencies authorized to prevent exports in excess of the specified quotas apparently do not yet exist in the United States and Canada. Such an agency now exists in Australia, where on October 18, 1933, the Minister of Commerce stated that exports of wheat and flour were to be made only on official permit, definite quantities to be assigned to individual exporters in proportion to their exports in earlier years. Before being granted a license, each exporter must agree to buy and hold one bushel of wheat for every two bushels exported, so long as farmers continue to offer freely. In Argentina, the Grain Control Board set up by decree of November 28, 1933, was apparently empowered not only to fix minimum prices (see p. 155), but also to control exports by methods not specified; the executive authorities, however, are reported to have announced that no control was contemplated.[4] We infer that means could quickly be found to check excessive exports from any of the Danube countries. Thus far, however, official agencies for control do not seem to have been organized, though the governmental grain-purchasing bureaus in Bulgaria and Rumania and the Privileged Export Company in Yugoslavia possibly possess the necessary powers.

Controls that would prevent exports from exceeding the accepted quotas are probably unimportant except as concerns Australia and Argentina, and probably Hungary. The large size of available supplies, the low level of world wheat prices, and prevailing and prospective import-export price relationships seem to be such that exports from other countries would not exceed quotas in the normal course of events. But Australia and Argentina have exportable surpluses substantially larger than the export quotas. Later developments may therefore include either enlargement of the quotas of these countries and Hungary also, with attendant diminution of quotas from other countries; or increase of stocks on August 1, 1934, to new high post-war levels; or adoption of some means of diverting wheat to feed use.

In the Agreement the Danube countries engage to keep their combined net exports next year to 50 million bushels, and they also "recognize that the acceptance of this export allocation will not allow of any extension of the acreage sown to wheat." Our advices do not include evidence that the governments concerned have taken specific steps designed to restrain sowings of winter wheat in the autumn of 1933, from which the exports of 1934–35 must largely come.

The engagement of the four major exporting countries "to bring into effect a reduction of production of wheat to the extent of 15 per cent" has not yet evoked specific measures except in the United States. The American acreage-reduction program is discussed

[1] Argentina, Australia, Bulgaria, Canada, Hungary, Rumania, Soviet Russia, the United States, and Yugoslavia. We rely for a text of the Agreement upon the U.S. Department of State, *Treaty Information Bulletin No. 48*, September 30, 1930. The text is not authenticated.

[2] The Wheat Advisory Committee first met on September 18 and has subsequently convened on several occasions. Thus far these meetings seem to have been deliberative in character, and no recommendations to governments participating in the Agreement have yet been formulated.

[3] *Foreign Crops and Markets*, November 20, 1933, p. 597. These percentages applied to a quota of 54 million bushels result in quotas for the several countries as follows, in million bushels: Hungary, 21.1; Rumania, 12.4; Yugoslavia, 12.4; Bulgaria, 8.1.

[4] *Commercial Intelligence Journal*, December 23, 1933, p. 1027.

below. Since the time for sowing the crops of 1934 in Canada,[1] Argentina, and Australia is some months distant, it is not surprising that the devices contemplated by the several governments to reduce wheat production have not yet been made public.

The importing countries signatory to the Agreement[2] for the most part have not taken significant steps in execution of their commitments. The Agreement does not call for lowering of tariff barriers until the world price of wheat (British parcels) has been maintained at a level of at least 63.02 gold cents for sixteen weeks; and prices have fallen rather than risen since the Agreement was concluded on August 25–30. During the second week of January, the Liverpool May future averaged 43 gold cents. Nor does the Agreement call for immediate "modification of the general régime of quantitative restriction of wheat imports." Agreements of importing countries "henceforth not to encourage any extension of the area sown to wheat and not to take any governmental measures, the effect of which would be to increase the domestic production of wheat," and "to adopt every possible measure to increase the consumption of wheat" do not appear to be contingent upon price recovery. Governmental measures interpretable as designed for fulfillment of these engagements do not seem to have been adopted unless in France, Germany, and Italy.

Effective September 19, a French decree established maximum extraction rates for milling wheat, the rate varying with the weight per measured bushel of the wheat used.[3] This seems to require for the current season an average extraction ratio of about 66 per cent, in contrast with normal ratios perhaps 70 per cent or over. This regulation is interpretable as an effort to enlarge flour consumption in France by improvement of flour quality, and to enlarge wheat consumption by increasing the amount of wheat used for feed. Premiums have been paid for "denaturing" wheat since last April; and all flour produced in excess of the permitted extraction must also be denatured. The French government is reported recently (*Foreign Crops and Markets,* January 15, 1934) to have decreed that increases in the acreage sown to wheat will be subjected to taxation.

In Germany, the new governmental policy and control of agriculture (see below, p. 157) is reported to involve "some reduction in wheat acreage,"[4] with "excess production . . . . punishable as a crime against the State."[5] Apparently no methods to divert wheat to feed use have been adopted. In Italy, it is reported that the Minister of Corporations has been authorized to alter existing regulations of bakeries and to introduce new grades of flour containing lower percentages of the weight of wheat milled than in grades customarily used, with the objects both of enlarging bread consumption through improving flour quality, and of expanding the amount of wheat used for feed. What specific action has been taken is not yet clear.

France, Germany, and Italy are all nations which in 1933–34 face difficulties in maintaining domestic wheat prices at desired levels, in the face of big domestic crops. The steps that have been taken toward restraint of wheat acreage and expansion of wheat consumption may therefore be regarded alternatively as fulfillment of international engagements, or simply as devices that would have been employed independently to solve domestic wheat-surplus problems. Other importing countries signatory to the Agreement seem not to have felt impelled to follow the leads given in France, Germany, and Italy. With regard to 1934 winter-wheat acreage in Europe, the comment has been made that "re-

[1] In Canada, methods of implementing the agreement are now under serious consideration, and announcement has been made that plans will be made clear in time for the crop of 1934. The Provincial Wheat Pools have approved the agreement and the Winnipeg Grain Exchange has pledged its support to steps that the Government may take. See *Northwestern Miller,* December 13, 1933, p. 666.

[2] Austria, Belgium, Czechoslovakia, France, Germany, Greece, Irish Free State, Italy, Poland, Spain, Sweden, Switzerland, and the United Kingdom.

[3] The requirement is that the *percentage* extraction shall not exceed the weight of the wheat in kilograms per hectolitre, less 11: the maximum extraction ratio for 75-kilogram wheat would be 64 per cent; for 80-kilogram wheat, 69 per cent.

[4] U.S. Department of Agriculture, *Press Service No. 665-34,* September 20, 1933; also *Foreign Crops and Markets,* October 9, 1933, p. 391.

[5] *Economist* (London), September 23, 1933, p. 580.

ports of increased sowings are surprisingly frequent."[1]

Developments in the United States.—The campaign for wheat acreage reduction in the United States began with educational meetings in farming communities about August 1, and the "sign-up" campaign in September. After applications for contracts had been assembled, an extensive and prolonged process of reconciliation and adjustment was necessary before definitive contracts could be signed. Contract signing began in October and has only recently been substantially completed. Total benefit payments have been estimated at 102 million dollars, at 28 cents per bushel on individual allotments equal to 54 per cent of the average annual production of contracting farmers in the base period, typically 1930–32. Up to January 6, 1934, checks for $21,386,607, at 20 cents per bushel, had been drawn to the order of 287,970 contracting farmers. The second installment, of 8 cents per bushel less local expenses, is to be paid after certification of fulfillment of contracts, typically in the spring of 1934.

The success of the campaign for reduction of wheat acreage is not properly to be judged by the relationship of the estimated sown winter-wheat acreage for 1934 to that now estimated as sown for 1933, which shows a reduction of only 1.69 million acres; still less by the relationship of the estimate for 1934 to the unrevised estimate for 1933, which shows an increase of 1.10 million acres. The general objective was to bring about for 1934 a reduction of sown wheat acreage equivalent to 15 per cent of the average acreage sown for the crops of 1930, 1931, and 1932. Published official statistics do not yet include estimates of the areas sown to spring wheat in these three years. Consequently it is not yet feasible to make close comparison of the sown acreage which farmers have actually agreed to remove from production with the sown acreage which the campaign sought to remove from production.

Early in the campaign, however, it was officially stated that reduction of 15 per cent "would mean a cut of about 9,600,000 acres in wheat plantings."[2] This statement appeared before harvested acreage statistics of the base period for all wheat (see p. 147) and sown acreage statistics for winter wheat[3] were revised upward; and we infer that a corresponding statement made at present would set the objective somewhat higher. The sown acreage which farmers have agreed to withdraw from production exceeds 8.12 million acres.[4] Farmers controlling around 80 per cent of the nation's sown wheat acreage have signed contracts, and the acreage destined for removal from production probably represents around 12–13 per cent of the average total area sown for the crops of 1930–32.

The official estimate of winter-wheat acreage sown for the crop of 1934 suggests that some non-signing farmers tended to expand their sowings; the area sown for 1934 is only 3.19 million acres below the (revised) 1930–32 average, and sowings for 1934 were larger than the average in several states, mostly east of the Mississippi, where farmers were relatively disinclined to sign contracts for reduction. Two factors at least may make for greater reduction in harvested acreages than indicated by the sown acreage: some contracting farmers had sown their wheat before signing contracts and will divert the excess acreage to other uses than production of wheat grain; and in some states (notably Oregon and Washington) where farmers grow either winter or spring wheat, the sowings of winter wheat may have been maintained with a view toward fulfilling contracts by reduction in spring-wheat sowings.

It was early officially recognized that the desired reduction had not been fully attained,

[1] *World Wheat Prospects*, December 21, 1933, p. 7.

[2] U.S. Department of Agriculture, *Press Service No. 440-34*, August 28, 1933.

[3] Unrevised and revised (December 20, 1933) official statistics of winter-wheat acreage sown are as follows, in million acres:

For crop of	Unrevised[a]	Revised[b]	Change
1930	43.56	44.97	+1.41
1931	43.52	45.24	+1.72
1932	40.42	42.35	+1.93
1933	39.90	42.69	+2.79
1934	...	41.00	...
Av. 1930–32	42.50	44.19	+1.69

[a] *Crops and Markets*, December 1932, p. 450.

[b] *U.S. Winter Wheat and Rye Report as of December 1, 1933*, December 20, 1933.

[4] U.S. Department of Agriculture, *Press Service*, December 23, 1933. An incomplete figure released on October 26 was 7.79 million acres.

and the Secretary of Agriculture has stated that methods are under consideration for taking out of production the additional acreage required to fulfill engagements under the International Agreement "to the letter."[1] The outlook for the next two months therefore includes official announcement of these methods. The amount of acreage reduction that will be sought, while uncertain in the aggregate, will presumably be large enough to offset whatever increase may have come about through expansion of acreage by non-signing farmers.

It is not yet possible to appraise with any precision the effects of the acreage-reduction campaign upon the 1934 wheat crop. To some extent, it seems likely to make for increased yields per acre. An incentive exists for contracting farmers to remove from production their poorer land, though the contracts contain provisions designed to present this. Contracting farmers may prepare their soil better than usual, partly because they can afford to and partly because they will have fewer acres to prepare. Since relatively more wheat will be taken out of low-yield regions than out of high-yield regions, the average yield for the whole country will tend to be raised for this reason alone. But it is impossible to predict the net effect closely. The outstanding facts bearing on the 1934 crop are that the acreage sown to winter wheat is relatively small; that its condition was distinctly low on December 1; and that low December 1 condition tends to be followed by relatively heavy abandonment and relatively low yields per acre. The Department of Agriculture has appraised probable abandonment of winter-wheat acreage at 20 per cent, and the probable winter-wheat crop at 435 million bushels.

As early as July 24, the Secretary of Agriculture announced that 2 cents out of the 30-cent processing tax (initially estimated at $9,000,000 but likely to be a million or more smaller) would be reserved for financing wheat exports if the opportunity should arise; and three days later the possibility of subsidizing exports from the Pacific Northwest was officially recognized. In Portland on August 21–22 a representative of the Agricultural Adjustment Administration met with representatives of producers and exporters of the Pacific Northwest. A tentative agreement was later worked out. By October 7, agreement was reached on all the details, and on October 10 the Secretary of Agriculture signed the agreement and approved the officers of the North Pacific Emergency Export Association. Set up to administer the scheme, this Association is a non-profit corporation formed by participating producers and exporters.

The Association buys wheat through member firms in amounts and at prices determined by the Secretary of Agriculture through his representative on the Executive Committee. It resells this wheat to member firms, on written bids approved by the Secretary's representative, for export as wheat or flour. The Association is reimbursed by the Secretary for the difference between total purchase prices and total sales prices. There are specified allowances to exporters for handling and milling. Wheat is purchased only in Washington, Oregon, and northern Idaho. The Association is not permitted at any time to have on its books purchases more than 1 million bushels in excess of its sales. The total quantity of wheat contemplated to be exported by the Association has been 35 million bushels from the outset. This is within the range of possibility with a fund of $7,000,000 if the subsidy does not exceed 20 cents per bushel; it is within the range of possibility with a fund of $8,000,000 even if the subsidy should average nearly 23 cents per bushel.

The Association first posted its bids on October 19, but little was purchased before November 1. By January 11, 1934, however, it was reported that purchases were 10,750,000 bushels; export sales 9,950,000; and shipments on these sales 5,500,000.[2] Up to December 4, the subsidy averaged 19.3 cents per bushel, but it rose to 22 cents in early December[3] and averaged about 21 cents up to Jan-

[1] U.S. Department of Agriculture, *Press Service No. 945-34*, October 26, 1933.

[2] U.S. Department of Agriculture, *Press Service No. 1578-34*, January 11, 1934.

[3] *Commercial Review*, December 19, 1933; U.S. Department of Agriculture, *Press Service No. 1371-34*, December 12, 1933.

uary 11. The Association apparently seeks to keep the average per bushel subsidy at approximately 20 cents, and seems to have regarded as normal a price relationship in which the price of No. 1 soft white wheat at Portland is about 10 cents under the active future at Chicago. If exports are to continue, the per bushel subsidy has to be increased either if the spread between Chicago and Liverpool prices widens, or if farmers refuse to market wheat when the discount of Portland prices under Chicago is as much as 10 cents. After about mid-December, farmers apparently regarded the offers of the Association as too low, and little wheat was purchased.

Export sales have been principally to the Oriental markets, but have extended to various European and South American countries. At meetings of the Wheat Advisory Committee in London, Australia has made some protest against the arrangement, in the light of the International Wheat Agreement. China is expected to take roughly half of the exports, partly under a credit of $10,000,000 extended on June 10 by the Reconstruction Finance Corporation to the Chinese government. Chinese purchases of American wheat did not begin until after the Emergency Export Association was formed and American wheat was offered c.i.f. China at competitive prices. Whether or not total exports by the Association will reach the contemplated 35 million bushels in the present crop year is uncertain; but we infer from rough appraisal of the fund available for financing and the rising trend of the per bushel subsidy that the total may fall nearer to 30 than to 35 million.

A third type of governmental intervention in the United States was purchase of futures and cash wheat by federal agencies for use in extending relief to the needy. Purchases apparently began on October 17, and were then an influential factor in price movements. Subsequent purchases attracted less attention. Purchases had exceeded 10 million bushels by December. The Federal Surplus Relief Corporation, which now has jurisdiction over purchases of wheat for relief purposes, is endowed with powers which would permit price-supporting purchases as well.

Other exporting countries.—New governmental measures affecting wheat in other exporting countries require only brief comment. In Australia, in addition to adoption of export licensing (see p. 151), the federal government has decided to continue payments to producers; and for payments on the crop of 1933 the sum appropriated for distribution, 3 million Australian pounds, is 50 per cent larger than the sum appropriated for payments on the crop of 1932. About half of the total payment is to come from a new tax on flour. Trade reports state that in Canada government-sponsored dealings in wheat futures have continued in 1933–34, notably purchases on all significant price declines after mid-September; and total holdings were guessed to approximate 200 million bushels early in November.[1]

In Argentina, where governmental intervention has not been prominent, the situation changed abruptly after November 28. On that date a Grain Control Board was established by executive decree. The Board, which began its operations on December 4, is to purchase at a fixed minimum price of 5.75 paper pesos per quintal (about 34 gold cents per bushel), new-crop wheat weighing 80 kilograms per hectolitre, f.o.b. cars at Buenos Aires, with differentials for other qualities and positions.

Fixed minimum prices were also specified for corn and flaxseed. Purchases by the Board (which will not enter the market when market prices exceed the fixed minima) will be resold to exporters at the world price. In effect this is subsidized exportation when prices do not rule above the fixed minima. Losses are to be covered by profits anticipated from a new method, instituted at the same time, for governmental dealing in foreign exchange. Employing basic rates which reduce the official value of the Argentine peso about 20 per cent in relation to the French franc, the government buys bills of exchange from exporters of specified agricultural products, and sells the bills to importers at auction. Full details of the scheme are not available at this date.

In Hungary, the grain ticket system and accompanying bonus to wheat producers have

[1] *Modern Miller*, November 11, 1933, p. 28.

been continued, but the amount of the bonus has been reduced from 19 to 14 cents per bushel (at par). Bilateral commercial treaties are reported to have been so far elaborated that Hungary has secured preferred markets for 22 million bushels of wheat. In Yugoslavia, exports are on government permit, and permission to export to countries which grant customs refunds on Yugoslavian wheat is reserved for the Privileged Export Company. A governmental commission was established in Rumania, to begin operations on August 16; abolished later (in November), it was authorized at the outset to support prices on the domestic markets with a fund equivalent to 5.4 million dollars at par. Purchases are reported to have been made prior to mid-October at a level of 49 cents per bushel (gold). In Bulgaria, as in 1932–33, governmental stabilization purchases are authorized at a domestic price level of 53 cents (gold) per bushel. Fixed prices prevail in Algeria under the new French system; and Tunis and Morocco continue to sell wheat duty-free in France.

Importing countries. — Throughout the wheat-importing countries of the world, governmental measures designed to protect or assist domestic wheat producers are more prevalent and stringent in 1933–34 than ever before. With the adoption of a system of tariff duties on wheat and flour in China, it may now be said that the United Kingdom is the only remaining important wheat-importing country which permits the bulk of her imports (and even here not wheat grown outside the Empire) to be brought in free of duty, free of import taxes, free from monopoly control, free from licensing, or free from specifications of the quotas of domestic wheat that must be mixed with foreign by mills.

Only a brief summary of recent developments in import restrictions is feasible in brief space. So far as our information extends, the protective systems already in effect continued practically unchanged in the more important ex-European importing countries[1] except China. Effective December 16, wheat imported into China was removed from the free list and subjected to an import duty and surtax of 33 gold customs units per 100 piculs (6 cents per bushel at par); and the duty on flour, surtax included, was raised to 82.5 gold customs units (49 cents per barrel at par).

In the British Isles, sagging international wheat prices threatened to render inadequate the fund for payment of the price-supplementing subsidy in the United Kingdom, and the levy on flour, set at 3*s.* 6*d.* per sack on August 2, was raised on November 5 to 4*s.* 6*d.* In the Irish Free State, where strict licensing of imports and control of flour milling were inaugurated in May 1933, a compulsory milling quota of 4 per cent domestic wheat was promulgated on September 18, to apply to operations for the year August–July 1933–34.

Few or no significant changes in governmental regulations have occurred in Spain, Portugal, Switzerland, Sweden, Norway, or the four Baltic states, where existing stringently protective devices apparently were regarded as adequate.

In Austria, Czechoslovakia, Greece, and Italy, the changes in regulations represented mainly mere alterations of controls existing before the crop year opened. There were two increases in the Austrian basic import duties on wheat: from 8.8 to 12 gold crowns per quintal (49 to 66 cents per bushel at par) effective August 6; and to 16 gold crowns (88 cents) effective August 26. These increases occurred before Austrian adherence to the International Wheat Agreement, and apparently did not alter preferential duties granted on import contingents of Hungarian and Yugoslavian wheat. In Czechoslovakia the syndicate that controlled imports in 1932–33 was empowered for 1933–34 to support domestic prices by purchase, and is reported to have bought about 2 million bushels of wheat by the end of November;[2] the purchasing quota imposed upon wheat importers has been higher this year than last—five rather than two carloads of domestic wheat to every carload of imported. In Greece, the Central Concentration Committee expected to pur-

[1] Japan, Brazil, Egypt, Cuba, South Africa, and New Zealand. For descriptions of governmental measures operative in these countries during 1932–33, see especially *World Trade Barriers in Relation to American Agriculture* (Washington, 1933); and WHEAT STUDIES, December 1933, X, 92.

[2] *World Wheat Prospects,* December 21, 1933, p. 11.

chase over twice as much wheat this year as last; importers have been required to purchase 50 rather than 15 units of domestic wheat for every 100 imported; a new tax of 9 cents per bushel (at par) was imposed on all wheat purchased in order to finance the price-supporting system; and from early December wheat imports were prohibited until the governmental purchases were used up. In Italy, where only 1 per cent of foreign wheat was permitted in mill mixes after July 16, complete prohibition became effective after November 21; the admixture of 99 per cent of domestic flour was approved November 25; and the duty on wheat flour was slightly increased on December 2.

In France, experiences under the régime of fixed prices inaugurated by the law of July 10 led to several modifications. In order to remove handicaps to sales by farmers relatively distant from markets, governmental subsidies were provided to cover costs of transportation; so that the fixed price is in effect not now a farm price, but a market price. Merchants are now allowed a commission of 2 francs per quintal, in effect a reduction of the farm price. Finally, producers are now taxed 2 francs per quintal in order to create a fund to finance the export bounty and the diversion of wheat to feed use. The bounty itself, however, was discontinued until further notice on December 2. From August 8, millers accustomed to use foreign wheat were required to include in their mill mix 35 per cent of wheat that was carried over from the 1932 crop with the aid of governmental storage premiums, until the full amount (18.4 million bushels) should be absorbed. The newly adopted measures designed to reduce the domestic wheat surplus are summarized above, p. 152.

Germany, Belgium, Holland, and Denmark have inaugurated new systems of controlling imports and domestic prices. The German system retains the compulsory milling quotas of 1932–33, the high tariff duties, the compulsory admixture of potato flour with wheat flour, the export certificate scheme under which foreign wheat is admitted duty-free or at low duties against exports of German wheat, and the policy of price-supporting governmental purchases. But effective October 1 the controls were tightened. Wheat prices were fixed at a level of 182 marks per ton (118 cents per bushel at par) at Berlin, rising by successive increments to 195 marks (126 cents) in June; there are differentials for other regions. Trading in wheat futures was abolished. Membership in the milling cartel was made compulsory; each mill was assigned quotas of grain, and each is required to purchase and keep in store 200 per cent of its assigned monthly quota. Rye was also subjected to control.

In 1932–33 Belgium and Holland extended aid to domestic wheat producers mainly through price-elevation, made effective by use of milling quotas. For 1933–34 Belgium has abandoned the milling quota, substituting for it on August 17 an import monopoly (the General Association of Mill Owners) which operates by licensing imports to all who pay to it an import tax of 10 francs per quintal of wheat (8 cents per bushel at par). No licenses are granted for bread flour. Proceeds of the tax are used to subsidize domestic wheat producers. Precautions are reported to have been taken against increase of domestic production.[1] Holland has apparently retained the compulsory milling quota of 35 per cent domestic wheat. In addition, effective August 14, a state monopoly took control of wheat imports (also other grains and grain products). As in Belgium, licenses are granted to importers on payment of an import tax; but in Holland importers may bring in flour, while soft wheat is excluded unless it is denatured. Proceeds of fees are employed to support domestic wheat prices. At the outset the import taxes were 1 florin per quintal of wheat (11 cents per bushel at par) and 6.25 florins per quintal of wheat flour ($2.23 per barrel).[2] Effective November 18, however, the import tax on wheat was raised to 15 cents per bushel, and on flour to $2.41 per barrel, on account of the decline in international wheat prices.

[1] *Commerce Reports*, September 23, 1933, p. 205.

[2] The *Commercial Intelligence Journal*, October 21, 1933, gives the original import tax on flour as 1.25 florins per quintal; apparently this amount does not include an additional "levy" of 5 florins per quintal on flour.

Denmark has abandoned free trade in wheat and flour, imposing effective December 13 duties equivalent at par to 24 cents per bushel of wheat and $1.26 per barrel of flour. A system of guaranteed domestic prices (80 cents per bushel at par) was also adopted.

United States Flour Consumption and the Processing Tax

Widely divergent opinions have been expressed regarding the probable effects of the wheat processing tax on flour consumption in the United States, but trade opinion has been nearly unanimous that consequent substitution of corn meal and rye flour, with some total decline in consumption of breadstuffs, would result in substantial decline in wheat flour consumption. In September the *Hook-Up* of the Miller's National Federation expressed the view that the decrease in flour consumption "may prove to be as much as 10 per cent."[1] In December the *Southwestern Miller* analyzed evidence on the decline in consumption and, though concluding merely that "it is obvious that a serious decline has occurred in the absorption of wheat flour and bread," stated that estimates "by some merchandisers of family flour, for example, point to a decrease possibly as much as 25 per cent from a year ago, and among bakers computations reveal a falling-off in bread sales between 15 and 20 per cent from last year, and considerably greater, of course, compared with previous years."[2]

Study of flour-production statistics to the end of December indicates that the decline in flour consumption attributable to the processing tax has been less than these estimates would suggest and may have been slight. Close appraisal is as yet impossible, owing partly to new uncertainties introduced into estimates of total flour production and particularly to the dependence of estimates of flour consumption on very uncertain estimates of flour stocks as of July 1, 1933, and January 1, 1934.

[1] The *Hook-Up*, September 25, 1933, p. 1.

[2] *Southwestern Miller*, December 5, 1933, pp. 23–24.

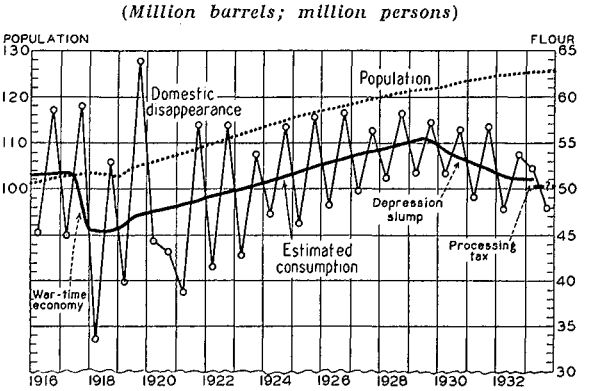
Statistics of monthly flour production and disposition, 1931–33, are shown in Table VIII. For appraisal of the recent course of flour consumption it is convenient to use six-month totals of domestic flour disappearance and to compare the recent statistics with the record for a number of earlier years. The data are as follows, in million barrels:[3]

Year	Jan.–June	July–Dec.	Year	Jan.–June	July–Dec.
1916	45.29	58.52	1925	46.36	57.82
1917	44.99	58.97	1926	48.23	58.21
1918	33.49	52.94	1927	49.81	56.10
1919	39.95	63.91	1928	51.09	58.16
1920	44.38	43.11	1929	51.85	57.11
1921	38.77	56.88	1930	51.73	56.20
1922	41.61	56.75	1931	49.05	56.59
1923	42.88	53.80	1932	47.87	53.75
1924	47.16	56.62	1933	52.27	47.15

In Chart 4 these figures are reproduced graphically, together with a curve representing the probable actual consumption semiannually to July 1, 1933, and for comparison a curve of total United States population.

Chart 4.—Domestic Flour Disappearance and Estimated Consumption, Semi-Annually, and Population, for the United States, 1916–33*

(*Million barrels; million persons*)



* Flour statistics as indicated in accompanying tabulation and text. Population chiefly from *Statistical Abstract of the United States* with deductions of men in American Expeditionary Forces, 1918–19. Owing to an error in figures from which the estimates were made (subsequently corrected), domestic disappearance for July–December 1933 is here shown about one million barrels too high.

Three features of the data on flour disappearance up to January 1933 are worthy of present notice. First, they indicate that disappearance in July–December is usually above disappearance in January–June, reflecting a tendency to build up flour stocks in the

[3] Data chiefly from Table VIII and from Wheat Studies, IV, 90, and X, 136; partly from figures hitherto published only as crop-year totals (*ibid.*, IV, 101).

first half of each crop year and reduce them in the second half. During 1921–26 the accumulation of flour stocks in the first half of the crop year was about 5–6 million barrels in each year except 1923–24, when it was only about 3 million barrels. During 1927–32 the accumulation of flour stocks in the first half of each crop year has been lower, ranging between 2 and 3.5 million barrels. Second, it is evident that under exceptional circumstances the accumulation of flour stocks may be very great. During July–December 1919 flour stocks were increased nearly 17 million barrels, and on July 1, 1920, remained some 13–14 million barrels above their level twelve months earlier. Third, since 1929 a decline has occurred in per capita flour consumption comparable with that which accompanied the war-time economies in flour use, but it has developed much more gradually.

With respect to the depression slump in flour consumption, Chart 4 slightly exaggerates the decline. Since 1929 there has undoubtedly been some expansion of production by custom mills, but the amount of the increase has been a small element in total production and, in the absence of good basis for estimating it quantitatively, we have not increased the allowance made for this item.[1]

Compared with a "normal" flour consumption of about 57 million barrels for January–June 1933, suggested by extending the predepression trend of flour consumption, our estimates, admittedly somewhat too low, show a decline of 10.5 per cent. On similar comparison, estimates of flour output prepared by Martin E. Newell,[2] which we regard as slightly too high, suggest a consumption decline of 7 per cent. Having regard to the inevitable uncertainties in such estimates, it seems sufficient at present to regard the depression as having lowered United States flour consumption for the first half of 1933 by 7–10.5 per cent from a level otherwise to have been expected.

In appraising the effect of the wheat processing tax on flour consumption, the somewhat debatable question of absolute level of flour production and consumption may be avoided by simply comparing indicated consumption in the six months beginning July 1, 1933, with indicated consumption in the previous six months, using comparable estimating methods for each. The figures on domestic retention shown in the foregoing tabulation and chart, compared with an estimated semiannual consumption of 51 million barrels, indicate that during July–December 1932 flour stocks were increased about 2.75 million barrels. This is about an average increase in stocks for this period in the years since 1927. During January–June 1933 accumulations of flour in anticipation of the processing tax seem to have resulted in a further increase of about 1.27 million barrels in place of the usual decline in flour stocks to the first of July. Stocks on July 1, 1933, appear to have been about 4 million barrels above normal, a very moderate excess by comparison with the surplus stocks of about 13–14 million barrels on July 1, 1920.

During July–December 1933 domestic flour retention was strikingly low at about 47 million barrels in consequence of reduction of flour stocks in place of the usual increase in this half of the year. If flour stocks on January 1, 1934, were at the same level as a year earlier, the reduction from the level on July 1, 1933, must have been about 1.27 million barrels. Probably, however, flour stocks at the beginning of the new calendar year were below the level of one year earlier. Slow move-

[1] Wheat "ground at mills for home use or exchanged for flour," as estimated by the U.S. Department of Agriculture, is in considerable part ground by merchant mills; consequently these estimates give little help toward appraising the flour output of custom mills. Custom-ground flour produced by merchant mills is presumably fully covered in our estimates.

There seems to have been a tendency in trade discussion to exaggerate the importance of the undoubted increase in output of the very small mills classed mostly as custom mills. The percentage increase in output of these mills has perhaps been great and there has probably been an important increase in the number of such mills operating. For this class of mill, however, the average annual output cannot reasonably be estimated at over 300–400 barrels annually per mill. If there were 6,000 such mills in operation in 1932, they could scarcely have accounted for a total of over 2.4 million barrels of flour during the year, as against our allowance of 1.2 million barrels for custom mills.

[2] In the *Northwestern Miller*, October 11, 1933, p. 105. See also comment on these estimates in WHEAT STUDIES, December 1933, X, 112.

ment of flour must have inclined mills and flour jobbers to keep their supplies at low levels. Recent tendencies of wheat prices together with the high price on taxed flour have not encouraged accumulation of stocks by bakers. Although some household consumers may still hold flour bought before the processing tax went into effect, and farmers taking flour in exchange for wheat probably have unusually large supplies on hand, it seems possible that January 1 stocks in the aggregate may have been within a million barrels of a usual July 1 level or 3.0 million barrels under the level of July 1, 1933.

Addition of these alternative estimates of drafts on stocks to the estimated domestic retention of 47 million barrels yields figures of 48.27 and 50.00 million barrels, respectively, for actual consumption during July–December 1933. Compared with an estimated consumption of 51 million barrels in the previous six months, these figures show a reduction of 1–2.73 million barrels, or 2–5.4 per cent. Within this range we regard as most probable a reduction not to exceed about 2–3 per cent. This appraisal includes allowance for the probability that the processing tax, through encouraging increase in output by small mills at the expense of large mills, has introduced a new, as yet unmeasurable, factor tending toward understatement of total flour production in our estimates. These figures may be taken as a rough measure of the probable effect of the processing tax on flour consumption, though it must be recognized that, in the absence of the tax, growth of population and business recovery might have brought some slight increase of consumption in July–December over the previous six months.

Exports

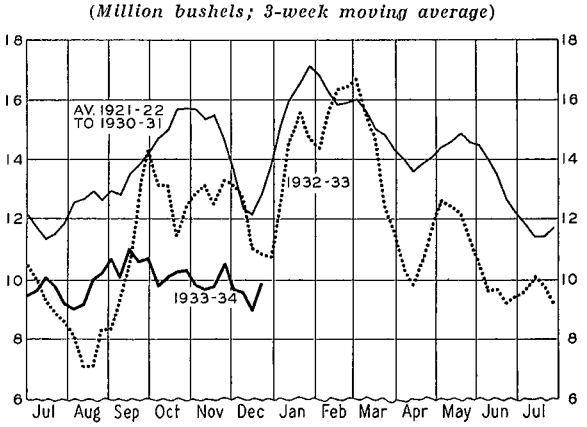
World trade. — Bumper European wheat crops, stringent governmental restrictions on wheat imports in Europe, and good-sized crops in ex-European importing countries kept international trade in wheat at a record (post-war) low level in August–December. World shipments were over 25 million bushels smaller in this period than in the same months of 1932, mainly because crops in importing countries were larger and governmental regulations more severe. Comparative shipments figures for the last six years are shown below, in million bushels:

Aug.–Dec. (21 weeks)	Total	North America	Argentina	Australia	Russia	Danube	Others
1928	366	263	52	24	0	20	6
1929	263	126	84	19	0	26	7
1930	322	167	18	30	74	20	12
1931	322	142	30	36	65	40	8
1932	236	151	18	35	15	4	12
1933	210	97	37	32	18	16	10

The course of world shipments (Chart 5) was peculiar in that shipments gradually declined instead of increasing as usual during September–November. The demand for North American wheat was greatly restricted at this time; Southern Hemisphere shipments declined more than seasonally; and exports from several continental European countries (notably France), which were heavy in August and early September, fell off as international wheat prices drifted downward in September–November. The decline in shipments in December was much smaller than usual, mainly because of the low level of shipments in late November.

Chart 5. — World Shipments of Wheat and Flour, July–December 1933, with Comparisons*

(Million bushels; 3-week moving average)



* See Table VIII.

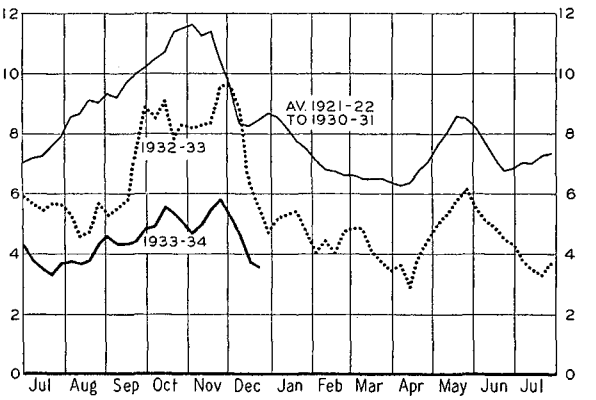
North American countries contributed a smaller proportion of world shipments in August–December 1933 than in any preceding post-war year except 1931. On the other hand, Argentina and Australia together shipped a fairly large amount of wheat as

compared with earlier years; and their aggregate shipments represented a strikingly large percentage of the world total. Shipments from other countries, including Russia, were higher than last year, both in absolute and percentage terms; but they were somewhat lower than in several earlier years.

North American shipments.—Almost all of the wheat shipped from North America was Canadian wheat. United States wheat prices were held so persistently above export parity (Chart 11, p. 169) that commercial exports of United States wheat were practically out of the question. The United States was indeed a net importer of wheat grain. August–November gross exports of wheat and flour, including shipments to possessions, were only 7.5 million bushels,[1] and consisted mainly of flour ground from Canadian wheat and of wheat and flour shipped from the Pacific Northwest under governmental subsidy. Canadian exports were also relatively small, smaller than in any preceding post-war year except 1929. Although European millers have a strong preference for the hard Canadian wheat for mixing purposes, premiums on this wheat were too high during August–December and import restrictions were too severe to permit much import buying.

The course of North American (practically all Canadian) shipments is shown in Chart 6. Striking features of this course, aside from the record post-war low level, were the unusually small rise from July to the peak in November, the decline during the latter part of October, and the relatively small seasonal reduction in December. That more North American wheat was not shipped in October–November is not surprising in view of the small import demand, cheap offers of Russian, German, and Hungarian wheats on European import markets, and marked fluctuations in international exchanges. Moreover, though the Liverpool–Winnipeg price spread (futures) widened during August–September, it approximated only 5 cents at a maximum in October and seldom exceeded 2–3 cents in the latter part of October or in November; these differentials were too small to warrant large Canadian exports when other countries were offering wheat more cheaply. The recession in North American shipments in the second half of October probably reflected some decline in import demand for Canadian wheat as international wheat prices recovered from the record lows of mid-October. In November, however, North American shipments rose to a seasonal peak as wheat prices remained firm. The December decline was less pronounced than usual primarily because the November peak was so low and because shipments from the Pacific Northwest were getting under way. After mid-December, average weekly shipments ran less than 2 million bushels below shipments for corresponding weeks in 1932–33.

CHART 6.—NORTH AMERICAN SHIPMENTS, JULY–DECEMBER 1933, WITH COMPARISONS*



(Million bushels; 3-week moving average)

* See Table VIII.

Southern Hemisphere shipments.—August–December exports from Argentina were heavier in 1933 than in most previous years, chiefly because farmers and exporters in Argentina had withheld an unusually large proportion of their crop from export during January–July. Argentine wheat stocks were therefore relatively large on August 1, despite the fact that the 1932 crop had been only of about average size. The course of Argentine shipments suggests that Argentina sold most heavily in July and August when wheat prices were at a higher level than later.

Large Australian shipments in August–December reflected mainly the big 1932 crop, since stocks on August 1 were not unusually

[1] Net exports of wheat (including flour) amounted to only 3.4 million bushels in August–November.

large in relation to the crop, though high in absolute level. August–December shipments from Australia were slightly smaller this year than last despite heavier wheat production and larger initial stocks in 1933–34 than in 1932–33.

Russian and Danubian shipments.—Russia shipped only a trifle more wheat in August–December 1933 than in the corresponding period last year. Since the Russian wheat crop of 1933 much exceeded that of 1932, we infer that the policy of the Soviet government has been changed this year to allow more wheat to be used domestically or, at least, to allow more to be stored for later use as required.

Danubian exports (consisting mainly of Hungarian wheat) were considerably increased as compared with the small movement last year; but they were smaller in relation to the aggregate Danubian crop (as officially estimated) than in eight of the ten preceding years. In view of the upward trend of domestic utilization of wheat in the Danube countries during the past ten years, and in the absence of definite evidence that any of the standing official crop estimates for 1933 is too high, it seems probable that increased utilization of wheat for food and to replenish stocks has been the chief factor behind the moderate export movement.

Shipments from other countries.—Of the 10 million bushels of wheat shipped by other countries in August–December, over 5 million are reported by Broomhall to have been shipped from Germany. This compares with German gross exports of 14 million bushels in August–November. France apparently exported gross about 5 million bushels up to the end of November; but it is clear that not all of these exports were included in Broomhall's shipments. German exports were encouraged by the export certificate system, and French exports by direct bounty. Exports from Algeria, Morocco, and Tunis were probably of moderate size, but smaller than in 1932.

Imports

European imports.—Reported shipments to Europe in August–December fell to a new post-war low level, some 15 million bushels smaller than last year. Shipments to, and net imports into, the United Kingdom were well maintained; but continental takings were the smallest in years. Comparative data on shipments to Europe are shown below for the past six years, in million bushels:

Aug.–Dec. (21 weeks)	Adjusted total[a]	Reported total[b]	United Kingdom	Orders	Continent
1928	282	291	72	34	184
1929	215	203	60	57	84
1930	276	265	54	86	125
1931	257	245	53	86	106
1932	173	182	70	35	77
1933	178	166	57	47	62

[a] By subtracting from the reported figure the amount by which stocks afloat were increased during these weeks or adding the amount of reduction.

[b] Figures in this column are not direct sums of items in the three following columns, which are taken from a different table in Broomhall's *Corn Trade News*.

Although *reported* shipments to Europe were smaller than last year, *adjusted* shipments were slightly larger: this is due to the fact that stocks of wheat afloat were reduced during August–December 1933, instead of being increased as in 1932. Adjusted shipments usually provide a better index of European imports, and sometimes of European consumption, of foreign wheat than do reported shipments. However, the fact that this year's figure is larger than last year's does not indicate that European consumption of imported wheat has been heavier this year; for stocks in European ports were increased more during August–December this year than last. From the standpoint of European consumption, it is also noteworthy that an unusually large part of this year's shipments was provided by certain of the importing countries themselves, particularly Germany and France (see above).

To judge by the size of "orders" shipments, pressure of unsold wheat on European (primarily British) import markets was somewhat heavier this year than last, but considerably lighter than in 1930 or 1931 when Russian shipments were more than four times as large.

This year, as in 1932–33, British net imports in August–November exceeded the net imports of all continental countries combined. In the face of a 1933 wheat crop half again as large as the crop of 1932, Great Britain

imported more wheat in August–November 1933 than in the same months of 1932. The added supply, however, went to increase port stocks rather than consumption.

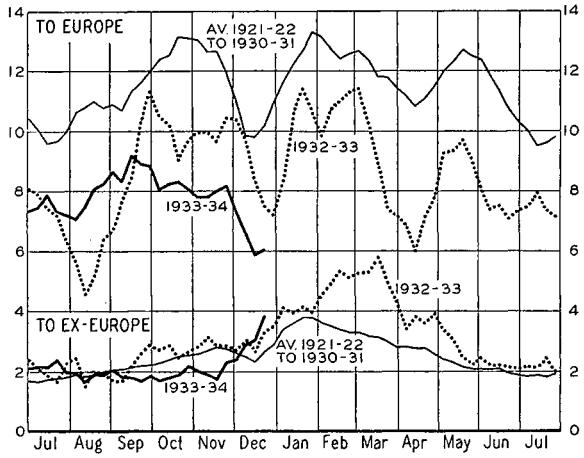
With record 1933 wheat crops in Germany, Italy, and France, total August–November takings of these three countries were strikingly reduced, even as compared with 1932. The decline in French imports accounted for most of the reduction; Germany exported net somewhat more wheat than in the same months of 1932. Italian net imports were close to a minimum in both years.

Among other leading continental importing countries, Netherlands imported more wheat in August–November 1933 than in 1932, while Belgium took about the same quantity in both periods. Since Belgium apparently harvested a smaller crop in 1933, it is not surprising that her imports were well maintained. Netherlands, however, secured a record outturn of wheat this year; and her sizable imports are the more surprising since they apparently did not lead to an unusually big increase in port stocks. Part of this imported wheat may have consisted of feed wheat and flour from nearby countries or Argentina; if so, consumption of foreign wheat in Netherlands was probably increased as compared with last year. But to the extent that the larger supplies were not absorbed by consumption, they must have gone to increase stocks in positions other than at ports (in mills, bakeries, etc.), a situation perhaps associated with imposition of import taxes on August 14, which were increased November 18 (p. 157). Greece and Czechoslovakia both had smaller imports this year than last. Scandinavian takings, however, were slightly higher this year, reflecting some increase in the imports of Denmark, perhaps anticipatory to imposition of duties.

The course of shipments to European countries (Chart 7) was unusual because the peak came in mid-September instead of late October or early November. These shipments were relatively heavier in August–September before the full size of many of the domestic crops was known, and while Argentina and Australia still had sizable supplies to export. August shipments were strikingly larger than in 1932, while shipments in October–December were considerably lower.

CHART 7.—SHIPMENTS TO EUROPE AND TO EX-EUROPE, JULY–DECEMBER 1933, WITH COMPARISONS*

(Million bushels; 3-week moving average)



* See Table VIII.

Shipments to ex-Europe.—Shipments to ex-European countries, as well as to Europe, were relatively light in August–December 1933; they were smaller than in the corresponding period of any year since 1927, and 10 million bushels below the figure for last year. As in 1927, the small size of these shipments mainly reflected a reduced Oriental demand. This is apparent from the following tabulation which shows the distribution of August–December shipments to ex-European countries, in million bushels:

Aug.–Dec. (21 weeks)	Total	China and Japan	Central America[a]	Brazil	Egypt	India	Others[b]
1927	39.6	9.5	14.0	10.5	3.2	.1	2.4
1928	74.7	18.9	25.1	11.8	6.7	7.9	4.2
1929	59.6	16.3	23.2	12.6	3.1	2.5	2.0
1930	57.6	21.7	19.1	9.3	3.9	2.0	1.5
1931	76.4	31.8	25.3	14.1	3.3	...	1.9
1932	54.2	25.7	14.1	10.7	1.3	...	2.4
1933	44.2	13.4	14.6	12.2	1.3	.2	2.5

[a] Includes Venezuela, West Indies, Dutch East Indies, etc.
[b] North and South Africa, Chile, Peru, Uruguay, Bolivia, Syria, Palestine, New Zealand.

Chinese imports, in particular, were considerably smaller than in other recent years. This was in spite of lower international wheat

prices (gold) in September–December 1933, relative stability of the Chinese yuan (in terms of gold) since May 1932, and a credit of 10 million dollars available to the Chinese government for purchases of United States wheat. On the other hand, supplies of Chinese domestic wheat and other cereals were fairly abundant and domestic wheat prices were strikingly low in the early months. Moreover, in August–October, Chinese importers showed some tendency to wait for subsidized exports from the United States; and in October–November, they may have restricted their takings because of uncertainty as to the amount and date of imposition of the expected import duty on wheat. After mid-December, shipments to China increased seasonally, although the new tariff on wheat became effective December 16. The unusually steep increase of total shipments to ex-Europe in December (Chart 7) reflected mainly the operations of Chinese purchasers.

The decrease in shipments to China and Japan, as compared with 1932, was due almost entirely to the reduction in Chinese buying. Japan's net imports in August–November 1933 were of about the same size as in 1932, when they totaled only a little over half a million bushels. The large Japanese wheat crop of 1933, abundant rice supplies, and some reduction in the gold value of the yen, even as compared with last year, tended to keep Japanese imports from increasing to a more normal level.

Shipments to the group of countries classified as "Central America" also remained low, as in 1932–33. Some improvement in economic conditions has occurred in certain of these countries; but purchasing power is still low in most. Egypt appears to have taken no more wheat this year than last, though she harvested a smaller wheat crop in 1933. With the Egyptian tariff on foreign wheat and flour notably high, domestic wheat supplies were probably used more heavily than usual during the early months of 1933–34, and larger quantities of foreign wheat may be demanded later.

Shipments to Brazil were moderately large, as were also shipments to Chile, Peru, Bolivia, and Uruguay: these reflected mainly cheap offers of wheat from Argentina, which may have resulted in part from the disadvantage suffered by Argentine wheat on British markets. In addition, Peru and Chile harvested relatively small wheat crops in 1932; the other countries of this group may also have had low yields, but reliable crop statistics are lacking.

Price Movements

The course of prices. — Wheat futures prices in leading world markets declined significantly, with only minor interruptions, from July 18 to the middle of October; then, after a week of sharp reaction, there was a slow downward drift to the end of December. From early September, when our last Survey was published, to the end of December, the Liverpool December future declined approximately 10 gold cents, 5 cents more than we had considered likely.[1] Revisions of crop estimates made the international statistical position for wheat increasingly bearish; and wheat prices (gold) suffered also from developments in the field of international exchange.

Sharp fluctuations in leading international exchanges in August–November greatly influenced and complicated the wheat-price situation. Charts 8 and 9 have accordingly been designed to show the course of prices in each leading futures market in terms both of gold and of the currency of the country in which the market is located. Currency prices for Chicago and Winnipeg are prices as quoted in American and Canadian cents respectively; currency prices for Liverpool and Buenos Aires are in United States cents at par of exchange, and show the same course of prices as that recorded in each market in domestic currency.

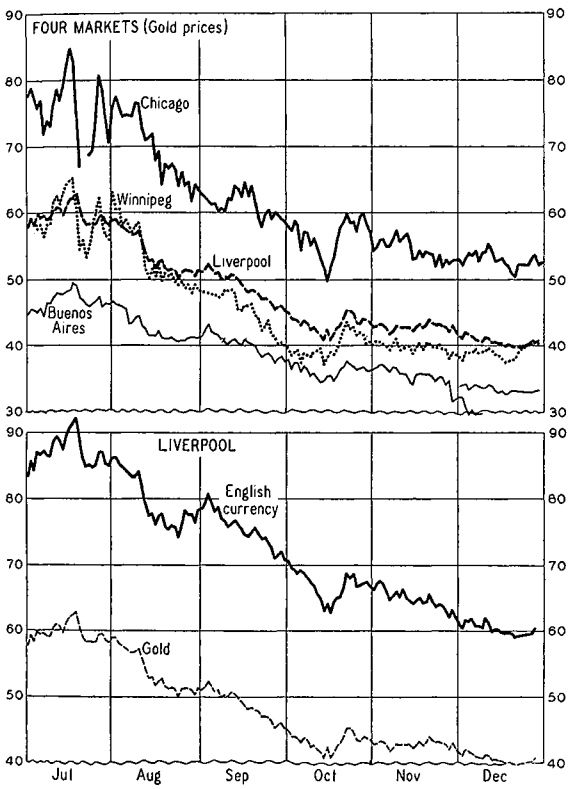
With wheat prices in the United States maintained far above export parity, and in-

[1] We judged it "improbable that international wheat prices (in gold) can fall as much as 5 cents below their level of early September for more than two or three weeks [except in the event of] . . . . substantial depreciation in the gold price of both the dollar and the pound, and of distinctly bearish influences otherwise" and considered most likely "an advance of small magnitude" (Wheat Studies, September 1933, IX, 397–80).

fluenced markedly by political developments relating to the national monetary situation, the close correspondence between July–December price movements at Chicago and Liverpool was striking. It was in line, however,

CHART 8.—FUTURES PRICES IN LEADING MARKETS IN GOLD, AND THE LIVERPOOL DECEMBER FUTURE IN GOLD AND CURRENCY, JULY–DECEMBER 1933*

(U.S. cents per bushel)



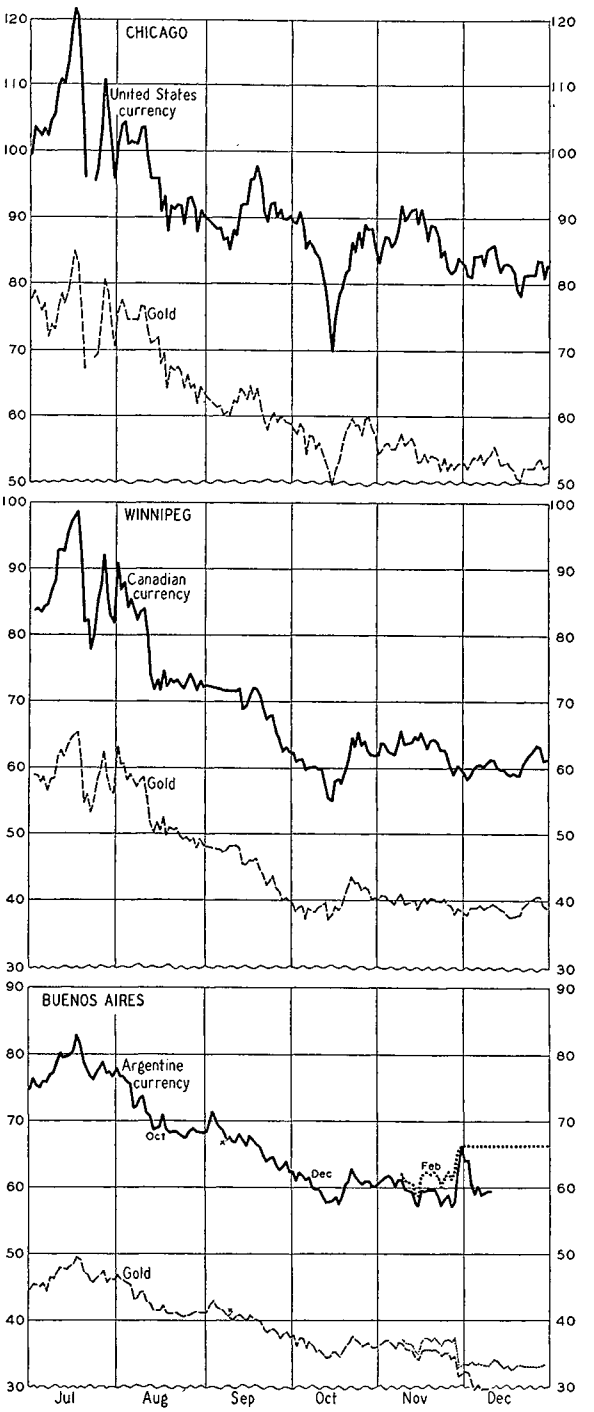
* Daily closing prices of wheat futures mainly from *Daily Trade Bulletin*, Chicago; *Grain Trade News*, Winnipeg; *London Grain, Seed and Oil Reporter*, and *Revista Semanal*. December future at Chicago, Winnipeg, and Liverpool futures successively at Buenos Aires. Conversions to gold based on daily price of gold in London. For explanation of currency prices, see text.

with developments in past years when United States wheat prices were held above export parity.[1] Analysis of interval price changes at Chicago, Winnipeg, and Liverpool suggests that market leadership in this period rested primarily with North American markets rather than with Liverpool.

[1] See "Price Leadership and Interaction among Major Wheat Futures Markets," WHEAT STUDIES, November 1933, X, No. 2.

CHART 9.—FUTURES PRICES IN GOLD AND CURRENCY IN LEADING MARKETS, JULY–DECEMBER 1933*

(U.S. cents per bushel)



* See footnote to Chart 8.

The general downward drift of wheat futures prices from mid-July to mid-October

was largely simply the aftermath of the preceding speculative boom in North American markets. There was heavy liquidation of Chicago, and presumably of Winnipeg, wheat futures as prices broke sharply July 18–22; thereafter liquidation was gradual but persistent. Instead of rising as is usual in early autumn, the open interest in Chicago futures declined 18 million bushels between August 1 and October 17, reflecting liquidation by speculative holders who became discouraged by the abundance of immediate wheat supplies and by apparently reduced prospects for price inflation.

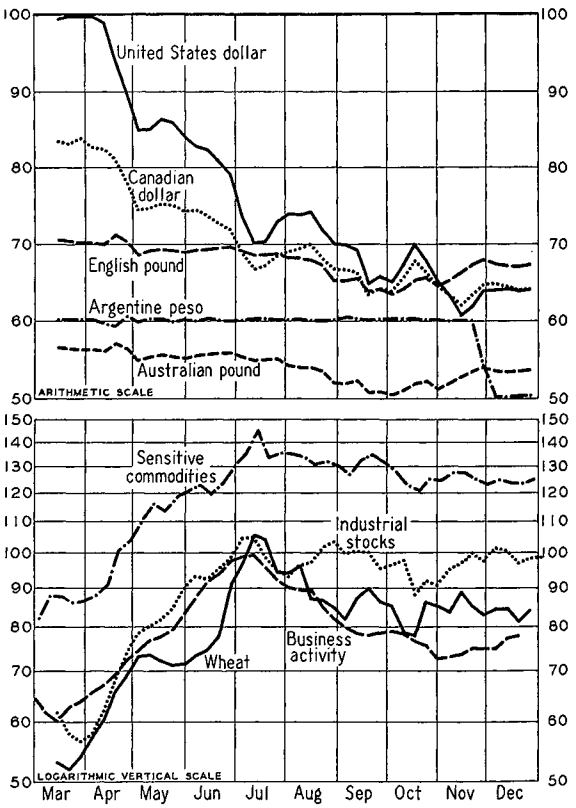
The drastic break in wheat prices after mid-July, and the subsequent wide price fluctuations to August 2, have been discussed in detail in previous issues of WHEAT STUDIES,[1] and need not be treated here.

During the first two weeks of August, wheat prices declined precipitously in all leading futures markets. The decline was smaller at Chicago than at Winnipeg, mainly because the Chicago Board of Trade had ruled that during August 1–15 no transactions in Chicago wheat futures should take place at prices below the closing prices on July 31. In addition, Winnipeg as well as Liverpool traders were probably influenced more than traders in the United States by glowing crop reports from Europe and by pressure of continental and Argentine wheats on British import markets.

After August 15, when minimum price restrictions were removed at Chicago and similar fixed minimum prices were established at Winnipeg, Chicago prices declined erratically for several days, while prices at Winnipeg were firm. From then until mid-September, currency prices in all markets were relatively steady; but in terms of gold there was a general downward drift, more pronounced at Chicago than elsewhere because the American dollar was depreciating more rapidly in terms of gold than was Canadian or English currency (Chart 10). Maintenance of fixed minimum prices at Winnipeg and diminishing pressure of continental wheats on British import markets were important factors in restraining the decline in international wheat prices. There was also temporary support from conclusion of the International Wheat Agreement and from reports of dry weather in Argentina; but closer analysis of the Agreement disclosed little basis for immediate bullish enthusiasm, and timely rains after September 10 relieved anxiety about the Argentine crop. At Chicago, a substantial independent rise in futures prices (particularly in terms of domestic currency)

CHART 10.—LEADING INTERNATIONAL EXCHANGES, WHEAT AND INDUSTRIAL STOCKS PRICES, AND INDEXES OF SENSITIVE COMMODITY PRICES AND BUSINESS ACTIVITY, WEEKLY FROM MARCH 1933*

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



* Dow-Jones average of 30 industrial stocks at New York; Moody's index of prices of 15 staple commodities (Saturday); *New York Times* weekly index of business activity; and lowest contract cash price of wheat at Chicago (see Table VII).

[1] See WHEAT STUDIES, September 1933, IX, 371–73, and December 1933, X, 104–5.

from September 9 to 19 was associated with inflation talk and depreciation of the American dollar in foreign exchange. The open interest in Chicago wheat futures, which had been steadily declining since late in July, increased slightly at this time.

On September 14 minimum price limits were removed at Winnipeg, and prices there immediately slumped, only to recover during the next few days as the Canadian dollar declined in terms of gold and Canadian wheat prices tended to reflect the strength at Chicago. After September 20, however, futures prices in all markets declined precipitously until October 17. North American markets led the decline. In the United States, sentiment was dominated by a growing conviction that President Roosevelt did not favor direct currency inflation and that devaluation of the dollar would be postponed as long as possible. This sentiment was reflected in foreign exchange markets, where the American dollar became firm late in September and rose sharply in relation to gold exchanges during the first half of October. There was concurrent but less marked appreciation of the Canadian dollar and the English pound. These developments naturally had a direct bearish effect upon all commodity and stock markets. Wheat prices suffered an additional indirect effect, for uncertainties in the exchange situation tended to restrict import buying until prices had declined to near-record low levels in terms of gold.

Though the international exchange situation, and developments and rumors relating to United States monetary policy, afforded part of the basis for the fall in wheat prices during September 20–October 16, an increasingly bearish international wheat position contributed to the decline. Upward revision of European crop estimates, continued pressure of continental wheats on British markets, and improved prospects for the Southern Hemisphere crop indicated that world wheat supplies for 1933–34 would be appreciably larger than previously anticipated.

Throughout this period of price decline, Winnipeg futures received intermittent support from stabilizing purchases for the account of the Canadian government. There was no direct governmental support of Chicago wheat prices until October 17. As the American dollar rose rapidly in foreign exchange markets October 13–16, Chicago wheat futures prices dropped by practically 5 cents a day—the maximum decline allowed. Not since late July had prices declined so precipitously or liquidation been so heavy at Chicago. Foreign markets reflected only a part of the three-day break in Chicago prices; Liverpool and Winnipeg wheat futures had already touched new record low gold prices which tended to stimulate import buying, and Winnipeg futures received some additional government-sponsored support. Moreover, announcement (October 15) of Germany's intention to withdraw from the League of Nations was reported to have had a temporary bullish influence at Liverpool.

The decline in Chicago prices was abruptly checked October 17, mainly as a result of purchases of cash wheat and of futures for the account of the Federal Emergency Relief Administration. Between October 17 and 23 Chicago prices rose almost as spectacularly as they had previously declined. Mill buying increased under the stimulus of advancing prices and rumors that the processing tax might be raised; and traders interpreted as bullish reports that government loans might be made on wheat held on farms. Political developments relating to the monetary situation also attracted much attention. In a radio address to the American public on October 21, President Roosevelt reaffirmed his determination to bring about a further advance in commodity prices, and announced his intention to establish a government market for gold "to prevent dollar disturbances from swinging us away from our ultimate goal, namely the continued recovery of our commodity prices." Relief purchases continued spasmodically as a market factor through December. To what extent the timing of these purchases has been governed by intention to support the wheat market and to what extent by desire to obtain relief wheat at low prices has not been indicated.

After some hesitation, foreign markets followed the upturn at Chicago. Canadian prices were helped by a fairly good export demand;

and at both Winnipeg and Liverpool considerable attention was paid to reports of unfavorably hot weather in Argentina and Australia October 20–23. The upturn was followed by minor reaction during the last week of October, on better weather conditions in Argentina and Australia and heavier pressure of shipments from Russia and other continental countries. European importers, who had made sizable purchases of foreign wheat when prices first began to rise, were indifferent to offers at the higher level; and export sales of Canadian wheat fell off, with a depressing effect at Winnipeg.

In November, price fluctuations in all the leading wheat futures markets were based mainly upon changes, anticipated or actual, in currency values. During the first half of the month, Chicago prices (in depreciated currency) rose, and Winnipeg prices remained firm, as both American and Canadian exchanges dropped to new low levels in terms of gold (Chart 10). These developments were associated with modification (October 29) of the gold-buying policy of the United States government to include purchases of gold in foreign markets. In contrast to the course of North American exchanges, the English pound increased in gold value during these weeks, and Liverpool wheat prices consequently declined in terms of English currency. Appreciation of the English pound continued throughout November; and after mid-November there was concurrent appreciation of American and Canadian exchanges which tended to depress North American wheat prices in terms of domestic currency.

Argentine wheat prices, in currency, rose sharply late in November when new exchange regulations led to a decline of about 20 per cent in the gold value of the peso. At the same time that exchange regulations were altered, the government adopted its policy of minimum prices for wheat (p. 155); this prevented Argentine wheat prices from declining as much in terms of gold as they probably would have otherwise. When the plan went into effect December 4, it became clear that the government intended to apply minimum prices only to new-crop wheat; and as a result, the price of the February future remained stable, while the December declined to 29.6 cents, a new low record in gold, on December 5.

Since early December, Argentine new-crop wheat prices have remained fairly constant at about minimum levels. Futures prices at Liverpool, Chicago, and Winnipeg, on the other hand, drifted downward to December 21 under the influence of a slow import demand, bearish developments in the United States, and anticipation that cheaper Argentine offers would result from the new plan to subsidize Argentine exports, especially since the official estimate of the Argentine crop was higher than generally expected. In the United States, disappointment over the small reduction in winter-wheat sowings for 1934, and some improvement in moisture conditions, apparently offset evidence that the condition of the winter crop on December 1 was unusually low. In addition, speculative buying of Chicago futures was discouraged by absence of inflationary developments and by continued dispute of the gold-buying program.

As Chicago wheat prices declined, they were supported by governmental purchases of wheat for relief purposes; and on December 22 the new silver-buying program of the United States government was announced. This announcement was followed by sharp recovery in Chicago wheat prices, many traders taking the view that China's demand for United States wheat would be increased as a result of higher silver prices. Moreover, the government's action in regard to silver renewed hopes of further governmental price-raising measures.

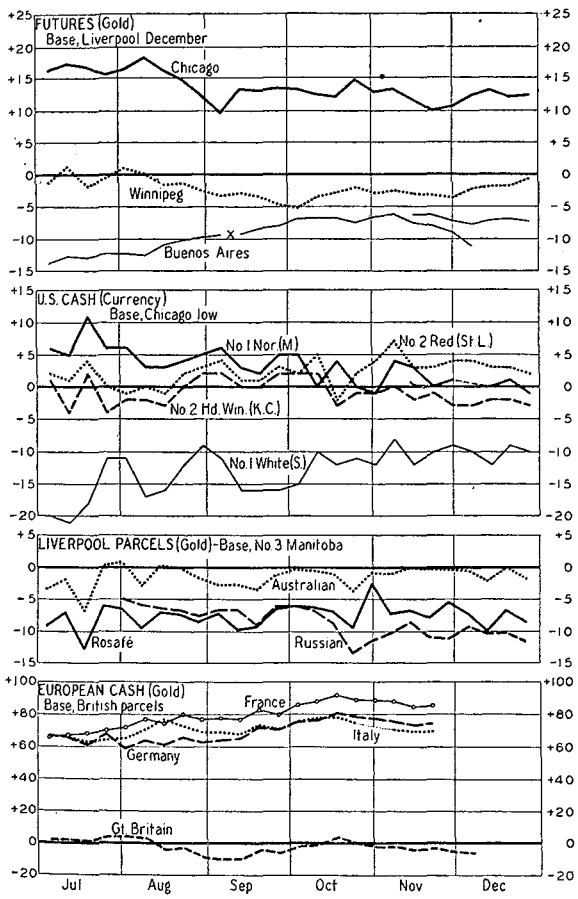
From December 22 to January 17 the May future at Liverpool was relatively stable; but wheat futures in North American markets first sagged slightly, then rose several cents under the influence of light marketings, fair sales of Canadian wheat for export, and anticipated and actual developments at Washington. Of these, the most spectacular was President Roosevelt's request (January 15) that Congress fix the upper limit of dollar revaluation at 60 per cent. This led to a sharp upturn of Chicago wheat prices in terms of domestic currency, but in terms of gold the Chicago May future was no higher on January

17 than on January 14, and only fractionally higher than on December 22.

Spreads between futures. — Price spreads between futures at Liverpool and Winnipeg remained narrow in August – December, though there was some seasonal widening; and Chicago futures prices continued to rule far above prices of corresponding futures at Liverpool and Winnipeg (Chart 11, top tier).

CHART 11.—SIGNIFICANT PRICE SPREADS, WEEKLY, JULY–DECEMBER 1933*

(*U.S. cents per bushel*)



* Futures price spreads are weekly average spreads of prices described in footnote to Chart 8. Prices of United States cash wheat, Liverpool parcels, and British parcels from Table VII. Continental European domestic prices (at Milan, Berlin, Paris) from *World Wheat Prospects;* British domestic prices from *The Economist* (London).

For about a month after minimum-price regulations were removed at Chicago (August 15) and while minimum prices were in force at Winnipeg, Chicago futures prices declined relatively. Thereafter, the Liverpool–Chicago spread (weekly average) was fairly constant, about 13 gold cents, until mid-November when there was a temporary reduction as United States wheat prices weakened under the influence of disturbed monetary conditions. The Liverpool–Winnipeg spread narrowed, as usual, in December. Buenos Aires futures prices rose seasonally during August–October in relation to futures in other markets. After mid-November, the spread between December futures at Liverpool and Buenos Aires widened appreciably; but the minimum-price regulations in Argentina prevented the widening of spreads between more distant futures in these two markets in December.

Spreads in United States markets.—The relation between the new- and old-crop futures at Chicago has been noteworthy in view of the prospective liberal outward carryover of United States wheat. As we interpret the domestic supply situation, it warranted a price of July wheat ranging during October–December from about the price of May to 1 or even 2 cents over, with expectation of its rising in April to 2 or 3 cents over the price of Chicago May wheat.[1] At the beginning of trading in July wheat on October 2, July sold about 1 cent under May. Thereafter it declined irregularly to about 3¼ cents under, late in October. From this low, July wheat recovered to only ½ cent under May in late November and declined again to 2 cents under by December 8. During the remainder of December, July wheat was relatively strong, but in January weakened again. Similar movements of this spread occurred in 1911–12, 1923–24, and 1931–32. The historical record indicates that even with supplies adequate for a large carryover the October–December period has usually been one in which uncertainties have developed that carried July wheat to increasing discounts under May. During December 1933, the resumption of government wheat-buying contributed notably in this direction, as did also the shortness of supplies of contract wheat in Chicago, which

[1] This interpretation of normal consequences of the supply situation, as we see it, rests on a detailed analysis of the characteristics of behavior of the May–July spread over nearly half a century, to be published in an early issue of WHEAT STUDIES.

resulted in December wheat rising at one time (December 12) to only 1 cent under May. A substantial factor in holding July wheat at a discount under May has been widespread belief that domestic wheat supplies are considerably less liberal than our expectation of a 240-million bushel carryover on July 1 would indicate.

Spreads between cash wheats in United States markets were narrow, as in 1932–33, except that white wheat at Seattle sold at a considerable discount under wheats in Eastern markets (Chart 11, second tier). This discount, though wide, was never wide enough in the period under review to allow commercial exports of North Pacific wheat to foreign countries. Moreover, after early October, when it became clear that wheat exports from the Pacific Northwest would be subsidized (p. 154), the price of No. 1 White wheat at Seattle was maintained at a discount of only about 10 cents under the price of Chicago contract cash wheat.

Price spreads in European markets.—On the British import market the price of No. 3 Manitoba was maintained considerably above prices of Rosafé and Russian wheats (duty-unpaid) and slightly above Australian (f.a.q.) (Chart 11, third tier). There was little lasting change in these price spreads during August–December, except that Russian wheat prices weakened significantly in relation to prices of other imported wheats after early October.

British wheat parcels showed the same general price tendencies as Liverpool wheat futures (Table VII). Spreads between the prices of various European domestic wheats and average British wheat parcels prices are shown in Chart 11, bottom tier. In continental European importing countries, wheat prices continued to be maintained at artificially high levels, despite bumper 1933 wheat crops. In addition to the various import restrictions and milling quotas previously in force in these countries, France (July 15) and Germany (October 1) resorted to fixed minimum prices for domestic wheat in 1933–34. Subsequent changes in the spreads between the prices of these domestic wheats and British wheat parcels are mainly attributable to changes in British parcels prices (Table VI). In spite of lower international wheat prices and larger domestic wheat supplies this year than last, prices in France were maintained at a higher level in September–December 1933 than in the same months last year. German and Italian wheat prices declined seasonally in July, and have ruled generally lower this year than last. Since early August, Italian prices have drifted downward, while German and French prices have firmed.

In contrast with the high level of wheat prices in France, Germany, and Italy, domestic wheat prices in Great Britain, Poland, and the Danube countries were strikingly low (Table VI). Under the influence of unusually heavy early marketings, British domestic wheat prices declined significantly in relation to British parcels prices during August–September, the spread narrowing later as British marketings were reduced to a more normal season flow. Wheat prices in Hungary, Yugoslavia, and Poland declined rapidly during late July and August when the new crops began to move; but prices in Rumania and Bulgaria continued to be maintained above export parity, influenced partly by governmental purchases of domestic wheat. During September–November, wheat prices declined slightly in most of these countries.

Outlook for Trade

With exportable supplies of wheat still considerably in excess of import requirements, the volume of international trade in 1933–34 depends almost entirely upon import purchases. In September, on the basis of preliminary and incomplete crop data, we tentatively expressed the opinion that import demand would call forth net exports of around 575 million bushels. Crop estimates for European importing countries have been raised substantially since mid-September. The increase affects mainly the outlook for European consumption and end-year stocks; but it is distributed among the various countries in such a way as to warrant a reduction of about 20 million bushels in our preliminary trade forecast. Our appraisal of probable shipments to ex-European countries in 1933–34 suggests a further reduction of about 5

million bushels. Accordingly, we revise our forecast of total net exports downward from 575 to 550 million bushels.

European import requirements.—The domestic supply position of European importing countries for 1933–34 is such as to make practically certain the reduction of European net imports to a new post-war low level. The previous record low was in 1932–33, when European net imports (ex-Russia and ex-Danube) totaled 442 million bushels. European importing countries harvested an aggregate 1933 wheat crop some 65 million bushels larger than the bumper crop of 1932, and in addition held considerably larger initial stocks this year than last. European net imports presumably will not be reduced by anything like the full amount of increase (around 125 million bushels) in domestic wheat supplies; for consumption will be expanded in many countries, and stocks will be built up in some. Broomhall has estimated that the reduction in European wheat takings (shipments) between 1932–33 and 1933–34 will approximate 49 million bushels; the International Institute of Agriculture has placed the probable reduction in net imports at 71 million bushels. We now incline to the view that European net imports, which were 442 million bushels (according to our calculations) in 1932–33, will in 1933–34 approach 385 million bushels, a reduction of 57 million.

This forecast is based upon several primary assumptions: (1) that standing crop and stocks estimates are approximately correct; (2) that European wheat crops will look less promising in the summer of 1934 than they did in 1933, but that crop developments in Europe and elsewhere will not be such as to create fears of wheat shortage in 1934–35; (3) that economic conditions in most European countries will be perceptibly better, instead of worse, in 1933–34 than they were last year; and (4) that in January–July 1934 there will be only moderate relaxation of governmental restrictions on wheat imports.

Most of the European countries which harvested record wheat crops in 1933 may be expected to import net less wheat this year than in 1932–33. Reductions of 5 million bushels or more will probably be recorded for France, Czechoslovakia, the British Isles, and Germany. France, despite her enormous domestic supplies, will probably be a net importer of wheat in 1933–34, perhaps to the extent of 10 million bushels, mostly originating in northern Africa. Trade statistics through November, abandonment of the export bounty, and the average seasonal course of northern African exports suggest this outcome. Germany may about balance imports against her exports under the export certificate system.

Greece, Austria, Holland, Sweden, and Italy will probably all take somewhat less foreign wheat this year than last. But in none of these countries is the reduction in net imports likely to exceed 5 million bushels, and in Holland and Sweden, at least, the reduction will probably be closer to 1 million. Belgium, with a smaller 1933 crop, is the only European country which will almost certainly import several million bushels more wheat in 1933–34 than in 1932–33. Spanish stocks of old-crop wheat on August 1 were high enough to make up for the deficiency in the new crop. No significant change in trade as compared with 1932–33 seems in prospect for any of the remaining European countries.

Ex-European requirements.—The bulk of wheat shipments to ex-European countries goes to China, Japan, Egypt, Brazil, the West Indies, South Africa, and sometimes India. Brazil's wheat imports are relatively constant from year to year, and in 1933–34 may be expected about to equal the imports of 1932–33. Egypt, the West Indies, and South Africa, all of which had notably small imports in 1932–33, will probably increase their takings somewhat in 1933–34. In South Africa and the West Indies, the amount of increase will be exceedingly small, in the aggregate probably not over a couple of million bushels, which may be offset by reduction in India. But Egyptian net imports are likely to be increased by about 5 million bushels. In 1932 Egypt harvested a bumper domestic wheat crop, and with the aid of a high tariff was able to keep her net imports down to less than half a million bushels. This year Egypt's wheat harvest was over 12 million bushels smaller and stocks of old-crop wheat were no larger; consequently, it seems probable that

net imports into Egypt will be considerably increased, even if there is little or no reduction in tariff duties during January–July.

Japan, China, and Manchuria are reported to have secured larger wheat crops this year than in 1932; and it therefore seems reasonable to anticipate a reduction in Oriental wheat imports. Japanese net imports of wheat and flour, however, were less than 4 million bushels in 1932–33; and further reduction seems improbable since net imports of about 7 million bushels would be necessary to bring supplies of wheat available for consumption in 1933–34 up to the level of other recent years, excluding 1932–33. But while a reduction in Japan's *net* imports appears improbable, it is likely that there will be some reduction in her *gross* imports of wheat and flour. In 1932–33, a considerable part of the wheat imported into Japan was re-exported in the form of flour, mainly to China and Manchuria. This year, the market for Japanese flour exports will probably be smaller, because of larger domestic crops in the countries which usually buy Japanese flour.

Chinese net imports of wheat will certainly be reduced this year as compared with last. The United States Department of Agriculture has indicated that July–June net imports of wheat and flour, which in 1932–33 totaled 60 million bushels, may this year approximate only 30–33 million, a reduction of 27–30 million bushels.[1] The new silver policy of the United States government presumably will not tend to enlarge Chinese takings. Yet in view of the existing low level of world wheat prices, and in spite of the new Chinese tariffs on wheat and flour, a reduction of as much as 27 million bushels in Chinese net imports (August–July) seems improbable. But imports into Manchuria, which in terms of wheat amounted to 14 million bushels in July–June 1932–33, will probably also suffer some reduction; and total reduction in Chinese and Manchurian imports may amount to about 25 million bushels.

[1] *Foreign Crops and Markets*, November 6, 1933.

[2] Their forecast is not strictly of ex-European trade, but roughly represents the difference between their forecasts of total net exports and their forecast of European net imports, with allowance for changes in stocks afloat.

The estimated changes indicated above suggest a net reduction in ex-European net imports of 20 million bushels from last year. The International Institute of Agriculture has forecast a reduction of about 30 million bushels in ex-European trade;[2] Broomhall has indicated a probable reduction of only 14 million bushels in shipments to ex-Europe.

Net exports.—If the aggregate net imports of European net-importing countries are 57 million bushels smaller in 1933–34 than in 1932–33; if ex-European imports are reduced by 20 million bushels; and if stocks afloat on August 1, 1934, are about the same as in 1933, total net exports of wheat in 1933–34 will probably approximate 550 million bushels, as compared with 627 million last year. Our forecast of 550 million bushels compares with a forecast by the International Institute of Agriculture of 525 million bushels, and net exports of 560 million accepted as the basis of export allocations in the International Wheat Agreement. Broomhall's forecast of international shipments—552 million bushels—is not directly comparable with these forecasts of net exports. But since total net exports have exceeded total reported shipments by 12 to 51 million bushels over the past ten years, we infer that Broomhall's forecast implies net exports of at least 564 million bushels in 1933–34.

In spite of allocation of wheat export quotas in the International Wheat Agreement, there is some question as to how net exports of 550 million bushels in 1933–34 would be distributed among the various exporting countries. The following tabulation, in million bushels, shows our forecast in relation

Region	Net exports F.R.I.	Allocated exports I.W.A.	Shipments Broomhall
United States	40	47	48
Canada	215	200	200
Argentina	110	110	112
Australia	105	105	104
Russia	30	...[a]	40
Danube	35	50–54	48
Others	15[b]	...[c]	
Total	550	560	552

[a] Unspecified.

[b] Algeria, Morocco, Tunis, Poland, Spain.

[c] Not allowed for in total.

to the allocated export quotas, and to Broomhall's estimate of the probable distribution of shipments.

Whether or not net exports will be distributed as we have indicated will depend in large measure upon governmental policies in the different exporting countries and upon possible re-allocation of export quotas. Our forecast is based upon the assumption that the various governments will take measures to confine exports within the quota limits, and that there will be no fundamental change in the quotas.

Both Argentina and Australia have supplies large enough to fill their quotas and to leave large wheat stocks on August 1, 1934. United States net exports probably will not reach the allotted total of 47 million bushels, because United States wheat prices will probably remain above export parity, and the domestic supply and price situation presumably will not be such as to encourage the subsidization of the full 35 million bushels of exports contemplated under the North Pacific export plan. The United States will probably do well to export net as much as 40 million bushels of wheat and flour.

Of the various Danubian countries, only Hungary is likely to fill her quota (around 20 million bushels). Bulgaria may export as much as 5 of the 8 million bushels she is allowed; but Rumanian and Yugoslavian net exports probably will not equal half of the allotted quantities. Since the original Wheat Agreement provided for Danubian exports of 50–54 million bushels, there is a question whether Hungary will not be allowed larger exports than her particular quota indicates, in case the other Danube countries do not utilize their quotas. If so, Hungary might export 25 to 28 million bushels of wheat, and total Danubian net exports might approximate 40 million bushels instead of the 35 we have indicated.

Russia will probably ship only about 30 million bushels despite her big crop. About 15 million bushels will probably come from northern Africa, Poland, and Spain.

The sum of the probable net exports already mentioned is 335 million bushels. This leaves 215 million for Canada. The Canadian quota was 200 million bushels; but the Agreement implies that deficiency in the net exports of any of the other countries would be shared by Canada and the United States. Since the United States probably will not fully utilize her own quota, Canada presumably will be allowed to make up the entire difference of about 15 million bushels, unless, on reallocation, the quotas of Argentina, Australia, and Hungary are raised.

Outlook for Consumption and Stocks

Gross disappearance of wheat in the world ex-Russia seems likely to prove larger in 1933–34 than in 1932–33, but not so large as in 1931–32 or 1930–31. Our appraisal for 1932–33 and tentative forecast for 1933–34 are as follows, in million bushels:

Area	1932–33	1933–34
Four major exporters[a]	975	890
Europe ex-Russia ex-Danube[a]	1,649	1,716
Others[b]	985	1,028
Total[a]	3,609	3,634

[a] For exporting countries, the figures are initial stocks, plus new crops, minus net exports, minus end-year stocks. For importing countries, stocks and crops plus net imports, minus end-year stocks. For the total, initial "world" stocks, plus crops, plus Russian exports, minus end-year stocks.

[b] World total minus totals for the major exporting countries and Europe ex-Danube ex-Russia. The figures cover disappearance of wheat in the Danube basin, India, northern Africa, Japan, Mexico, Chile, Uruguay, South Africa, and New Zealand; changes in wheat stocks afloat to Europe and to ex-Europe; and shipments to areas outside the "world ex-Russia."

A reduction of roughly 85 million bushels in domestic disappearance in the four major exporting countries seems probable chiefly because of prospective reduction in the use of wheat for milling, for feed, and for seed in the United States. Detailed estimates, which for the United States alone involve a reduction of perhaps 70 million bushels, are given in Table XI for all four exporting countries. In the United States, net mill grindings in 1933–34 are likely to fall below those of 1932–33 mainly because flour stocks, accumulated when the year opened, will be consumed; and not because flour consumption will be significantly reduced. Higher wheat prices this year than last presumably will tend to reduce the quantity of wheat fed to

livestock; but local shortages of feed grains may keep the figure higher than it was in any year prior to 1930–31. Forecasts of feed use in the United States rest as usual upon an inadequate foundation, and our figure of 100 million bushels for 1933–34 as compared with 138 million in 1932–33 may prove substantially too low or too high.

A prospective increase of wheat consumption in European importing countries tends to offset a prospective reduction in the major exporting countries. The forecast for 1933–34 includes little change in the quantity used for seed. We have assumed that abundant domestic crops would tend to expand consumption either for food or for feed in many countries in the absence of governmental efforts to divert wheat to feed use. Only in Poland, Czechoslovakia, France, Italy, and Germany, however, have we allowed for increases of consumption (as compared with 1932–33) that are quantitatively important. In France and Italy governmental measures may help to expand consumption, and in Italy a short crop of corn.

The substantial increase in estimated disappearance in "other regions," about 47 million bushels, rests principally upon the change in the size of the Rumanian and Yugoslavian crops between 1932 and 1933. These countries were short of wheat in 1932–33 and consumed much less than in preceding years. They have in 1933–34 wheat crops large enough to permit recovery of consumption to the earlier level, and moderately short corn crops may contribute to the recovery. Except for the prospect that shipments from the "world ex-Russia" to outside areas, notably China, will be smaller this year than last, disappearance in "other regions" might substantially exceed 47 million bushels solely because of recovery of consumption in Rumania and Yugoslavia.

The tabulation in the next column shows, in million bushels, our appraisal of prospective wheat stocks as of about August 1, 1934, in comparison with those of a year before.

These forecasts rest upon current crop statistics and upon our forecasts of trade and consumption, country by country, which have been discussed earlier. Here it suffices to point out that a substantial reduction in world wheat stocks during 1933–34, about 120 million bushels, seems reasonably in prospect. The actual reduction may prove to be 50 million bushels larger or smaller. A reduction of 120 million bushels would leave end-year stocks more than 300 million bushels above a normal level. Hence disappearance of the world wheat surplus is not yet in sight.

Position	1933	1934
United States	386	240
United States in Canada	4	4
Canada	212	155
Canadian in the United States	7	7
Australia	60	65
Argentina	75	128
Afloat to Europe	32	32
Total above	776	631
Importing Europe	243	245
Danube basin	29	50
India	29	29
Northern Africa	13	13
Japan	5	5
Afloat to ex-Europe	11	11
Total above	330	353
Grand total	1,106	984

The reduction will probably appear only in North America; and reduction of North American stocks will probably be partially offset by increases especially in Argentina (if exports are kept within the quota, as we assume) and in the Danube basin, where reserves abnormally low when the year opened will presumably be replenished. If the distribution proves to be as forecast above, North American stocks will be the lowest since 1929 and will constitute the smallest proportion of the world total; stocks in importing Europe and in Australia will be the largest in at least a decade, and in Argentina almost as large as in 1929; Danubian stocks will be sizable; and elsewhere stocks will be small. The aggregate probable reduction of world ex-Russian end-year stocks is about 100 million bushels smaller than the reduction of the world ex-Russian wheat crop between 1932 and 1933 (p. 147), but about 20 million bushels larger than the reduction in

total world ex-Russian wheat supplies between 1932–33 and 1933–34 (p. 147).

Outlook for Prices

During January–March,[1] crop developments in the United States and elsewhere will probably have little influence upon wheat prices. The low December condition of the United States crop and subsequent winterkilling may help domestic wheat markets to resist decline; but there is little historical basis for anticipating that these factors will actively tend to raise prices during the next two and a half months.

Indeed, within the wheat situation itself, and without regard to possible monetary developments or new governmental measures, there is little to indicate the probability of a price advance prior to early April. European domestic supplies remain heavy, and European importers, with sizable stocks of imported wheat already on hand, are in a favorable position to resist any increase in prices. Import restrictions are unlikely to be modified much. Moreover, as usual in January–March, there is likely to be pressure of Argentine and Australian wheat offers on European import markets. It is not yet clear how the export control systems of Argentina and Australia will operate, but we doubt if these will significantly restrict exports, or appreciably affect prices of export offers, during January–March. The import demand of ex-European countries (particularly China) may be expected to improve considerably in this period, helping to absorb fair quantities of both Australian and Argentine wheat; but demand from these sources would presumably shrink if prices rose.

International wheat prices therefore seem likely to remain low, and perhaps to weaken slightly, during January–March. A sharp decline or a net decline in the Liverpool May future below 39 cents (gold) as compared with about 44 cents on January 17 nevertheless seems improbable, except perhaps in brief periods. Any tendency for wheat prices to decline sharply would probably be checked by governmental support of wheat futures at Winnipeg, further buying of wheat for relief purposes in the United States, and perhaps temporary restriction of wheat exports by governmental action in Argentina and Australia.

Monetary developments we do not venture to predict. We assume, however, that international exchange relationships will be considerably more stable in January–March than they were in August–November. This assumption seems warranted because the exchanges of England, Canada, the United States, and Argentina have remained relatively firm since early December; because the United States dollar is already depreciated to about 60 cents in terms of gold; and because under the new (as under the old) regulations for Argentine exchange, the value of the peso for official purposes is based upon the French franc. The action of President Roosevelt (January 15) in requesting Congress to set the upper limit of permissible revaluation of the dollar at 60 per cent (the lower limit already being 50 per cent) further supports this assumption.

We also assume that inflationary developments will not be prominent in January–March. General business and trade indexes for the United States may continue to reflect gradual improvement, under the influence of increased purchasing power of consumers; but this probably would not excite much interest in United States wheat markets. Indeed, many holders of Chicago wheat futures who have been counting on spectacular inflation news may become discouraged and liquidate their holdings, carrying Chicago wheat prices down relative to wheat prices at Liverpool, and probably also relative to Winnipeg prices.

Another factor which may tend to depress Chicago prices relative to Liverpool prices in January–March is prospective wider recognition that there will be a large, though reduced, carryover of United States wheat on July 1, 1934. We anticipate that these two factors—disappointment over inflationary developments and clearer recognition of the domestic supply position—may cause Chicago

[1] The following paragraphs are written on the basis of price quotations up to and including January 17.

wheat prices to decline, though probably by less than 10 cents (depreciated United States currency), in relation to corresponding Liverpool prices. A sustained advance in the premium of Chicago over Liverpool appears likely only in the event of substantial weakness initiated in Liverpool, which Chicago might resist. The Chicago May future stood 21 cents above the Liverpool May on January 17.

Chicago July wheat is likely to go to a premium over May, perhaps during February and at least by the end of April; and September wheat will probably increase its premium over July. If our appraisal of probable year-end carryover is approximately correct, price relationships among these futures similar to those of last year are to be expected. The chief uncertainty concerns possible abnormal effects from government purchasing of wheat futures. Developments encouraging strong farm holding of wheat during the spring months would tend also to support May wheat relative to the new-crop futures.

Price developments after early April are largely unpredictable, because crop news is then likely to become the dominating market factor. The condition of the United States winter-wheat crop will assume great importance; and crop reports from Europe may influence international wheat prices. Attention will also be paid to subsoil moisture conditions in the North American spring-wheat belt and to the acreage planned for spring wheat in the United States and Canada. If the crop outlook is moderately favorable, and improved in the United States as compared with crop indications in December, wheat prices may continue to drift downward. If, on the other hand, several of these factors, including the condition of the United States crop, point toward small yields in 1934, wheat prices may advance substantially in leading markets.

This issue was written by M. K. Bennett, Helen C. Farnsworth, and Holbrook Working

APPENDIX

TABLE I.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING AREAS AND COUNTRIES, 1928–33*

(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	1,146	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.....	3,702	3,202	1,646	744	476	268	455	212	235	753	224	1,266	75	337
1933[d]....	3,288	2,875	1,141	506	340	166	283	152	200	...	343	1,226	64	353
1933[e]....	3,482	3,012	1,215	527	351	176	272	160	256	1,021	361	1,333	67	353

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	50.6	28.0	29.2	17.5	52.6	44.4	333.5	183.8	277.2	16.1	12.8
1933[d]....	87.4	90.0	113.9	52.1	25.7	28.1	10.3	39.9	57.0	297.1	192.7	279.2	13.6	14.2
1933[e]....	90.1	96.6	115.6	58.9	27.0	30.5	9.2	40.0	63.4	338.7	205.9	297.6	14.4	14.9

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	10.6	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	32.5	6.58
1932.....	38.3	17.0	184.2	18.1	4.18	13.0	53.7	49.5	20.3	9.7	39.9	10.6	31.3	10.35
1933[d]....	33.3	17.4	128.6	14.8	4.81	13.3	65.8	72.8	18.0	11.8	46.5	..	...	...
1933[e]....	40.0	19.2	131.9	14.7	4.81	17.4	72.9	68.3	28.6	11.8	47.6	9.4	...	...

* Data of U.S. Department of Agriculture and International Institute. 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 September 15, 1933; partly unofficial data.
[e] As of about January 15, 1934; totals include our rough estimates for Ireland, Chile, Uruguay, and New Zealand.
[f] Including Luxemburg.
[g] Denmark, Norway, Sweden.
[h] Finland, Latvia, Estonia, Lithuania.

TABLE II.—WHEAT ACREAGE IN PRINCIPAL PRODUCING AREAS, 1928–33*

(Million acres)

Year	World	World ex-Russia	Northern Hemisphere ex-Russia	Four chief exporters	United States		Canada	Australia	Argentina	USSR	Lower Danube	Other Europe	Northern Africa	India
					Winter	Spring								
1928.....	309.9	241.4	200.2	120.6	36.9	22.4	24.1	14.8	22.4	68.5	19.6	51.8	8.3	32.2
1929.....	312.7	239.2	204.1	119.5	41.2	22.1	25.3	15.0	15.9	73.5	18.3	51.7	8.5	32.0
1930.....	328.9	248.4	206.6	125.2	40.9	21.7	24.9	18.2	19.5	80.5	20.0	53.7	8.9	31.7
1931.....	332.3	240.2	204.7	114.0	43.1	14.0	26.2	14.7	16.0	92.1	20.9	55.0	8.2	32.2
1932.....	333.5	244.8	207.6	117.4	35.3	21.9	27.2	15.2	17.8	88.7	19.2	56.4	8.8	33.8
1933.....	....	234.1	196.4	106.7	28.4	19.1	26.0	14.5	19.7[a]	...	18.9	57.3	8.8	33.0

* Sources of data and grouping of countries as described in footnotes to Table I.

[a] Sown acreage.

TABLE III.—WHEAT RECEIPTS IN NORTH AMERICA, MONTHLY, JUNE–NOVEMBER 1928–33*

(Million bushels)

Year	United States (14 primary markets)							Canada (country elevators and platform loadings)						
	June	July	Aug.	Sept.	Oct.	Nov.	July–Nov.	June	July	Aug.	Sept.	Oct.	Nov.	Aug.–Nov.
1928.....	15.5	72.6	84.2	73.3	84.4	43.5	358.0	12.0	6.0	3.4	134.1	105.6	107.0	350.1
1929.....	25.7	94.2	101.7	47.0	36.3	20.6	299.8	8.2	4.1	14.2	109.6	52.9	19.5	196.2
1930.....	18.7	99.0	85.5	62.6	28.9	24.6	300.6	4.4	3.0	21.2	105.1	53.8	52.4	232.5
1931.....	29.7	104.0	61.5	38.9	32.7	26.4	263.5	8.2	5.4	11.9	47.4	74.1	43.1	176.5
1932.....	13.5	41.0	40.7	38.4	27.2	17.6	164.9	15.0	3.8	17.6	120.5	82.7	36.5	257.3
1933.....	28.6	37.2	26.7	22.6	17.6	11.6[a]	115.7	19.5	10.5	25.6	55.6	46.4	23.0	150.6

* United States data unofficial, compiled 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] Preliminary.

TABLE IV.—WHEAT VISIBLE SUPPLIES, AUGUST–JANUARY 1933–34, 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						
Aug. 1 1928.....	201.6	63.1	2.3	52.4	13.6	131.4	44.7	10.1	54.8	9.5	5.9
1929.....	325.4	136.4	2.3	83.8	22.9	245.4	37.6	6.2	43.8	20.0	16.2
1930.....	357.7	161.9	4.0	89.5	16.1	271.5	39.2	6.5	45.7	33.5	7.0
1931.....	447.8	233.6	22.9	105.8	5.5	367.8	37.9	10.6	48.5	24.5	7.0
1932.....	385.5	175.9	15.4	116.8	4.7	312.8	31.4	9.1	40.5	26.0	6.2
1933.....	423.2	135.0	3.7	190.4	6.7	335.8	31.6	11.4	43.0	31.5	12.9
Jan. 1 1929.....	522.5	144.4	7.3	180.9	47.5	380.1	54.4	6.1	60.5	76.0	5.9
1930.....	514.3	182.2	8.2	190.8	38.3	419.5	28.2	15.2	43.4	44.0	7.4
1931.....	535.4	199.6	4.8	185.4	31.7	421.5	27.3	20.0	47.3	60.0	6.6
1932.....	594.0	226.9	29.1	172.6	19.7	448.3	29.8	23.9	53.7	85.0	7.0
1933.....	549.7	168.5	6.9	224.2	13.8	413.2	36.4	7.5	43.9	83.0	9.6
1934.....	475.9	132.5	2.3	227.6	14.0	376.4	20.7	17.5	38.2	50.0	10.3
1933											
Aug. 5.....	423.3	138.4	3.7	189.5	6.4	338.0	32.9	10.4	43.3	29.5	12.5
12.....	420.1	140.4	3.7	189.3	5.7	339.1	33.5	9.3	42.8	25.8	12.4
19.....	415.7	143.7	3.7	186.5	5.3	339.2	32.1	9.4	41.5	22.5	12.5
26.....	425.1	148.2	3.7	191.2	5.3	348.4	34.0	10.4	44.4	20.5	11.8
Sept. 2.....	430.1	151.7	3.7	194.2	4.8	354.3	34.7	10.2	44.9	19.5	11.4
9.....	436.4	153.3	3.7	198.9	6.0	361.9	35.1	10.2	45.3	18.2	11.0
16.....	439.8	155.6	3.7	204.6	4.9	368.8	32.9	11.2	44.1	16.2	10.7
23.....	450.2	156.7	3.7	212.5	4.6	377.5	34.5	13.1	47.6	14.5	10.6
30.....	456.9	156.6	3.1	220.5	5.8	386.0	34.5	13.2	47.7	12.5	10.7
Oct. 7.....	460.6	154.9	3.0	228.6	6.6	393.1	31.1	14.4	45.5	11.7	10.3
14.....	469.2	155.8	2.8	236.5	7.1	402.2	30.7	15.7	46.4	10.3	10.3
21.....	469.9	155.0	2.8	238.2	7.6	403.6	30.9	16.0	46.9	9.5	9.9
28.....	468.3	153.3	2.7	241.2	8.3	405.5	29.4	16.3	45.7	7.5	9.6
Nov. 4.....	465.8	151.3	2.7	241.2	9.7	404.9	28.7	16.8	45.5	6.2	9.2
11.....	456.5	148.9	2.7	239.2	10.6	401.4	25.1	16.3	41.4	4.5	9.2
18.....	454.2	146.2	2.8	237.4	11.0	397.4	26.1	18.4	44.5	3.5	8.8
25.....	447.6	143.4	2.2	234.5	11.9	392.0	25.3	19.0	44.3	2.5	8.8
Dec. 2.....	443.1	142.2	2.2	228.6	14.5	387.5	27.3	17.2	44.5	3.0	8.1
9.....	439.9	138.5	2.2	226.8	16.2	383.7	22.1	17.7	39.8	8.3	8.1
16.....	448.0	135.6	2.3	227.6	15.4	380.9	20.9	17.6	38.5	19.8	8.8
23.....	455.3	133.9	2.2	228.2	14.6	378.9	20.0	18.0	38.0	28.5	9.9
30.....	475.9	132.5	2.3	227.6	14.0	376.4	20.7	17.5	38.2	50.0	10.3

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

TABLE V.—UNITED STATES FLOUR PRODUCTION, EXPORTS, AND NET RETENTION, MONTHLY FROM JANUARY 1931*

(Thousand barrels)

Month	Production						Exports and shipments to possessions			Estimated net retention		
	All reporting mills			Estimated total								
	1931	1932	1933	1931	1932	1933	1931	1932	1933	1931	1932	1933
Jan.	9,233	8,180	8,077	9,891	8,774	8,666	996	903	392	8,895	7,871	8,274
Feb.	8,242	7,692	7,216	8,840	8,257	7,752	808	753	344	8,032	7,504	7,408
Mar.	8,724	8,483	8,867	9,351	9,096	9,503	775	652	391	8,576	8,444	9,112
Apr.	8,494	8,196	9,298	9,107	8,792	9,960	811	582	282	8,296	8,210	9,678
May	8,015	7,739	8,777	8,599	8,307	9,408	838	388	384	7,761	7,919	9,024
June	7,762	7,820	8,577	8,331	8,393	9,195	840	469	424	7,491	7,924	8,771
July	9,852	7,828	8,275	10,548	8,401	8,875	1,048	400	337	9,500	8,001	8,538
Aug.	9,658	9,005	6,719	10,342	9,649	7,225	692	460	362	9,650	9,189	6,863
Sept.	9,735	9,395	7,540	10,424	10,062	8,096	768	420	416	9,656	9,642	7,680
Oct.	10,399	9,382	8,181	11,128	10,049	8,776	825	416	346	10,303	9,633	8,430
Nov.	9,890	8,719	8,114[a]	10,588	9,346	8,705[a]	905	537	333	9,683	8,809	8,372[a]
Dec.	8,148	8,323	....	8,741	8,926	7,613[a]	942	447	350[a]	7,799	8,479	7,263[a]
Jan.-Dec ..	108,152	100,762	....	115,890	108,052	103,774[a]	10,248	6,427	4,361	105,642	101,625	99,413[a]
July-June[b].	109,896	105,792	103,464	117,572	113,390	110,917	12,319	8,927	4,897	105,253	104,463	106,020

* 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 of total production and net retention for December are based on production reported to the *Northwestern Miller*.

[a] Preliminary. [b] Twelve months ending in year stated.

TABLE VI.—MONTHLY AVERAGE PRICES OF DOMESTIC WHEAT IN EUROPE, JULY–NOVEMBER, 1929–33*

(U.S. cents per bushel)

Year	July	Aug.	Sept.	Oct.	Nov.	July	Aug.	Sept.	Oct.	Nov.	July	Aug.	Sept.	Oct.	Nov.
	GREAT BRITAIN					FRANCE					GERMANY				
1929.....	135	152	129	124	122	170	158	152	153	150	162	159	147	150	151
1930.....	108	109	95	91	87	171	180	175	173	176	187	163	155	147	160
1931.....	82	83	58	59	67	186	172	163	165	162	155	134	136	136	146
1932.....	61	59	53	51	48	179	135	123	120	119	154	136	135	129	128
1933.....	83	67	60	60	63	175	174	189	192	208	170	155	172	182	198
1933.....	*60*	*49*	*41*	*41*	*40*	*125*	*127*	*127*	*129*	*130*	*122*	*114*	*116*	*123*	*123*
	ITALY					HUNGARY					YUGOSLAVIA				
1929.....	177	174	175	184	185	...	...	108	111	110	...	...	...	...	...
1930.....	177	180	177	170	163	109	89	76	74	68	85	84	76	70	66
1931.....	131	126	133	133	140	67	49	44	47	56	83	79	84	84	84
1932.....	137	137	145	146	152	63	67	66	66	62	65	70	60	60	57
1933.....	169	166	175	170	180	78	60	58	55	59	103	58	60	56	63[a]
1933.....	*123*	*120*	*118*	*116*	*113*	*56*	*44*	*39*	*37*	*37*	*74*	*43*	*40*	*37*	*40*[a]
	RUMANIA					BULGARIA					POLAND				
1929.....	...	...	114	111	110	...	...	...	...	...	154	146	122	120	122
1930.....	83	80	66	56	55	85	79	65	61	50	153	105	94	86	83
1931.....	45	46	45	45	50	66	58	55	56	53	87[a]	69	73	73	84
1932.....	51	69	78	88	103	51	54	51	51	51	77	80	85	79	81
1933.....	91	81	91	89	92	73	64	78	79	82[b]	121	62[c]	67	64	64
1933.....	*65*	*59*	*61*	*56*	*58*	*53*	*47*	*53*	*53*	*51*[b]	*86*	*45*[c]	*45*	*43*	*40*

* For sources and methods of computation, see WHEAT STUDIES, December 1933, Table XXXVI; Polish prices are monthly averages of weekly average prices reported in *Informations Statistiques* (Warsaw). Figures in italics represent approximate *gold* cents per bushel, based on prices of gold in London.

[a] Three-week average. [b] Price of November 18. [c] Four-week average in month containing five weeks.

TABLE VII.—PRICES OF REPRESENTATIVE WHEATS, WEEKLY FROM AUGUST 1933*

Week ending	British parcels	Liverpool (Tuesday prices)					United States					Winnipeg		Buenos Aires 78-kilo
		No. 1 Manitoba	No. 3 Manitoba[a]	Russian	Argentine Rosafé	Australian f.a.q.	Basic cash: Chicago	No. 2 Hard Winter Kansas City	No. 2 Red Winter St. Louis	No. 1 Northern Spring Minneapolis	No. 1 White Seattle	Weighted average	No. 3 Manitoba	
	A. U.S. CURRENT CENTS PER BUSHEL													
Aug. 5	74	83	77[b]	71	69	78	94	92	93	100	83	76	73	59
12	68	84	81[b]	73	68	77	96	94	96	99	79	72	68	56
19	70	76	70[b]	62	61	70	87	84	86	90	71	65	62	53
26	65	76	70[b]	61	60	70	86	86	88	90	74	66	62	55
Sept. 2	71	78	74[b]	63	62	72	84	86	87	89	75	65	62	56
9	72	80	76[b]	66	66	72	82	84	86	88	71	65	62	57
16	73	79	74[b]	65	61	71	87	87	88	90	71	64	62	55
23	68	81	78[b]	64	64	72	90	90	91	92	74	66	63	57
30	71	78	73[b]	64	63	71	86	88	89	91	70	61	58	54
Oct. 7	66	73	69	60	60	69	85	87	87	90	70	58	55	53
14	62	69	66[b]	56	56	65	79	81	84	79	69	55	53	49
21	53	65	61[b]	48	51	60	78	75	76	82	66	54	51	47
28	58	74	70[b]	51	57	65	86	85	88	86	75	60	57	51
Nov. 4	63	73	68[b]	51	64	66	85	84	89	84	73	59	57	53
11	67	76	70[b]	54	59	69	84	84	91	88	76	61	60	54
18	72	79	73[b]	59	62	73	89	87	92	91	77	64	62	55
25	70	83	78[b]	60	65	77	85	84	88	85	75	63	61	55
Dec. 2	71	81	74	57	66	74	83	80	87	84	74	58	56	52
9	72	79	72	58	61	72	84	81	88	...	74	58	55	47[c]
16	68	80	73	57	59	70	84	82	87	84	72	58	55	46
23	72	77	71	55	60	71	81	79	84	82	72	58	54	...
30	56	79	73	55	60	70	84	81	86	83	74	59	55	...
	B. U.S. GOLD CENTS PER BUSHEL													
Aug. 5	55	62	58[b]	53	52	59	70	68	69	74	61	56	54	43
12	50	62	60[b]	54	50	57	71	69	71	73	58	53	50	42
19	52	57	52[b]	46	46	53	65	62	64	67	53	48	46	40
26	47	56	52[b]	45	44	52	62	62	63	65	53	47	45	39
Sept. 2	50	55	52[b]	44	44	50	59	60	61	63	53	46	44	40
9	50	56	53[b]	46	46	50	57	59	60	61	50	46	43	40
16	50	56	53[b]	46	43	50	60	60	61	62	49	45	43	38
23	44	53	51[b]	42	42	48	58	58	59	60	48	43	41	37
30	47	51	48[b]	42	41	47	57	58	58	60	46	40	38	36
Oct. 7	43	47	44	38	38	44	55	56	56	58	45	38	36	34
14	41	45	43[b]	36	37	42	53	54	56	53	46	37	36	33
21	37	45	42[b]	34	36	41	54	53	53	58	46	38	36	33
28	40	52	49[b]	35	39	45	58	58	60	58	51	40	39	35
Nov. 4	41	48	45[b]	34	42	44	55	55	58	55	47	38	37	34
11	42	48	44[b]	34	37	44	53	53	57	55	48	38	37	34
18	44	48	45[b]	36	38	45	54	53	56	55	47	38	38	34
25	43	50	47[b]	36	39	47	53	52	54	52	46	39	38	34
Dec. 2	45	52	47	36	42	47	53	51	56	54	47	37	35	33
9	46	50	46	37	39	46	54	52	56	...	47	37	35	30[c]
16	43	51	47	37	37	45	54	53	56	54	46	37	35	30
23	46	49	45	35	38	45	52	50	54	52	46	37	35	...
30	36	51	46	35	38	45	54	52	55	53	47	38	35	...

* For sources and methods of computation, see WHEAT STUDIES, December 1933, Tables XXXV and XXXVI. Dots (...) indicate data not now available. Under B, gold cents are based on prices of gold in London as reported in the *Economist* (London) and the *Chicago Journal of Commerce*.

[a] Wheat shipped from Vancouver. [b] Parcels to London. [c] 80-kilo from December 15.

TABLE VIII.—INTERNATIONAL SHIPMENTS OF WHEAT AND FLOUR, WEEKLY, AUGUST–DECEMBER 1933*

(Million bushels)

Week ending	Total	Shipments from							Shipments to Europe				To ex-Europe		
		North America	Argentina[a]	Australia	South Russia	Danube	India	Other countries[b]	Total	United Kingdom	Orders	Continent	Total	China, Japan	Others
Aug. 5	9.07	4.22	1.92	2.78	....	0.06	...	0.08	7.89	3.08	2.82	1.99	1.18	0.34	0.84
12	8.90	3.33	4.85	0.61	....	0.07	...	0.05	6.92	1.79	2.90	2.23	1.98	0.30	1.68
19	9.61	3.47	3.06	2.47	0.25	0.14	...	0.22	7.75	2.30	3.35	2.10	1.86	0.54	1.32
26	11.58	4.54	3.91	2.45	0.17	0.16	...	0.36	9.67	2.87	3.82	2.98	1.91	0.46	1.45
Sept. 2	9.50	5.01	2.73	0.58	0.30	0.10	...	0.78	7.32	2.64	2.22	2.46	2.18	0.48	1.70
9	11.05	4.16	2.83	2.07	0.94	0.70	...	0.34	8.98	2.06	3.74	3.18	2.07	0.53	1.54
16	9.74	3.80	1.77	1.42	1.55	0.95	...	0.26	8.55	2.51	2.95	3.09	1.19	0.30	0.89
23	12.17	4.95	2.00	2.02	1.62	1.28	...	0.30	10.02	3.12	2.99	3.91	2.15	0.29	1.86
30	9.92	4.12	1.29	2.02	1.04	0.70	...	0.46	8.17	3.19	1.82	3.16	1.75	0.29	1.46
Oct. 7	10.05	5.10	0.82	1.31	1.09	1.54	...	0.20	8.38	2.66	1.34	4.38	1.67	0.24	1.43
14	9.38	5.26	1.26	0.80	1.12	0.71	...	0.23	7.65	2.85	1.71	3.09	1.73	0.18	1.55
21	10.79	6.32	1.33	0.98	0.56	1.23	...	0.36	8.73	2.26	1.30	5.17	2.06	0.27	1.79
28	10.57	4.46	1.36	0.91	1.82	1.38	...	0.63	8.58	2.84	1.94	3.80	1.99	0.10	1.89
Nov. 4	9.48	4.22	1.38	1.42	0.38	1.74	...	0.33	6.92	2.57	1.79	2.56	2.56	0.46	2.10
11	9.46	5.27	0.93	1.22	0.77	0.82	...	0.46	7.92	2.90	1.60	3.42	1.54	0.23	1.31
18	10.14	5.44	0.83	1.41	0.94	0.86	...	0.66	8.57	3.10	1.83	3.64	1.57	0.15	1.42
25	9.66	5.70	0.39	0.82	1.40	0.62	...	0.73	7.55	3.63	1.76	2.16	2.11	0.86	1.25
Dec. 2	11.78	6.30	1.34	1.62	1.26	0.68	...	0.58	8.47	4.09	2.03	2.35	3.31	1.66	1.65
9	7.65	3.72	0.59	1.12	0.63	0.55	...	1.03	5.83	2.39	1.26	2.18	1.82	0.97	0.85
16	9.26	3.98	0.84	1.59	1.46	0.69	...	0.69	5.58	1.62	1.92	2.04	3.68	2.22	1.46
23	10.10	3.53	1.63	2.40	1.27	0.70	...	0.56	6.19	2.50	1.80	1.89	3.90	2.58	1.32
30[c]	10.29	3.23	1.97	2.94	1.46	0.28	...	0.40	6.35	....	....	....	3.94	....	....

* 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 IX.—NET IMPORTS OF WHEAT AND FLOUR, MONTHLY FROM JULY 1933*

(Million bushels)

Month	British Isles			Three variable importers				Belgium[b]	Netherlands	Scandinavia				Switzerland
	U.K.	I.F.S.	Total	Total	France[a]	Germany	Italy			Denmark	Norway	Sweden	Total	
July	17.67	1.13	18.80	4.35	2.16	1.75	0.44	2.59	3.26	1.01	0.84	0.10	1.95	1.51
Aug.	17.15	2.09	19.24	2.81	1.98	0.27	0.56	3.89	2.69	1.38	0.63	0.16	2.17	1.55
Sept.	21.14	1.74	22.88	(1.05)	0.89	(1.81)	(0.13)	2.55	4.34	1.69	0.65	0.22	2.56	2.24
Oct.	20.83	2.26	23.09	0.89	1.77[d]	(1.22)	0.34	3.41	3.40	1.10	1.04	0.18	2.32	1.84
Nov.[c]	20.66	....	....	0.58	2.08[d]	(2.13)	0.63	4.14	2.23	1.50	1.01	0.19	2.70	1.50

Month	Austria	Czecho-Slovakia	Greece	Spain	Portugal	Finland	Latvia	Estonia	Lithuania	Four Baltic States	Egypt	Japan	New Zealand	South Africa
July	1.04	2.75	1.72	(0.00)	0.06	0.42	0.00	0.00	(0.01)	0.41	0.01	0.28	0.08	0.00
Aug.	0.88	0.15	1.34	(0.00)	0.08	0.49	0.00	0.00	(0.01)	0.48	0.01	0.26	....	0.00
Sept.	0.37	0.00	1.40	(0.01)	0.06	0.34	0.00	0.00	(0.01)	0.33	0.03	0.09	....	0.01
Oct.	0.81	0.00	1.07	(0.01)	0.04	0.39	0.00	0.00	(0.00)	0.39	0.01	(0.01)	....	....
Nov.[c]	....	0.00	....	(0.01)	....	0.30	....	0.00	(0.01)	....	....	(0.01)	....	....

* Data from official sources and International Institute of Agriculture. Dots (...) indicate data are not available. Figures in parentheses represent net exports.

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

[b] Including Luxemburg.

[c] Figures for November are preliminary for many countries.

[d] Net imports in "commerce spécial."

TABLE X.—NET EXPORTS OF WHEAT AND FLOUR, MONTHLY FROM JULY 1933*

(Million bushels)

Month	United States[a]	Canada	Argentina	Australia	Four exporters	USSR	Hungary	Yugoslavia	Rumania	Bulgaria	Poland	Algeria	Tunis	India
July	0.66	18.57	14.70	9.17	43.10	(0.17)	0.61	0.01	0.00	0.29	0.21	1.07[b]	0.82	0.07
Aug.	0.99	10.78	16.51	8.10	36.38	2.25	1.82	0.06	0.01	0.27	0.06	1.36	0.36	0.05
Sept.	0.72	22.13	7.12	7.26	37.23	6.23	4.37	0.13	0.00	0.72	(0.02)	1.16	0.12	0.07
Oct.	0.57	25.60	5.81	4.63	35.61	5.74	3.64	0.18	0.07	0.43	(0.12)	1.00	(0.20)	0.05
Nov.[c]	1.13	25.60	4.09	....	....	....	3.86	....	....	0.52	(0.17)	....	....	(0.10)

* See general footnote to Table IX. Here figures in parentheses represent net imports.

[a] Includes shipments to possessions. [b] June and July. [c] Figures preliminary for many countries.

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

(Million bushels)

Year	Domestic supplies			Domestic disappearance				Surplus over use[c] domestic	Net exports wheat and flour			End-year stocks
	Initial stocks	New crop	Total	Milled (net)	Seed use	Balancing item[a]	Total[b]		Total	Nov. 30 To	Dec. 1 From	
	A. UNITED STATES (JULY–JUNE)											
1928–29	120	913	1,033	510	85	+ 51	646	387	145	81	64	242
1929–30	242	822	1,064	508	85	+ 25	618	446	143	78	65	303
1930–31	303	890	1,193	492	82	+180	754	439	115[d]	72	43	324
1931–32	324	932	1,256	485	81	+181	747	509	127[d]	64	63	382
1932–33	382	744	1,126	487	80	+138	705	421	35	26	9	386
1933–34	386	527	913	447	72	+114	633	280	40	4	36	240
	B. CANADA (AUGUST–JULY)											
1928–29	78	567	645	44	44	+ 47	135	510	406	190	216	104
1929–30	104	305	409	43	44	+ 26	113	296	185	70	115	111
1930–31	111	421	532	42	39	+ 59	140	392	258	120	138	134
1931–32	134	321	455	42	37	+ 37	116	339	207	82	125	132
1932–33	132	455	587	42	36	+ 34	112	475	263	121	142	212
1933–34	212	272	484	42	31	+ 41	114	370	215	84	131	155
	C. AUSTRALIA (AUGUST–JULY)											
1928–29	36	160	196	29	15	+2	46	150	109	18	91	41
1929–30	41	127	168	32	18	+6	56	112	63	14	49	49
1930–31	49	214	263	34	14	+3	51	212	152	24	128	60
1931–32	60	191	251	32	15	−2	45	206	156	33	123	50
1932–33	50	212	262	33	14	+5	52	210	150	15	135	60
1933–34	60	160	220	33	14	+3	50	170	105	25	80	65
	D. ARGENTINA (AUGUST–JULY)											
1928–29	95	349	444	60	23	+9	92	352	222	40	182	130
1929–30	130	163	293	60	26	−9	77	216	151	71	80	65
1930–31	65	232	297	63	21	+9	93	204	124	14	110	80
1931–32	80	220	300	65	24	+6	95	205	140	25	115	65
1932–33	65	235	300	65	22	+6	93	207	132	27	105	75
1933–34	75	256	331	65	22	+6	93	238	110	34	76	128

* Based on official data so far as possible; see WHEAT STUDIES, December 1933, Table XXXII. Data for 1933–34, except initial stocks and new crops, are mainly our preliminary estimates.

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

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

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

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