



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

SURVEY OF THE WHEAT SITUATION

APRIL TO JULY, 1930

Under the pressure of large stocks of old-crop wheat in North America, and in an atmosphere of pessimism in the business world, international wheat prices April-July moved downward, though the change in level for the most part occurred in about two weeks in mid-June. The drop in prices seemingly was not caused by distinctly favorable development of new crops, nor by further shrinking of European demand for import wheat. In July, British prices of import wheat averaged only about \$1.04 per bushel—a level the lowest of any month in post-war years, within a few cents as low as the lowest levels prevailing in any month of the seven years just preceding the war, and one the more strikingly low in view of the fact that the general level of wholesale prices has been considerably higher in post-war than in pre-war years.

Wheat-crop developments during the period under review were not spectacular. In the United States, the outlook for winter wheat improved. European crops showed about normal progress, even though there was deterioration in Italy and central Europe, and striking reversals occurred in France. Spring wheat in Canada and the United States encountered rather unfavorable growing conditions. Current official and unofficial advices suggest a Northern Hemisphere wheat crop, excluding Russia and China, somewhat larger than that of 1929, but much smaller than the bumper crop of 1928. India, Roumania, and Bulgaria harvested bumper post-war crops; only the crop of France, among the larger producers of the Northern Hemisphere, appears to be a distinctly small one. In quality the North American wheat crop appears to be good, especially the United States winter wheat; in the Danube basin also quality is good, but the European importing countries for the most part have appar-

ently harvested crops much less satisfactory in quality than the fine crops of 1929. Early crop developments in the Southern Hemisphere now suggest at least an average crop; the area sown was maintained in Argentina and notably increased in Australia, and thus far rainfall seems to have been ample, in sharp contrast with the situation a year ago. If an average crop is harvested in the Southern Hemisphere, the world wheat crop of 1930 seems likely to fall closer to the (approximate) line of post-war trend than did the huge crop of 1928 or the short crop of 1929; and the distribution between importing and exporting countries will be a more normal one than that of 1929. The European feed grain and rye crops of 1930 now seem likely to fall below the big outturns of 1929; and the

United States will presumably harvest an exceptionally short crop of corn.

International trade in wheat and flour in April-July 1930, some 205 million bushels as measured by Broomhall's shipments, continued to be of relatively small volume as compared with the same months of earlier post-war years. The volume was larger, however, than it was in the preceding four months. Demand from Europe became appreciably more insistent in part of June and July than it had been before, as stocks were reduced and as the European new-crop outlook turned somewhat unfavorable. The average seasonal movement, which involves a decline in shipments or exports between December-March and April-July, was reversed this year; to use net export data, this reversal was the first to occur in at least nine years. The volume of net export trade for the crop year 1929-30 as a whole approximated only 625 million bushels, a decline of over 300 million bushels between 1928-29 and 1929-30. As large a change as this in the volume of

CONTENTS

	PAGE
<i>New-Crop Developments</i> . . .	380
<i>Wheat Price Movements</i> . . .	387
<i>International Trade</i>	394
<i>Visible Supplies and Outward Carryovers</i>	401
<i>Outlook for the New Crop Year</i>	408
<i>Appendix Tables</i>	414

trade has never before occurred between two successive years in the twentieth century, even in the war period.

The world carryover, at least so far as concerns Europe (ex-Russia) and the four major exporting countries, was reduced in the course of the crop year. Small increases in North America and Australia were much more than offset by reductions in Argentina, the Danube countries, and presumably in the European importing countries, though there was an increase in the carryover of France. Even with the reductions, however, the level remained a high one because of the heavy stocks in North America and France.

With less wheat available in European importing countries and more in North America in 1930-31 than in 1929-30, the new crop year seems likely to be characterized by a heavier volume of trade in wheat and flour than transpired in 1929-30. It seems impossible to formulate the outlook for trade and prices much more clearly than this without recourse to assumptions. If Argentina and Australia harvest crops of about 240 and 150 million bushels respectively, if economic conditions throughout the world become not worse, but better,

though without striking improvement, and if in Europe the spreads between wheat prices on the one hand and rye and the feed grain prices on the other prove to be narrower in 1930-31 than in 1929-30, then a somewhat more definite picture of probable developments may be drawn. Under these assumptions, import requirements might fall within the range of 775-875 million bushels, and the volume of trade somewhere near the middle of this range. Exporting countries could not supply as much wheat as this without further reduction of carryovers, though they could supply it without reducing carryovers to a distinctly low or even to a normal level. With greater activity in international trade and a revival in business activity, international wheat prices seem rather more likely to rise than to fall from the low level of July-August 1930. Under the assumptions stated, the average level of prices in 1930-31 might reasonably be expected to lie within or below the range of the low levels of 1923-24 and 1928-29 and the moderately low levels of 1922-23 and 1929-30, and not to reach the moderately high post-war levels of 1926-27 and 1927-28, or the notably high levels of 1924-25 and 1925-26.

I. NEW-CROP DEVELOPMENTS

INDIA AND NORTHERN AFRICA

The Indian wheat crop of 1930, now officially estimated at 387 million bushels, appears to be the largest crop on record, at least for the years 1891-1930. The area from which the bumper crop of 1930 was harvested is now estimated at 31.2 million acres, which is slightly smaller than the areas harvested in 1928 and 1929, but about equal to the 1923-27 average. Thus, the large size of this year's production may be attributed mainly to a high (but not record) average yield per acre rather than to an exceptionally large acreage.¹

The 1930 wheat crop of northern Africa not only falls considerably short of last year's record outturn, but is probably be-

low the average for the past five years. Since official figures indicate that no appreciable change took place during 1928-30 in the total area sown to wheat, at least in the three French dependencies of northern Africa, this year's small crop was presumably the result of a relatively low average yield per acre on a fair-sized acreage. Heat and drought during the spring months, especially in May, are said to have damaged the crops in all the countries; in Algeria and Tunis frosts in the northern districts caused further deterioration, and in Morocco locusts were apparently responsible for an additional heavy loss. Although an official estimate of the Egyptian crop is not available, it seems probable that the four countries of northern Africa have harvested a little less than 100 million bushels, around 20 million less than in 1929 and somewhat below the 1925-29 average.

¹ According to official estimates, the yield per acre indicated for this year's crop has been exceeded in 1903, 1904, 1910, 1920, and 1922.

THE UNITED STATES

The outlook for the winter-wheat crop of the United States changed radically over the period April-July. In spite of a large planted acreage, an outturn of only moderate size was expected at the beginning of April. Approximately 43.4 million acres are estimated to have been sown to winter wheat in the fall of 1929. According to official estimates, this acreage was exceeded only once (1928) during the five years 1924-28, and is 600 thousand acres larger than the area planted to winter wheat for the crop of 1929. Abandonment during the winter of 1929-30, 11.0 per cent, was approximately equal to the ten-year average of 11.7 per cent, and abandonment during May-June was very slight; the area remaining for harvest on July 1, 1930 (38.5 million acres), therefore ranks fairly high among the areas harvested in recent years.¹ In spite of the large planted acreage, however, crop estimators were not inclined to forecast a large winter-wheat crop on the basis of conditions as of April 1. Subnormal precipitation in the Southwest during February and March had resulted in a situation which was becoming acute by the first of April.

During April the winter-wheat crop suffered severely from lack of moisture. The drought was worst in Kansas, Oklahoma, and Texas; but extremely dry weather also prevailed in parts of the Ohio Valley and of the Pacific Northwest. In all these areas general rains during the latter half of April greatly improved the outlook. While the rains were exceedingly beneficial, they apparently arrived too late to enable the crop to make a complete recovery; for the government crop report as of May 1 indicated marked deterioration (as compared with April 1) in Kansas, Oklahoma, and Texas, and some deterioration in Indiana, Illinois, and the Pacific Northwest.

Weather conditions during May-July were, on the whole, exceptionally favorable

for late growth and harvesting. Drought threatened the Central and Eastern states several times during the period, but relatively little damage was done to wheat. In the Pacific Northwest the crops were benefited by generous May and June rains, and by weather in July which was generally favorable for harvesting, although too dry for some of the late-sown crops. In the Southwest, ample rainfall during May and generally warm, clear weather during June and July provided almost ideal conditions for ripening and harvesting. In the more northerly portions of the winter-wheat belt east of the Rockies, the crop progressed well during April-June and good-sized outturns were secured, in spite of the injury caused by drought and excessive heat in those sections during July.

Thus, the outlook for the winter-wheat crop changed sharply between May 1 and August 1. The following monthly private and official forecasts and estimates of winter-wheat production, in million bushels, reflect the change in outlook² which took place during those months:

Estimator	Apr. 1	May 1	June 1	July 1	Aug. 1
Cromwell	604	547	534	543	569
Donovan	560	545	535	545	585
Miller .....	...	540	549	556	579
Murray	569	540	545	552	595
Snow	562	...	557	564	584
Average	574	543	544	552	582
Official	550	525	532	558	597

Private estimates for August 1 averaged almost 40 million bushels higher than those for May 1; the official forecast as of August 1 was 72 million above the official May figure. This change, although striking enough, was not so great as the change of 92 million bushels for the same period in 1928, or the change of 78 million bushels in 1926.

The latest official estimate of the winter-wheat crop indicates an outturn which ranks high in comparison with the crops of recent years. Only once during the period 1922-29 has a larger winter-wheat crop been harvested, and that crop (1926) exceeded the 1930 outturn by only 30 million bushels. The large crop of 1930 is apparently the result both of a large acreage and of a high yield per acre. The yield per acre

¹ Although the area planted for the 1930 crop exceeded the area planted for the 1929 crop, the area harvested in 1929 was larger than the area remaining to be harvested in 1930 because of the relatively smaller abandonment last year.

² Data from *Daily Market Record* and official sources. Private forecasts appear about the first of each month, the official about the tenth.

was officially estimated as of August 1 at 15.5 bushels, which compares with an average yield of 14.9 for the ten years 1920-29. Not only is the crop of 1930 large in size, but it is also exceptionally high in quality. Hard winter wheat is reported to be notably high in protein content, clean, of good weight per measured bushel, and of low moisture content. In general, the crop was well adapted to harvesting with the combine; and a rather early harvest under favorable weather led to very large receipts at primary markets in July.¹ An unusually large proportion of the hard wheat marketed in June and July graded No. 1 and No. 2. The new soft winter wheat has also given rise to favorable comments in regard to quality.

While the outlook for winter wheat was improving during May-July, the outlook for spring wheat became worse. The acreage sown to spring wheat this year (20.5 million acres, according to the July official estimate) was the smallest since 1926. This comparison alone, however, does not present a complete picture of the situation, for the reduction in acreage was not divided proportionally between durum wheat and bread wheat. In fact, spring wheat other than durum showed an increase and not a decrease as compared with most recent years, the area planted to spring wheat other than durum in 1930 being officially placed at 16.2 million acres—an acreage exceeded only twice (in 1920 and 1925) within the past decade. Seeding of spring wheat took place somewhat earlier than usual this year,² and growing conditions up to June 1 were moderately favorable. The condition of spring wheat as of June 1 was

officially reported as 85.7 per cent, as compared with a ten-year (1919-28) average condition of 86.8 per cent. Four private estimates of the crop, issued June 2, ranged between 250 and 264 million bushels, averaging 257 million.³ Thus, at the beginning of June the outlook was for a spring-wheat crop smaller than the five-year (1924-28) average of 283 million bushels, but considerably larger than the very small crop harvested last year.

Spring-wheat prospects changed little during June; but the crop deteriorated markedly during July. The official estimate as of July 1 indicated that a crop of 250 million bushels was to be expected; the estimate of August 1 suggested a total outturn of only 223 million. Excessive heat and drought prevailing throughout the spring-wheat belt during most of July are reported to have resulted in premature ripening and shrinkage of the kernels, and to have been the major causes of the general deterioration. Hot, dry weather continued during early August, taking further toll of late-sown wheat, but providing excellent harvesting conditions for the earlier wheat.

Little definite information is available at present in regard to the quality of the new spring-wheat crop. It appears probable that the wheat will vary greatly as to weight in measured bushel, the early-sown grain being of good weight and the late-sown grain being light; that the protein content will run fairly high; and that the moisture content will be decidedly low.

The total United States wheat crop of 1930 is at present officially estimated at approximately 821 million bushels. This estimate indicates a crop a little larger than that of last year, but about equal to the average for the five years 1925-29. Thus, if the standing estimate for the 1930 crop is not revised upward in the future, the crop will rank historically with the smaller crops of the decade following the war, though much above the short one of 1925. The outstanding feature of the distribution by classes of the 1930 crop is the shortage of hard red spring and of durum wheats. In only 3 of the past 10 years have smaller crops of hard red spring been harvested; and the durum crop appears about equal to the smallest one (1926) harvested in a decade. The hard red winter outturn, however,

¹ See Appendix Tables II and III.

² In May, Murray stated that at the end of April seeding was 6.2 days ahead of normal.

³ Private and official forecasts and estimates of United States spring wheat for June-August as reported in the *Daily Market Record* were as follows, in million bushels:

Estimator	June 1	July 1	Aug. 1
Cromwell	256	259	227
Donovan	250	260	225
Miller .....	...	263	229
Murray	258	251	226
Snow	264	266	236
Average	257	260	229
Official .....	...	250	223

ranks among the largest of the decade; and the soft red winter and the white wheat crops appear to be of good size in comparison with the crops of 1924-29, but smaller in relation to the average for 1920-23.

CANADA

The Canadian crop seems to have developed under as unfavorable conditions during April-July as did the spring-wheat crop of the United States.

According to the revised official acreage estimates, issued July 10, the total area sown to wheat in Canada in 1930 was 24.7 million acres, as compared with 25.3 million finally reported for 1929.¹ Since the Canadian Wheat Pool has calculated that approximately 1.6 million acres of wheat were abandoned this year—presumably a high figure—in the three western provinces,² we may perhaps conclude that something like 23 million acres remain for harvest. It is impossible to compare this figure with areas harvested in earlier years, for estimates of areas harvested are not available, but abandonment was probably even heavier in 1929.

Weather in the Prairie Provinces this year was favorable for early seeding; by the first of May 73 per cent of the spring wheat sowing was completed in Manitoba, 61 per cent in Saskatchewan, and 64 per cent in Alberta, each of these percentages being the highest within the past decade. Since April rains followed the seeding in many districts, the 1930 crop seemed to have an unusually favorable start. One feature, however, the deficiency of subsoil moisture, darkened the outlook. But even when that deficiency was considered, a crop of average size or over seemed to many to be in prospect. Forecasting the Canadian crop on the basis of precipitation and temperature in western Canada from August 1929 through April 1930, the United States Department of Agriculture concluded that for Canada as a whole the yield per acre

would probably be about 18 or 19 bushels, and that the total crop might fall between 425 and 450 million bushels.

Unfavorable weather conditions during May, however, largely offset the advantage gained from early seeding. Low temperatures and occasional frosts retarded growth and harmed some of the plants, while high winds caused rapid evaporation, soil drifting, and general damage. As a result of these factors, the condition of spring wheat was officially reported as below average on May 31. The figures below are condition estimates of the Dominion Bureau of Statistics for May-July 1924 and 1928-30 in terms of percentage of average yields for the preceding ten years.

Year	May 31	June 30	July 31
1924	96	92	77
1928	100	103	107
1929	100	88	66
1930	96	91	85

The course of development of the 1930 crop from May 31 to August 1 can be well compared to that of the 1924 crop and contrasted with the developments of the 1928 and 1929 crops. Although in both 1924 and 1930 the percentage condition on May 31 was the same, the estimated condition of the 1930 crop was slightly higher on that date than was the condition of the 1924 crop, because the average yield for the years 1920-29 was higher than for the years 1914-23. Naturally no striking difference in the condition of the four crops was apparent as early as May 31. During June the crops of 1924 and 1930 showed approximately the same amount of deterioration; the 1930 crop declined 5 points while the 1924 crop declined 4—declines which can be contrasted with a record 12-point drop in 1929 and a 3-point gain in 1928. In 1924, 1929, and 1930, wheat deteriorated further during July, dropping 22 points in 1929, 15 in 1924, but only 6 in 1930. It is apparent that while the condition of wheat in western Canada declined this year during both June and July, the total decline was not as marked as that of 1924, and was much smaller than that of 1929.

Crop development during June and July was by no means uniform throughout the

¹ The Canadian Wheat Pool has estimated the area sown to wheat in western Canada this year as approximately 24.1 million acres, 150 thousand acres higher than the official estimate for 1930, and 1.4 per cent larger than the Pool's estimate of the wheat area planted in 1929.

² *Canadian Wheat Pool Crop Report*, No. 11, July 16, 1930.

three major wheat-growing provinces, as is apparent from condition figures published in the reports of the Canadian Wheat Pool.¹ Wheat in Alberta and Saskatchewan suffered markedly during June from high winds, drought, and cutworms, while wheat in Manitoba was little affected. During the first three weeks of July the condition of wheat in Manitoba remained high, while in Saskatchewan and Alberta it continued to decline as a result of excessively hot, dry weather in the southern portions of those provinces, and local winds and hailstorms in scattered districts. Good rains during the last half of July arrested deterioration in Alberta; but the last week of the month witnessed a marked spread of rust in Manitoba and further injury from drought in southern and central Saskatchewan. Since the beginning of August reports from the western provinces have indicated still further deterioration. Apparently the crop is very spotty; wind and hail damage is confined mainly to restricted localities, and injury from drought is most noticeable on the stubble lands of southern Alberta and southern and central Saskatchewan.

Opinions concerning the probable size of the Canadian crop vary widely, but not so widely as they did at this time last year. This year most observers place their estimates somewhere between 300 and 400 million bushels, while last year the forecasts ranged between 175 and 350 million. No official estimate of the 1930 crop has yet appeared, but private observers have expressed the belief that the official crop-condition figure for July 31 indicated a spring-wheat crop of approximately 355 million bushels in the three Prairie Provinces. This figure is somewhat lower than the August

¹ Canadian Pool condition estimates for the Prairie Provinces, expressed in terms of percentage of a "full yield," not of a ten-year average yield, follow:

Date	Manitoba	Saskatchewan	Alberta
June 2	93.0	89.0	91.0
June 15	95.0	85.0	84.0
June 28	96.0	80.0	80.0
July 15	97.8	76.2	75.7
July 29	90.4	71.3	76.5
Aug. 15	77.0	66.0	70.0

² *World Wheat Prospects*, July 28, 1930, pp. 5-6. The winter-wheat crop of Canada, officially estimated at 16 million bushels for 1930, ranks as small in comparison with the crops of recent years.

estimates of three American experts which range from 369 to 385 million bushels for western Canada; but is at the extreme upper limit of, or perhaps slightly exceeds, the estimate of 360-375 million bushels for all of Canada, published July 28 by the United States Department of Agriculture.² For purposes of evaluating the world wheat outlook for 1930-31, we employ a figure of 375 million bushels as a reasonable approximation to the total Canadian wheat crop of 1930, though at the date of writing (August 28) many unofficial forecasts run somewhat lower than this.

EUROPE, INCLUDING RUSSIA

Early reports suggest that the total European (ex-Russian) wheat crop of 1930 falls considerably below the outturns of 1928 and 1929. At the beginning of April the outlook for the European crop was good, although French wheat, and perhaps also Italian wheat, had apparently suffered prior to that time as a result of excessive rainfall and weed growth. During parts of April-July, however, weather conditions were distinctly unfavorable in certain regions of Europe, and at the middle of August the outlook seemed to be for a European crop of only moderate size. The following figures of wheat production show the official preliminary estimates which are available for 1930 for the different countries of Europe, and the standing estimates for the same countries for 1928 and 1929. Data are in million bushels.

Country	1928	1929	Preliminary 1930
Hungary	99.2	75.0	70.1
Bulgaria	49.2	34.4	62.4
Roumania	115.5	101.2	123.7
Jugo-Slavia	103.3	95.0	89.0
Total	367.2	305.6	345.2
Spain	119.9	154.2	160.6
Italy	228.6	260.7	223.1
Netherlands	7.3	5.5	7.2
Belgium	17.2	13.2	15.9
Germany	141.6	123.1	148.8
Portugal	7.5	11.1	16.7
Austria	12.9	11.6	11.5
England, Wales	47.3	47.5	43.5
Finland	1.0	1.1	1.1
Total	583.3	628.0	628.4

The figures above may, of course, be subjected to extensive revisions; this occurred, for example, with the estimates available in August 1929. Nevertheless, the official and unofficial estimates standing at this season of the year generally give a significant picture of the general distribution of the crop, and consequently furnish a useful basis for early judgments. To judge by standing official reports and unofficial advice, the 1930 crop of the European importing countries is likely to fall nearly 150 million bushels below the big crop of 1929, whereas the Danube countries have crops less than 40 million bushels larger than the crops of 1929.

Of the Danubian exporting countries, two, Roumania and Bulgaria, appear to have harvested record crops this year. The Bulgarian crop was harvested from an acreage estimated to be the largest in post-war years, while the Roumanian crop was secured from an area reported to be only of moderate size. Jugo-Slavia and Hungary, however, were considerably less fortunate as regards their 1930 crops. The Jugo-Slavian outturn, which is unofficially reported as smaller than the standing official estimates, appears small in comparison with the crops of 1928 and 1929, even though it is of good size in relation to the crops of 1920-27. Reports of the Hungarian crop are somewhat conflicting, but seem to suggest that the crop is an ordinary one, falling markedly below the record crop of 1928. Crop prospects in the two latter countries appear to have been reduced mainly by storms and hail during late May and early June, and by excessive heat and drought during the latter part of June and the first part of July. Although weather conditions were apparently responsible for reduced yields in part of the Danube basin, they are reported to have favored the development of wheat of high protein content and good natural weight. As a group, therefore, the Danubian exporting countries appear to have harvested this year a crop of large size (exceeded only by the record crop of 1928) and one of good quality.

The countries of southern Europe, exclusive of those in the Danube basin, have apparently secured a crop only of moderate size and of fair to mediocre quality. The two largest producers of wheat in southern

Europe, France and Italy, appear to have suffered the most from adverse weather conditions. Practically the whole growing and harvesting period in France was characterized by excessive precipitation and numerous storms; the situation was similar, but apparently not so serious, in Italy. As a result, the French and Italian crops deteriorated during April-July; and complaints of excessive weed growth, rust, and lodging were common in both countries. No official estimate of French wheat production has yet appeared, but the latest official estimate of wheat acreage indicates that the area for the 1930 crop was slightly larger than the wheat area of 1929, and approximately equal to that of 1928. Thus, from the standpoint of acreage alone there seems to have been no reason to anticipate a small crop. Unofficial estimates of production fall generally within the range of 200 to 260 million bushels, suggesting an unusually low yield per acre. If the outturn for 1930 falls below 260 million bushels, as now seems probable, the crop will not only be considerably smaller than the crops of 1928 and 1929, but will rank as one of the three smallest crops of the decade 1921-30. It may turn out to be quite the smallest.

The standing official estimate for the Italian crop is 223 million bushels. Raised on an area smaller than any of the crops of 1926-29, the crop of 1930 falls notably short of the huge one of 1929, though it may approximate the fair crops of 1926 and 1928. The quality is said to be rather poor.

Of the remaining countries of the southern European group, Portugal is reported to have harvested a bumper crop, Spain a crop of good size, and Greece a crop of average size or smaller. The wheat production of Portugal appears to be the largest, by a wide margin, of any recorded for post-war years. The official Spanish estimate, which indicates an outturn only slightly smaller than the bumper crop of 1925, has been criticized as too high. The Spanish estimate has been standing since the last of May; and some damage was probably done to the crop by heavy rains in early June, and by unfavorable harvesting weather in some districts in June and July. No official estimate of the wheat crop of Greece is yet available, but unofficial ad-

vices indicate that, mainly as a result of severe storms in June, the crop of 1930 will not exceed, and perhaps will fall below, the average of the past five years.

Considerably less is known about the new crops of the northern European countries, which are harvested later. These crops, however, developed under more favorable conditions than did those of southern Europe; and the total outturn in the northern group is seemingly large this year in comparison with most previous years, but presumably not so large as in 1928.

The important producers of north central Europe—Germany, Poland, Czecho-Slovakia, and Austria—appear as a group to have harvested a good-sized crop from an acreage of record size. In general, the crops in all four of these countries developed under approximately similar weather conditions; they progressed well in April and May, suffered marked deterioration as a result of excessive heat and drought during June, were somewhat benefited by late rains in July, but were harmed again by wet weather during the latter part of July and the first half of August. An official estimate of production is available for only two of these countries, Germany and Austria. The German estimate of 148.8 million bushels, apparently based on condition as of August 1, indicates a record post-war crop; but this estimate looks high in the light of recent advices. The Austrian official estimate indicates a crop approximately equal to the crop of 1929.

In the United Kingdom the acreage devoted to the wheat crop of 1930 is estimated as approximately equal to the small wheat areas of the preceding two years, while the yield per acre is said to be below average largely as a result of excessive rainfall during the latter half of July and the first part of August. It thus appears that the crop of 1930 will probably rank as the smallest of post-war years—a ranking consistent with the downward trend of production noticeable during recent years.

The crops of the remaining northern European countries, aside from Russia, are too small greatly to affect the total production of Europe. Reports of crop development in the Scandinavian countries were favorable until heavy rains came in August. Unofficial advices suggest that pro-

duction in the Baltic countries as a group will probably be in line with the recent upward trend; and that Lithuania, at least, has apparently harvested a record crop. The crops of Belgium, the Netherlands, and Switzerland likewise appear to be of good size, notably larger than the small crops of 1929 and near the line of trend.

The character of the available information seems to be such that inferences concerning the size of the Russian crop of 1930 cannot be drawn with much assurance. According to official reports the outlook is for a moderately good wheat crop, the result partly of large acreage and partly of favorable growing conditions. Official statements have indicated that the winter-wheat acreage remaining for harvest in 1930 was strikingly larger than the area remaining for harvest in 1929; that the area planted to spring wheat this year¹ was the largest of the past five years; and that the condition of all wheat as of July 1 was considerably above average. Experienced commentators, however, have noted that the method used in compiling the acreage figures for the 1930 crops differs from the method used in previous years; hence the 1930 figures are not comparable with those for earlier years. Moreover, some observers believe that the area planted to spring wheat this year is smaller than the area planted in 1929.² Consequently, even though the average yield per acre turns out to be high (there seems to be no special reason to question the accuracy of the official condition figures for this year) the wheat crop of 1930 may not greatly exceed the crop of 1929. Reports suggest good crops especially in the areas north of the Black Sea and closest to the importing countries, though late advices seem less optimistic than early ones. It seems impossible to evaluate probable or possible Russian exports in 1930-31 by reference either to the size or the distribution of the crop.

¹ The spring-wheat acreage sown up to June 25 has been officially placed at 59.5 million bushels, according to *Pravda*, July 13, 1930.

² The decrease of 9 per cent (official figures) in the number of horses in Russia between the spring of 1929 and the spring of 1930 lends some support to the view that the acreage planted this year falls below that of 1929. Incidentally, it is to be noted that official figures likewise indicate a decrease in other livestock over the same period: cattle decreased 20 per cent, sheep 33 1/3 per cent, and swine 40 per cent.

OTHER NORTHERN HEMISPHERE COUNTRIES

Information concerning the 1930 crops of other countries of the Northern Hemisphere is rather scanty. Official production figures are available only for Japan, Chosen, and Mexico. These crops are all of fair size. Private advices indicate that Turkey and Palestine also have good-sized wheat crops this year, but that production in Cyprus is below average. No estimates of outturn are available for Syria and Lebanon, but the combined wheat area of those two countries (1.2 million acres) is about 300,000 acres larger than the small area planted in 1929. Reports concerning the Chinese wheat crop have been decidedly favorable. In Manchuria, and in the northern Chinese provinces of Shantung, Shansi, and Shensi, good-sized crops appear to have been harvested; and in the lower Yangtze Valley wheat yields are said to be above average in spite of damage caused by rains in the lower districts.

THE SOUTHERN HEMISPHERE

Little can be said at this season in regard to the outlook for the wheat crop in the countries of the Southern Hemisphere. Certain it is, however, that conditions in Argentina and Australia have been much more favorable for seeding and early growth this year than they were in 1929 when drought was so long continued in both countries.

The area sown to wheat in Australia has been placed officially at 17 million acres, 2 million acres larger than the record area of 1928. Some trade advices have suggested

that the official estimate is too high; but practically all agree that the acreage planted for the crop of 1930 is larger than for any other post-war year. The increase in acreage in Australia is probably the result of a combination of several factors: good sowing weather in several of the wheat-raising districts; extensive political propaganda for larger wheat plantings; low prevailing prices for wool; and perhaps the possibility, then existing, of the establishment of a guaranteed price for wheat in connection with the organization of a compulsory wheat pool. It is impossible to know to what extent each or any of these factors affected the planting of wheat; but it seems reasonable to believe that in combination they may have exerted considerable influence in the direction of a larger acreage. In spite of the favorable seeding conditions in Argentina, the area planted in that country for the 1930 crop was, according to private estimates, approximately equal in size to the area planted last year. This would be surprising, in view of the upward trend of wheat acreage in Argentina, had it not been for the discouraging outcome of the crop in 1929 and the low wheat prices which prevailed throughout the planting period.

As a result of the large planted acreage and of generally favorable weather conditions in April–August, it now appears that the Southern Hemisphere will probably produce a fairly large wheat crop in 1930 if weather conditions during the remainder of the season are reasonably favorable. Unfavorable weather conditions during September–November, however, may change this outlook at any time.

II. WHEAT PRICE MOVEMENTS

THE COURSE OF PRICES

During April–July 1930 the prices of wheat futures in the leading markets continued a general downward drift that has persisted with some interruptions since August 1929, reaching, at least so far as concerns Winnipeg and Chicago prices, the lowest levels recorded since the summer of 1914. Except for a bulge in early April, price fluctuations were small up to June 9; from June 9 to June 25, however, prices de-

clined sharply; and, after remaining fairly stable at the lower level during most of July, they dipped downward again for a brief period near the end of the month.

It is perhaps impossible to segregate, to evaluate, and to arrange in their proper time-sequence the numerous influences that affected the course of wheat prices in the period under review. Two price-depressing influences, however, were more or less persistently present and important: first, the continuing pressure of heavy stocks of old-

crop wheat in North America, a pressure that may reasonably be said to have become increasingly significant as the time for harvesting the crop of 1930 approached; and second, prevailing pessimism among business men both in North America and Europe as business conditions failed to improve, as the prices of many commodities other than wheat continued to decline, and as weakness developed sporadically in the securities markets. In view of the moderately large exports to Europe as compared with earlier months, one cannot say that the overseas demand for wheat failed to improve in April-July, though the improvement seems to have occurred largely in the last six weeks of the period; nor can one properly describe the new-crop prospects in North America and Europe as strikingly favorable. On the whole the situation seems to have been such that factors which under other circumstances might have tended to raise prices were in this period ineffective, whereas the markets responded promptly to bearish news. The bearish factors in retrospect seem to have outweighed the bullish, though their effect upon prices was not spread out evenly over the period but was apparently concentrated between June 9 and 25.

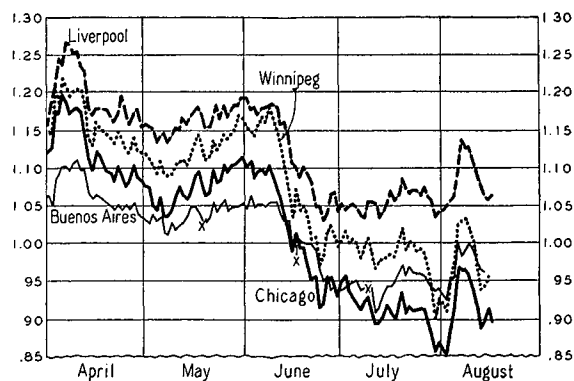
Writing as of May 1, 1930, we expressed the opinion that "if crop developments are nowhere unusual, the balance of other influences seems to us to suggest steady or rising, but not sharply rising, prices . . ." from the level of March-April.¹ Prices declined. In retrospect we find that the decline was not due on the whole to unusually favorable crop developments. Our analysis appears to have been in error in large part because we postulated improvement in the world-wide economic depression and in the European feed grain situation; improvement did not occur, and consequently European demand for wheat from North America in May-July was less insistent than seemed to us reasonably to be expected in early May.

Chart 1 shows the course of September futures in Chicago, of October futures in Winnipeg and Liverpool, and of successive futures in Buenos Aires. The bulge in prices between April 1 and April 15 seems attribut-

able mainly to a change in the outlook for the winter-wheat crop of the United States. Extremely dry weather in the Southwestern states during March and the first part of April led to many reports of crop damage in Kansas, Oklahoma, and Texas. Under the stimulus of these reports prices rose rapidly during the first week of April; but local rains in some parts of the dry territory on April 11 and 12, and general rains commencing April 13, dispelled the worst fears concerning the crop, and in Chicago, Winnipeg, and Liverpool prices declined from six to seven cents in the course of three days.

CHART 1.—DAILY CLOSING PRICES OF OCTOBER WHEAT FUTURES IN LIVERPOOL AND WINNIPEG, SEPTEMBER FUTURES IN CHICAGO, AND JUNE, JULY, AUGUST, AND SEPTEMBER FUTURES IN BUENOS AIRES, APRIL-AUGUST 1930*

(U.S. dollars per bushel)



* Data from *Daily Trade Bulletin*, Chicago. The X indicates a change in the Buenos Aires future.

Although from day to day prices fluctuated considerably between April 15 and June 9, there was no striking upward or downward movement. A depression of minor importance during the first week of May and a slight upswing toward the end of May were the major departures from the general horizontal tendency. The early May depression, most apparent in the Chicago market, was seemingly produced by a combination of influences, the most important of which were favorable crop reports from the United States and Canada, weakness in the stock markets, and relatively small export sales from North America. Just as no single factor may be taken as the cause of the early May depression, so no single factor seems responsible for the slight up-

¹ See WHEAT STUDIES, May 1930, VI, 326-27.

swing during the latter part of the month; on some days crop news from the United States was the major bullish feature; on other days unfavorable crop reports from France, Italy, or Canada attracted the attention of traders; and on still others reports of active European demand for North American wheat improved market sentiment.

The June price decline of approximately 20 cents in Winnipeg and Chicago and 16 cents in Liverpool took place within the space of about two weeks, and was the most spectacular price movement occurring in the period under review. Often one can explain a similarly sharp movement of wheat prices by obvious changes in the wheat position itself, such as a notable alteration in the crop outlook. This year, however, the decline seems attributable largely to factors operative over the whole April-July period—the prevailing atmosphere of pessimism and the pressure of stocks—which for some obscure reason registered their effect not over the period but in two weeks of June. It is true, however, that in these weeks the market reviewers stressed the importance of timely rains falling in Canada that went far to insure a crop of moderate rather than of small size; and some attention was given to improvement in the outlook for the United States winter-wheat crop. In this period also the New York securities market was very weak, a situation that drew comment from reviewers of the wheat market; but at the same time reviewers of the stock market were attributing some of its weakness to the declining prices of wheat. A study of cumulated opening-to-closing changes in futures prices at Liverpool, Chicago, and Winnipeg seems to contribute little more than the inference that the North American markets first registered most of the weakness in the early part of the decline.¹ Perhaps the feeling of pessimism in the United States at least was intensified by the ratification of the new tariff bill, which occurred on June 17; many business men expressed the fear that higher import duties would affect our export trade unfavorably. Again, during this period or

a little before, it became clear that in the United States the Stabilization Corporation would not employ in the new crop year such price-supporting measures as had been used in earlier months.

Probably as a reaction following this sharp drop in prices, a slight upturn occurred during the last few days of June. But even that slight increase was not maintained throughout July; after almost a month of relatively small price changes when the markets were influenced mainly by weather conditions in the North American spring-wheat belt, prices broke again, and in Winnipeg and Chicago reached new low levels on July 30. In Winnipeg the July future fell even below the low point of the year 1914; and in Chicago July wheat was driven below the price of July corn. Market reviewers seemed to find this sudden break in wheat futures difficult to explain. Apparently no strikingly bearish news came into the markets during July 28-30. Some private forecasts, however, placed the Canadian crop as high as 400-425 million bushels; Broomhall issued an estimate of wheat production in 23 countries that was regarded as bearish by many; there was a sharp increase in the United States visible supply; and rumors were current of rather pressing offers of Russian wheat. It is impossible to say to what extent these factors were effective causes of the drop in wheat prices at the end of July, but it appears probable that they would have had little effect, in view of continued drought and hot weather in the United States, wet harvesting weather in parts of Europe, and minor crop complaints from parts of Canada, had it not been for the general bearish sentiment prevailing at that time.

To consider the period April-July as a whole, it is apparent that price relationships between the various futures markets were quite different at the end from what they were at the beginning of the period. During June the Chicago September future moved from a point five or six cents above the Buenos Aires July future to a point approximately three cents below the August future in Buenos Aires, a shift which took place in spite of the fact that the average weekly Argentine exchange rate declined about four cents in American

¹ For a description of this approach to the study of price movements, see *WHEAT STUDIES*, May 1930, VI, 311-12.

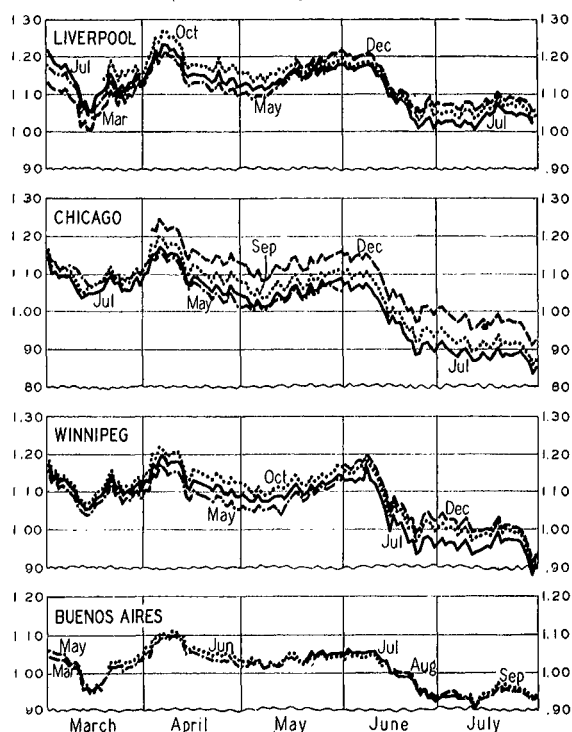
currency during the same time. The change in the Liverpool-Buenos Aires price spread was not striking, though on the whole it tended to narrow a little, a development that often occurs at this season of the year, when Argentine stocks may be small and diminishing, while Northern Hemisphere supplies are being augmented by the new crops. The Liverpool-Winnipeg and Liverpool-Chicago price spreads, however, widened materially during June and July, Liverpool prices declining considerably less than the prices at Winnipeg and Chicago. This widening of spreads was presumably the result, on the one hand, of inherent weakness in North America attributable to the large wheat supplies and the outlook for average crops in the United States and Canada, and, on the other hand, of relative firmness in Liverpool due mainly to the moderate size of supplies in many European countries and the unfavorable development of new crops in some parts of Europe. An increase in ocean freight rates on grain was presumably an additional factor.

Another matter of interest in regard to futures prices is the relationships of near and distant futures in the different markets. The data appear in Chart 2. Throughout the period April-July the distant futures generally ruled above the near (usually to the extent of the carrying charge), thus reflecting the availability of large immediate supplies of wheat. In Liverpool and Winnipeg the December and October futures remained consistently higher than the May and July futures; and the July future stayed at a level well above the May future. In Chicago the December and September futures maintained fairly large spreads over the May and July futures throughout the period, but the May future ruled slightly above the July future during March and the first two days of April, and only slightly below the July future during April and May. In view of the large stocks of wheat in the United States this year the relation between the May and July futures in Chicago in the spring may be considered as abnormal; for it is natural for the price of July wheat to exceed the price of May wheat by a substantial margin when there is a large amount of wheat to be carried, as was the situation this year. The abnormal relation-

ship prevailing between the July and May futures in Chicago this year may presumably be attributed mainly to support of the May future by the Stabilization Corporation.

CHART 2.—DAILY CLOSING PRICES OF PRINCIPAL WHEAT FUTURES IN FOUR LEADING MARKETS, MARCH-JULY 1930*

(U.S. dollars per bushel)



* Data from *Daily Trade Bulletin*, Chicago.

In the first part of August, a sharp advance of futures prices occurred in the principal markets (see Chart 1, p. 388); this advance was prompted chiefly by serious injury to the United States corn crop from drought and extreme heat. The advance, however, did not hold when the weather improved, and when rumors became current that the Canadian Pool was encountering difficulties in arranging for the financing of its operations in 1930-31.

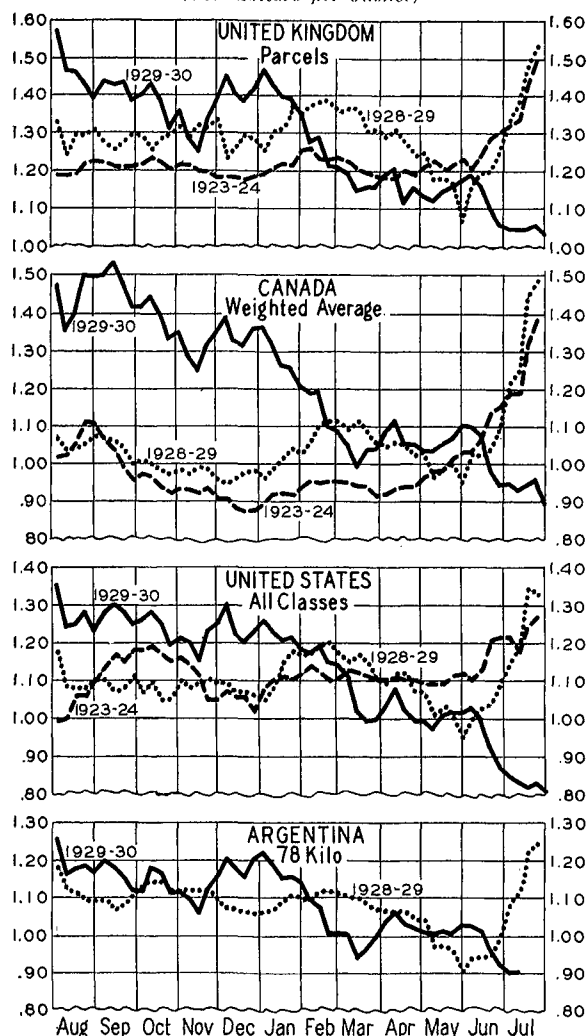
THE LEVEL OF PRICES

Chart 3 serves to emphasize the relatively low level to which wheat prices declined toward the end of the crop year 1929-30; it shows average cash prices in the United

Kingdom, Canada, the United States, and Argentina weekly in 1929-30 in comparison with the prices of 1923-24 and 1928-29, the years in which prices, in these countries at least, had previously stood at their lowest

CHART 3.—WEEKLY AVERAGE PRICES OF WHEAT IN LEADING EXPORTING AND IMPORTING MARKETS, 1923-24 AND FROM AUGUST 1928*

(U.S. dollars per bushel)



* For sources, see Appendix Table IX. Argentine prices of wheat weighing 78 kilograms per hectoliter not available for 1923-24.

post-war levels. In July 1930 a new post-war low level was reached in the United Kingdom and the United States, though Canadian weighted average prices had been lower in some weeks of 1923-24, and Argentine prices had been equally low at the end of May 1929. Prices of Argentine wheat

weighing 78 kilograms per hectoliter are not available for 1923-24; but, to judge from prices of wheat weighing 80 kilograms and usual price differentials, the Argentine prices in July 1930 were lower than prices in 1923-24. It is unnecessary here to discuss the fact that, among these price series, relatively the lowest level was touched in July 1930 by prices in the United States, and relatively the highest level was maintained by prices in Canada. These relationships are broadly explicable by the facts that prices are subject to local as well as to general influences, and that from year to year these local influences do not necessarily act in the same direction in different countries.¹

One outstanding feature of the price situation is the fact that in July, at the end of a crop year characterized by a relatively small world wheat crop, trend considered, and at the beginning of a crop year seemingly to be characterized by a world wheat crop little if any above the line of trend, wheat prices stood at a decidedly low level. Huge inward carryovers, wide-spread business depression and declining prices of many raw materials, abundance of wheat substitutes, an unusual distribution of wheat crops, and governmental measures tending to curtail importation, all seem to have contributed to the situation—and other factors as well. It is unnecessary here to attempt to classify and to evaluate the several factors.² Another striking feature brought out by Chart 3 was the extent and persistence of the decline in wheat prices between the beginning and the end of the year. In Canada, the United Kingdom, and the United States, this decline approximated 50 cents per bushel. No other year of the past seven has witnessed so large a decline. Argentine prices did not sink as greatly as prices in the other countries. Here the huge inward carryover was followed by a notably short crop which was exported fairly freely, and by the end of the year stocks were no longer burdensome.

The extremely low level of prices prevailing in July 1930 deserves a further com-

¹ This is a subject to which attention will be given in our review of the crop year 1929-30, to be published in December.

² We shall return to this difficult subject in our review of the crop year.

ment. Not only was July 1930 the month of lowest post-war prices of wheat imported into the United Kingdom (British parcels prices averaged about \$1.04 per bushel), but this level was low even as compared with many months in the seven years immediately preceding the war. In these 84 months British import wheat prices fell below \$1.00 a bushel only twice, and below \$1.04 per bushel only 17 times.¹ Moreover, in July 1930 the British import price of wheat probably stood lower in relation to the prices of other commodities as a group than it had done in any month of the seven years preceding the war; for whereas British wheat prices in July 1930 stood 3 or 4 per cent below the level of the calendar year 1913, the British index number of wholesale prices stood in July 1930 some 20 per cent above the 1913 level.

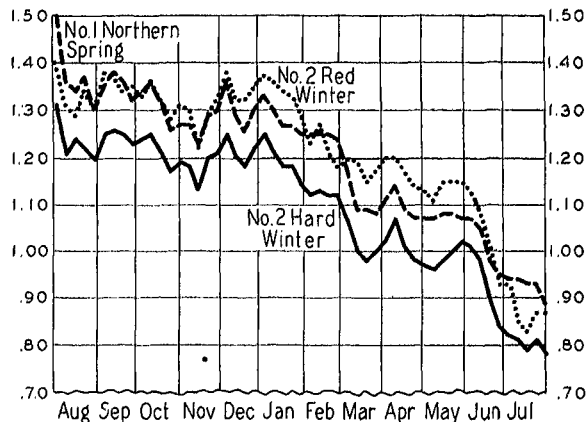
UNITED STATES CASH PRICES

As usual, the end of the season brought a change in the price relationships of the three principal types of United States wheat. This may be seen from Chart 4, which shows the weekly average prices of No. 1 Northern Spring at Minneapolis, No. 2 Red Winter at St. Louis, and No. 2 Hard Winter at Kansas City. During April and May the price spreads between the different types of cash wheat were kept fairly constant except for minor temporary changes. During June and July, however, when all cash prices moved downward, the relative positions of the various wheats changed. The price of No. 2 Red Winter declined from a point considerably above the price of No. 1 Northern to one considerably below, and No. 2 Hard Winter declined more than No. 1 Northern but somewhat less than No. 2 Red. When these movements are considered in relation to futures price movements, the outstanding feature appears to be the relative strength of No. 1 Northern. This strength can be attributed partly to the uncertainty that necessarily prevails in June and July with regard to the oncoming spring-wheat crop, the winter-wheat crop being more nearly made, but mainly to the relatively more unfavorable reports that have issued from the spring-

wheat areas than from the winter-wheat areas.

It is more difficult to explain the narrowing of the spread between the prices of No. 2 Red Winter and No. 2 Hard Winter. One might expect that such a narrowing would be incident to a change,

CHART 4.—WEEKLY AVERAGE CASH PRICES OF TYPICAL WHEATS IN UNITED STATES MARKETS, AUGUST-JULY 1929-30*
(U.S. dollars per bushel)



* No. 2 Red Winter at St. Louis, No. 2 Hard Winter at Kansas City, and No. 1 Northern Spring at Minneapolis. Data from *Crops and Markets*.

between 1929 and 1930, in the proportions of the crops of hard red winter wheat and of soft red winter to the total winter-wheat crop, soft red winter constituting a larger proportion and hard red a smaller in 1930 than in 1929. The preliminary estimates do not suggest an appreciable change, however. In some trade circles the narrowing of the spread is attributed to operations of the Stabilization Corporation and the Farmers National Grain Corporation in hard red winter but not in soft red winter wheat. Again, perhaps greater strength has been given to the prices of hard than of soft winter by the excellent quality of the new crop, by a significant movement of hard winter to spring-wheat areas, by fairly active export demand for hard winter, and by an alleged tendency of farmers to restrain their marketings of hard winter, though the existence and effects of these influences are not easy to perceive and measure.

At Kansas City, cash prices of No. 2 Hard Winter did not fall as far below the prices

¹ See table of British import wheat prices in *WHEAT STUDIES*, June 1929, V, 294.

of the September future as was the case last year; apparently storage facilities have proved more adequate to handle the crop movement, and the notable congestion that was present in 1929 has not been evident in 1930. The new crop of hard winter wheat has proved to be so good in quality that protein premiums declined from those prevailing in 1929-30, and are now notably small.

EUROPEAN PRICES

Several features of the wheat price situation as regards domestic wheats in Europe in April-July are of interest.

The cash prices of domestic wheats in Italy, France, and Germany did not follow at all closely the movement of international cash wheat prices as shown by British parcels. The following tabulation,¹ incomplete in some respects, shows monthly average prices per bushel of domestic wheats in these countries and in the United Kingdom, and of British import wheats (parcels) in April-July 1930, all expressed in terms of United States dollars:

Month	British parcels	Domestic wheats			
		United Kingdom	France	Germany	Italy
April	1.16	1.13	1.36	1.75	1.94
May	1.15	1.14	1.31	1.87	1.96
June	1.13	1.11	1.36	1.95	2.02
July	1.04	1.08	1.66	1.87	1.76

French domestic wheat prices declined with international prices between April and May, but rose instead of declining between May and June; and between June and July, when international prices declined 9 cents a bushel, French prices rose 30 cents. This occurred in the face of very heavy stocks, and reflects mainly the decidedly unfavorable outlook for the new crop. In Germany and Italy prices rose between April and June, while international prices declined; such a movement often occurs at the end of the crop year as supplies of old-crop wheat become scarce, but it may have been

accentuated this year by increases in the German import duty on April 25, and the Italian on June 5, though the presence of other factors obscures the effects of changes in duties. French prices may have been only slightly influenced by the increase of duty that became effective May 19, for prices increased only a little between May and June, and perhaps this increase was as much the result of changing crop prospects or some other factor as of the increase in duty. Domestic wheat became so scarce in Germany at the end of July that prices were not quoted on most days of the month. In Italy, the advent of the new crop in July brought a decline in price, apparently a normal seasonal occurrence. In June, when new-crop and old-crop wheat were quoted at the same time, the new-crop wheat was the cheaper; apparently this situation is commonly to be observed in continental European countries.

On the British import market, adjustments occurred in the price relationships of the several important types of import wheat.² By July, the range was considerably narrower than it had been in December, at least if one considers only the prices of No. 3 Northern Manitoba, No. 2 Winter, Argentine Rosafé, and Australian. In December the range among these grades was around 15-20 cents per bushel; in July, only 8-10 cents. Of these wheats, No. 3 Manitoba was the dearest in December, Australian the dearest in July; and Rosafé was the cheapest in December, while No. 2 Winter was the cheapest in July. The relationships at the end of the year were much closer to the usual position than they were at the beginning. In August 1929, for example, No. 3 Northern Manitoba sold on the average for about 31 cents per bushel more than Rosafé—the largest differential in at least seven years; but by July 1930 the spread had been reduced until it was only about 5 cents.

For about five weeks in May and June, French wheat was cheaper than any of the four types or grades considered above. Moreover, on the average for April-July, spot French wheat at Liverpool sold for about \$1.13 per bushel, while French wheat in Chartres was selling for around 30 cents more, or \$1.42—an effect of the export bounty in France.

¹ Summarized from data in Appendix Tables IX and X. The July 1930 figures for France, Germany, and Italy are preliminary.

² See Appendix Table IX.

III. INTERNATIONAL TRADE

The volume of international trade in wheat and flour was smaller in April–July 1930 than in most other post-war years; yet it compared with the April–July movement in earlier years considerably more favorably than the movement in the preceding four months, December–March 1929–30, had compared with the December–March movement in earlier years. For the first time in eight years, net exports in April–July exceeded net exports in December–March; the average seasonal movement was reversed. Moderately low stocks in some European countries and an unfavorable new-crop outlook in France and Italy especially stimulated import purchases; and in July 1930, for the first time in many months, overseas shipments (Broomhall's data) ran high rather than low in relation to shipments recorded in earlier years.

VOLUME OF TRADE IN THE CROP YEAR

Broomhall's shipments during 1929–30 totaled only 613 million bushels in the crop year August–July. Preliminary official data, including some estimates, suggest that world net exports approximated 625 million bushels.¹ Either total is extraordinarily small in comparison with the exports of other years, as is shown by the following figures in million bushels:

August–July	Broomhall's shipments	Net exports
1921–22	647	697
1922–23	676	711
1923–24	775 ^a	823
1924–25	715	768
1925–26	668	692
1926–27	814	846
1927–28	793	815
1928–29	928 ^a	940
1929–30	613	625

^a Fifty-three weeks.

Both sets of data show that trade in wheat and flour fell in 1929–30 to the lowest level

¹ In this total we reckon net exports as follows: Canada, 185 million bushels; Argentina, 151 million; the United States, 143 million; Australia, 62 million; the Danube countries, 58 million; Russia, 7 million; Algeria, Tunis, Morocco, and Chile, 15 million. These figures are preliminary.

² See chart in *WHEAT STUDIES*, December 1929, VI, 78.

in the past nine years. The causes of so small a volume of trade now seem clearly to lie largely in the European situation, for exporting countries, especially the United States and Canada, had plenty of wheat to export, and the imports of ex-European countries as a group were at least of fair size. The carryovers of European importing countries at the beginning of the year were large; the domestic wheat crops were big, perhaps also underestimated, and of good quality; rye and the feed grains in Europe were abundant and cheap in relation to wheat; business depression prevailed in many countries; governmental measures in several instances tended to restrain importation; declining prices not only of wheat but of most raw materials discouraged trade.

It is interesting to observe that the change in the volume of trade between the crop years 1928–29 and 1929–30 was apparently the largest to occur between any two consecutive years of the twentieth century, even including the war years. This change was a decline of over 300 million bushels. During the past decade the next largest change—an increase of around 150 million bushels—was between the crop years 1925–26 and 1926–27. Prior to 1921–22, the largest changes (as judged by Broomhall's shipments) were a decline of about 160 million bushels between the crop years 1916–17 and 1917–18, and an increase of about 160 million between the crop years 1917–18 and 1918–19.²

The volume of trade in 1929–30 fell far below expectations expressed by many, if not most, commentators. Thus in October 1929 Broomhall's estimate of probable shipments was 744 million bushels, and the Canadian Pool's estimate (apparently of August–July net exports) was 850 million bushels. The Pool reduced its estimate to 770 million bushels late in November, and to 730 million in February 1930. In December 1929, Broomhall's standing estimate of probable shipments was 696 million bushels; the United States Department of Agriculture's estimate of net exports in July–June was 750–839 million bushels; and our own estimate of net exports in August–July was 720 million bushels. Comparable esti-

mates current in April 1930 were lower—Broomhall's was 636 million, the Department's was 650-714 million, our own was 660 million. The outcome was shipments of 613 million, and August-July net exports of about 625 million.¹ The failure of commentators better to anticipate the outcome seems to have been due largely to the difficulties inherent in evaluations of the size of the inward carryover and 1929 crop of wheat in Europe, and in anticipating the effects on wheat imports of abundant European supplies of feed grains and rye, of business depression and governmental regulations, and of declining prices of many raw materials. It is not surprising that a change in the volume of the export trade as large as the change between 1928-29 and 1929-30 proved to be was not anticipated early in the crop year; for in a considerable degree one must be guided by precedents, and the actual decline of trade proved to be quite without precedent.

VOLUME AND COURSE OF TRADE IN APRIL-JULY

According to Broomhall's data, the volume of international trade in wheat and flour in the last 18 weeks of 1929-30 was 205 million bushels—a notably small figure as compared with shipments in April-July 1924, 1927, 1928, and 1929, but larger by 17 million bushels than that of 1925 and about the same as that of 1922.² The relatively small volume is attributable to factors mentioned above in explanation of the small volume of trade for the crop year 1929-30 as a whole.

A rather striking revival of trade occurred in the closing months of the year. In each of the preceding eight years except 1922-23 and 1923-24, Broomhall's shipments for 18 weeks in April-July had fallen below shipments in the 17 weeks of December-March. This year, as in 1922-23 and 1923-24, the April-July shipments were

larger, the excess being larger than in either of these two years. The change between shipments in December-March and shipments in April-July has been as follows, in million bushels; for purposes of comparison, the tabulation also shows the December-March to April-July changes in combined official net exports from six exporting countries (Canada, the United States, Argentina, Australia, India, and Hungary):

	Shipments	Net exports
1921-22	-17.5	-25.1
1922-23	+ 5.8	-15.6
1923-24	+13.3	- 5.7
1924-25	-83.8	-82.6
1925-26	- 9.3	-19.9
1926-27	-16.6	-12.8
1927-28	- 4.5	-38.2
1928-29	-67.2	-56.1
1929-30	+16.2	+ 9.3

The average or usual seasonal movement was clearly disturbed; to judge by net export rather than by shipments statistics, the April-July movement exceeded the December-March movement for the first time in at least nine years.

Charts 5 and 6 (p. 396) illustrate in greater detail the manner in which the disturbance in the average seasonal flow of wheat occurred. Chart 5 shows Broomhall's shipments weekly, in terms of three-week moving averages, for the years 1925-26, 1926-27, 1928-29, and 1929-30; Chart 6 shows average monthly net exports from the six exporting countries mentioned above on the average from 1921-22 to 1928-29, in 1928-29, and in 1929-30. This year the decline in exports that usually occurs in June and July was not in evidence; and exports and shipments alike in July were up to or above the monthly average of recent years for the first time since August and September 1929.

The unusual appearance of larger exports in April-July than in December-March was anticipated in our last survey of the wheat situation, prepared in April. At that time it seemed probable that European import wheat stocks and stocks afloat for Europe were sufficiently reduced to warrant the inference that European importers could not curtail their purchases as sharply as they had done in December-March; that spreads between Winnipeg-Liverpool and Chicago-Liverpool wheat fu-

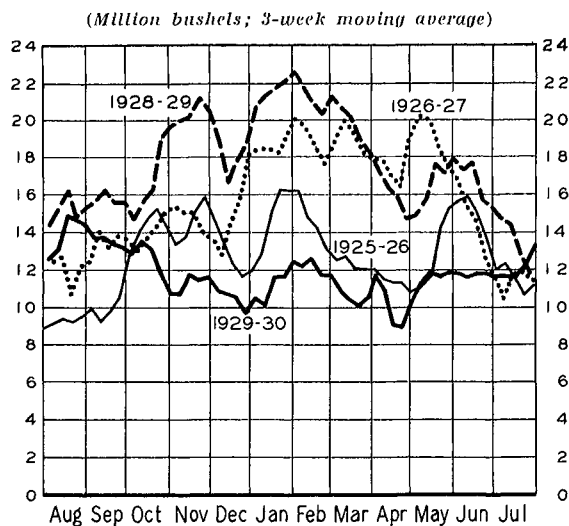
¹ This year Broomhall's shipments seem not to have fallen so far below net exports as has been the case in earlier years, in some part because stocks of Canadian wheat in lake and Atlantic ports of the United States were reduced in the course of the year and this reduction served to increase shipments in relation to net exports; in some part also because he includes shipments from France, and these do not figure in net exports because France was a net importer for the year as a whole.

² See below, Table 2, p. 399.

tures prices then seemed to be widening, favoring exportation; and that the feed grain situation and general business conditions in Europe might improve.¹ At present our views of the European stocks situation

ance therefore occurred through somewhat but not altogether different causes from those outlined in our survey written in April. It was also a considerably smaller disturbance than we then anticipated,

CHART 5.—INTERNATIONAL SHIPMENTS OF WHEAT AND FLOUR, WEEKLY, 1925-26, 1926-27, AND FROM AUGUST 1928*



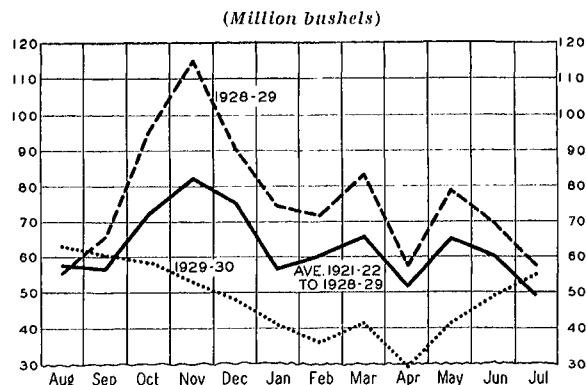
* Broomhall's data, from the *Corn Trade News*.

and of the widening of spreads² seem to have been confirmed; and these factors contributed somewhat to the disturbance of the average seasonal movement. Neither the business situation in Europe nor the feed grain situation, however, seems to have shown improvement; and it now appears that the change from the average seasonal movement is to be attributed in considerable part to unfavorable crop developments in Italy and France. As we see the situation, in part of June and July large stocks and average new-crop prospects in North America were set against moderately low stocks and rather unfavorable new-crop prospects in parts of Europe, giving rise to a widening of the North American-European price spreads; and this widening of spreads promoted rather heavy import purchases, both for immediate and for future delivery, and hence caused in large part the change in the average seasonal movement of exports. The disturb-

¹ See *WHEAT STUDIES*, May 1930, VI, 320-21.

² See above, pp. 389-90.

CHART 6.—MONTHLY NET EXPORTS FROM SIX LEADING EXPORTING COUNTRIES, AUGUST-JULY, AVERAGE 1921-22 TO 1928-29, 1928-29, AND 1929-30*



* Data from official statistics of Canada, the United States, Argentina, Australia, India, and Hungary, partly as reported by the International Institute of Agriculture. The figure for June 1930 is about 3 million bushels too low; that for July 1930 is largely estimated.

counting upon improved conditions in Europe and an earlier adjustment of Winnipeg-Liverpool and/or Chicago-Liverpool price spreads.

SOURCES OF EXPORTS

A general view of the movement of wheat from the several exporting countries in April-July 1930 is given in Table 1, which shows, with comparisons, Broomhall's shipments by countries of origin and net exports from the four principal exporting countries. Total shipments, 205 million bushels, were small as we have seen chiefly because of circumstances tending to keep European imports of 1929-30 at a lower level than in other post-war years. That the total was smaller than we anticipated in April seems also traceable largely to the European situation. It was exports from Canada and the United States that failed notably to occur in the volume which earlier seemed reasonable to expect. In April it seemed possible that net exports from Canada and the United States in April-July might approximate 145 million bushels, rather less than more; actually

these countries exported only 108 million bushels. Both the United States and Canada therefore closed the crop year 1929-30 with very large carryovers.

Canadian April-July net exports of 66 million bushels were notably small in comparison with those of the preceding four years, and especially small in relation to the quantities of wheat available within the country on March 31, 1930. Canada ex-

ported only 28.8 per cent of these stocks in April-July 1930; the lowest percentage exported previously in these months in any of the past eight years was 37.6, in 1929.

1926 respectively. But these were years in which supplies, as judged by the crops harvested in December-January, were smaller than in 1930.

Argentine exports of about 35 million bushels were also small, indeed the smallest recorded in nine years except for those of 1925. But by comparison with earlier years Argentina has had relatively little wheat available for export on account of the short

TABLE 1.—INTERNATIONAL SHIPMENTS AND NET EXPORTS OF WHEAT AND FLOUR FROM PRINCIPAL EXPORT AREAS, APRIL-JULY, 1922-30*

(Million bushels)

April-July	International shipments (Broomhall)								Net exports from			
	Total	North America	Argentina	Australia	Russia	Balkans	India	Others ^a	United States	Canada	Argentina	Australia
1922.....	206.4	105.6	61.2	36.8	...	2.8 ^b	....	...	55.7	47.8	58.1	32.3
1923.....	231.6	131.9	60.7	15.8	...	4.7 ^b	18.5	...	45.1	66.2	57.1	18.0
1924.....	283.3	144.0	86.4	29.9	4.0	7.1 ^b	11.8	...	28.4	103.0	75.6	28.8
1925.....	188.0	104.2	31.0	44.3	...	4.0 ^b	4.5	...	43.4	54.2	31.8	48.9
1926.....	224.8	138.8	42.0	22.8	7.6	7.6	3.4	3.0	45.9	83.9	38.7	22.8
1927.....	283.2	141.6	71.2	48.8	8.0	5.6	7.6	.4	50.7	82.6	65.7	44.6
1928.....	268.0	144.8	74.4	33.2	0.0	7.2	3.6	4.8	25.9	106.4	62.4	30.4
1929.....	278.9	144.8	89.1	33.4	0.0	9.1 ^c	.2	3.3 ^c	42.8	92.0	89.2	31.0
1930.....	204.6	121.2	34.8	22.3	3.9	9.8	3.9	8.7	41.6	65.9	35.0 ^d	20.7 ^d

* Shipments figures are Broomhall's cumulative totals for eighteen weeks from the *Corn Trade News*. These totals and their distribution differ slightly from the totals in Table 2, p. 399, and the weekly data given in Appendix Table V. Net exports are official data.

^a North Africa, Chile, Germany, France, etc.

^b Includes also shipments from other areas.

^c Approximate distribution.

^d Partially estimated from Broomhall's shipments.

ported only 28.8 per cent of these stocks in April-July 1930; the lowest percentage exported previously in these months in any of the past eight years was 37.6, in 1929.

April-July net exports from the United States, 42 million bushels, compared more favorably with those of earlier years, being distinctly larger than those of 1924 and 1928, but notably smaller (so far as concerns the years 1922-29) than those of 1922 and 1927. Nevertheless the stocks of wheat remaining within the country on March 1 or April 1, 1930, were undoubtedly the largest in nine years, so that the movement to export was small as compared with available supplies.

Australian net exports of about 21 million bushels were also small, though not so strikingly so in comparison with available supplies as were those of the North American countries. During the past nine years, Australian net exports in April-July have once fallen below those of 1930, and once approximately equaled them—in 1923 and

crop of 1929-30. Apparently the flow of wheat from Argentina, available supplies considered, was maintained in its historical proportions better than the flow from the other three major exporting countries, in spite of the rather poor quality of Argentine wheat this year—an illustration of the relative weakness of Argentina in holding wheat. The decline in total shipments between April-July 1929 and 1930, so far as sources of exports are concerned, is explained in the larger part by the decline of around 55 million bushels in Argentine shipments; but in its broader aspects the decline in the total was the result of smaller demand. As the year progressed, importers have had to turn more and more toward North America as a source of supplies; Argentina was able to furnish 33 per cent of the total shipments in August-November, 24 per cent in December-March, and 17 per cent in April-July. In coming months, before the new crop is harvested, she will presumably be able to supply a still smaller

fraction, as is ordinarily the situation in August-November. The heavy autumn shipments from Argentina that were so significant a factor on the world wheat markets in late 1928 and especially late 1929 can hardly occur in late 1930.

During the period under review, Russia exported, according to Broomhall's data, about 4 million bushels of wheat, rather more than she had shipped in December-March. The explanation seems to lie rather in the policies of the Soviet government than in circumstances relating to domestic stocks or to world prices, though it is possible that a good outlook for the Russian winter-wheat crop of 1930 was a factor. In July, offers of Russian wheat for forward shipment were apparently larger than in many months. The Danube countries continued to export more freely in April-July 1930 than in other years, the exports moving from Hungary and Jugo-Slavia rather than Bulgaria and Roumania, though the excellent crop of 1930 in Roumania stimulated exports from that country in July. India appears to have shipped about 4 million bushels in April-July, not a large quantity in view of the record crop harvested in March-May. Perhaps the movement from India has not yet reached its height; possibly low world wheat prices do not serve to induce a heavy movement; or possibly the political disturbances act as a restraining factor, though some commentators seem to believe that unsettled political conditions tend to induce Indian producers to sell grain quickly in order to obtain silver money that is easily hidden.

A fairly striking feature of the export trade was the relatively large size of shipments from "other countries," a list that includes North Africa, Chile, and this year France. These shipments totaled nearly 9 million bushels, the largest in recent years. So far as one can judge, this is largely attributable to shipments from France. It is difficult to ascertain precisely how large French shipments may have been, for French trade statistics are not yet complete for the period, and are also subject to diverse interpretations according as one accepts statistics of "commerce general" or "commerce special," and as one believes that French imports and exports are recorded as of the months in which they actu-

ally occurred. A French correspondent of Broomhall's has mentioned French exports in 1929-30 of nearly 26 million bushels.¹ According to official data gross exports of wheat and flour together totaled 20 million bushels in August-May 1929-30, though gross imports exceeded gross exports, so that France was a net importer of some 13 million bushels for the period August-May. In any event it seems clear that exports began to exceed imports only in January, and that the excess became of notable size only in May and June. In June, the United Kingdom imported more wheat (grain only) from France than from Argentina, Australia, or any other source except North America; the typical mill mix included about 7.5 per cent of French wheat; and throughout the year imports of French flour have been decidedly large. Liberal offers of relatively cheap French wheat were apparently a price-depressing influence on British markets in parts of the period under review.

Chile now appears to have harvested so large a crop in 1929-30 that her exports in April-July may have contributed to the size of shipments from "other countries"; but official data on exports are not available.

DISTRIBUTION OF IMPORTS

It is always impossible to bring crop-year net imports into close relation to crop-year net exports on account of certain discrepancies and of deficiencies in the import statistics; and at the moment, with net import statistics for July 1930 not yet available for most countries, an adequate analysis of imports either in August-July or April-July 1930 is not feasible. Certain significant facts, however, are apparent.

Table 2 shows Broomhall's shipments in August-July and April-July 1921-22 to 1929-30, distributed between European and ex-European destinations. The data show clearly enough that the strikingly small total volume of trade in August-July 1929-30 is to be attributed not to extraordinarily small imports by ex-European countries, but to extraordinarily small European takings. Shipments to Europe of 483 million bushels were smaller by some 50 million than they had been even in that year of the

¹ *Corn Trade News*, June 18, 1930.

preceding eight when shipments were smallest, in 1925-26. Shipments of 130 million bushels to ex-Europe in 1929-30, however, were relatively less small than those to Europe, and had been notably exceeded only in two of the past eight years, 1923-24

TABLE 2.—INTERNATIONAL WHEAT AND FLOUR SHIPMENTS (BROOMHALL) BY DESTINATION*
(Million bushels)

Year	April-July (18 weeks)			August-July (52 weeks)		
	Total	To Europe	To ex-Europe	Total	To Europe	To ex-Europe
1921-22.....	206.1	181.3	24.8	647.1	546.7	100.4
1922-23.....	231.7	200.7	31.0	676.4	585.9	90.5
1923-24.....	283.3	246.0	37.3	775.3 ^a	626.5 ^a	148.8 ^a
1924-25.....	188.2	169.2	19.0	715.2	639.7	75.5
1925-26.....	225.4	190.0	35.4	667.6	532.3	135.3
1926-27.....	282.5	233.3	49.2	814.4	682.4	132.0
1927-28.....	268.2	218.0	50.2	792.8	661.8	131.0
1928-29.....	278.9	213.7	65.2	928.1 ^a	703.1 ^a	225.0 ^a
1929-30.....	204.6	170.3	34.3	612.9	483.1	129.8
Average						
1909-14.....	218.2	189.7	28.5	624.7	542.7	82.0
1924-29.....	248.6	204.8	43.8	783.6	643.8	139.8

* Data from Broomhall's *Corn Trade News*.

^a Fifty-three weeks.

and 1928-29. The situation changed in April-July. Shipments to Europe of 170 million bushels were not so strikingly small by comparison with earlier years, and in fact exceeded those of April-July 1925 and were not far below those of 1922. Shipments to ex-Europe of 34 million bushels in April-July 1930, however, were not so large in comparison with earlier years as were the August-July shipments; April-July shipments had been appreciably larger in 1927, 1928, and 1929, and appreciably smaller only in 1922 and 1925. Between December-March and April-July 1930, total shipments increased about 16.2 million bushels; but whereas shipments to Europe increased 30.3 million, the shipments to ex-Europe decreased 14.1 million. A stronger demand from Europe not offset by weaker demand from ex-Europe was therefore significant in causing the unusual change in the average seasonal flow of wheat to export that occurred in the latter part of the crop year.

Table 3 (p. 400), showing the distribution of Broomhall's shipments according to ex-European destinations in April-July and August-July 1926-27 to 1929-30, is of interest. In the crop year 1929-30 as a whole,

practically all ex-European countries took a good deal less wheat than in 1928-29, the reductions being most striking as regards the group called "Central America," China and Japan, Egypt, and India. Economic depression involving declining prices of silver, silk, sugar, and other raw materials was important in causing the decline of imports, and so also, so far as concerns India, Egypt, and South Africa, were the more abundant domestic wheat crops. In comparison with 1926-27 and 1927-28, imports in 1929-30 appear to have been strikingly small only as regards the African countries and the group called "Central America." In April-July 1930 every group of ex-European countries except Peru seems to have taken less wheat and flour than in each of the three preceding years. Adequate explanations of the rather small April-July movement to ex-Europe seem not yet to be available, though the smaller takings of India are obviously to be explained by the large size of her new crop harvested in March-May, and those of China by the advent of a large new crop and by the continuing decline in silver prices.

Table 4 (p. 400) shows Broomhall's shipments to European destinations in August-July and April-July of the past five years. This is a rather unsatisfactory guide to the situation in importing countries because the large "orders" shipments cannot be distributed to destinations, and because shipments to Belgium and Holland represent in some part wheat and flour reshipped from these countries to Germany and Switzerland; but it is serviceable when taken in conjunction with net import statistics. It is clear that the small European takings in August-July 1929-30 reflect principally the small import requirements of Italy, France, and Germany. The British Isles imported net some 225 million bushels in 1929-30, about an average quantity, some 15 million larger than the small total for 1925-26, and some 15 million smaller than the high total for 1923-24. So far as the incomplete official data suggest, net imports in the crop year were moderately but not strikingly small for the minor importing countries of Europe taken as a group. France, however, probably imported net less than 10 million bushels, the smallest quantity in post-war years; this figure contrasts with a five-

year average, 1924-25 to 1928-29, of nearly 53 million (using statistics of "commerce general"). Italy imported only about 40 mil-

total volume of international trade in 1929-30. The principal factor underlying the small imports of Italy and France was, of

TABLE 3.—BROOMHALL'S SHIPMENTS OF WHEAT AND FLOUR BY EX-EUROPEAN DESTINATIONS, APRIL-JULY AND AUGUST-JULY, 1926-30*

(Million bushels)

Destination	April-July (18 weeks)				August-July (52 weeks)			
	1927	1928	1929	1930	1926-27	1927-28	1928-29 ^a	1929-30
Central America ^b	19.91	25.18	24.94	13.67	55.62	55.62	70.37	50.07
China and Japan.....	9.59	10.18	17.21	7.05	30.73	31.39	69.48	33.61
Brazil.....	8.78	8.71	10.87	8.64	22.73	26.68	30.26	38.17
Egypt.....	4.73	3.77	4.98	2.62	10.98	9.16	17.85	7.60
North and South Africa.....	2.70	2.20	1.60	1.01	7.04	5.94	7.29	2.68
Chile.....	.21	.03	...	.01	.34	.10	.03	.01
India.....	2.97	...	4.67	1.03	4.05	1.50	27.64	6.28
Syria.....	.10	.10	.09	.....	.21	.25	.53	.....
Peru.....	.26	...	.51	.30	.26	.38	.75	1.41
Palestine.....	...	...	.32	.....	...	...	.72	.....
New Zealand.....	...	...	.04	.....	.10	...	.06	.....
Total.....	49.25	50.17	65.23	34.33	132.05	131.02	224.98	129.83

* Data from the *Corn Trade News*.

^a Fifty-three weeks.

^b Includes Venezuela, West Indies, Dutch East Indies, etc.

lion bushels, also the smallest in post-war years; this contrasts with a five-year average of nearly 84 million. Germany imported

course, the huge crops of good quality harvested in 1929. In these countries and in Germany, and elsewhere as well, govern-

TABLE 4.—BROOMHALL'S SHIPMENTS OF WHEAT AND FLOUR BY DESTINATIONS IN EUROPE, APRIL-JULY AND AUGUST-JULY, 1925-30*

(Million bushels)

Destination	April-July (18 weeks)					August-July (52 weeks)				
	1926	1927	1928	1929	1930	1925-26	1926-27	1927-28	1928-29 ^a	1929-30
Orders.....	37.7	60.9	53.7	45.8	30.7	109.4	151.3	145.0	145.1	120.4
United Kingdom.....	58.7	65.1	55.0	49.2	53.3	162.8	176.5	164.7	158.8	137.4
France.....	4.3	13.1	10.4	15.2	5.4	21.3	50.6	30.0	45.3	18.7
Belgium.....	21.0	23.5	20.2	23.9	17.1	51.4	57.9	63.1	63.2	44.2
Holland.....	17.7	18.3	17.2	19.3	14.7	42.5	62.6	70.7	69.3	36.4
Germany ^b	18.0	20.3	19.7	19.7	11.8	44.1	59.7	67.1	67.3	34.9
Italy.....	21.2	20.6	24.4	21.2	21.3	56.2	74.9	69.3	73.0	36.0
Greece ^c	3.7	2.9	5.8	5.7	5.4	15.3	14.5	15.6	20.3	15.7
Scandinavia.....	3.3	5.0	5.1	6.1	4.6	14.0	18.0	18.9	25.5	15.8
Austria ^d	2.4	2.4	4.5	4.5	4.5	11.5	12.4	13.7	16.5	19.2
Spain ^e	2.0	1.8	2.0	3.1	1.4	3.8	4.6	3.7	18.7	4.3
Total.....	190.0	233.9	218.0	213.7	170.2	532.3	683.0	661.8	703.1	483.0

* Data from the *Corn Trade News*.

^a Fifty-three weeks.

^b Includes Poland and Czecho-Slovakia.

^c Includes Turkey.

^d Includes Malta.

^e Includes Spanish Colonies and Portugal.

only about 47 million; this contrasts with a five-year average of about 79 million. The small import takings of these three countries obviously go far to explain the small

mental measures of one kind or another were of some significance.¹

¹ We shall return to this subject in our review of the crop year, to be published in December.

In the absence of official net import statistics for July (often for June) it is impossible to secure an adequate view of European imports in April-July. Apparently, however, the European countries that began to import rather heavily in June and July were the British Isles, Italy, Belgium, Holland, and Austria.¹ Broomhall's shipments to Italy in April-July 1930 were about as large as in the same months of the preceding four years, while August-November and December-March shipments had been relatively much smaller. After a period of seven months in which imports had been small, the British Isles imported rather heavily in July.

It is pertinent at this point to summarize some of the more important changes in tariffs, milling regulations, and other governmental controls that have occurred in many countries during April-July 1930; the list is not complete. The Canadian tariff on wheat was raised from 12 to 42 cents per bushel on May 2, on flour from 50 cents to \$1.04 per barrel. The new tariff law of the United States, effective June 17, required that wheat used in flour milled in bond must be subject to a (compensatory) duty, if exported to a country where United States flour is accorded preferential treatment; it will be of interest to observe to what extent this provision will affect the operations of Buffalo mills that grind Canadian wheat in bond for export of flour to Cuba. The French duties were raised on May 19; on July 26, a decree decreased the percentage of the mill mix that must consist of domestic wheat from 97 to 90. In Germany the import duties were raised on

April 25; later, in July, the law requiring admixture of native wheat with foreign was renewed to apply to the year 1930-31, and a law was passed requiring rye to be milled either at 60 or 100 per cent extraction, and bakers to make a bread of pure (97 per cent) rye flour of either of these extractions, without admixture of wheat, or a bread containing 80 per cent of rye flour of 60 per cent extraction, and 17 per cent of wheat flour or rye bran. Import duties were raised in Italy on June 5; in Greece on May 9; in Bermuda on July 1; in Mexico on July 20; in Palestine on April 1; in Egypt on July 25; and in Poland on August 1. On July 2, Swedish millers agreed with the government to include in their mix 45 per cent of Swedish wheat, purchased at stipulated prices, the agreement to last until September 15 unless abrogated between July 30 and that date. In Czecho-Slovakia, supplementary import duties, varying with prices on the Prague exchange, were made effective on July 6 for countries not possessing trade agreements with Czecho-Slovakia. In Roumania, export duties were reduced on June 29. In Hungary, proposals for the introduction of export bounties on wheat or flour have been discussed at various times; official reports state that on July 16 a law became effective providing for a tax upon the sale of all wheat, the tax to be refunded on evidence of exportation.² The year closed with tariffs on wheat and flour standing at extraordinarily high levels. Actual developments during April-July were rather striking in view of declarations proposed at the so-called "Tariff Truce Conference" held in Geneva early in 1930.

IV. VISIBLE SUPPLIES AND OUTWARD CARRYOVERS

The information now available on year-end stocks in various countries demonstrates fairly conclusively that the crop year 1929-30, unlike 1927-28 and 1928-29, was characterized by a reduction of world carryovers, at least if the wheat world is defined to include Europe ex-Russia, North America, and Argentina and Australia. In some countries, notably France and the

United States, and also Canada and Australia, carryovers were increased in the course of the year. Visible supplies so closely watched by the trade—commercial stocks in the United States, Canada, afloat for Europe, and in ports of the United Kingdom—were not reduced; but they were not sharply increased, as they were in 1928-29. The reductions occurred in Argentina, the Danube basin, and in many of the importing countries of Europe, France being the outstanding exception. The reduction in Argentine stocks more than offset increases

¹ See Appendix Table IV.

² In May we stated that an export bounty had been introduced. The evidence is not yet altogether clear as to the fact or time of introduction.

in North America, as appears from Table 5, so that old-crop supplies in the four major exporting countries, afloat for Europe, and in ports of the United Kingdom stood at a somewhat lower level at the end of the year than at the beginning. It is impossible to express numerically the levels of European (ex-Russian) stocks in dif-

TABLE 5.—APPROXIMATE CARRYOVERS OF WHEAT IN EXPORTING COUNTRIES, AFLOAT FOR EUROPE, AND IN PORTS OF THE UNITED KINGDOM, AUGUST 1, 1925-30*

(Million bushels)

Location	1925	1926	1927	1928	1929	1930
United States ^a	135	112	137	143	264	290
Canada	26	36	51	78	104	112
Canadian in United States ^b	3	4	5	14	23	16
Argentina	56	61	65	90	130	64
Australia	36	30	34	43	38	51
Afloat for Europe	33	39	46	45	38	39
United Kingdom ports..	9	4	8	10	6	6
Total	298	286	346	423	603	578

* Data summarized from Appendix Tables VII and XI, except as noted.

^a Data as of July 1. Includes flour stock in city mills.

^b Canadian wheat in store in lake and Atlantic ports of the United States. Data from *Canadian Grain Statistics*, as of dates nearest to August 1.

ferent years. Nevertheless the evidence suggests that here the reductions much more than offset the increase in France. Even with the net reduction in stocks in and near Europe (ex-Russia) and in the major exporting countries, however, the general level at the end of the year remained notably high. It is hardly feasible to attempt to evaluate the year-end stocks position in northern Africa, Russia, India, and China. The latter two countries, however, had apparently harvested such large new crops before August 1, 1930, that stocks were distinctly large.

LEVEL AND COURSE OF VISIBLE SUPPLIES

Wheat stocks in commercial channels in North America, in ports of the United Kingdom, and afloat for Europe remained at a relatively high level in the closing four months of the crop year 1929-30. The data, with comparisons involving the two preceding crop years, when these supplies were also large, are given in Chart 7. With re-

gard to the crop year 1929-30 as a whole, the facts of outstanding significance are that the general level was higher even than the record level of 1928-29, but that in the course of the year stocks were not increased as they were in 1928-29 and 1927-28. In April-July 1930 the level of visibles remained so high as to constitute a major factor tending to depress wheat prices; nevertheless it was only a little above the level of April-July 1929, whereas in August-November 1929 the level was far higher than in August-November 1928.

During April-June 1930, the United States visible supply declined rather more than in the same months of 1929 and 1928; perhaps the small spread between the May and July futures prices at Chicago was the principal factor. The low point was reached late in June, at about the same time as in June 1929. Sharp increases occurred in the course of July and early August, induced this year rather by a prompt harvest of winter wheat in excellent condition than by rapidly rising wheat prices, a situation influential in July 1929. Of the several components of the total visible supply, only the United States visible stood appreciably higher in April-July 1930 than in the same months of 1929.

The Canadian visible supply (which, unlike the United States visible, includes stocks at country points as well as at terminals) declined only a little in April and not rapidly in June, but the May decline was striking. This year the visible was reduced not only by net exports but also by a reduction in stocks of Canadian wheat at lake and Atlantic ports of the United States that was the largest May reduction in at least nine years. At the end of May, and again at the end of June and the end of July, the Canadian visible supply fell to as low a level as in 1929; nevertheless, like the carryover¹ (which is only a little different with regard to the several components) it stood at the end of July 1930 close to the previously highest level of July 1929.

Stocks afloat to Europe and in ports of the United Kingdom, unlike the United States and Canadian visibles, remained at relatively low levels throughout April-June, reflecting the much smaller volume of

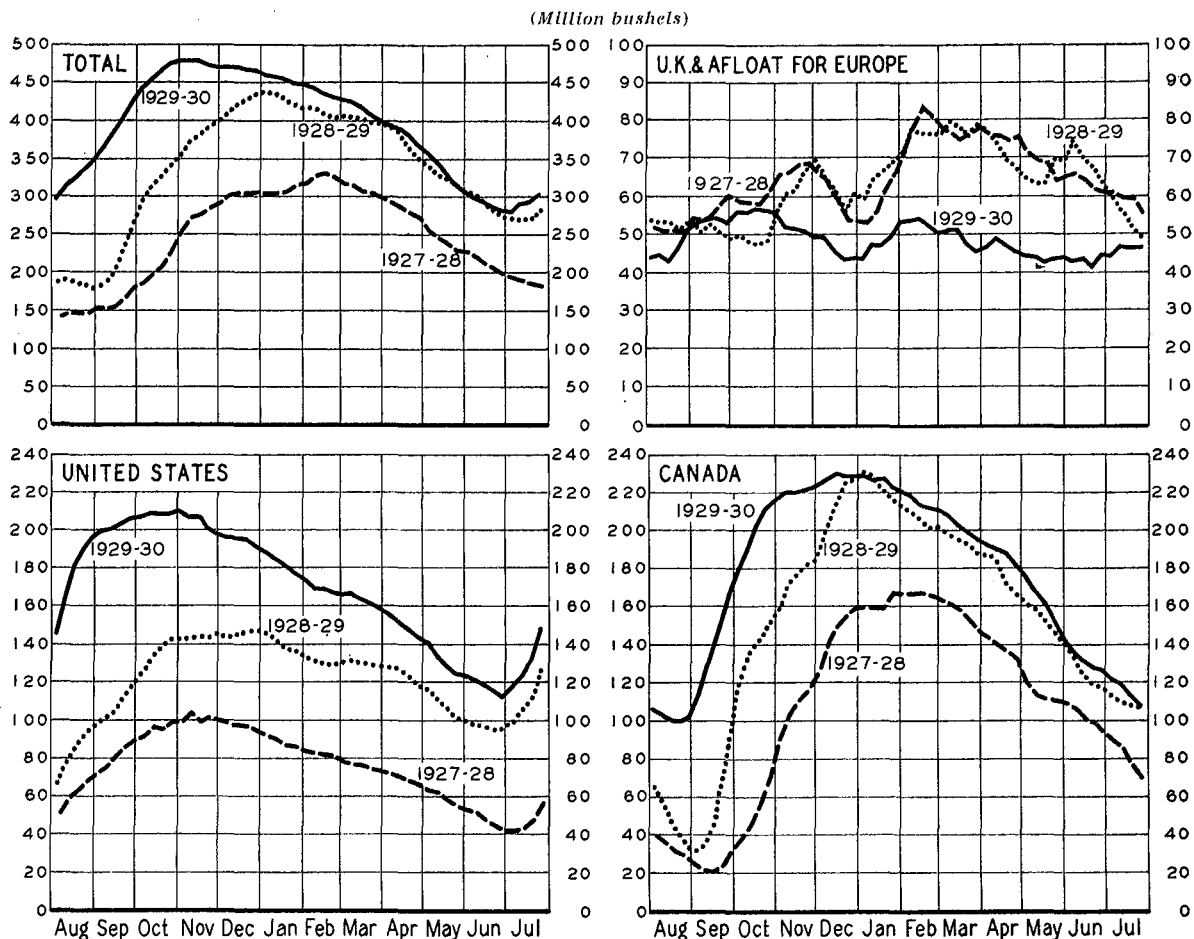
¹ See below, p. 405.

international trade transpiring in these months of 1930 than of 1929 and 1928.¹ There was, however, no such marked reduction between April 1 and August 1 as appeared in 1929 or 1928, or, indeed, as usually appears. This reflects the fact that international trade, instead of declining in

UNITED STATES CARRYOVER, JUNE 30, 1930

The United States was one of a few countries to increase stocks in the course of the year 1929-30. The total recorded carryover in the United States on June 30, 1930, was 290 million bushels. The figure includes

CHART 7.—VISIBLE WHEAT SUPPLIES IN THE UNITED STATES, CANADA, AND UNITED KINGDOM PORTS AND AFLOAT TO EUROPE, WEEKLY FROM AUGUST 1927*



* Data from *Grain Dealers Journal*, *Northwestern Miller*, and *Canadian Grain Statistics*.

volume between December-March and April-July, as is usually the case, increased somewhat in 1929-30. By early August 1930, these stocks of 45.7 million bushels were not much larger than in 1929, 1926, and 1925, years when the lowest figures in the decade 1920-29 were recorded.²

stocks on farms, in country mills and elevators, in terminal elevators (Bradstreet's visible), and in city mills (including some flour). In 1929 the carryover was 264 million bushels; on July 30 of the four preceding years it ranged from 112 million in 1926 to 143 million in 1928. Comparisons for earlier years are not feasible in the absence of the census reports on city mill stocks; but presumably the United States

¹ See above, Chart 5, p. 396.

² See Appendix Table VII.

carryover never before reached as large a figure as 290 million bushels. The increase of carryover in the course of the year 1929-30 was about 26 million bushels, a small one as compared with the increase of 121 million that occurred in the crop year 1928-29, and much the same as the increase of 25 million in 1926-27. The reported figure is not far from our estimate of 280 million bushels made late in April 1930.¹

All four components of the carryover stood at relatively high levels on June 30, 1930. Data for stocks on farms, in country mills and elevators, and in terminals appear in Chart 8, and for city mills (including some flour as wheat) in Table 6. As was

TABLE 6.—CITY MILL STOCKS OF WHEAT AND FLOUR IN THE UNITED STATES, JUNE 30, 1925-30*

(Million bushels)						
June 30	Wheat in private terminals	Flour as wheat in mills	Total	Wheat in country elevators	Wheat in public terminals	Grand total
1925..	26.72	15.73	42.45	2.16	3.44	48.05
1926..	30.32	14.67	44.99	2.52	3.00	50.51
1927..	46.15	16.76	62.91	2.56	3.88	69.35
1928..	40.50	17.08	57.58	1.91	3.68	63.17
1929..	63.51	17.98	81.49	3.52	8.32	93.33
1930..	59.36	16.61	75.97	3.50	3.80	83.27

* Data from press releases of U.S. Department of Commerce.

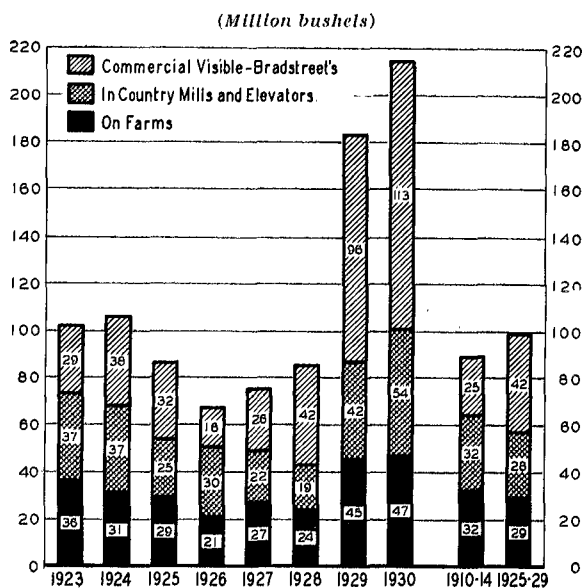
the event on June 30, 1929, the visible supply rather than the other components of the carryover was strikingly large on June 30, 1930, though stocks in country mills and elevators were also the largest in post-war years, while farm stocks were not small. The generally high level of stocks at the end of 1929-30 reflects a complex of conditions, too intricate to be examined in detail here, that has persisted practically through-

¹ See WHEAT STUDIES, May 1930, VI, 325. This estimate was more nearly correct with regard to the total than to its several components. Stocks on farms, in country mills and elevators, and terminals were reduced between March 1 and July 1 by a smaller amount than seemed probable in April; an unusually heavy flow of United States wheat to export in March-June did not occur. Stocks held by city mills, on the other hand, decreased by an unusual amount.

² In order to avoid duplication with official estimates of country mill and elevator stocks or with Bradstreet's statement of visible supplies in terminals, we do not include in discussion of city mill stocks the wheat held by these mills in country elevators and public terminal elevators, the fourth and fifth items shown in Table 6.

out the two crop years 1928-29 and 1929-30. For various reasons United States wheat prices have ruled so high in relation to prices elsewhere, notably in Argentina and the United Kingdom, that wheat could not flow to export in quantities proportionate to the supplies available.

CHART 8.—WHEAT STOCKS IN THE UNITED STATES, JULY 1, 1923-30, WITH COMPARISONS*



* Official data except Bradstreet's visible, as tabulated in Appendix Table VIII. Country mill and elevator figures for 1926-29 are estimated on a new basis, and probably are not strictly comparable with figures for earlier years.

The changes in the various categories of stocks between July 1, 1929, and July 1, 1930, are of some interest. City mill stocks² were 5.5 million bushels smaller in 1930; this year, especially since February, carrying charges between the near and the distant futures have been smaller than in 1929 and have offered less of an inducement for mills to maintain stocks. The decrease in city mill stocks between December 31, 1929, and June 30, 1930, was 70 million bushels this year, as compared with decreases ranging from 53 to 59 million bushels in the four preceding years. These relationships between near and distant futures were also influential in inducing the largest reduction in visible supplies between March 1 and July 1 that has occurred since 1919, though limitations in terminal storage facilities and holding in the country may have been additional influences. East of the

Rocky Mountains, the visible supply of 1930 exceeded that of 1929 chiefly in Buffalo and Duluth; stocks were smaller in Chicago, Minneapolis, St. Louis, and Omaha, and not much larger in Kansas City. With regard to country mill and elevator stocks, it is interesting to observe that most of the increase of 12.5 million bushels between July 1, 1929, and July 1, 1930, occurred in the states of Washington, North Dakota, Oregon, and Montana, where the increases totaled 10.4 million bushels.

The appearance of carryover and net export statistics permits a rough check on the accuracy of the official crop estimate of 1929. Available supplies in 1929-30, using the official crop estimate and the inward carryover, totaled 1,070 million bushels; net exports and shipments to possessions, consumption for food, wheat used for seed, and year-end stocks totaled about 1,030 million. Hence only about 40 million bushels appears to have been available for wheat fed to livestock on farms where grown and elsewhere, for loss and waste, and for changes in unrecorded stocks.¹ If our estimate of wheat consumed for food is approximately correct and if changes in unrecorded stocks were insignificant, the data suggest that the official crop estimate was low rather than high; but no positive inference seems warranted, and in any event a revision of the official estimate will appear in December.

CANADIAN CARRYOVER, JULY 31, 1930

According to the official estimate, the Canadian carryover on July 31, 1930, reached 112 million bushels, some 8 million

bushels larger than the previous record post-war carryover of 1929.² Here, as in the United States, there was an increase of stocks, though not a large one, in the course of the crop year 1929-30. This increase was almost offset by a decline in stocks of Canadian wheat in lake and Atlantic ports, which stood at 23 million bushels in 1929 and 16 million bushels in 1930. The Canadian carryover of 1930 was some 17 million bushels larger than in April we had anticipated it might be; April-July exports, especially those of April, were somewhat smaller than then seemed reasonable to expect.³ Stocks held in elevators and stocks in transit rather than stocks on farms or in flour mills were strikingly large. The appearance of the official estimate of carryover, and data on net exports and domestic disappearance, suggest that the standing official estimate of the Canadian crop of 1929 was inaccurate only within a small margin; using statistics of marketings at country elevators, the Dominion Bureau of Statistics now places the crop at 304.5 rather than 299.5 million bushels.

EUROPEAN STOCKS

The available evidence on European (ex-Russian) stocks at the end of the crop year 1929-30 is as usual fragmentary, and mostly non-statistical in nature. The crop year 1929-30 now seems to have been characterized by an appreciable reduction in aggregate European (ex-Russian) stocks. On this point most observers seem to be agreed;⁴ but opinions differ as to the relative level at which European stocks may have stood late in July 1930 as compared with other years than 1929, some observers characterizing the level of 1930 as exceptionally low.⁵ Whatever the general situation, there were marked differences from country to country. Among the major wheat-consuming countries of the importing group, Germany alone seems to have held distinctly small stocks, while France alone held distinctly large ones.

Year-end stocks in the four exporting countries of the Danube basin (Hungary, Jugo-Slavia, Roumania, and Bulgaria) seem unquestionably to have been reduced strikingly in the course of the crop year 1929-30. In each country except possibly

¹ See the disposition table, Appendix Table XI.

² See Appendix Table VIII.

³ See Appendix Table IV for monthly net exports from Canada.

⁴ Thus Broomhall, writing in the *Corn Trade News* of August 13, 1930, stated that total European (apparently ex-Russian) stocks on July 31, 1930, might be reckoned as 116 million bushels smaller than they were the year before; and Agricultural Commissioner Steere, the Berlin representative of the United States Department of Agriculture, estimated that a decrease of some 55 million bushels had occurred between July 1, 1929, and July 1, 1930 (*World Wheat Prospects*, July 28, 1930, p. 14). These estimates admittedly rest upon evidence other than direct enumeration of stocks, and we know of no way to evaluate their accuracy with precision.

⁵ This is the opinion of Mr. Steere.

Jugo-Slavia, domestic utilization in 1929-30 (crops of 1929 minus net exports of 1929-30) appears to have fallen below the line of post-war trend, though the trends are themselves uncertain. But domestic utilization so calculated was for 1929-30 in no instance as far below the trend as utilization in 1928-29 was above the trend. The data may reasonably be interpreted to suggest that domestic consumption was maintained on a normal level, trend considered, and that stocks were merely reduced from the extraordinarily high level of August 1, 1929, to a more normal level, but not to a low one, on August 1, 1930.¹ With domestic supplies of corn, barley, and rye abundant, there has been little incentive to feed wheat to animals in 1929-30, and presumably wheat prices have not proved attractive enough to induce peasants to reduce their stocks to strikingly low levels, as they probably did in 1924-25 when wheat prices were high.

The stocks situation in the importing countries of Europe may be considered advantageously if each of the five major consumers of wheat—the British Isles, France, Germany, Italy, and Spain—are treated separately, other countries as a group.²

Year-end stocks in the British Isles may perhaps be best evaluated through comparisons of the quantities of wheat and flour imported in June-July or May-July in recent years, since there appears to be no marked trend in domestic utilization and since imports form a large fraction of the annual wheat supplies. Such a comparison suggests that August 1 stocks in 1930 may have been moderately but not strikingly low, lower than in 1927 and probably 1928, but almost certainly no lower than in 1929. Port stocks of the United Kingdom suggest much the same conclusion: these were 6.5 million bushels on August 1, 1930, as com-

pared with a five-year average of 7.5 million and with 6.2 million in 1929.³ In the British Isles there is little evidence serving to show that stocks were reduced in the course of the crop year.

All evidence points to a sharp reduction of German stocks during the year, and to a rather low level as of August 1. Domestic utilization in 1929-30 was apparently far below the line of post-war trend, though in some part this may be attributed to widespread substitution of rye, the feed grains, and/or potatoes for wheat. In addition net imports in May-July were distinctly the smallest in six years, less than 10 million bushels as compared with a five-year average of 28.5 million. And as of June 15, 1930, farm stocks of winter wheat were estimated as 3.3 per cent of the crop of 1929; in the preceding two years the figures were 6.7 and 8.6 per cent of the corresponding crops of 1928 and 1927.

Net imports into Italy in May-July 1930 are said to have been⁴ a little small as compared with earlier years, even with the stimulus afforded by an increase in the tariff on June 5; and this suggests moderately small stocks of import wheat on August 1. But stocks of domestic wheat are of large importance in the Italian carryover. If one employs the official estimate of the crop of 1929, domestic utilization of wheat in Italy in 1929-30 fell a little below the line of post-war trend; and taken alone this suggests a moderate but not striking reduction of total stocks in the course of the crop year. Presumably, however, corn was substituted for wheat to an unusual extent in 1929-30; the comments of traders suggest that the official estimate of the wheat crop of 1929, if at all inaccurate, was somewhat too low; and if one accepts and makes allowances for these influences, it is possible that Italian stocks of wheat were not much reduced in the course of the year, and that the level of stocks on August 1, 1930, was distinctly high. In so far as we are able to evaluate the data and opinions, Italian year-end stocks in 1930 may be described as average or above in size, rather than below average or extraordinarily small.⁵ Presumably, however, they were smaller in 1930 than in 1929.

The existence of extraordinarily large year-end stocks in France is admitted by

¹ Mr. Steere's opinion is that stocks were probably reduced to exceptionally low levels in Hungary and Jugo-Slavia, but not to such low levels in Roumania (*World Wheat Prospects*, July 28, 1930, p. 28).

² The five major consuming countries use on the average about 78 per cent of the total European wheat supply outside of Russia and the Danube basin.

³ See Appendix Table VII.

⁴ Net import statistics for June and July are not available to us.

⁵ Commissioner Steere, however, speaks of "a very small carryover" in Italy. (*World Wheat Prospects*, July 28, 1930, p. 26.)

most or all commentators. Opinions differ as to their magnitude. A French writer has observed that estimates ranged from approximately 35 to 90 million bushels;¹ Broomhall commented on "reserves" of about 55 million.² The accuracy of any given estimate is hardly subject to precise appraisal while the official estimate of the French crop of 1929 continues to stand at 320 million bushels, and unofficial estimates nearer to 360 million; moreover, one cannot be certain even of the quantities of wheat and flour imported into and exported from France in 1929-30.³ Nevertheless the available evidence, however interpreted in numerical terms, points to the facts that French stocks were increased in the course of the crop year, and stood at an extraordinarily high level on August 1, 1930.

In Spain as in Italy and France, year-end stocks were probably average or above in size, though by no means as far above as were those in France. On account of the big crop of 1929, domestic utilization of wheat in Spain in 1929-30 stood well above the approximate line of trend; and this suggests relatively abundant supplies at the end of the year as well as at the beginning. Moreover, in June the producers in some provinces were complaining of burdensome stocks and were requesting governmental assistance.⁴

In the minor consuming countries of Europe (aside from Russia and the Danube countries), domestic utilization of wheat in 1929-30 appears to have fallen well below the approximate line of post-war trend. Stocks were presumably lower at the end of the year than at the beginning. If rye, the feed grains, and potatoes were extensively substituted for wheat, there is little reason to suppose that stocks stood below an average level at the end of the year.

¹ *La Cote Bodenheimer*, July 16, 1930.

² *Corn Trade News*, July 9, 1930.

³ See above, p. 398.

⁴ See *Corn Trade News*, June 25, 1930.

⁵ See Appendix Table VII.

⁶ See Appendix Table XI.

⁷ See *World Wheat Prospects*, July 28, 1930, p. 18, wherein the carryover on January 1 is given as approximately 10 million bushels.

⁸ On July 16, 1930, Broomhall expressed the opinion that the Australian exportable surplus as of August 1 would probably not exceed 24 million bushels, a figure which implies total stocks of roughly 40-45 million.

SOUTHERN HEMISPHERE STOCKS, AUGUST 1, 1930

In the absence of direct and complete estimates, an altogether satisfactory impression of the stocks position in Argentina and Australia on August 1, 1930, can hardly be obtained until the exports of August-December have more clearly demonstrated the amounts of wheat actually available.

As of August 1, 1930, visible supplies in Australia were reported as 34 million bushels, the largest in eleven years;⁵ and, although these data can hardly be regarded as a satisfactory guide to the stocks position, the high figure for 1930 at least suggests that stocks may have been relatively large. Our own method of calculation, based on the admittedly unsound assumption that Australian stocks always stand at 5 million bushels on January 1, leads to the conclusion that stocks on August 1, 1930, may have reached 51 million bushels, considerably the highest figure in the past five years.⁶ If the carryover on January 1 was larger than 5 million bushels, as is commonly supposed,⁷ the estimate of stocks reached by our method is presumably too low; on the other hand, if the crop harvested last December was overestimated by around 10 million bushels, as some private estimates suggest, our figure may be correspondingly too high. On the whole the available evidence seems to support the inference that Australian stocks were built up somewhat in the course of the year, and that stocks on August 1, 1930, stood at an unusually high level.⁸

In Argentina, however, stocks were undoubtedly greatly reduced in the course of the crop year 1929-30, though the precise amount of the reduction seems not yet to be subject to accurate appraisal. If one accepts the official estimate of the 1929 crop, 137 million bushels, and an unofficial estimate of stocks on January 1, 1930, of 25 million bushels, it appears that stocks on August 1, 1930, could not have exceeded 32 million bushels; for exports and domestic consumption during January-July, together with July seed, must have totaled about 130 million. So low a figure as 32 million bushels for August 1 stocks is hardly to be accepted. Around 27 million bushels will be

consumed domestically in Argentina in August–December 1930; and one can find no satisfactory reason why so little as 5 million bushels of wheat should be left for export in August–December and carryover into the next Argentine crop year. Hence one may suppose that the crop of 1929 was officially underestimated, and that stocks on August 1 considerably exceeded 32 million bushels. Broomhall's Argentine agent placed the crop of 1929 at 180–190 million bushels; the United States Department of Agriculture employs a figure of 170 million. To use the method of calculation employed above, substituting these crop estimates for the official, would lead to the conclusion that stocks on August 1, 1930, ranged somewhere between 65 and 85 million bushels. The lower figure is more in line with Broomhall's view. Tentatively we employ a figure

of 64 million bushels, which rests on the assumption that stocks on January 1, 1930, approximated 20 instead of 25 million bushels, and that the crop of 1929 approximated 175 million bushels rather than 137, 170, 180, or 190; these are assumptions made in April 1930, and as yet the evidence seems not to warrant a change. Nevertheless one may infer that Argentine stocks on August 1 were larger, not smaller, than 64 million bushels, which is about the same as in other recent years except 1928 and 1929, when stocks were heavy.¹ Even if stocks on August 1, 1930, reached 85 million bushels, a reduction of around 45 or 50 million bushels occurred in the course of the crop year 1929–30. Such a reduction as this would more than offset the increase of stocks in the United States, Canada, and Australia.

V. OUTLOOK FOR THE NEW CROP YEAR

NORTHERN HEMISPHERE CROPS OF 1930

The data on crop production in 1930 are necessarily preliminary at this season, and close comparisons of outturns in 1930 and in earlier years are likely to prove misleading. A year ago, for example, at about this date of writing (August 28) official and unofficial advices suggested that the Northern Hemisphere crop of 1929, ex-Russia and China, might approximate 2,900 million bushels;² and data now available point to a crop of around 3,070 million bushels. Nevertheless certain broad features of the Northern Hemisphere wheat production and its distribution between countries seem to be established at this time. Table 7 summarizes the data in tentative form. The italicized figures for 1930 contain a considerable element of our own conjecture; and for earlier years such figures represent our own corrections of standing official crop estimates for the United States, Canada, and Argentina, and for the 1929 crop in France. Figures in roman type in all instances are official or predominately so.

With regard to size, the Northern Hemisphere wheat crop of 1930 now appears to be about an average one, or one that falls

fairly close to the (indeterminate) line of post-war trend; perhaps it approximates 3,110 million bushels. It is apparently not a distinctly short crop like that of 1924, trend considered, nor a distinctly large one like those of 1923 and 1928. It seems to exceed the crop of 1929 by 40 million bushels more or less. The distribution between producing areas is notable chiefly because of the decidedly large outturns in India and the Danube countries; apparently the crops of the United States, Canada, and the European importing countries as a group are not strikingly large nor strikingly small. By comparison with the distribution in 1929, the smaller outturn of 1930 in the European importing countries, and the larger outturns in Canada, the Danube countries, and India are significant. Russia may have harvested more wheat in 1930 than in 1929; if so, the prospect is broadly for a larger supply of wheat available from the minor exporting countries in 1930–31 than in 1929–30. Since importing countries have smaller wheat crops than in 1929, and exporting countries of the Northern and Southern Hemispheres have larger ones, the situation is likely to make for a larger volume of international trade in wheat and flour in 1930–31 than that which occurred in 1929–30.

¹ See Appendix Table XI.

² See *WHEAT STUDIES*, September 1929, V, 453.

SOME ASSUMPTIONS REGARDING THE OUTLOOK

The Northern Hemisphere crops both of wheat and of other grains have for the most part passed the hazards of the growing season, and one may formulate some sort of an idea of the size of inward carryovers of wheat. Perhaps this information, though

and Australia, we assume that these will approximate 240 and 150 million bushels respectively, in view of the acreages now reported to have been sown, and current reports of crop progress that at the moment suggest fairly good yields per acre. The assumed outturns were not fixed upon by any sort of a careful analysis, statistical or

TABLE 7.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING AREAS, PRE-WAR AND POST-WAR*
(Million bushels)

Year	United States	Canada	Soviet Russia	Lower Danube ^a	Other Europe	North-ern Africa	India	Japan, Chosen	North-ern Hemisphere ex- Russia ^b	Argen- tina	Aus- tralia	South- ern Hemisphere	World ex- Russia ^b
1922	868	400	...	224	819	71	367	40	2,805	196	109	354	3,160
1923	797	474	419	260	996	106	372	35	3,060	248	125	427	3,485
1924	864	275	472	204	853	85	361	35	2,690	191	165	406	3,095
1925	700	430	782	296	1,100	105	331	40	3,015	191	115	359	3,375
1926	870	415	914	294	915	90	325	39	2,960	230	161	443	3,405
1927	878	480	776	272	1,002	106	335	38	3,125	290	118	470	3,595
1928	930	567	793	367	1,039	104	291	39	3,350	340	160	565 ^c	3,915 ^c
1929	806	305	739	306	1,168 ^d	118	318	39	3,070	175	126	370 ^e	3,440 ^e
1930	821	375	...	345	1,025	98	387	40	3,110	...	...	...	...
Average													
1909-13	690	197	757 ^f	330	1,017	92	352	32	2,725	147	90	280	3,004
1925-29	837	439	801	307	1,045	105	320	39	3,105	245	136	440	3,545

* Summarized from most recent official data for individual countries (see Appendix Table I), as reported by the U.S. Department of Agriculture and International Institute of Agriculture; but figures in italics represent our adjustments for apparent underestimates of crops, as shown in Appendix Table XI, for years prior to 1930. Italicized figures for 1930 represent our approximations. Totals exclude China, Asia Minor, Brazil, and a number of small producers. All estimates are for areas within post-war boundaries.

^a Hungary, Bulgaria, Roumania, Jugo-Slavia.

^b Rounded figures. Includes Mexico and Cyprus.

^c Includes our estimate for Peru.

^d Counting the French crop of 1929, officially estimated at 320 million bushels, as 360 million.

^e Includes our estimates for Peru and Uruguay.

^f Regarded as too low by some Soviet officials, whose estimate is 908 million bushels.

fragmentary and uncertain, ought to be adequate to provide a rough picture of the outlook for trade and prices in 1930-31. But one cannot appraise the outlook with any precision without making certain assumptions with regard to at least three important factors in the wheat situation—the crops of Argentina and Australia, the prospects for improvement or further worsening in the existing world economic depression, and the prospects for improvement or worsening in the rye and feed grain situation in Europe.

Since assumptions regarding these factors must be made, it is desirable to set them forth as clearly as possible; and it is to be understood that we should employ different ones if such meagre information as is available suggested them. With regard to the 1930 wheat crops of Argentina

other; weather conditions in September-December might cause actual outturns to differ from the assumed ones very greatly in either direction.

As to the rye and feed grain position in Europe, we assume that in many countries the wide spreads prevailing in 1929-30 between wheat prices on the one hand and rye, corn, barley, and oats prices on the other will prove narrower in 1930-31. In relation to the approximate line of post-war trend, present indications suggest that world wheat crops will be not so far below the trend in 1930-31 as in 1929-30, and that supplies of rye, corn, barley, and oats available to European importing countries will not be so far above the trend in 1930-31 as in 1929-30. Specifically, we assume that the Danube countries will harvest less corn this year than last, and that the short

corn crop in the United States will contribute strength to the European feed grain situation. The general assumption is questionable partly because Russia seems to have good crops of feed grains, and at the same time a greatly reduced livestock population, and hence may press exports on the world markets; and partly because one cannot even guess what the corn crop of Argentina, to be harvested early in 1931, will be.

With regard to business conditions throughout the world, we assume neither further worsening nor strikingly sharp recovery at any time in the crop year, with improvement some time in the course of 1930-31. So far as we are able to judge, more reputable commentators take this view than any other, though the several views vary a good deal with respect to the outlook for and the timing and steepness of recovery or of further decline, and expressions of opinion are naturally so cautious that it is not easy to form a notion of what the majority of commentators anticipate. With the exception of crops threatened with climatic calamities, the prices of raw materials were still tending (internationally) to decline in midsummer. At the same time, however, stocks were passing into consumption, and the pressure of spot supplies tended to recede. The summer trade brought with it signs of adjustment of retail prices to wholesale prices, retail prices having previously tended to lag.

IMPORT REQUIREMENTS AND INTERNATIONAL TRADE

Given the new wheat crops and the inward carryovers that we suppose to be present in importing countries in 1930-31, the evidence suggests that import requirements are likely to prove much larger in 1930-31 than they were in 1929-30 if per capita consumption is to be maintained at all close to the line of trend. Perhaps not much change is to be anticipated in the requirements of ex-European countries. India will not be an importer as she was in part of 1929-30, and China may not need to import more wheat and flour. But in the aggregate other ex-European requirements seem to increase from year to year, and the increase of 1930-31 over 1929-30 would be

the more marked if the prices of sugar, rubber, silk, coffee, and silver in particular should improve.

Among the European importing countries, France and Italy especially would need to import more wheat in 1930-31 than in 1929-30 in order to maintain per capita consumption on its approximate line of trend. The Italian crop of 1930 falls far below that of 1929 and is of poorer quality, and the inward carryover is apparently smaller this year than last. In France also the crop of 1930 is much smaller and poorer in quality than that of 1929—so much smaller, it seems, as more than to offset an increase in the inward carryover. In Germany the situation is less clear. The inward carryover is smaller this year than last, whereas the crop of 1930 is larger but apparently of poorer quality; and the outlook is complicated by the difficulty of evaluating the effects on wheat consumption of increased tariffs, milling regulations, and strenuous governmental efforts to encourage the substitution of rye for wheat on the one hand and feed grains on the other. But at present the balance of evidence seems to suggest increased import requirements in Germany as in France and Italy. If these three European countries need more wheat, then European importing countries as a group need more. Furthermore, in the other European countries aside from France, Italy, Germany, and Spain, the aggregate inward carryover appears to have been smaller this year than last, and the new wheat crops seem to be no larger and presumably of poorer quality than those of 1930; hence these countries as a group seem likely to require more wheat in 1930-31 than in 1929-30 in order to maintain per capita consumption. Requirements of import wheat for Europe as a whole would be the larger if general economic conditions should improve, and if the rye and feed grain situation became tighter.

The pertinent questions for trade and prices are, of course, how much wheat do importing countries require in 1930-31, how much will be available in exporting countries to meet these requirements, and will the adjustment of exportable surpluses and import requirements prove such as to result in a relatively high or in a relatively low level of international wheat prices.

It is necessarily difficult to give numerical expression to the import requirements of 1930-31. But one may hazard the guess that importing countries may require anywhere from 150 to 250 million bushels more wheat in 1930-31 than in 1929-30 in order to maintain per capita consumption approximately on its line of trend. Total domestic utilization in Europe ought to increase annually in order to provide for growth of population. Stocks apparently cannot be drawn upon as freely this year as last; the domestic wheat crop in European importing countries now appears to be almost 150 million bushels smaller in 1930 than in 1929, and of poorer quality. A figure in the lower part of the range of world import requirements for 1930-31 perhaps seems the more probable in view of the high tariffs now in effect particularly in France, Germany, and Italy, and the milling regulations in Germany and France. On the other hand, a figure in the higher part of the range is suggested by the size of inward carryovers and new crops and by the possibilities of improvement in the European rye and feed grain position and in world economic conditions—improvement which, as stated above, we assume will become apparent in greater or less degree at one time or another in the course of the crop year 1930-31.

On the whole, in view of the foregoing analysis of import requirements, we are disposed to conjecture that a figure of 775 million bushels may reasonably be taken to represent about the minimum volume of international trade (net exports) likely to be recorded in 1930-31, under the stated assumptions. The volume in 1929-30 was about 625 million bushels; in 1928-29, about 940 million. Since the world is not faced with as large a supply of wheat in 1930-31 as in 1928-29, since Spain, Asia Minor, and India will not import heavily this year, and since rye and the feed grains in Europe seem unlikely to bring such high prices in relation to wheat, and since economic activity is unlikely to reach the heights of 1928-29, we assume that international trade in wheat and flour will not be as large in 1930-31 as in 1928-29. Perhaps 875 million bushels may reasonably be regarded as the upper limit of the probable range, with 775 million as the lower.

EXPORT SURPLUSES IN RELATION TO IMPORT REQUIREMENTS

It is next important to ask whether or not exporting countries will have available surpluses in 1930-31 of sufficient size to satisfy import requirements of around 775-875 million bushels. In this connection the desirability of moderately clear exposition creates the necessity of dealing with specific figures rather than ranges. Consequently we take for import requirements the middle of this range, or 825 million bushels. We have assumed that the 1930 crops of Argentina and Australia will approximate 240 and 150 million bushels respectively,¹ the Canadian crop 375 million. For the convenience of readers, Table 8 (p. 412) is inserted; it shows in summary form our tentative evaluations of crops, outward carryovers, and exportable surpluses for the various exporting countries.

Under these circumstances, import requirements of 825 million bushels probably could not be fully satisfied unless the carryovers of the United States and Canada were reduced by the end of the crop year from what they were in the beginning. Perhaps some 700 million bushels could be exported from the major and minor exporting countries without drawing down year-end stocks in any of the four major exporting countries, and at the same time permitting domestic retention of wheat to remain at exceptionally high levels in India, the Danube countries, and perhaps Chile and the three French dependencies in northern Africa.² On the other hand, import requirements of 825 million bushels could easily be satisfied if carryovers in the four major exporting countries should be reduced to levels well below those of August 1, 1930 and 1929, yet considerably above the average of the five years preceding 1929, and if the minor exporters should ship wheat fairly freely. Under these circumstances the supplies available for export might approximate 895

¹ See above, p. 409.

² The figure of 120 million bushels for the United States was reached after allowance of 100 million bushels for disappearance as feed and waste, a very high figure but one suggested by the short corn crop and present high prices of corn in relation to wheat. A final corn crop below 2 billion bushels might entail heavier feeding of wheat. The Russian figure roughly approximates commercial estimates of the quantities already shipped or sold from Russia.

million bushels. If the major exporting countries should reduce their carryovers to really low levels, possibly 1,040 million bushels could be exported. None of these figures, of course, is more than a rough approximation; each represents an evaluation of the possibilities and probabilities in the light of such decidedly incomplete information as is available to us at the moment.

TABLE 8.—TENTATIVE AND APPROXIMATE STATEMENT OF WHEAT CROPS, YEAR-END STOCKS, AND EXPORTABLE SURPLUSES IN 1930-31*

(Million bushels)

Country	Crops	Assumed outward carryover			Exportable surpluses		
		As in 1930	Normal	Small	With 1930 carry-over	With normal carry-over	With small carry-over
United States	820	290	185	135	120	225	275
Canada	375	110	65	30	255	300	335
Argentina . . .	240	65	75 ^a	60	150	140	155
Australia . . .	150	50	40	35	100	110	115
Danube	345	...	...	...	30	40	50
Russia . . . . .	...	...	...	...	20	40	60
India	390	...	...	...	15	30	45
Northern Africa & Chile	...	...	...	...	10	10	15
Total . . . . .	...	...	...	...	700	895	1,050

* Based so far as possible on official data for the present and past years. Dots (....) indicate that data are not available.

^a Normal in view of the percentage that stocks on August 1 tend to be of the crops harvested in the preceding December-January.

On the whole, this rough set-up seems to us to confirm our impression that the volume of international trade in 1930-31 may range between 775 and 875 million bushels; barring crop failures in Argentina and/or Australia, as much wheat as this ought to be available for export. But if as much wheat as this is exported in 1930-31, it seems reasonable to suppose that outward carryovers in the major exporting countries as a group will prove smaller at the end of the year than at the beginning; the year may be one characterized by a reduction of stocks from a high level at least to a fairly high one or at most to a moderate one, but not to a low one. At the moment it is difficult to see, even if net exports reach 825 million bushels, how the reduction in carryover in the major exporting countries

could much exceed 125 million bushels, and a reduction of this size would not suffice to bring stocks to what appears to be a normal level.

PRICES

Perhaps the broad outlines of the position in 1930-31 are even now sufficiently clear to warrant the inference that international prices are unlikely to reach and remain at the high levels of 1924-25 and 1925-26. At least within a range, the Northern Hemisphere wheat crops are made, and one has no reason to anticipate crop calamity in the Southern Hemisphere; and in the absence of extremely severe damage to wheat crops, it is difficult to envisage circumstances that could advance prices from the prevailing level to the high levels of 1924-25 or 1925-26—even if one counts upon a strikingly sharp recovery from business depression. To reach these levels, a sustained increase of some 65-80 cents per bushel would be necessary from the level of July-August 1930. Even the change in price between 1923-24 and 1924-25, historically a very large one, and one resting partly upon a change from a year of abundance to one of distinct shortage of wheat, was not as large as 60 cents. If prices were in 1930-31 to reach the moderately high levels of 1926-27 and 1927-28, a sustained increase of 50-60 cents a bushel from the July-August level of 1930 would be necessary.

It is difficult to envisage a sustained advance of this magnitude with North American stocks and crops as large as they are and if, as we assume, the new crops of Argentina and Australia together approximate 390 million bushels. Probably only a notable crop scare or fear of shortage could induce so large a sustained increase; and in the absence of a crop scare, it is scarcely probable that a strong holding movement should develop in North America, where export stocks are now concentrated. The disappointing results of the crop year 1929-30 are fresh in the minds of North American traders. Again, there seems to be little reason to suppose, if import requirements and export surpluses are what we assume them to be, that European importers will not follow a policy of rather leisurely purchasing. For many months exportable surpluses, first from North America and later

from the Southern Hemisphere, will presumably bulk large enough in relation to import requirements to preclude a rush of hurried or panicky buying.

If international cash wheat prices were to approximate the average levels characterizing post-war years of low and moderately low prices (1922-23, 1923-24, 1928-29, and 1929-30), a sustained increase of anywhere from around 15 to 35 cents a bushel would be necessary from the level prevailing in July-August 1930. An increase of prices lying within these limits is less difficult to envisage. Under the assumptions made above, trade in 1930-31 ought to be much more active than it was in 1929-30. Export stocks will probably be reduced more or less significantly as the year progresses. Market sentiment ought to become more optimistic as these developments become apparent and as general business conditions improve. An increase in the volume of international trade might reasonably be expected to tend to raise the prevailing low level of ocean freight rates, and hence to increase the price spreads between import and export markets. In France and Italy, the prices of domestic wheats ought to stand much higher in relation to import wheat prices than in 1929-30, and some of the governmental devices designed to support domestic wheat prices may be weakened.

A continuing decline of international prices from the level of July-August 1930

may, of course, occur. The Northern Hemisphere crops of wheat, rye, and the feed grains may turn out to be somewhat larger than now seems probable. The Southern Hemisphere may harvest bumper wheat crops; business conditions and the prices of a long list of raw materials may become worse rather than better. With regard to these latter developments one must fall back upon assumptions. A sustained decline in international wheat prices from the July-August level seems to us contingent principally upon big crops in the Southern Hemisphere and/or further recession of business activity; and we assume that these will not appear. If not, the outlook for wheat seems to us to include the hope of recovery from the low post-war level of international wheat prices prevailing in July-August 1930, though not a recovery that implies high or moderately high prices in 1930-31. It is hardly necessary to emphasize the fact that the foregoing summary of prospective developments in trade and prices rests heavily upon our stated assumptions. If one or all of the assumptions prove erroneous, the actual developments presumably will be different. In any event the outcome for the crop year as a whole will depend in some part, toward the end of the year, upon Northern Hemisphere crop prospects for 1931; and at this time even the crudest assumptions are not warranted with regard to these prospects.

This study is the work of M. K. Bennett and Helen C. Farnsworth, with the aid of Katharine Merriam and Janet Murray

APPENDIX

TABLE I.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING AREAS, 1920-30*
(Million bushels)

Year	United States	Canada	India	Australia	Argentina	Chile	Uruguay	Hungary	Bulgaria	Jugoslavia	Romania	Soviet Russia	Mexico
1920	833.0	263.2	377.9	145.9	156.1	23.2	7.8	37.9	29.9	43.0	61.3	.....	15.0
1921	814.9	300.9	250.4	129.1	191.0	23.6	10.0	52.7	29.2	51.8	78.6	.....	5.1
1922	867.6	399.8	367.0	109.5	195.8	25.9	5.2	54.7	32.6	44.5	92.0	.....	13.6
1923	797.4	474.2	372.4	125.0	247.8	28.1	13.3	67.7	29.1	61.1	102.1	419.1	13.7
1924	864.4	262.1	360.6	164.6	191.1	24.5	9.9	51.6	24.7	57.8	70.4	472.2	10.4
1925	676.8	395.5	331.0	114.5	191.1	26.7	10.0	71.7	41.4	78.6	104.7	782.3	9.2
1926	831.4	407.1	324.7	160.8	230.1	23.3	10.2	74.9	36.5	71.4	110.9	913.8	10.3
1927	878.4	479.7	335.0	118.2	239.2	30.6	15.4	76.9	42.1	56.6	96.7	776.0	11.9
1928	914.9	566.7	290.9	159.7	307.4	29.7	15.2	99.2	49.2	103.3	115.5	793.3	11.0
1929	805.8	304.5	317.6	126.5	137.4	37.0	....	75.0	34.4	95.0	101.2	738.9	11.3
1930	820.6	.....	386.5	.....	.....	.....	.....	70.1	62.4	89.0	123.7	.....	11.6
Average													
1909-13	690.1	197.1	351.8	90.5	147.1	20.1	6.5 ^a	71.5	37.8	62.0	158.7 ^a	756.9 ^b	11.5 ^a
1924-28	833.2	422.2	328.4	143.6	231.8	27.0	12.1	74.9	38.8	73.5	99.6	747.5	10.6

Year	Morocco	Algeria	Tunis	Egypt	British Isles	France	Germany	Italy	Belgium	Netherlands	Denmark	Norway	Sweden
1920	17.9	16.2	5.2	31.7	56.8	236.9	82.6	142.3	10.3	6.0	7.4	1.00	10.3
1921	23.2	28.5	9.0	37.0	73.8	323.5	107.8	194.1	14.5	8.6	11.1	.97	12.3
1922	12.9	18.9	3.7	36.0	65.2	243.3	71.9	161.6	10.6	6.2	9.2	.64	9.5
1923	20.0	35.8	9.9	40.7	60.5	275.6	106.4	224.8	13.4	6.2	8.9	.59	11.0
1924	28.8	17.3	5.1	34.2	53.9	281.2	89.2	170.1	13.0	4.7	5.9	.49	6.8
1925	23.9	32.7	11.8	36.2	53.7	330.3	118.2	240.8	14.5	5.7	9.7	.49	13.4
1926	16.2	23.6	13.0	37.2	52.2	231.8	95.4	220.6	12.8	5.5	8.8	.59	12.2
1927	24.6	28.3	8.3	44.3	57.2	276.1	120.5	195.8	16.3	6.2	9.4	.60	15.8
1928	24.7	30.3	12.1	37.3	50.9	281.3	141.6	228.6	17.2	7.3	12.2	.80	19.2
1929	26.9	33.3	12.3	45.2	50.9	319.9	123.1	260.7	13.2	5.5	11.7	.73	19.0
1930	19.5	29.2	9.0	....	43.5 ^c	.....	148.8	223.1	15.9	7.2	....	....	....
Average													
1909-13	17.0	35.2	6.2	33.7	59.6	325.6	131.3	184.4	15.2	5.0	6.3	.31	8.1
1924-28	23.6	26.4	10.1	37.8	53.6	280.1	113.0	211.2	14.8	5.9	9.2	.59	13.5

Year	Spain	Portugal	Switzerland	Austria	Czechoslovakia	Poland	Finland	Latvia	Estonia Lithuania	Greece	Japan, Korea	South Africa	New Zealand
1920	138.6	10.4	3.6	5.4	26.4	22.7	.27	.39	2.58	11.2	41.1	7.6	6.9
1921	145.1	9.3	3.8	6.5	38.7	40.5	.58	.78	3.34	10.3	39.7	8.7	10.6
1922	125.5	10.0	2.6	7.4	33.6	46.8	.71	.96	4.17	9.0	39.8	6.3	8.4
1923	157.1	13.2	3.8	8.9	36.2	54.9	.69	1.64	3.70	8.8	35.2	6.0	4.2
1924	121.8	10.6	3.1	8.5	32.2	37.5	.79	1.58	3.86	7.7	35.3	7.1	5.4
1925	162.6	12.5	3.5	10.7	39.3	63.9	.93	2.16	6.08	11.2	40.0	9.2	4.6
1926	146.6	8.6	4.2	9.4	34.1	52.5	.92	1.86	5.02	12.4	38.7	8.3	8.0
1927	144.8	11.4	4.1	12.0	47.2	61.1	1.06	2.64	6.35	13.0	38.2	6.0	9.5
1928	119.9	7.5	4.3	12.9	51.5	59.2	1.00	2.50	7.36	13.1	39.4	6.7	8.8
1929	154.2	11.1	5.8 ^d	11.6	52.9	65.9	1.10	2.34	10.60	8.5	38.8	10.3	7.1
1930	160.6	16.7	...	11.5	....	....	1.14	....	....	....	39.5	...	...
Average													
1909-13	130.4	11.8 ^e	3.3	12.8	37.9	63.7	.14	1.48	3.63	16.3 ^e	32.0	6.3 ^a	6.9
1924-28	139.1	10.1	3.8	10.7	40.9	54.8	.94	2.15	5.73	11.5	38.3	7.5	7.3

* Data of U.S. Department of Agriculture and International Institute of Agriculture. For 1909-13, including U.S. Department of Agriculture estimates for area within post-war boundaries. Dots (....) indicate that data are not available.

^a Four-year average.

^b Regarded as too low by some Soviet officials, whose estimate is 908 million bushels.

^c England and Wales only.

^d Includes spelt.

^e One year only.

TABLE II.—MONTHLY WHEAT RECEIPTS AT PRIMARY MARKETS IN THE UNITED STATES AND CANADA*
(Million bushels)

Month	United States primary markets				Fort William and Port Arthur				Vancouver			
	1926-27	1927-28	1928-29	1929-30	1926-27	1927-28	1928-29	1929-30	1926-27	1927-28	1928-29	1929-30
Aug.	71.6	81.6	84.2	101.7	1.5	2.4	3.5	2.4	.12	.09	1.07	.74
Sept.	48.7	79.7	73.3	47.0	32.8	8.6	39.1	27.7	.29	.32	2.61	4.83
Oct.	37.1	73.3	84.4	36.3	56.1	51.4	81.4	28.9	6.37	6.17	12.69	7.32
Nov.	29.8	44.8	43.6	20.6	60.5	71.0	72.9	17.0	7.22	10.78	14.65	6.19
Aug.-Nov.	187.2	279.4	285.5	205.6	150.9	133.4	196.9	76.0	14.00	17.36	31.02	19.08
Dec.	22.4	26.5	33.0	22.9	26.3	41.0	51.6	6.2	6.63	11.81	13.53	4.73
Jan.	24.6	23.5	22.5	17.5	14.0	21.1	11.0	2.8	6.83	16.49	13.90	4.25
Feb.	21.0	22.5	28.7	19.9	8.6	9.5	2.9	1.8	4.27	12.54	9.25	6.23
Mar.	16.6	26.3	27.2	16.7	6.3	3.3	5.2	1.6	5.94	10.50	15.46	6.89
Dec.-Mar.	84.6	98.8	111.4	77.0	55.2	74.9	70.7	12.4	23.67	51.34	52.14	22.10
Apr.	14.4	18.0	17.5	13.5	12.6	.9	9.7	1.6	3.58	10.88	7.31	4.12
May	19.2	25.9	18.6	16.5	17.3	17.6	13.8	7.4	1.56	7.43	3.91	3.08
June	20.7	15.6	25.7	18.7	7.3	20.1	14.7	23.7	.61	3.66	3.04	3.60
July	58.8	72.6	94.2	98.9	10.7	14.4	14.6	14.2	.14	2.44	3.30	3.31
Apr.-July	113.1	132.1	156.0	147.6	47.9	53.0	52.8	46.9	5.89	24.41	17.56	14.11
Aug.-July	384.9	510.3	552.9	430.2	254.0	261.3	320.4	135.3	43.56	93.11	100.72	55.29

* United States data are unofficial figures compiled from *Survey of Current Business*; Canadian data are official figures from *Reports on the Grain Trade of Canada* and *Canadian Grain Statistics*. Vancouver figures include receipts at Prince Rupert after October 1, 1926.

TABLE III.—WEEKLY WHEAT RECEIPTS AT PRIMARY MARKETS IN THE UNITED STATES AND CANADA*
(Million bushels)

Month	United States				Fort William and Port Arthur				Vancouver ^a			
	1927	1928	1929	1930	1927	1928	1929	1930	1927	1928	1929	1930
Apr.	3.78	5.48	5.35	3.08	.83	.48	1.59	.41	1.15	2.78	3.06	1.14
	3.49	4.42	4.86	2.60	.64	.23	1.50	.35	1.27	1.96	2.69	1.23
	2.98	4.48	4.12	2.34	.59	.26	1.17	.29	.54	2.77	2.00	.62
	3.41	4.17	3.55	4.08	4.34	.26	.51	.36	.77	2.92	1.37	.96
	3.28	4.07	3.66	3.73	6.86	.09	4.80	.78	.94	2.81	1.41	.82
May	3.60	4.86	3.84	3.05	6.42	.25	4.10	1.53	.34	2.41	1.47	.59
	3.89	6.70	4.03	3.06	3.87	3.13	3.11	1.23	.14	1.95	1.09	.66
	5.20	7.46	4.08	4.72	2.96	6.56	3.54	.96	.49	1.45	.74	.62
	4.92	4.83	4.16	3.84	2.82	4.72	2.51	3.19	.50	1.39	.58	.79
June	4.93	4.32	4.56	4.55	2.49	4.22	2.43	4.03	.23	1.56	.77	.86
	4.09	3.87	5.45	3.69	1.99	4.54	2.60	5.60	.11	.72	.66	.74
	4.03	3.10	5.67	4.56	1.48	5.08	3.32	6.29	.17	1.21	.49	.78
	4.15	2.89	6.30	4.94	1.33	4.38	4.16	6.80	.18	.64	.67	.90
July	7.65	4.24	7.51	5.85	1.33	4.93	4.46	4.15	.06	.46	.98	.93
	8.54	7.40	11.45	18.30	2.07	4.28	3.25	3.49	.07	.69	.75	1.09
	10.35	14.24	16.49	23.57	2.89	3.14	3.61	2.49	.04	.50	.57	.90
	11.35	18.76	17.84	32.35	3.10	3.07	3.42	2.47	.02	.46	.85	.62
	26.01	23.93	29.69	29.76	2.61	3.03	2.89	3.53	.00	.72	1.00	.29

* United States data are unofficial figures compiled from *Grain World*; Fort William and Port Arthur data are official figures for net receipts furnished by Canadian Board of Grain Commissioners; Vancouver data are official figures compiled from *Canadian Grain Statistics*. United States and Fort William and Port Arthur data begin with figures for weeks ending April 2, 1927, March 31, 1928, March 30, 1929, and April 5, 1930; Vancouver figures are for weeks ending one day earlier.

^a Receipts at Prince Rupert included.

TABLE IV.—INTERNATIONAL TRADE IN WHEAT AND FLOUR, MONTHLY, FROM JULY 1929*

(Million bushels)

A.—NET EXPORTS

Month	United States	Canada	India	Australia	Argentina	Roumania	Hungary	Jugoslavia	Poland	Algeria	Tunis	Egypt	Greece
July	12.58	20.74	(.90) ^a	4.43	17.52	.02	2.55	1.09	(.11) ^a	...	1.23	(.88) ^a	....
Aug.	16.81	12.98	.33	5.34	23.73	.10	3.65	5.97	(.10) ^a	...	1.31	(.66) ^a	(1.17) ^a
Sept.	18.18	9.42	(.05) ^a	4.53	24.51	.19	3.70	2.34	(.02) ^a	.35	1.01	(.73) ^a	(1.98) ^a
Oct.	14.57	23.06	.10	1.98	15.12	.06	3.72	5.20	(.01) ^a	.38	.63	(1.06) ^a	(1.54) ^a
Nov.	14.63	24.48	(.80) ^a	2.46	8.25	.06	3.32	2.12	(.02) ^a	.46	.50	(1.03) ^a	(2.18) ^a
Dec.	11.29	18.47	(.37) ^a	4.08	11.16	.06	2.94	2.29	(.05) ^a	.54	.34	(1.00) ^a	(2.41) ^a
Jan.	13.08	7.19	(.80) ^a	6.65	11.88	.20	2.06	1.41	.10	.38	.25	(1.38) ^a	(1.72) ^a
Feb.	7.86	8.84	(.58) ^a	6.99	11.33	.19	1.05	.39	.11	.42	.14	(2.81) ^a	(1.63) ^a
Mar.	4.87	14.60	(1.21) ^a	9.45	9.99	.21	2.38	.54	.06	...	.07	...	(2.69) ^a
Apr.	6.64	5.43	(.01) ^a	4.66	11.06	.24	1.82	.76	.08	...	.20	...	(1.37) ^a
May	9.06	15.98	.03	6.27	7.42	.43	2.63	.67	.05	...	.12	...	(1.50) ^a
June	10.83	21.65	1.55	....	11.83	...	2.03	.81	.08	...	.20	...	(1.75) ^a
July	15.04	22.81	...	....	....	...	....	...	...	...	...	...	....

B.—NET IMPORTS

Month	Irish Free St.	United Kingdom	France ^b	Germany	Belgium	Italy	Netherlands	Scandinavia	Switzerland	Austria	Czechoslovakia	Baltic States ^c	Japan
July	1.86	15.85	7.28	16.17	3.99	6.63	2.59	2.22	2.53	1.14	1.23	1.24 ^d	.72
Aug.	1.53	19.61	6.36	4.51	4.84	1.58	2.82	2.05	2.50	1.56	1.22	.79	.63
Sept.	1.80	24.35	4.06	2.19	3.25	.84	1.95	2.48	1.63	1.52	1.09	.92	.37
Oct.	1.73	23.95	1.62	1.63	4.03	1.22	3.45	2.33	1.02	1.53	1.16	.95	1.00
Nov.	1.77	19.53	2.16	4.18	3.11	1.29	2.99	2.28	.96	1.57	1.39	1.06	.93
Dec.	1.29	13.21	1.49	5.91	3.72	1.72	1.99	1.71	1.12	1.51	1.37	1.41	1.44
Jan.	1.10	13.26	(1.08) ^e	10.19	2.91	1.67	1.51	1.36	1.23	1.24	1.05	.38	1.40
Feb.	1.31	11.79	(.83) ^e	5.94	2.81	2.47	2.06	1.76	1.06	1.15	1.12	.49	1.09
Mar.	1.61	16.96	.13	4.02	3.16	5.52	1.77	1.68	1.24	1.38	1.21	.62	1.58
Apr.	1.34	12.22	(1.20) ^e	2.19	3.45	7.80	2.41	1.69	1.11	1.50	1.34	.51 ^f	1.42
May	1.80	16.87	(3.90) ^g	2.02	3.77	....	3.45	1.52	1.33	3.48	.82	.57 ^f	....
June ....	....	14.93	....	....	....	....	....	....	....	....	....	....	....
July ....	....	....	....	....	....	....	....	....	....	....	....	....	....

* Data from official sources and International Institute of Agriculture.

^a Net import.^b Net imports in "commerce general."^c Finland, Estonia, Latvia.^d Imports into Latvia partially estimated.^e Net export.^f Excluding Latvia.^g "Commerce special."

TABLE V.—WEEKLY WHEAT AND FLOUR SHIPMENTS BY AREAS OF ORIGIN AND DESTINATION, APRIL–JULY 1930*

(Million bushels)

Week ending	North America	Argentina, Uruguay	Australia	Russia	Danube ^a	India	Other countries ^b	Total	To Europe	To ex-Europe
Apr. 5.....	4.94	3.15	2.02	.51	1.14	...	.14	11.90	9.52	2.38
12.....	4.99	4.12	.87	1.05	.82	...	.12	11.97	9.76	2.21
19.....	5.19	1.69	1.25	.17	.49	...	.16	8.95	6.57	2.38
26.....	3.75	1.60	.38	.13	.33	...	.22	6.41	5.07	1.34
May 3.....	7.14	1.57	1.54	.31	.54	...	.38	11.48	9.14	2.34
10.....	6.47	2.51	1.90	.06	.71	...	.41	12.06	9.80	2.26
17.....	7.18	1.10	.96	...	.71	...	.59	10.54	8.12	2.42
24.....	9.16	1.76	1.20	...	.37	...	.63	13.12	10.68	2.44
31.....	6.67	2.10	1.60	...	.52	...	.42	11.31	9.33	1.98
June 7.....	5.75	2.34	1.34	.82	.67	.02	.29	11.23	8.54	2.69
14.....	7.78	3.08	.47	.25	.49	.15	.75	12.97	11.49	1.48
21.....	4.87	2.67	1.83	...	.40	.22	.86	10.85	9.06	1.79
28.....	6.71	2.19	.66	...	.30	1.06	.74	11.66	10.15	1.51
July 5.....	7.73	1.63	1.50	...	.36	.47	1.20	12.89	11.32	1.57
12.....	6.80	.78	1.00	.22	.59	.59	.66	10.64	9.72	.92
19.....	7.73	1.34	1.06	...	.54	.28	.62	11.56	9.85	1.71
26.....	9.52	.42	1.30	.47	.28	.22	.29	12.50	10.99	1.51
Aug. 2.....	8.84	.73	1.45	.22	.22	.88	.20	12.54	11.12	1.42

* Here converted from data in Broomhall's *Corn Trade News*. Broomhall's weekly figures do not always check with his cumulative totals, which presumably include later revisions. Shipments from "other countries" apparently include a part of the shipments from the Danube and Russia in most weeks.

^a Russia, Danube, and Black Sea shipments are given together in the compilation which is the principal source for this table, with shipments across land frontiers included. The Russian figures here given are from another of Broom-

hall's tables, and these have been subtracted from the total to give data for Danube and Black Sea which include all the land shipments.

^b North Africa, Chile, Germany, France, etc.

TABLE VI.—WEEKLY VISIBLE SUPPLIES OF WHEAT IN NORTH AMERICA, UNITED KINGDOM PORTS, AND AFLOAT TO EUROPE, APRIL–JULY 1930*

(Million bushels)

Date	United States	Canada	U.K. ports	Afloat to Europe	Total	Date	United States	Canada	U.K. ports	Afloat to Europe	Total
Apr. 5.....	155.2	192.7	13.0	33.8	394.7	June 7.....	120.9	135.5	8.0	34.6	299.0
12.....	151.7	190.3	12.2	36.4	390.6	14.....	118.7	131.8	7.2	36.1	293.8
19.....	147.3	187.5	11.2	36.0	382.0	21.....	115.5	128.4	6.6	35.4	285.9
26.....	143.7	181.3	10.2	35.1	370.3	28.....	112.8	126.8	6.8	37.8	284.2
May 3.....	140.3	176.3	9.6	34.6	360.8	July 5.....	116.8	121.6	7.0	37.5	282.9
10.....	133.4	168.8	9.0	34.6	345.8	12.....	123.2	119.2	6.8	40.0	289.2
17.....	128.6	161.4	9.4	33.1	332.5	19.....	132.2	113.6	7.7	38.8	292.3
24.....	124.7	151.1	8.6	34.7	319.1	26.....	148.3	108.7	7.6	38.9	303.5
31.....	123.0	142.3	8.2	35.6	309.1	Aug. 2.....	165.6	103.3	6.8	39.2	314.9

* United States data are *Bradstreet's*; Canadian data from *Canadian Grain Statistics*; United Kingdom and Afloat data from Broomhall's *Corn Trade News* and *Milling*. Canadian figures are for the days preceding the dates indicated in the table above, and include stocks in some elevators for the preceding week, but are adjusted to bring stocks in western country elevators to the correct week.

THE WHEAT SITUATION, APRIL TO JULY, 1930

TABLE VII.—WORLD VISIBLE WHEAT SUPPLIES, AUGUST 1, 1920-30, AND MONTHLY, 1929-30*

(Million bushels)

Date	United States	Canada	Argentina	Australia	United Kingdom ports	Afloat to Europe	North America	Argentina, Australia	U.K. and afloat	Grand total	Total ex-Australia
1920 Aug. 1.....	42.7	8.2	3.7	27.5	12.8	76.2	50.9	31.2	89.0	171.1	143.6
1921 Aug. 1.....	56.2	8.9	3.7	30.0	7.6	57.9	65.1	33.7	65.5	164.3	134.3
1922 Aug. 1.....	43.1	19.3	2.2	3.0	7.1	48.9	62.4	5.2	56.0	123.6	120.6
1923 Aug. 1.....	73.3	14.1	4.4	18.0	8.2	39.0	87.4	22.4	47.2	157.0	139.0
1924 Aug. 1.....	72.1	31.6	6.8	30.0	9.9	41.8	103.7	36.8	51.7	192.2	162.2
1925 Aug. 1.....	57.3	23.4	7.7	8.4	9.2	33.3	80.7	16.1	42.5	139.3	130.9
1926 Aug. 1.....	64.2	28.3	4.1	6.2	4.3	38.6	92.5	10.3	42.9	145.7	139.5
1927 Aug. 1.....	65.9	42.7	5.9	12.7	7.8	46.1	108.6	18.6	53.9	181.1	168.3
1928 Aug. 1.....	88.1	69.2	5.9	9.5	10.1	44.7	157.3	15.4	54.8	227.5	218.0
1929 Aug. 1.....	190.3	99.8	16.2	20.0	6.2	37.6	290.1	36.2	43.8	370.1	350.1
Sept. 1.....	265.0	92.4	12.9	13.5	6.5	46.5	357.4	26.4	53.0	436.8	423.3
Oct. 1.....	285.2	153.6	9.2	6.2	11.4	42.3	438.8	15.4	53.7	507.9	501.7
Nov. 1.....	288.5	206.9	9.0	2.8	16.8	39.0	495.4	11.8	55.8	563.0	560.2
Dec. 1.....	274.3	220.7	7.4	1.8	20.6	28.6	495.0	9.2	49.2	553.4	551.6
1930 Jan. 1.....	264.0	223.1	7.4	44.0	16.8	28.2	487.1	51.4	45.0	583.5	539.5
Feb. 1.....	240.7	214.0	9.2	60.5	15.1	37.6	454.7	69.7	52.7	577.1	516.6
Mar. 1.....	221.6	210.0	9.5	59.5	13.6	36.7	431.6	69.0	50.3	550.9	491.4
Apr. 1.....	212.0	192.4	10.3	56.0	13.1	34.2	404.4	66.3	47.3	518.0	462.0
May 1.....	191.9	174.4	10.3	50.0	9.9	34.6	366.3	60.3	44.5	471.1	421.1
June 1.....	170.6	143.1	7.4	47.5	7.9	35.6	313.7	54.9	43.5	412.1	364.6
July 1.....	161.1	124.8	6.6	42.5	6.4	37.9	285.9	49.1	44.3	379.3	336.8
Aug. 1.....	221.9	103.5	7.0	33.5	6.5	39.2	325.4	40.5	45.7	411.6	378.1
Average, Aug. 1											
1910-14.....	58.8	10.8	1.3	5.9 ^a	15.4	35.2	69.6	7.2 ^a	50.6	127.4 ^a	121.5
1925-29.....	93.1	52.7	8.0	11.3	7.5	40.1	145.8	19.3	47.6	212.7	201.4

* A joint compilation by Broomhall, the *Daily Market Record*, Minneapolis, and the *Daily Trade Bulletin*, Chicago, here summarized from Broomhall's *Corn Trade News* and the *Daily Trade Bulletin*. Includes some flour stocks.

^a For Australia, 4-year average, 1911-14.

TABLE VIII.—UNITED STATES AND CANADIAN CARRYOVERS OF WHEAT, 1919-30*

(Thousand bushels)

Year	United States (July 1)				Canada (August 31, 1919-23; July 31, 1924-29)				
	Total	On farms	In country mills and elevators	Commercial visible (Bradstreet's)	Total	On farms	In elevators	In transit	In flour mills
1919.....	49,806	19,261	19,672	10,873	.....^a	2,149	3,305	.....^a	.....^a
1920.....	110,254	49,546	37,304	23,404	.....^a	2,122	6,930	.....^a	238
1921.....	93,840	56,707	27,167	9,966	13,727	2,144	4,831	6,032	720
1922.....	81,457	32,359	28,756	20,342	20,590	2,360	11,024	4,578	2,628
1923.....	102,414	35,894	37,117	29,403	11,690	1,441	5,051	2,758	2,440
1924.....	106,204	30,981	36,626	38,597	45,159 ^b	7,363 ^b	27,400 ^b	5,856 ^b	4,539 ^b
1925.....	86,447	29,357	25,287	31,803	26,483	2,709	17,939	3,835	2,000
1926.....	66,969	20,982	29,501	16,486	36,474	3,987	25,451	3,163	3,873
1927.....	74,514	27,222	21,776	25,516	50,787	4,264	37,079	5,243	4,201
1928.....	85,214	23,729	19,277	42,208	77,626	4,186	53,570	13,728	6,142
1929.....	182,713	45,483	41,546	95,684	104,383	5,617	82,640	8,669	7,457
1930.....	213,620	46,834	54,031	112,755	111,692	5,326	86,087	12,779	7,500
Average									
1910-14.....	89,411	32,485	31,600	25,326	.....^a	.....^a	.....^a	.....^a	.....^a
1925-29.....	99,171	29,355	27,477	42,339	59,151	4,153	43,336	6,927	4,735

* Bradstreet's visible, and official data of U.S. Department of Agriculture and Dominion Bureau of Statistics. See especially *Agriculture Yearbooks*, *Canada Yearbooks*, *Grain Dealers Journal*, and press releases.

^a Not available.

^b July 31, as for later years.

^c For 1924 quantities in farmers' hands relate to August 31; for subsequent years to July 31.

TABLE IX.—WEEKLY CASH PRICES OF REPRESENTATIVE WHEATS IN LEADING EXPORTING AND IMPORTING MARKETS, APRIL–JULY 1930*

(U.S. dollars per bushel)

Month	United Kingdom	United States				Canada		Argentina	Liverpool				
	British parcels	All classes and grades ^a	No. 2 Red Winter (St. Louis)	No. 2 Hard Winter (Kansas City)	No. 1 Northern (Minneapolis)	Weighted Average (Winnipeg)	No. 3 Manitoba (Winnipeg)	78 Kilo (Buenos Aires)	No. 1 Manitoba	No. 3 Manitoba	No. 2 Winter	Argentine Rosaf	Australian
Apr.	1.19	1.03	1.20	1.02	1.11	1.08	1.05	1.03	1.26	1.20	1.14	1.10	1.19
	1.21	1.08	1.20	1.07	1.14	1.11	1.07	1.07	1.34	1.30	1.22	1.19	1.28
	1.11	1.02	1.17	1.01	1.09	1.06	1.02	1.03	1.27	1.22	1.19	1.11	1.24
	1.16	.99	1.14	.98	1.07	1.05	1.01	1.02	1.26	1.21	1.18	1.14	1.21
May	1.13	.99	1.13	.97	1.07	1.04	1.00	1.01	1.25	1.20	1.17	1.17	1.21
	1.12	.97	1.11	.96	1.07	1.04	1.01	1.00	1.22	1.17	1.12	1.15	1.20
	1.14	1.01	1.15	.98	1.08	1.06	1.04	1.01	1.25	1.20	1.17	1.15	1.22
	1.15	1.02	1.15	1.00	1.08	1.07	1.05	1.01	1.26	1.22	1.16	1.16	1.24
June	1.17	1.02	1.15	1.02	1.07	1.10	1.08	1.03	1.29	1.26	1.19	1.18	1.26
	1.19	1.03	1.13	1.01	1.07	1.10	1.07	1.02	1.29	1.24	1.18	1.18	1.25
	1.16	1.00	1.08	.98	1.05	1.07	1.04	1.02	1.29	1.25	1.18	1.18	1.25
	1.10	.92	1.01	.90	.98	.98	.95	.97	1.16	1.12	1.06	1.12	1.19
July	1.06	.87	.93	.84	.95	.94	.91	.93	1.14	1.09	1.03	1.11	1.14
	1.04	.85	.93	.82	.94	.95	.91	.90	1.12	1.07	1.02	1.02	1.12
	1.04	.83	.85	.81	.94	.93	.89	.90	1.11	1.07	1.02	1.02	1.12
	1.04	.82	.83	.79	.93	.94	.91	.91	1.11	1.06	1.01	1.02	1.09
Aug.	1.05	.83	.87	.81	.93	.96	.93	.92	1.13	1.08	1.01	1.03	1.12
	1.03	.81	.87	.78	.89	.89	.86	...	1.12	1.10	1.03	1.04	1.12

* United Kingdom prices are averages of sales of wheat parcels in British markets for weeks ending Saturday, from *London Grain, Seed and Oil Reporter*. United States prices are weekly averages of daily weighted prices for weeks ending Friday, from *Crops and Markets*. Prices of No. 3 Manitoba at Winnipeg are averages for weeks ending Saturday, from *Canadian Grain Statistics*; for the Canadian weighted averages see *WHEAT STUDIES*, March 1929, V, No. 5. Argentine prices are averages for weeks ending Saturday, from *Revista Semanal*. Liverpool prices are for Tuesday of the same week, parcels to Liverpool or London, and are from *Broomhall's Corn Trade News*.

^a Six markets.

TABLE X.—MONTHLY PRICES OF DOMESTIC WHEAT IN EUROPE, FROM AUGUST 1927*

(U.S. dollars per bushel)

Month	Great Britain			France (Chartres)			Italy (Milan)			Germany (Berlin)		
	1927-28	1928-29	1929-30	1927-28	1928-29	1929-30	1927-28	1928-29	1929-30	1927-28	1928-29	1929-30
Aug.	1.63	1.33	1.52	1.75	1.60	1.51	1.75 ^a	1.72	1.74	1.78 ^b	1.49	1.59
Sept.	1.43	1.19	1.29	1.57	1.58	1.48	1.73	1.81	1.75	1.68	1.36	1.47
Oct.	1.37	1.24	1.24	1.54	1.61	1.45	1.77	1.88	1.84	1.62	1.38	1.50
Nov.	1.32	1.28	1.22	1.48	1.60	1.43	1.90	1.87	1.85	1.57	1.37	1.51
Dec.	1.29	1.25	1.24	1.58	1.56	1.41	1.88	1.87	1.90	1.53	1.33	1.57
Jan.	1.29	1.25	1.24	1.58	1.59	1.40 ^a	1.93	1.92	1.94	1.52	1.35	1.60
Feb.	1.26	1.27	1.16	1.56	1.64	1.31	1.94	1.96	1.89	1.49	1.40	1.52
Mar.	1.27	1.27	1.08	1.65	1.68	1.37	2.00	1.95	1.86	1.59	1.44	1.55
Apr.	1.34	1.28	1.13	1.74	1.60	1.36 ^a	2.09	1.93	1.94	1.72	1.45	1.75
May	1.43	1.29	1.14	1.87	1.65	1.81	2.14	1.89	1.96	1.73	1.41	1.87
June	1.43	1.25	1.11	1.85	1.62	1.36	2.10	1.91 ^a	2.02	1.66	1.39	1.95
July	1.41	1.35	1.08	1.76	1.62	1.66 ^a	1.77	1.77	1.76 ^a	1.60	1.65	1.87 ^c

* Data for Great Britain are averages of weekly average *Gazette* prices as given in the *Economist*; for France, averages of Saturday prices furnished directly by Federal Reserve Board through November 1929, after which they are taken from *Bulletin des Halles*; for Italy, averages of Friday prices of soft wheat as given in *International Crop Report and Agricultural Statistics*; for Germany, monthly average prices as given in *Wirtschaft und Statistik*. All data are converted, for convenience, from the domestic currency in which they are quoted in the sources above into U.S. money by monthly average exchange rates.

^a Three-week average.

^b Second half of August.

^c Preliminary.

THE WHEAT SITUATION, APRIL TO JULY, 1930

TABLE XI.—APPROXIMATE DISPOSITION OF WHEAT SUPPLIES IN FOUR LEADING EXPORTING COUNTRIES, 1925-26 TO 1929-30*

(Thousand bushels)

Item	United States (July-June)					Canada (August-July)				
	1925-26	1926-27	1927-28	1928-29	1929-30	1925-26	1926-27	1927-28	1928-29	1929-30
Initial stocks	135	112	137	143	264	26	36	51	78	104
New crop	677	831	878	915	806	395	407	480	567	305
Total supplies	812	943	1,015	1,058	1,070	421	443	531	645	409
Net exports	95	209	194	147	143	324	292	332	406	185
Seed requirements	79	84	90	82	83	40	39	42	44	45
Consumed for food	493	494	505	506	514	42	43	42	44	44
Unmerchantable, lost in cleaning, fed on farms.....	33	17	83	59	40	18	31	34	44	16
Apparent error in crop estimate						-39	-13	+3	+3	+7
Stocks at end.....	112	137	143	264	290	36	51	78	104	112
Total disappearance	812	943	1,015	1,058	1,070	421	443	531	645	409

Item	Argentina (August-July)					Australia (August-July)				
	1925-26	1926-27	1927-28	1928-29	1929-30	1925-26	1926-27	1927-28	1928-29	1929-30
Initial stocks	56	61	65	90	130	36	30	34	43	38
New crop	191	230	239	307	175 ^a	115	161	118	160	126
Total supplies	247	291	304	397	305	151	191	152	203	164
Net exports	94	143	178	224	151	77	103	71	109	62
Seed requirements	25	24	25	23	24	11	12	14	14	16
Consumed for food.....	54	57	59	61	63	29	30	30	31	31
Feed and waste.....	10	3	3	4	3	4	5	4	4	4
Apparent error in crop estimate	+3	-1	-51	-45	...	...	+7	-10	+7	51
Stocks at end.....	61	65	90	130	64	30	34	43	38	
Total disappearance.....	247	291	304	397	305	151	191	152	203	164

* Based so far as possible upon official estimates for the various items of supply and disposition. Estimates for 1929-30 are preliminary. For detailed explanation of our method of estimation and adjustment of items in the disposition table, see notes in WHEAT STUDIES, December 1929, VI, 110.

^a Unofficial; the official estimate now standing is 137 million bushels.