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# W H E A T   S T U D I E S

## OF THE FOOD RESEARCH INSTITUTE

VOL. VIII, NO. 7

(Price \$1.00)

MAY 1932

### SURVEY OF THE WHEAT SITUATION

DECEMBER 1931 TO MARCH 1932

**T**HE period under review was not strikingly eventful. Net increases in crop estimates were about 35 million bushels. In the United States net mill grindings fell to a low level. The volume of international trade declined from its August–November level for the third successive year. Russian and Danubian shipments declined sharply; North America shipped relatively little while Australia and Argentina exported heavily.

World wheat stocks remained burdensome. International wheat prices fluctuated within a narrow range, on a very low level, but were moderately firm in spite of further recession in business and in price levels. In the major Continental European importing countries, wheat prices were held high by tariffs and milling regulations.

With heavy feed use in North America, wheat consumption in 1931–32 may still equal or exceed the high level of 1930–31 in the world ex-Russia and China; but it now seems probable that the depression has led to reduced flour consumption in the United States. China's absorption of imported wheat is likely to set a new high record. The world carryover seems likely to be lower than the inward carryover by 50 to 100 million bushels, a smaller reduction than seemed indicated last December. Most of the surplus will be in the United States.

Low stocks in Europe and relaxation of import restrictions will make for heavier international trade in April–July than in December–March, and North America will be called upon to cover a large fraction of the import requirements. Apart from unpredictable changes in new-crop prospects and from further unfavorable developments in business and in commodity prices, a tendency to moderate firmness of wheat prices on the international market now seems in prospect.

STANFORD UNIVERSITY, CALIFORNIA

May 1932

# W H E A T   S T U D I E S

## OF THE

### FOOD RESEARCH INSTITUTE

The central feature of the series is a periodic analysis of the world wheat situation, with special reference to the outlook for supplies, requirements, trade, and prices. Each volume includes a comprehensive review of the preceding crop year, and three surveys of current developments at intervals of about four months. These issues contain a careful selection of relevant statistical material, presented in detail in appendix tables for reference purposes, and in summary form in text tables and charts.

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The Food Research Institute was established at Stanford University in 1921 jointly by the Carnegie Corporation of New York and the Trustees of Leland Stanford Junior University, for research in the production, distribution, and consumption of food.

# SURVEY OF THE WHEAT SITUATION

DECEMBER 1931 TO MARCH 1932

Developments in the second third of the international crop year have not been of major importance. The principal developments affecting the outlook have been three: net increases in crop estimates of about 35 million bushels; the failure of milling for domestic use in the United States to increase as much as earlier seemed likely; and the resulting prospect of a smaller reduction in world carryover than seemed probable last December.

International shipments in December-March were smaller than in August-November, as in 1929-30 and 1930-31, but contrary to earlier post-war experience. Australia and Argentina furnished an exceptionally high percentage of the total, and North America a smaller percentage than usual. The volume of international trade in August-March has been much the same as in the same period last year and the average for recent years. Its course departed less from the average than was true in 1930-31, but September shipments were relatively high and December shipments exceptionally small. With relaxations of import restrictions in Europe, larger shipments are in prospect for April-July. These will be furnished largely by North America, Argentina, and Australia. The year's total trade will reach a liberal figure, probably slightly above last year's, again with heavy shipments to the Far East.

Wheat stocks continue burdensome. World visible supplies made new monthly records up to and including April 1, but in the coming months they seem likely to run lower than last year. Commercial stocks of United States wheat in North America declined from the season's peak that was reached (earlier than usual) about the end of last August, by some 59 million bushels to April 2; but they are still at record levels for this season of the year. Total

wheat stocks in the United States on March 1 stood at record heights, probably 70 million bushels above last year's high figure. Visible supplies in Australia were exceptionally high in January-March, in consequence of a large crop which subsequently was marketed promptly. Stocks afloat to Europe and in British ports about April 1 were some 13 million bushels larger than last year. Substantial reductions in other stocks, chiefly in unreported positions, have

probably brought the aggregate (outside Russia, China, and Asia Minor) to levels below that of last year; and Russia's stocks must also be reduced. The prospect is that world wheat stocks ex-Russia next July will be 50 to 100 million bushels below the record level of July 1931, though still 200 to 300 million above normal. The great bulk

of the accumulated surplus will be in the United States, but less than last year will be in the hands of the Grain Stabilization Corporation and probably less in United States visibles.

Wheat consumption in 1931-32 outside Russia and China seems likely to equal or slightly exceed the high level of 1930-31, chiefly because of continued heavy feed use, especially in the United States; and China's absorption of imported wheat bids fair to exceed last year's high total. The depression is apparently having the effect of reducing per capita disappearance of wheat for food in the United States, and flour grindings for domestic use are not likely to be nearly as far above last year's low figures as we earlier expected. Wheat consumption for food in Continental Europe may be higher than last year, but numerous restrictions in importing countries will presumably keep it below the levels reached in 1928-29 and probably 1929-30.

Wheat prices have fluctuated, since late November, on a very low level and within

## CONTENTS

	PAGE
<i>International Trade</i> . . . . .	378
<i>Changes in the Supply Position</i> . . . . .	384
<i>Wheat Consumption, 1931-32</i>	389
<i>Wheat Price Movements</i> . . . . .	392
<i>Some Aspects of the Outlook</i>	396
<i>Appendix Tables</i> . . . . .	401

a narrow range. Record lows of early October were broken through, to a small extent and for a short time, in a few instances. The principal features of the price movement were an advance in Winnipeg of about 10 cents a bushel, in January–February; an abrupt advance in Chicago on January 16–18; general declines in the third week of March, followed by recovery early in April. Over the period, Winnipeg prices showed the largest net gain. The continued firmness of United States prices (especially of futures), in relation to Liverpool prices, has been striking, considering the heavy stocks in the United States; and old-crop futures were, until late in January, above the normal relation to the July future. Domestic wheat prices in Germany, France,

and Italy were kept very high in relation to British import prices by tariffs and milling regulations.

At this time the probable outcome of the 1932 world wheat crop is necessarily uncertain, even though it is already clear that India's crop is a fairly good one, and that the United States winter-wheat crop will be small.

Unpredictable changes in crop prospects are likely to have significant price influence, at least of a temporary character. Apart from such changes, and from further unfavorable developments in the general price level and in business conditions, a tendency to moderate firmness of wheat prices on the international market seems in prospect for the next few months.

## I. INTERNATIONAL TRADE

The volume of international trade in wheat and flour in August–March 1931–32 was of average size for these months, and slightly larger than in 1930–31 despite a bigger European crop this year. Shipments to Europe were not much smaller than in August–March 1930–31, smaller inward carryovers and shorter rye crops in Europe tending to offset larger aggregate wheat crops there. Ex-European takings were enlarged, mainly because wheat was cheaper, and Oriental rice crops smaller.

International trade in December–March was lighter than usual, and much smaller than in August–November 1931; but in both periods trade was slightly heavier than in corresponding months of 1930–31 and far heavier than in 1929–30. Russia shipped very little wheat in December–March, in sharp contrast with large shipments in August–November. Shipments from the Danube countries also fell off sharply. India remained out of the market. Argentina and Australia together furnished a larger fraction of the total shipments than usual, North America a much smaller one.

Among the importing countries, the British Isles, France, and the Scandinavian countries imported unusually large supplies in August–March, Germany and Italy strikingly little. The outstanding developments in governmental regulations, mainly since January 1, were progressive, rapid, and

substantial increases in the quotas of foreign wheat permitted in the mill mix in Italy and France. Great Britain has taken the first steps, though none yet of special importance for the present year's wheat situation, toward protection and subsidy of domestic wheat growers.

### VOLUME AND COURSE OF TRADE

Broomhall's shipments for the first two-thirds of the crop year 1931–32 are shown below in million bushels:

Crop year	Aug.–Nov. (17 weeks)	Dec.–Mar. (17 weeks)	Aug.–Mar. (34 weeks)
1926–27	233	302	535
1927–28	252	273	525
1928–29	285	346	631
1929–30	219	188	408
1930–31	270	242	512
1931–32	274	246	521
Average 1926–31	252	270	522

This year's August–March shipments approximately equalled the average for the five years preceding. They were 17 per cent smaller than the record shipments of 1928–29, 28 per cent larger than the strikingly small shipments of 1929–30, and a little higher than those of August–March 1930–31. In all of these four years the volume of international trade (though not its course) has been determined mainly by import demands, for export surpluses have

been at such high levels that wheat could have been shipped much more heavily if importers had needed, wished, or been able to purchase more.

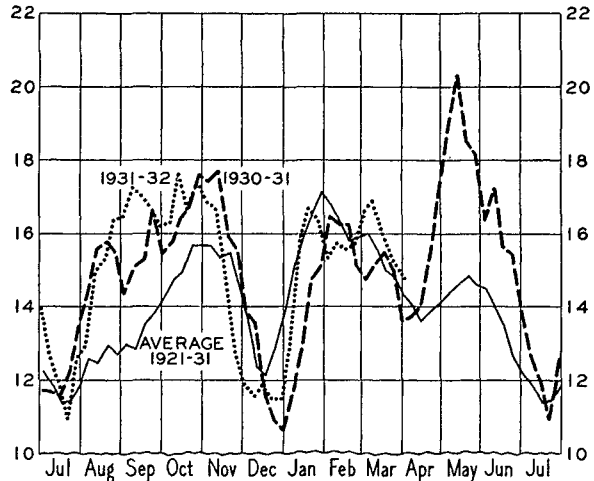
Shipments were slightly larger in August–March this year than last in spite of a wheat crop in European importing countries some 65 million bushels larger in 1931 than in 1930, and in spite of wheat import restrictions more generally in force and on the whole even more stringent and depression even deeper this year than last. The main reasons were the lower level of 1931–32 inward carryovers of wheat in European importing countries; the much smaller 1931 crop of rye in those countries; and a substantial increase in shipments of wheat to ex-European countries, notably China.

For the third successive year, the volume of international trade in 1931–32 was substantially smaller in the second than in the first third of the crop year, whereas in the eight years prior to 1929–30, shipments in December–March regularly exceeded those of August–November. This year, as last year, the reversal of the usual seasonal relationship was due mainly to heavy Russian shipments in August–November.<sup>1</sup> This wheat, superadded to liberal supplies available in other Northern Hemisphere exporting countries, was pressed for sale, and only partially offset by withdrawals of offers from North America. With current requirements not large enough to absorb current arrivals, imported wheat piled up in Europe, notably in the United Kingdom. In both years shipments in December–March fell from their August–November level mainly because, following sharp seasonal reductions in Russian exports, accumulated stocks in Europe were drawn upon for consumption pending the arrival of ample supplies of cheap wheat from Argentina and Australia.

The course of trade from week to week, shown in Chart 1, was apparently associated with fluctuations in wheat prices. The autumn peak this year came in mid-October—a little earlier than usual. In view of the heavy stocks that had previously accumulated in Europe (largely from Russian ship-

ments of August–September), the September peak might not have been exceeded, in the absence of sharply rising prices in October. The earlier part of the price advance seems to have stimulated import purchases,

CHART 1.—WORLD SHIPMENTS OF WHEAT AND FLOUR, 1931–32, WITH COMPARISONS\*  
(Million bushels; 3-week moving average)



\* Broomhall's weekly data from *Corn Trade News* and *Corn Trade Year Books*. The average is for ten years ending July 1931.

but this influence was short-lived. The subsequent fall of prices presumably contributed to the extreme decline of shipments in November. Shipments ran exceptionally low through December. The unusually sharp rise in January was associated with the prompt and heavy movement of new-crop wheat from the Southern Hemisphere, especially Australia (see Chart 3, p. 381). Rising prices in February seem to have been a factor making for rather heavy world shipments in mid-March, in a bulge that appears strikingly in shipments from Argentina.

#### SOURCES OF EXPORTS

Broomhall's total shipments in December–March are given below by areas of shipment, in million bushels and significant percentages (see tabulation on page 380). This year distinctly less than the usual fraction came from North America; much more than usual came from Australia; Argentina and the Danube countries also shipped somewhat larger fractions of the total than

<sup>1</sup> In 1929–30 unexpectedly large exports from Argentina, from the underestimated crop of 1928, were the principal factor.

they had on the average in 1926-31; Russia shipped much less than in the same period of 1926-27 and 1930-31.

Year	North America	Argentina	Australia	Russia	Balkans	North Africa <sup>a</sup>
Dec.-Mar.						
1926-27.....	159.2	60.8	49.6	20.4	10.4	1.2
1927-28.....	149.6	82.4	27.6	.8	10.0	2.4
1928-29.....	176.0	93.6	60.4	....	14.4	2.0
1929-30.....	90.8	45.6	28.0	....	18.8 <sup>b</sup>	5.2
1930-31.....	92.0	45.6	64.4	26.0	10.0	3.6
1931-32.....	88.8	62.4	67.6	8.8	16.0	2.8
Average 1926-31.....	133.5	65.6	46.0	9.5	12.7	2.9
PERCENTAGES OF TOTAL SHIPMENTS						
1930-31.....	38.1	18.9	26.6	10.8	4.1	1.5
1931-32.....	36.0	25.3	27.5	3.6	6.5	1.1
Average 1926-31.....	49.4	24.3	17.0	3.5	4.7	1.1

<sup>a</sup> North Africa, India, and Chile.

<sup>b</sup> Includes small shipments from Russia.

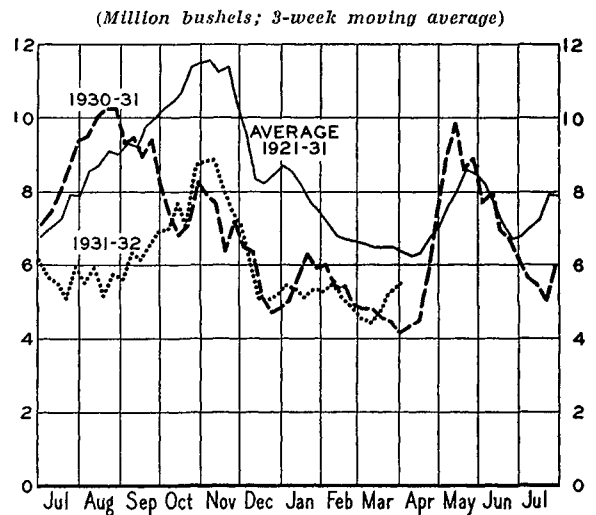
North American shipments of only 88.8 million bushels were the smallest in at least a decade, though not much less than in the corresponding period of 1929-30 and 1930-31. As in those years, despite large wheat stocks, wheat prices in both the United States and Canada ranged too high in relation to export prices elsewhere to permit a heavy outflow of North American wheat. Judging from official statistics of net exports,<sup>1</sup> North American shipments contained more United States wheat and less Canadian than in 1930-31.<sup>2</sup> Net exports from the United States this year have been swelled by shipments on Stabilization Corporation sales to Brazil, China, and Germany. Winnipeg May futures prices have stood a little higher in relation to Liverpool futures this year than last, and Chicago May futures not nearly as high as last year (when the Chicago price was pegged) in relation to Liverpool.

The general course of shipments from North America, as shown in Chart 2, has not been strikingly different from the average, as it was in 1930-31; but less than the average seasonal decline occurred in January and early February.

Exports of wheat from Australia in December-March 1931-32 were the heaviest in at least a decade. The new crop proved to be the second largest in the past ten years and of superior quality; it was har-

vested promptly, and farmers apparently sold freely, so that visible supplies stood at a notably high level on January 1; forward

CHART 2.—NORTH AMERICAN SHIPMENTS, 1931-32, WITH COMPARISONS\*



\* See note to Chart 1, p. 379.

sales of new-crop wheat both to Europe and to ex-Europe appear to have been relatively heavy. These factors help to explain why, as shown in Chart 3, Australian shipments began to increase earlier than usual in De-

<sup>1</sup> There is some question whether the official statistics of net exports can be taken at face value in appraising the export movement, particularly in a year when stocks of United States wheat in Canada are much higher than usual. In accordance with the law, under certain conditions such wheat need not be recorded as exported when it is shipped to Canada, and may (or possibly may not) be recorded as exported in some subsequent month. See *World Wheat Prospects*, February 20, 1932, pp. 9-10.

<sup>2</sup> December-March net exports from the United States and Canada compare as follows with Broomhall's shipments (17 weeks), in million bushels:

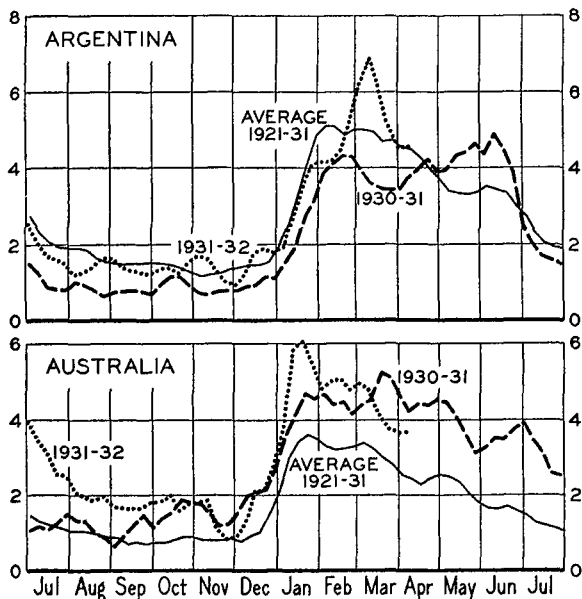
Year	Net exports			North American shipments
	U.S.	Canada	Total	
Dec.-Mar.				
1926-27.....	42.3	100.6	142.9	159.2
1927-28.....	32.0	113.2	144.2	149.6
1928-29.....	32.5	124.7	157.2	176.0
1929-30.....	37.1	49.1	86.2	90.8
1930-31.....	16.0	63.9	79.9	92.0
1931-32.....	33.2	58.5	91.7	88.8

Shipments in this period usually exceed net exports, but the discrepancy has been in the opposite direction this year. The reason is not clear, especially because the reduction of combined stocks of Canadian wheat in the United States and United States wheat in Canada (stocks which may be counted as exports before they are counted as shipments) was not larger than usual between about December 1 and April 1.

ember and rose to record levels in January and February. In 1930-31, by contrast, the crop was larger, but early season shipments were restricted by delay in harvesting, poorer quality, and a temporary tendency for farmers to hold in anticipation of the authorized bounty on exports which, as it turned out, could not be financed. This year's shipments have run below last year's since early March.

CHART 3.—ARGENTINE AND AUSTRALIAN SHIPMENTS, 1931-32, WITH COMPARISONS\*

(Million bushels; 3-week moving average)



\* See note to Chart 1, p. 379.

Argentine shipments in December-March were a little below the 5-year average. The crop was below average; but favorable harvest weather, at least after December, and good quality tended to stimulate exports, and December-March shipments constituted a somewhat larger fraction of the crop than on the average in the preceding five years. Substantially heavier shipments this year than last, despite a smaller crop, seem attributable mainly to better weather and higher quality. The pause in the seasonal increase of shipments from late January to mid-February, and the subsequent very rapid increase to mid-March, seem attributable largely to the fall and rise of Liverpool prices; anticipations of government control of domestic prices<sup>1</sup> may

also have contributed to the heavy shipments in March. It is not clear to what extent the movement represented sold wheat and unsold wheat, respectively; but total shipments to orders, presumably largely from Argentina, were notably large in mid-March (see Appendix Table VIII).

Shipments from Russia were only 9 million bushels in December-March, sharply below those of August-November (61 million bushels), and substantially below those of December-March last year (26 million). Accumulated information, chiefly on collections and on shortage of seed in the eastern regions of European Russia and beyond, now suggests not only that a short spring-wheat crop rather than transportation difficulties was mainly responsible for smaller shipments in October-November this year than last,<sup>2</sup> but also that early-season exports were larger than was warranted by the domestic supply situation. Although we have seen no authentic reports of general bread-grain shortage, we infer that the small Russian wheat exports of December-March represent maximum exports from short supplies rather than merely seasonal decline or temporary withdrawal from the market. The reduction in Russian exports left more room on the import market for exports from other countries, and Australian and Argentine shippers took the opportunity.

Shipments of 16 million bushels from the Danube basin (which presumably understate total exports of this period) were relatively large in December-March, but not strikingly so. The notably high level of August-November (34 million bushels), when the movement from heavy available supplies attained record post-war proportions under the stimulus of governmental measures, was not maintained. The decline reflects partly a seasonal tendency, but mainly earlier disposal of the larger part of the exportable surplus.<sup>3</sup>

<sup>1</sup> Described in *Foreign Crops and Markets*, March 28, 1932.

<sup>2</sup> See *WHEAT STUDIES*, January 1932, VIII, 240.

<sup>3</sup> Governmental controls of the grain trade in the Danube countries (see *WHEAT STUDIES*, VIII, 221-23) were maintained during the period under review except in Roumania, where it was decided that premiums should not be paid on exports made after December 1. Recent reports state that a decision has been reached to abandon the governmental monopoly



### CHANGES IN TARIFFS AND MILLING REGULATIONS

Great Britain is abandoning free trade for a system which includes both tariffs and subsidies. On March 1, 1932, a duty of 10 per cent ad valorem became effective on flour imports from countries other than the British Dominions, India, and Southern Rhodesia. Wheat grain, however, remains free of duty; other grains except maize are subject to it. Quota plans both for domestic and foreign wheats are under discussion. The domestic wheat measure (involving a subsidy to growers in proportion to their sales of millable wheat, financed by levies on flour production and imports) will presumably come into operation with the crop of 1932; and Empire quota plans are to be discussed at the Imperial Conference at Ottawa in July 1932. Except for some influence on flour importation, the new British policy has little bearing on the present market situation.

Neither France, Italy, nor Germany<sup>1</sup> altered the standing basic tariff duties on wheat and flour during the period under review, though commercial treaties between France and Hungary, Jugo-Slavia, and Roumania included terms which granted to each of these countries a 30 per cent reduction in duty on annual contingents equal to 10 per cent of the French annual wheat import requirement.

Significant relaxation of milling quotas, of a seasonal character, have been made in France and Italy. The percentage admixture of foreign wheat permitted by French law was increased from 3 to 10 per cent on February 1; and successive relaxations followed, bringing the admixture to 45 per cent on April 1. Last year only 25 per cent was permitted as late as the end of April. In Italy, quotas for imported durum wheat were raised from 25 to 50 per cent

in Jugo-Slavia. Efforts to find assured export outlets for grain have mainly involved further negotiations of commercial agreements with neighboring grain-importing countries. Detailed consideration of the operation of governmental controls in the Danube countries are available in successive issues of *World Wheat Prospects and Foreign Crops and Markets*.

<sup>1</sup> In March 1932, trade journals mentioned reduction of German duties as probable after April 1, but up to April 20 no change had been announced other than that permission had been granted to import free of duty 7.4 million bushels of wheat for poultry feed.

on January 1 and to 80 per cent on February 1; quotas for imported bread wheats were successively raised from 5 to 30 per cent on February 1, to 60 per cent in southern Italy and 40 per cent in northern Italy on March 1, and to 70 per cent in the south and 50 per cent in the north on March 21. Effective April 26, quotas for durum became 85 per cent in the south and 90 in the north; and for bread wheats, 85 in the south and 60 in the north. This is Italy's first year under a quota system.

In Germany the permitted admixture of foreign wheat remained unchanged at 3 per cent (with a 30 per cent maximum attainable by the use of imports obtained with export certificates). Relaxation of the regulations was rumored to be imminent in March, but on the basis of an inquiry into wheat stocks in the hands of dealers (see below, p. 388), it was officially stated (but not generally accepted by the trade) that supplies were ample to cover requirements until the new crop was harvested.

Changes of duties and regulations among the minor European importing countries were not of large importance, and need not be listed here.

### IMPORTS AND THEIR DISTRIBUTION

The distribution of total shipments in December-March between Europe and ex-Europe was much the same as last year, as appears from the following figures, in million bushels:

Dec.-Mar. (17 weeks)	Total	To Europe	To ex-Europe
1926-27 .....	302	256	46
1927-28 .....	273	223	50
1928-29 .....	346	245	101
1929-30 .....	188	140	48
1930-31 .....	242	170	72
1931-32 .....	246	174	72
Average			
1926-31 .....	270	206	64

In both years substantially more than the five-year average fraction of total shipments went to ex-Europe, substantially less to Europe; both years, and 1929-30 as well, were characterized by drafts upon accumulated stocks in Europe in these months. Although shipments to Europe were of almost the same size in 1931-32 and 1930-31, one

may infer that European imports during these months were substantially smaller this year than last because stocks afloat to Europe increased by 23 million bushels between December 1 and April 1, whereas last year the increase was only 2 million. Shipments to ex-Europe showed, as usual, an increase between these two periods, but a smaller increase this year than last (10 as against 30 million bushels). This probably reflects mainly differences in the price situation,<sup>1</sup> though other factors also were operative.

Statistics of shipments covering a longer period, August–March, are more significant in their bearing on important developments of the crop year. These are given below, in million bushels:

Aug.–Mar. (34 weeks)	Total	Ex-Eu- rope	Europe		Orders	U.K.	Conti- nent
			Re- ported	Ad- justed <sup>a</sup>			
1926-27..	535	83	452	415	90	111	247
1927-28..	525	81	444	422	91	110	243
1928-29..	631	154	477	451	95	107	275
1929-30..	408	96	312	315	90	84	139
1930-31..	512	114	398	389	138	78	182
1931-32..	521	135	386	366	142	85	160

<sup>a</sup> By subtracting from the reported figures the amounts by which stocks afloat to Europe were increased between August 1 and April 1 following.

It is clear that Europe has taken less wheat this year than last. The decline is the larger when adjustment is made for changes in stocks afloat to Europe, and it has come in direct shipments to continental countries rather than in shipments to the United Kingdom and to "orders." Shipments to orders have been exceptionally large in the past two years because so much Russian wheat has been shipped on consignment. Thus far the crop year has been characterized by exceptionally heavy shipments to ex-Europe; the 135 million bushels reported is the largest on record except for 1928–29, when India took large quantities of Australian wheat.

The distribution of ex-European ship-

ments by destinations, in August–March, is given in million bushels in the tabulation below:

Aug.–Mar. (34 weeks)	Total	China and Japan	Central America <sup>a</sup>	Brazil	India	Others <sup>b</sup>
1926-27.....	82.8	21.1	35.7	14.0	1.1	10.9
1927-28.....	80.8	21.2	30.4	18.0	1.5	9.7
1928-29.....	153.8	50.0	44.0	19.0	21.3	19.5
1929-30.....	95.5	26.6	36.4	19.5	5.3	7.7
1930-31.....	114.2	40.2	39.1	17.1	7.3	10.5
1931-32.....	134.5	64.1	40.5	21.7	0.0	8.2

<sup>a</sup> Includes Venezuela, West Indies, Dutch East Indies, etc.  
<sup>b</sup> Egypt, North and South Africa, Chile, Syria, Peru, Palestine, New Zealand.

Widespread economic depression, and in some countries the raising of tariff barriers as well, have doubtless tended to keep shipments to ex-Europe at levels lower than they might otherwise have attained; this is suggested principally by the relative size, in 1928–29 and 1930–31, of the shipments to "others" and to the group called "Central America." Low wheat prices, however, have operated in the opposite direction, and were undoubtedly the main reason why China and Japan took the largest quantity in at least eight years, and possibly the largest in history. It is probable, however, that these takings would have been somewhat less high if wheat and rice crops in the Far East had not been short, and in the absence of shipments on stabilization sales to China on long-term credits. Shipments to Brazil in August–March were also probably enlarged by the movement of stabilization wheat in exchange for coffee; but when the year closes, it may not appear that this wheat served significantly to enlarge Brazilian imports.

To judge by statistics of net imports mostly covering only the months of August–February (see Appendix Table X), the outstanding features of European trade were exceptionally heavy net imports into the British Isles, France, and Scandinavia, and notably small imports into Italy and Germany. Poland was again a net-exporting country, but of only a small quantity. Among the minor importing countries, the effect of governmental measures tending to restrict imports is apparent especially in the net import statistics for the Nether-

<sup>1</sup> In most of December–March of both years, when shipments to ex-Europe were of the same size, international prices were rather stable and at about the same low level; but they were substantially higher in August–November 1930 than in the same months of 1931.

lands, Austria, Spain, and Portugal. The fairly heavy imports of Czecho-Slovakia reflect the short domestic crops of wheat and rye. The Scandinavian countries, Belgium, and possibly Switzerland have imported wheat rather heavily partly for feed use. There are no indications of accumulation of wheat stocks in any of these minor importing countries. Quite generally both domestic and import wheat seem to have passed into consumption. It is not improbable that in some of these countries, where net import statistics for August-February were relatively small, enlarged takings will be necessary in March-July, and the year's total imports will appear relatively larger than August-February imports.

The data for the major importing countries warrant more discussion. Rather heavy August-February net imports into the British Isles were to be expected in view of the short crop of domestic wheat. In fact the net imports in these months were of record size, some 160 million bushels as against an average of 133 million in the five preceding years, and 144 million in 1930-31. This year, as last year, the heavy imports went partly toward increase of port stocks, and were necessary partly because British farmers have not sold their wheat freely. It seems clear, however, that wheat consumption has been relatively heavy, probably in feed use especially; for prices of oats and barley have for several months exceeded wheat prices, pound for pound.

Italy's net imports in August-February were extraordinarily small—only 7.3 million bushels as against a five-year average of 35.5 million. This reflects the joint influence of a large domestic wheat crop and the quota system (which makes for close utilization of available domestic supplies), rather than reduced wheat consumption. The situation was similar in Germany, though further reduction of wheat consumption—a reduction which began in 1929-30—may have occurred there, with rye and potato flour further displacing wheat flour. Together, Germany and Italy were mainly responsible for total European wheat imports smaller in August-March this year than last. France, with only an average crop and with a low inward carryover, has had to import considerably more wheat this year than last, when a shorter crop was amply supplemented by a larger inward carryover. Since stocks on April 1, 1932, were presumably very low if trade reports reflect the facts, there is no conclusive evidence of reduced consumption thus far in 1931-32, unless the crop of 1931 was heavily overestimated. The net imports of 37.5 million bushels in August-February must much exceed the permitted admixture of foreign wheat with domestic in the mill mix; but it is not clear how far this reflects evasion of the quota regulations on the one hand and imports from French North Africa (which are not counted as foreign wheat) on the other.

## II. CHANGES IN THE SUPPLY POSITION

Supplies of wheat available to the world outside of Russia, in 1931-32, now appear to be just about as large as in 1930-31, and some 30 million bushels larger than was indicated in December.

World visible supplies of wheat were maintained at record heights during the period; on April 1 they stood 18 million bushels higher than last year. Commercial stocks of United States wheat in North America were strikingly higher than in any earlier year; and Canadian visibles were consistently somewhat higher than in any of the ten preceding years except 1928-29, 1929-30, and 1930-31.

World wheat stocks, visible and invisible

combined, undoubtedly remained at an extremely high level as of April 1, 1932. But the past year has probably witnessed substantial reduction in the aggregate, chiefly in positions for which direct estimates cannot be made. March 1 stocks of United States wheat in North America were close to 70 million bushels larger this year than last. There were increases in wheat stocks afloat to Europe, in ports and on farms in the United Kingdom, and on farms in Germany; but these increases were probably less than 20 million bushels in the aggregate. On the other hand, Canadian stocks on March 31 were 37 million bushels smaller this year than last, and Argentine

and Australian about 70 million bushels smaller. In addition, reductions not subject to measurement probably occurred in the Danube basin, India, and the European importing countries as a group. Aggregate reductions, therefore, must substantially have exceeded aggregate increases, possibly by 50 to 100 million bushels.

Rye stocks in Europe excluding Russia were undoubtedly much smaller this year than last, probably standing at the lowest level in five years. There must also have been a sizable reduction of wheat stocks, and probably of rye as well, in Russia.

CHANGES IN CROP ESTIMATES

Revisions in crop estimates which have appeared since late December suggest that the world wheat crop of 1931 was actually about 36 million bushels larger than was indicated four months ago. Of this net increase, almost 33 million bushels represented changes in the crop estimates of exporting countries; increases of over 5 million bushels were reported for each of four exporters, Argentina, Australia,<sup>1</sup> Roumania, and Canada.<sup>2</sup> Net decreases in estimates, few in number, totaled only 5 million bushels. No official estimate of the Russian crop has yet been published; but recent developments (including the establishment of a grain loan fund to supply seed for spring sowings and to relieve the general food shortage in eastern regions of the USSR which suffered from drought last year) suggest that the crop may have been smaller than we anticipated in December.<sup>3</sup>

As compared with other recent years, the crop revisions of January–April 1932 were neither unusually numerous nor unusually large; but fewer decreases than usual were reported, and the aggregate net increase therefore was fairly large.

In view of the revisions published during the past three months, the wheat supply

<sup>1</sup> The quality of the new Argentine and Australian crops appears to be exceptionally good.

<sup>2</sup> As we had anticipated, the estimate of the Canadian crop of 1930 was also revised upward—from 398 to 421 million bushels.

<sup>3</sup> See WHEAT STUDIES, December 1931, VIII, 206.

<sup>4</sup> Broomhall's data adjusted to include stocks of United States wheat in Canada. See Appendix Table V.

position for 1931–32 now compares as follows with that for each of the five preceding years, in million bushels:

Year	Stocks ex-Russia <sup>a</sup>	Crops ex-Russia	Russian exports	Total
1926–27.....	482	3,371	49	3,902
1927–28.....	521	3,593	7	4,121
1928–29.....	590	3,911	0	4,501
1929–30.....	858	3,421	10	4,289
1930–31.....	809	3,687	112	4,608
1931–32.....	904	3,622	85 <sup>b</sup>	4,611

<sup>a</sup> Our figures, including reasoned but rough estimates for various countries.

<sup>b</sup> Our tentative forecast.

Aggregate wheat supplies available to the world ex-Russia in 1931–32 were approximately equal to the supplies available in 1930–31, and considerably larger than in 1928–29, despite the smaller world crop, ex-Russia, in the present season. Future revisions of estimates now standing are not likely to change this broad picture significantly, though the details may be altered; some commentators regard the French crop of 1931 as overestimated.

VISIBLE SUPPLIES

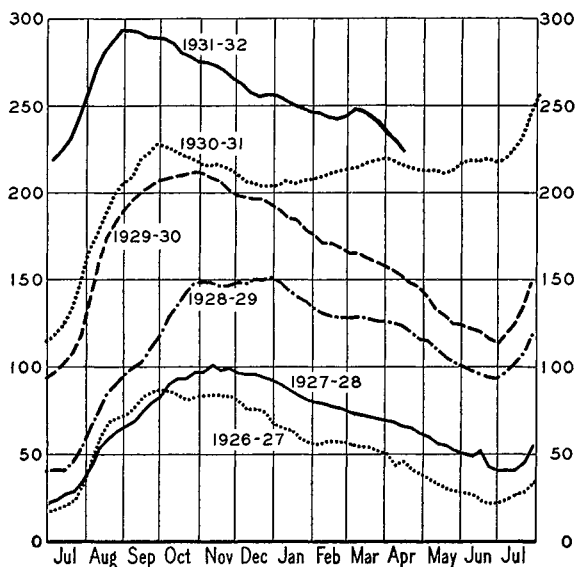
From December 1 to April 1, world visible supplies of wheat continued to set new monthly high records. The general level and course of world visibles during December–April, for the past six years, compare as follows in million bushels:<sup>4</sup>

Year	Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1
1926–27.....	302	380	382	374	345
1927–28.....	352	403	425	405	383
1928–29.....	467	572	557	529	498
1929–30.....	562	592	585	557	524
1930–31.....	546	588	606	635	605
1931–32.....	571	638	660	640	623

Monthly changes in these supplies were not strikingly unusual, although fairly large increases occurred in December and January chiefly as the result of large increases in Australian and Argentine visibles; and a somewhat small decline occurred during March with an unusual increase in Canadian visibles.

Commercial stocks of United States wheat in North America remained at record levels, but continued in December–March the decline of September–November, as shown in Chart 4. The net decline from

CHART 4.—UNITED STATES WHEAT VISIBLE SUPPLIES, WEEKLY 1931–32, WITH COMPARISONS\*  
(Million bushels)



\* Including United States wheat in Canadian lake and Atlantic ports. See Appendix Table IV.

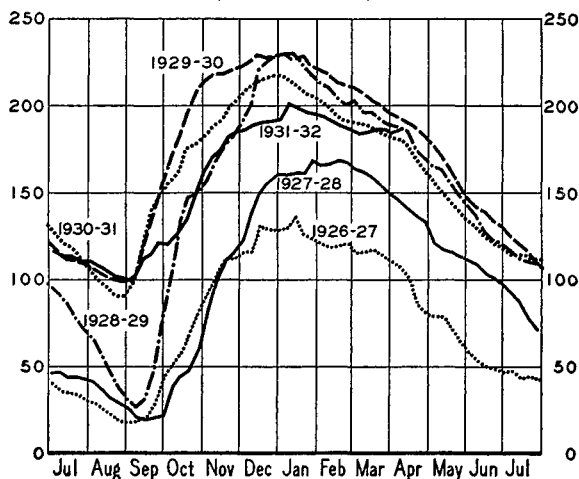
the peak of late August to April 2 was 59 million bushels; over half of this occurred in December–March. The peak this year came much earlier than usual because the winter-wheat crop was large and the spring-wheat crop small. The decline from the peak has been greater than usual, in the face of small mill production and only moderate exports, chiefly because of exceptionally heavy feed use and the retention of heavy stocks on farms. In December–March 1930–31, visible supplies increased, with the Stabilization Corporation accumulating wheat which in the absence of the pegged price might have remained on farms or in mills.

The downward course of United States visibles during September–March was significantly interrupted only once, around the first of March. At this time receipts at primary markets showed a big bulge, reflecting the arrival of the large quantities

of wheat shipped from country points in anticipation of increased freight rates on February 20,<sup>1</sup> and partly also of tax payment and/or assessment on March 1. Since early March United States visibles have declined at an unusually rapid rate.

Visible supplies of Canadian wheat (see Chart 5) were considerably lower in December–March 1931–32 than in the corresponding period of either 1928–29 or 1929–30; and in December–February they were also lower than last year. The mid-Janu-

CHART 5.—CANADIAN WHEAT VISIBLE SUPPLIES, WEEKLY, 1931–32, WITH COMPARISONS\*  
(Million bushels)



\* Includes Canadian wheat in United States lake and Atlantic ports. See Appendix Table IV.

ary peak was followed by a decline less rapid in the present season than in any of the three preceding; and in early April visibles were a little above those at the corresponding date in 1931. The relatively slow decline during January–March 1932 was due mainly to heavier marketings this year than in the same months of 1930 or 1931, and to considerably smaller exports than in 1929.

Net changes in visible supplies (Broomhall's data) in the various positions between December 1 and April 1, 1931–32,

<sup>1</sup> These increases represented a re-establishment of the rates in force prior to August 1, 1931, when reductions ordered by the Interstate Commerce Commission became effective. In January the United States Supreme Court ordered a rehearing of the rate case, on account of "changed conditions," and, in effect, set aside the reduced rates ordered by the Commission.

compare as follows with other recent years, in million bushels:

Year	World	United States	Canada	Australia	Argentina	Afloat to Europe	U.K. ports
1926-27..	+42	-46	-16	+51	+13	+39	+ 1.4
1927-28..	+31	-49	+26	+35	+ 9	+11	- 1.9
1928-29..	+31	-42	+ 8	+45	+10	+ 8	+ 2.3
1929-30..	-39	-66	-28	+54	+ 3	+ 6	- 7.5
1930-31..	+60	-10	-16	+79	+ 5	+ 2	- 1.4
1931-32..	+52	-37	0	+69	+11	+23	-14.2

The net increase in world visibles during December - March 1931 - 32 was relatively larger than in any of the five preceding years except 1930-31; this was chiefly due to unusually big increases in Australian stocks and stocks afloat to Europe, combined with only a moderate decrease in North American supplies. The large increase in Australian visibles reflected the rapid marketing of a large crop, while the big increase in ocean supplies reflected a notable improvement in European demand for wheat, met largely by heavy shipments from the Southern Hemisphere which are afloat a longer time than shipments from most Northern Hemisphere countries.

#### MARCH STOCKS IN NORTH AMERICA

Wheat stocks reported on March 1, 1932, within the United States (see Appendix Table VI) stood at a new record high level. Aggregate stocks on farms, in country mills and elevators, and in the commercial visible were 498 million bushels, an increase of 45 million bushels or 10 per cent over the unprecedentedly high figure for 1931.

The increase on farms alone was nearly 46 million bushels, doubtless reflecting a strong disposition among farmers to hold at the low prices prevailing. The commercial visible increased only 8 million bushels, while stocks in country mills and elevators decreased 9 million. Stocks on farms were low rather than high in the spring-wheat belt, where the crop of 1931 was notably short, and on the Pacific Coast; they were exceedingly large in the winter-wheat belt.

If in addition account is taken of March 1 stocks of United States wheat in store in

Canada (mainly the property of the Grain Stabilization Corporation), the total becomes 526 million bushels, 68 million more than a year ago. Up to March 1 these stocks in Canada (then 27.7 million bushels) had declined only 4.8 million bushels from their peak in early October.

The Census Bureau's report on wheat stocks in and in transit to city mills as of March 31 will probably show that wheat stocks in these positions were about like those of a year ago, with increase of stocks owned by mills offsetting decrease in the quantity "stored for others."<sup>1</sup> Aggregate flour stocks in the United States were probably about average on March 1 in both years; the deviations from average probably do not exceed 1 or 2 million barrels.

Unlike the United States, Canada held smaller stocks in March (reported as of the 31st; see Appendix Table VI) this year than last, 243 as compared with 280 million bushels. The reduction was almost entirely in stocks on farms. Farmers have had less to sell, and clearly have been less disposed to hold wheat this year than last. The bounty of 5 cents per marketed bushel (which expires July 31, 1932) has doubtless influenced their decision, and possibly also the rather steady rise of Winnipeg wheat prices from late December to the end of February.

#### MARCH STOCKS IN OTHER EXPORTING COUNTRIES

Reported visible supplies on April 1, 1932, were slightly the largest in six years in Argentina, and in Australia smaller only than those of 1931 (see Appendix Table V). But these visibles refer only to port stocks in Argentina, and in Australia farm reserves are not included. A more comprehensive though necessarily rough index of the stocks position can be constructed by subtracting, from estimated stocks at the beginning of the Northern Hemisphere crop year plus new crops, the estimated domestic utilization for food and seed in the crop year plus net exports during August-March. The outcome of this calculation (see Appendix Table XIII for basic data), giving estimated stocks on April 1 for ex-

<sup>1</sup> See *Special Bulletin* of the Millers National Federation, April 15, 1932.

port, carryover, and domestic utilization for purposes other than food and seed, is as follows for the past six years, in million bushels:

Apr. 1	Argentina	Australia	Total
1927 .....	138	77	215
1928 .....	148	54	202
1929 .....	223	65	288
1930 .....	91	62	153
1931 .....	159	121	280
1932 .....	133	77	210

There is a substantial margin of error in several components of the calculation. Yet it seems proper to infer that on April 1, 1932, stocks available for export and carryover in these two countries were about of average size, and much below those of 1929 and 1931. The reduction in the course of the past year, amounting to roughly 70 million bushels, was due mainly to smaller crops in 1931 than in 1930, and to substantially heavier exports in January–March this year than last.

Trade reports<sup>1</sup> suggest that wheat stocks in the Danube basin were small at about April 1, 1932. On the assumption that wheat consumption has been maintained close to its approximate line of trend, we infer that consumption and exports in August–March were large enough, even with available supplies larger in 1931–32 than in 1930–31, to bring stocks in April 1932 below those of 1931 and to a level about average.

<sup>1</sup> See *Corn Trade News*, April 5, 1932.

<sup>2</sup> Marketings were smaller this year than last, and there is some evidence that farmers have been holding wheat in anticipation of the adoption of the quota scheme. But the change in stocks could not have been large.

<sup>3</sup> As of March 1, 1932, stocks of wheat in warehouses and mills in Germany were for the first time estimated as 19.9 million bushels, about 70 per cent of the farm stocks on March 15. But no comparisons are available to show whether these stocks were relatively large or small.

<sup>4</sup> See *Foreign Crops and Markets*, March 28, 1932, p. 492. The figures were 31.5 million bushels in 1932, and 37.0 million in 1931. Rye stocks were 73.5 million bushels as against 112.3 million, a large reduction. In Germany the rye stocks on farms as of March 15 were 49.3 million bushels in 1932, and 77.1 million in 1931. Since these are the two major rye-consuming countries of Europe ex-Russia, rye stocks in the import area must have been much smaller this year than last, or indeed much the smallest in five years. It follows that bread-grain stocks on April 1 were much smaller this year than last, and probably much the smallest in five years.

Russia's wheat crop of 1931 probably fell so far below that of 1930, while August–March exports in 1931–32 were not much smaller than those of 1930–31, that stocks within the country must have been much smaller in April this year than last unless (as seems improbable) there was a decline in consumption roughly corresponding to the decline in crop.

Stocks of old-crop wheat in India may have stood at a moderately high level on account of large total available supplies for 1931–32; but with consumption as elastic as it appears to be, we assume that the April level in 1932 was lower than in 1931, when it was probably unusually high.

#### MARCH STOCKS IN IMPORTING COUNTRIES AND AFLOAT

The April 1 level of wheat and flour stocks in European importing countries as a whole, plus supplies afloat to Europe, was probably somewhat lower in 1932 than in 1931, when the level appears to have been low as compared with at least the three preceding years.

Stocks afloat to Europe about April 1 were about 11 million bushels larger than last year, but still at a moderate level for this season of the year; port stocks in the United Kingdom were some 3 million bushels larger this year than last, when they stood high for this date (see Appendix Table V). Stocks of British domestic wheat also were larger.<sup>2</sup> In Germany, farm stocks of wheat on March 15 were estimated about 8 million bushels larger in 1932 than in 1931.<sup>3</sup> Except in these instances, the evidence generally points to smaller stocks than last year.

Broomhall estimated April 1 stocks in six continental ports (Hamburg, Bremen, Rotterdam, Antwerp, Genoa, and Naples) at 5.3 million bushels in 1932, and 7.5 million in 1931. Farm stocks in Poland on February 1 were placed 5.5 million bushels lower this year than last.<sup>4</sup> Trade reports, as well as available statistics of crops and net imports, point to reduction of wheat stocks in Spain, Portugal, the Baltic states, Holland, the Scandinavian countries, Austria, and Czecho-Slovakia. As to Belgium and Switzerland, the position is not clear. In France and Italy available supplies

(crops plus inward carryovers plus net imports) have thus far been smaller this year than last; and this, together with the facts that domestic wheat prices have risen and that milling quotas have been raised, leads us to infer that April 1 stocks in these important countries must have been substantially lower in 1932 than in 1931.

The numerous probable reductions in April 1 wheat stocks between 1931 and 1932 seem likely to have more than offset the few probable increases in European importing countries as a group and the increase in stocks afloat to Europe; but the

data do not warrant numerical evaluation of the change.

As to ex-Europe the position is less clear. Stocks afloat to ex-Europe (which are not reported), particularly the Orient, were probably larger than usual, but no larger than last year. The same may be true of stocks of import wheat in China and Japan. There is little evidence of large accumulations of import wheat stocks in most ex-European countries, and it seems reasonable to assume that arrivals have gone to expand consumption of import wheat, not to augment stocks.

### III. WHEAT CONSUMPTION IN 1931-32

In December 1931, we expressed the opinion that wheat consumption in 1931-32, in the world excluding Russia and ex-European importing countries, might exceed consumption in 1930-31 by roughly 70 million bushels.<sup>1</sup> This estimate now appears too high. Statistical and other evidence appearing since December suggests that consumption (net mill grindings, seed use, and feed use) in the United States is not likely to prove as heavy as we then anticipated. Fragmentary evidence yields no good reason for altering our rough estimates of probable consumption in Canada, Argentina, Australia, the Danube basin, and European importing countries, though a small increase in the aggregate would be more appropriate than a reduction. It still appears probable that in the areas designated above the crop year 1931-32 will rank, like 1930-31, as one characterized by exceptionally heavy aggregate wheat consumption, but on account of heavy utilization of wheat for feed (mainly in North America) rather than for food. The data now available do not tend to confirm the tradition that bread consumption rises in hard times.

#### THE UNITED STATES

The aggregate disappearance of wheat in the United States in July-February 1931-32 was relatively large, but not strikingly so; as appears from the tabulation below, it approximated 713 million bushels as against 696 million in 1930-31 and a five-year average of 683 million:

July-Feb.	Aggregate disappearance <sup>a</sup>	Net exports <sup>b</sup>	Domestic disappearance			
			Total	Milled net <sup>c</sup>	Seed <sup>d</sup>	Other
1926-27....	658	159	499	346	84	69
1927-28....	718	166	552	345	90	117
1928-29....	677	106	571	352	84	135
1929-30....	665	111	554	348	82	124
1930-31....	696	86	610	342	77	191
1931-32....	713	90	623	334	75	214

<sup>a</sup> Crop plus July 1 stocks (on farms, in country mills and elevators, visible, in and in transit to city mills) minus subsequent March 1 stocks (on farms, in country mills and elevators, and in the visible).

<sup>b</sup> Wheat and flour, including shipments to possessions.

<sup>c</sup> Estimated from net retention of flour as shown in Appendix Table VII.

<sup>d</sup> Including seed for spring wheat not sown by March 1.

With exports small, however, the total domestic disappearance was strikingly large, exceeding even the high figure of 1930-31. Seed use for the year is likely to fall below that of 1930-31, and wheat milled and retained domestically also has probably been somewhat smaller this year than last.<sup>2</sup> Apparently, therefore, the heavy total domestic utilization thus far in 1931-32 has been due mainly to exceptionally heavy disappearance of wheat for feed, as waste, or in industry. Murray's estimates of wheat fed on farms<sup>3</sup> support this inference.

<sup>1</sup> See WHEAT STUDIES, January 1932, VIII, 248.

<sup>2</sup> Total flour production fell off more than net retention of flour; flour exports and shipments to possessions were substantially smaller this year than last. See Appendix Table VII.

<sup>3</sup> Of 137 million bushels in July-February 1931-32 as against 105 million in the same months of 1930-31; see circular of Clement, Curtis, and Company, Chicago, March 2, 1932.



Our present estimate of 334 million bushels milled and retained domestically in July–February warrants further comment. Unless the usual July 1–March 1 increase of flour stocks was smaller this year than in earlier years, or unless grindings by custom mills were substantially larger than usual, the estimate suggests that both aggregate and per capita disappearance of flour thus far in 1931–32 have been the smallest in at least six years. The July 1–March 1 increase in flour stocks was presumably larger, not smaller, this year than usual, if only because stocks were at a low level last July. There may have been exceptionally large flour production in custom mills; nevertheless the main explanation of the relatively small quantity of wheat milled and retained now appears to be reduction of total and per capita flour disappearance.

To adopt this interpretation is to relinquish the view that annual per capita consumption of flour in post-war years has remained constant at .9 barrel. If this view is now subject to revision, our earlier conclusion<sup>1</sup> that per capita flour consumption in 1930–31 was maintained at .9 barrel despite substantially lower net mill grindings than in earlier years requires qualification. It now appears that economic depression has had the effect of reducing flour consumption (not necessarily ingestion)<sup>2</sup> both in 1930–31 and thus far in 1931–32. Pending detailed discussion of this subject, it suffices to say that we no longer

expect that net mill grindings in the United States in July–June 1931–32 will reach 530 million bushels, our estimate of last December.<sup>3</sup> Net mill grindings of this size for the year would imply grindings in March–June 1932 some 34 per cent above the small grindings of March–June 1931, and 22 per cent or more above the substantially larger ones in March–June of the four preceding years.

On the assumption that some of the 40 million bushels of the Stabilization Corporation's wheat holdings made available by Congress for relief<sup>4</sup> may serve somewhat to swell net grindings in March–June (partly to increase flour consumption and partly to enlarge flour stocks), we are disposed to estimate net mill grindings in July–June 1931–32 as around 495 million bushels. This, however, is a liberal estimate in view of the fact that July–February net grindings in the four years preceding 1930–31 averaged 68.8 per cent of July–June grindings in the same years, and on this basis the grindings of July–June 1931–32 would reach only 484 million bushels.

In December, we estimated that wheat consumption (net mill grindings, seed use, and feed and waste) in the United States in July–June 1931–32 might approximate 766 million bushels as compared with the high figure of 714 million bushels in 1930–31. Other things equal, reduction of our estimate of net mill grindings by 35 million bushels would call for reduction of total estimated consumption to 731 million bushels. But Murray's estimate of wheat fed on farms suggests the propriety of an increase in our December figure for wheat fed and wasted (from 163 to 171 million bushels); and with a trifling increase in prospective use of wheat for seed, it seems reasonable to reduce our December estimate of total consumption in 1931–32 only to roughly 741 million bushels. It still seems probable that aggregate consumption in 1931–32 will exceed the high figure of 1930–31.

#### OTHER EXPORTING COUNTRIES

Canadian milling statistics show that, though flour production and exports in August–February 1931–32 fell below the figures for the two preceding years, net domestic retention of flour increased; hence

<sup>1</sup> See WHEAT STUDIES, December 1931, VIII, 123.

<sup>2</sup> Disregarding changes in flour stocks, it would be possible for net domestic retention of flour to decline without decline in human ingestion of bread; that is, the decline in net flour retention might represent a decline in the wastage of bread or in the utilization of bread for animal feed. We are not in a position to measure ingestion.

<sup>3</sup> See WHEAT STUDIES, January 1932, VIII, 248, 260.

<sup>4</sup> The joint congressional resolution was signed by the President on March 7, 1932. Under its terms, not more than 40 million bushels of the Corporation's wheat are to be delivered on application (approved by the President) by the Red Cross or its designated agencies prior to May 1, 1933, for free distribution as food, or as feed in the 1931 crop failure area. Arrangements have been made whereby the costs of milling and transportation are in the first instance to be paid by millers, who in turn will be reimbursed by offals retained and by wheat from the quantity made available.

As of April 11, 1932, a report of the Red Cross stated that 17 million bushels had already been requisitioned. See *Northwestern Miller*, April 6, 1932.

there is not yet evidence of reduced aggregate flour consumption in Canada. Seed use in 1931-32 is not expected to fall appreciably below that of 1930-31. As was earlier expected, official March estimates of wheat unmerchantable and lost in cleaning gave a relatively low figure, only about 9 million bushels, for utilization in these categories. The probable quantity of sound wheat fed and to be fed on farms was officially estimated as 34 million bushels, as compared with 41 million in 1930-31.

No evidence has appeared recently to suggest that our December estimates of wheat consumed for food, used for seed, or fed and wasted in 1931-32 in Argentina and Australia require revision.<sup>1</sup> The Danube countries as a group exported so much wheat in August-March that about 35 million bushels less wheat remained available for domestic utilization this year than last; but it is not yet to be inferred that consumption has been reduced. Somewhat less was presumably used for seed on the reduced sown winter-wheat acreage, and the export bounty on wheat in conjunction with an abundant crop of corn and low prices for both grains in Roumania may have tended there to stimulate substitution of corn for wheat. Yet in the Danube basin as a whole wheat consumption could have been maintained at last year's level, or a little above, through drafts upon the inward carryover, which was substantially larger in 1931-32 than in 1930-31.

Cheap wheat and abundant available supplies have presumably resulted in expansion of consumption in India, involving substitution of wheat for millet.<sup>2</sup> In Russia, consumption was almost certainly smaller in August-March this year than last.

#### IMPORTING COUNTRIES

The following tabulation, in million bushels, is pertinent as a preliminary attempt to measure the aggregate supplies that have been available to European importing countries for all purposes in August-March in the past six years:

Year	Stocks Aug. 1 <sup>a</sup>	Crops	Imports Aug.-Mar. <sup>b</sup>	Available supplies
1926-27 .....	143	921	415	1,479
1927-28 .....	144	1,001	422	1,567
1928-29 .....	161	1,042	451	1,654
1929-30 .....	194	1,147	315	1,656
1930-31 .....	173	1,009	389	1,571
1931-32 .....	143	1,076	366	1,585

<sup>a</sup> Our rough estimates; see WHEAT STUDIES, December 1931, VIII, 190.

<sup>b</sup> Broomhall's August-March shipments to Europe adjusted for changes in stocks afloat to Europe.

It appears probable, in spite of inaccuracies inherent in all three items of the totals, that available supplies have been substantially smaller in August-March 1930-31 and 1931-32 than in the two preceding years. Between these pairs of years consumption for food and feed (but not seed use) has probably fallen off sharply, in large part because of governmental measures that have tended to restrict wheat consumption in several important wheat-consuming countries, especially Germany.

The figures yield, however, no evidence of decline in aggregate consumption in 1931-32 as compared with 1930-31. The available supplies were of much the same size in both years. Since wheat stocks in European importing countries about April 1 were probably smaller this year than last, it seems reasonable to infer tentatively that wheat consumption for all purposes was somewhat larger in August-March 1931-32 than in 1930-31. The increase could hardly have been large; there may have been decline instead of increase in some countries, including Spain and Germany; and such increase as there was may have been mainly in use of wheat for feed and seed, though in some countries (especially Poland) shortage of rye may have tended somewhat to expand wheat consumption. It seems clear that no such decline in European wheat consumption as occurred between the crop years 1929-30 and 1930-31 is now in prospect between 1930-31 and 1931-32.

Since shipments to ex-Europe in August-March 1931-32 have substantially exceeded those of 1930-31, and at the same time there is little evidence of heavier accumulation of April 1 stocks this year, we infer that ex-European importing countries have

<sup>1</sup> See WHEAT STUDIES, January 1933, VIII, 248, 260; also below, Appendix Table XIII.

<sup>2</sup> See *Foreign Crops and Markets*, April 4, 1932, p. 503.

consumed more imported wheat this year. The increase must have come mainly in China, and seems attributable chiefly to lower import wheat prices and shorter crops of wheat and rice. Aggregate wheat

consumption in the Orient (and in ex-European countries generally) may have been lower this year than last if China's wheat crop of 1931 fell substantially below that of 1930.

#### IV. WHEAT PRICE MOVEMENTS

From December to mid-April wheat prices in leading world markets fluctuated within a narrow range on an exceedingly low level.<sup>1</sup> The December decline at Winnipeg, which was not paralleled in other markets, carried the prices of the May future there to within a fraction of a cent of the October low. New lows for the season were recorded at Liverpool on January 28 and March 23, when prices of identical futures declined to points slightly under the previous lows of October 5; and at Winnipeg and Chicago the October low prices were approached within a few cents on March 26. In Buenos Aires, futures prices (allowing for shifts in futures) were at their lowest late in January. These lows, however, were exceptional and short-lived.

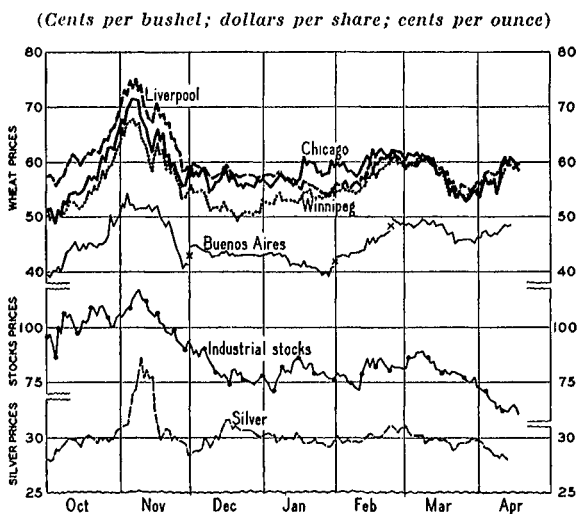
##### THE COURSE OF FUTURES PRICES

Futures prices in the four principal markets (see Chart 6) showed considerable diversity of movement during the period under review. Price movements at Liverpool and Buenos Aires, adjusted for exchange rates, were roughly similar; North American markets gave evidence of independent strength, and varied one from the other. In all markets prices moved within a narrow range, reflecting little change in evaluations of the general statistical position for the season, and (until late March) moderately favorable reports of the growing crops. More strength would probably have been shown in all the markets if general business conditions had shown signs of improving, instead of becoming worse during the period.

After a minor decline during the first week of December, Liverpool prices ruled firm until the second week of January; they tended to sag during the remainder of that

month, but moved upward by about 8 cents (United States currency) from January 29 to February 24. A slight reaction followed; but, on the whole, prices were relatively stable until the third week of March, when a general decline took place in all markets.

CHART 6.—PRICES OF MAY FUTURES IN LEADING MARKETS, OCTOBER–APRIL 1931–32, WITH COMPARISONS\*



\* Daily closing prices from *Daily Trade Bulletin*, Chicago; *Grain Trade News*, Winnipeg; and *London Grain, Seed and Oil Reporter*. For Buenos Aires, December, February, March, and May futures. Dow-Jones index of closing prices of 30 industrial stocks, and prices of bar silver in New York.

Low points of the decline were reached on March 22 in Buenos Aires, March 23 in Liverpool, and March 26 in Chicago and Winnipeg. Thereafter prices advanced to mid-April, recovering most of the earlier loss.

The general course of Liverpool prices outlined above can be explained mainly in terms of anticipated pressure, or lack of pressure, of wheat supplies upon the international market. During December and early January shipments of wheat to the

<sup>1</sup> The factors responsible for the existing low level of prices were discussed in *WHEAT STUDIES*, December 1931, VIII, 84–108.

United Kingdom and to orders, and arrivals of supplies at British ports, were small as compared with estimated requirements. This in itself was a bullish factor; but with port stocks in the United Kingdom unusually high no big advance in prices could occur.

During the last three weeks of January, shipments from the Southern Hemisphere increased greatly (see Chart 3, p. 381). Current demand from the Continent remained small. The United Kingdom consequently received an unusually large proportion of the total supplies shipped to Europe. In view of these large shipments and the high level of port stocks in the United Kingdom, the decline of Liverpool prices might well have been greater had there not been a large current demand for wheat from ex-European countries, prospective improvement of demand on the Continent, and bullishness at Chicago. This bullishness was apparently induced partly by the belief that commodity prices in the United States might be strengthened in consequence of operations of the proposed Reconstruction Finance Corporation.

The price advance that began late in January is probably attributable mainly to three factors: the realization of earlier expectations of increase in the wheat imports of Continental countries; further talk of possible inflation of commodity prices in the United States; and accumulated evidence that exports from Russia would be small during the remainder of the season. The increase in European demand came mainly from France and Italy, where milling quotas for imported wheat were successively raised (see p. 382). With domestic wheat prices in these countries rising rapidly, and Argentine and Australian wheat of good quality available at low prices, the demand for import wheat expanded as milling restrictions were relaxed.

In the United States, the introduction in Congress of the Glass-Steagall bill on February 11 (eventually signed on February 27) helped to bring advances in United States wheat and stock prices, and led to fairly general discussion of prospective price inflation. The influence of this factor was felt abroad as well as in United States wheat markets, and presumably contributed to the advance of Liverpool prices,

especially during the second week of February.

Reports of general wheat scarcity in Russia became more numerous after the middle of February; and finally word came that the Soviet government had arranged to send about a million tons of grain into the southeastern districts, where peasants were suffering as the result of a scarcity of wheat and other grains.<sup>1</sup> This report tended to confirm the growing belief that spring exports from Russia would be small, and hence to strengthen wheat prices.

Other factors influencing the market during February were also mainly of a bullish character. Drought in India was reported to have damaged wheat to such an extent that yields were expected to be below average. News from Russia indicated that winter crops there had suffered from alternate freezing and thawing. United States wheat prices continued to be maintained far above export parity; and neither the Stabilization Corporation nor private wheat owners showed signs of changing their holding policy. Exporters in other countries, encouraged by the improved import demand from Europe, tended to advance their prices; Canadian prices rose even in relation to prices at Liverpool. Finally, shipments to Europe, particularly to the United Kingdom and to orders, were unusually small during the last week of January and the early weeks of February; and port stocks in the United Kingdom showed a fair reduction during this period.

During the first two weeks of March prices remained moderately stable. With a fair Continental demand, heavy shipments to Europe caused little disturbance to the markets. A further reduction in the Italian quota was announced on March 10; and the outlook seemed to be for a continuation of a good demand from Continental countries.

Beginning March 17, however, world wheat markets suddenly turned weak. A flood of bearish news and rumors (chiefly concerned with the possibility of an unloading of the Stabilization Corporation's stocks) reached the markets; and bullish news was mostly disregarded. On March 17, a report that President Milnor of the Grain Stabilization Corporation was about to sail

<sup>1</sup> *Corn Trade News*, February 24, 1932.

for Europe was interpreted to mean that the Stabilization Corporation was anxious to export more wheat, and that it might become a pressing seller sometime during the course of the next few months. On the same date Broomhall reported that weekly shipments from Argentina had again exceeded 7 million bushels; and a cable from Berlin stated that a recent inquiry into the stocks position showed German wheat supplies to be adequate for the remainder of the season. While this latter report was not generally accepted without reservations, it doubtless influenced market sentiment. During the next two days cables from the United States were extremely bearish. Chicago prices broke sharply on the report that Secretary Hyde had announced that the government was planning "an intensive campaign" to dispose of part of the country's surplus cotton and wheat supplies abroad, and that some of the \$200,000,000 provided for agriculture under provisions of the Reconstruction Finance Corporation Act might be used in the campaign. Liverpool wheat prices dropped over 2 cents on March 19; and despite reassuring statements from Chairman Stone, Secretary Hyde, and other officials, prices continued to decline during the early part of the following week. The low point of the decline was reached on March 23, when the May future closed a fraction of a cent (in United States currency) below the closing price of January 28, previously somewhat the lowest price recorded during the season.

After the Easter holidays world wheat prices recovered, mainly on reports of crop damage in the American Southwest. Assurances from Mr. Milnor that sales of stabilization wheat during the remainder of the season would be in accord with the selling policy announced last July, further increases in French and Italian milling quotas, and large decreases in United States visible supplies contributed to the advance. The strength in world wheat markets at this time was the more striking because of concurrent weakness in securities markets.

At Winnipeg, the course of futures prices (in United States currency) differed markedly from the Liverpool course during December-January. Throughout most of December, Winnipeg prices drifted downward, chiefly under the influence of

a small export demand; but from the last week of December to February 1 they rose relative to Liverpool prices. Part of this advance was probably seasonal; but an improvement in export demand and an upturn in securities prices in early January, and strength in Chicago wheat prices later in the month, were contributing factors. During January-February the Chicago-Winnipeg price spread gradually narrowed; and throughout most of March and early April, Winnipeg and Chicago futures prices ran close together, Winnipeg prices being slightly higher. The relative strength in Winnipeg over the period (there was a net gain of about 10 cents in January-February) probably also reflected hopes or expectations that the Imperial Conference next July will result in allotment to Canada of a high quota of British wheat imports.

A sharp advance in Chicago prices on January 16-18 was reflected only in a small degree in other markets. The exact basis for the rise is not clear,<sup>1</sup> but several facts are pertinent. For over a week prior to January 16, the volume of futures trading at Chicago had been small, and such trading as occurred had been confined to a narrow price range. Meanwhile prices of securities had risen, mainly on the anticipation that Congress would soon authorize the organization of the Reconstruction Finance Corporation. As a result of these circumstances the wheat market was in a condition easily to be influenced by any show of speculative activity; and the abrupt price advance of January 16-18 bears witness to this fact.

During the remainder of the month Chicago futures were maintained 3 to 4 cents above identical futures at Liverpool; but in early February, when market news was without feature, Chicago prices sagged as those at Liverpool rose. Finally, around the middle of March, Chicago futures dropped slightly below those at Liverpool, and remained lower during most of the remainder of the period (to April 20).

Relationships between the prices of near and more distant futures were fairly normal (in view of large stocks) at Winnipeg and Liverpool, but somewhat unusual at

<sup>1</sup> Rumors credited heavy buying to an eastern pool of speculators; but these rumors do not seem to have been substantiated.

Chicago, especially during December and January. From early October, when trading started in the July future, until well after the middle of November, the July future at Chicago sold fractionally above the May future in that market. But from late November to late January a reverse price relationship obtained, distinctly unusual in a year in which a heavy carryover was expected. Still more unusual was the fact that the Chicago September future opened in January at a premium of almost one cent over the July, and fractionally above the May, at a time when the July future was selling below the May. In over 45 years this relationship among the May, July, and September futures prevailed only once before—in the spring of 1893. The underlying factors responsible for its existence in January 1932 are not clear at present; but the marked widening of the May–July spread and the substantial increase in the July–September spread during February–April suggest that during these months traders may have increased their forecasts of the volume of commercial stocks likely to remain in private hands at the end of the season. The heavier farm marketings of wheat in February and the consideration and the final enactment of the bill authorizing the Stabilization Corporation to give 40 million bushels of wheat to the Red Cross, were factors operating in this direction. At the beginning of April the relationships prevailing among Chicago futures appeared fairly normal for a year of large carryover.

#### EUROPEAN CASH PRICES

On the British import market, American wheats were quoted only rarely and at irregular intervals in December–March, for little has been sold under the narrow Chicago–Liverpool price spreads. Canadian wheats have commanded a fair-sized premium over wheats imported from Argentina and Australia; but price relationships among the wheats of these three countries have not been unusual.

In the leading Continental importing countries domestic wheat prices tended generally to rise during the period under review, with reductions in supplies of home-grown wheat. The spreads between the prices of these wheats and British par-

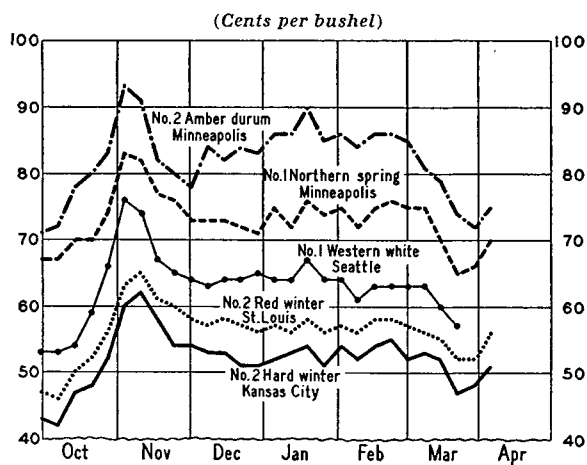
cels have remained strikingly wide, and have even increased. In the past decade, it was only in 1930–31 that spreads of like magnitude were maintained; only in that year were import tariffs and milling regulations at all comparable with those in force during the present season.

In the Danube basin, the prices received by wheat producers and the prices paid by mills grinding wheat for domestic use appear to have been maintained at levels somewhat above British parcels prices in all countries except Roumania. The relatively high prices in Jugo-Slavia and Bulgaria may be ascribed mainly to the operations of government monopolies in those countries, while the grain-ticket system seems to have been the principal factor in maintaining high prices in Hungary.<sup>1</sup> In Roumania, the inability of the government to continue the payment of export bounties appears partially to account for the lower prices prevailing there.

#### UNITED STATES CASH PRICES

The course of cash prices in United States markets was generally similar to the course of Chicago futures prices during December–March (cf. Charts 6 and 7). Several

CHART 7.—CASH WHEAT PRICES IN THE UNITED STATES, OCTOBER–APRIL 1931–32\*



\* See Appendix Table XI.

outstanding differences, however, are noteworthy. During December, the price of

<sup>1</sup> See WHEAT STUDIES, January 1932, VIII, 221–23. More detailed discussions of Danubian prices have appeared in *World Wheat Prospects*, January–March 1932.

Amber Durum at Minneapolis tended upward, while the prices of other cash wheats and of wheat futures remained fairly stable or declined slightly. The result of these divergent movements was the re-establishment of a higher premium for Amber Durum, a premium about equal to that which had prevailed prior to the general decline of wheat prices last November.

In February, cash prices in most markets failed to reflect the full upturn registered by Chicago futures; this is attributable primarily to unusually heavy farm marketings in those weeks. A reduction in protein premiums for hard winter wheats was a contributing factor.

Finally, the decline in prices measured from the peak at the end of February to the low point during the third week of March was greater for most of the important grades of cash wheat than it was for Chicago futures; Western White at Seattle and Red Winter at St. Louis were notable exceptions. Some further reduction in the premiums for protein in winter wheats, and a light milling demand for spring wheat during part of the period, were factors which contributed to the greater decline. In some markets, mills favored purchases of low-protein hard winter wheats on account of earlier accumulation of high-protein wheats.

#### V. SOME ASPECTS OF THE OUTLOOK

The volume of international trade in 1931-32 still seems likely to equal or slightly exceed that of 1930-31. Shipments totals of around 800 million bushels, and net exports of around 840 million, seem reasonable forecasts. Again, as in the past two years, April-July shipments are likely to exceed those of December-March. As compared with our December forecasts, we now expect, for the year ending next July, slightly smaller exports from the United States, Russia, and minor exporters, and more from the Danube basin and Australia. Stabilization Corporation export sales, however, cannot safely be predicted.

World wheat stocks next July seem likely to be lower than last year by 50 to 100 million bushels. This reduction is smaller than we forecast in December, chiefly because of a net increase in crop estimates of around 35 million bushels and prospects for much smaller increase in milling for domestic use in the United States. The outward carryover of United States wheat in North America seems certain to exceed last year's record total, perhaps by 30 million bushels or more. Elsewhere reduced stocks are generally in prospect, and stocks outside North America are not likely to be above average levels. The great bulk of the accumulated wheat surplus will be in the United States, where stocks in most positions are likely to be high. World wheat visibles on August 1 are likely to be substantially lower than on August 1, 1931.

The new-crop outlook points clearly to a fairly good 1932 crop in India, and a winter-wheat crop in the United States substantially below last year's record total; a smaller outturn in eastern Europe ex-Russia is also probable. Larger crops of spring wheat in North America, however, are probable unless the weather is exceptionally adverse. We find at the moment no trustworthy indications that the world crop ex-Russia will differ widely (say by 100 million bushels) from last year's total. Some improvement in the wheat price situation is possible in 1932-33; but considering the large (though somewhat reduced) size of the prospective world wheat carryover and the persisting policies of economic nationalism applied to wheat, no striking reversal of the situation is likely unless further crop developments should prove, on the whole, exceptionally adverse. A big crop would somewhat intensify the present situation.

Apart from unpredictable changes in new-crop prospects and from further decline in the trade cycle, conditions appear favorable to moderate firmness rather than sustained weakness in world wheat prices in the next few months. North American wheat visibles seem likely to fall below the record monthly totals that were established in 1931 and early 1932. Wheat prices in the United States may not remain next year as far above their normal relation to world market prices as in most of the past seven or eight months, but no such radical read-

justment as occurred last summer is in prospect at this time.

#### NEW-CROP PROSPECTS

The prospective size of the world wheat crop of 1932, including or excluding Russia, is not safely predictable as early as April. Pertinent information consists mainly of preliminary estimates of sown winter-wheat acreage in Northern Hemisphere countries, of scattered spring condition and abandonment reports, and of rather insecurely founded appraisals of probable sowings of North American spring wheat and of subsoil moisture in the spring-wheat area. Statistics of acreage point to a somewhat smaller winter-wheat sown area in the Northern Hemisphere this year than last, decreases mainly in the United States and Roumania more than offsetting increases mainly in India and France. Although an official inquiry into the intentions of United States farmers to plant spring wheat yielded the prospect of a moderate increase in area sown as compared with the small one of 1931, it is not yet possible to predict the size of the sown spring-wheat area in North America, and much less the sown winter-wheat area in Argentina and Australia.

Abandonment of winter-wheat acreage now appears to be fairly heavy in Europe east of Italy-Switzerland-Germany and in the United States. But the prospects for sown and abandoned winter-wheat acreage and for sown spring-wheat acreage taken together do not point definitely either to a larger or to a smaller world wheat crop excluding Russia in 1932 than in 1931. Nor do reports of a fairly good crop in India (348 million bushels, according to the official estimate) and notably low condition in the United States southwestern winter-wheat belt as of April 1<sup>1</sup> throw much light on the prospective world outturn. As we interpret the available evidence, a crop 100 mil-

lion bushels larger than that of 1931 lies about as much within the range of probability as a crop 100 million smaller; and with sufficiently adverse weather there could be a distinctly short crop like that of 1929, with sufficiently favorable weather a distinctly large crop like that of 1928, though neither is indicated by any present information. In short, with what is known or may reasonably be predicated of acreage and abandonment, the direction of change in size of the 1932 world crop as well as the extent of change seems to depend on weather subsequent rather than antecedent to mid-April.

#### INTERNATIONAL TRADE

The volume of international trade in April-July seems likely for the third successive year to exceed that of December-March, which in terms of Broomhall's shipments was 246 million bushels. The excess of April-July over December-March shipments was 33 million bushels in 1930-31. Total stocks of wheat in European importing countries were probably lower on April 1 this year than last, and of rye considerably lower. Import restrictions are less stringent in some countries, more so in others; but on the whole, imports by Europe in April-July bid fair to be greater than last year.

On the other hand, stocks afloat to Europe on April 1 (see Appendix Table V), were at a level permitting a larger reduction than occurred in April-July last year; and shipments to ex-Europe may decline more between December-March and April-July this year than last, if only because Australia has less cheap wheat to sell to the Orient and because Brazil may import less on account of her earlier heavy receipts from the United States. We lean to the view that the factors making for a larger increase of April-July over December-March shipments will offset those making for a smaller increase. If they should, shipments in April-July 1932 would approximate 280 million bushels, as against Broomhall's balance of 255 million; and shipments in the crop year 1931-32 would approximate 800 million bushels, as against his standing estimate of 776 million.

Shipments of roughly 800 million bush-

<sup>1</sup> The official report, issued April 11, placed condition as 75.8 per cent of normal, notably below the ten-year average of 80.9 per cent. Probable abandonment was placed at 14 per cent, substantially higher than private estimates published April 1; the indicated crop, 458 million bushels, was also well below the private estimates. In recent years there have been no estimates of abandonment or forecasts of outturn as of April 1. The low condition is due largely to drought and soil-blowing.



els imply, so far as we are able to ascertain from the relationships of net exports to shipments in August-March, net exports of 830-840 million bushels in August-July. We see no cogent reason for altering our tentative December estimate of probable net exports in 1931-32 as 840 million bushels. Minor changes in our forecasts of exports by regions for 1931-32, with comparisons, are given below in million bushels:

Aug.-July	United States <sup>a</sup>	Canada	Argentina	Australia	Russia	Other countries <sup>b</sup>	Total
1926-27 .....	202	292	143	103	49 <sup>c</sup>	59	848
1927-28 .....	187	332	178	71	7 <sup>c</sup>	50	825
1928-29 .....	153	406	224	109	.. <sup>c</sup>	51	943
1929-30 .....	146	185	150	63	10	74	628
1930-31 .....	116	258	123	152	112	68	829
Forecasts							
1931-32							
December ...	135	235	150	140	90	90 <sup>d</sup>	840
April .....	125	235	150	145	85	100 <sup>e</sup>	840

<sup>a</sup> Includes shipments to possessions of about 3 million bushels a year.

<sup>b</sup> Includes Danube basin (Hungary, Jugo-Slavia, Roumania, Bulgaria), India, Morocco, Algeria, Tunis, Chile, Spain, and Poland for years in which these countries were net exporters, exclusive of certain imports by some of these.

<sup>c</sup> July-June.

<sup>d</sup> Danube basin, 70; India, 0; other countries, 20.

<sup>e</sup> Danube basin, 85; India, 2; other countries, 13.

The indicated increase in the forecast of Australia's net exports is due to upward revisions of the stocks figure for August 1 and the crop estimate for 1931. Net exports from the Danube basin were so large in August-March that the year's total is sure to exceed 70 million bushels, and we put the figure tentatively at 85, which includes, of course, shipments that Broomhall does not report. Although the Argentine crop estimate was also raised, it now seems probable that our earlier estimate of initial stocks was too high. No significant change is necessary for India, where exports have been very small and the new crop is unlikely to give rise to appreciable net exports in April-July, unless world wheat prices rise sharply. Prospects for a moderate to small winter-wheat crop in the United States, if maintained, will help to hold Chicago futures prices high in relation to Liverpool. April-July net exports from the United States can hardly be much larger than those of December-March (33.2 million bushels), unless the Stabilization Cor-

poration should find more fresh export outlets than seem reasonably to be counted upon; and the year's net exports (including shipments to possessions) may not exceed 125 million bushels. Russia's net exports for the crop year do not seem likely to exceed 85 million bushels. Our December forecast of net exports from "other countries" is subject to reduction mainly because Poland seems already to have exported less than earlier seemed probable from a large crop, and because the 1931 wheat crop in Chile now seems to have been too small to permit exports. In the absence of a reliable independent basis for anticipating what Canada's net exports may be, we assume that Canada will export what other countries do not export—that is, 235 million bushels out of the estimated world total of 840 million; this leaves our December figure unchanged. Needless to say, all these estimates represent centers of ranges, and we regard the figures as liberal rather than conservative.

If net exports should approximate 265 million bushels in April-July 1932,<sup>1</sup> the total seems likely to be distributed roughly as follows:

United States .....	45
Canada .....	95
Argentina, Australia .....	100
Other countries .....	25

Argentina and Australia cannot export 100 million bushels (assuming the accuracy of standing crop estimates) unless their wheat stocks on August 1 are brought down to average levels, substantially below those of 1931. If Canada should export 95 million bushels net, this would represent much the largest increase (over 35 million bushels) of April-July over December-March net exports since the war.<sup>2</sup> The estimated figure for April-July 1932 looks high in the light of this relationship and of the narrow spread now prevailing between Winnipeg and Liverpool futures prices; but there seems to be good reason to suppose the figure will be reached if world net exports attain 840 million bushels. Factors that would result in a lower figure would be

<sup>1</sup> Net exports from North America usually fall below shipments in these months.

<sup>2</sup> Before 1929-30, April-July net exports from Canada regularly fell below those of December-March.

evidence of underestimation of Southern Hemisphere crops, sales by the Stabilization Corporation that would swell April-July exports from the United States, or widening of the Chicago-Liverpool more than of the Winnipeg-Liverpool price spreads.

#### OUTWARD CARRYOVERS

The following tabulation, in million bushels, shows our December forecasts<sup>1</sup> of probable wheat stocks in important areas about on August 1, 1931 and 1932, with revisions appropriate in the light of accumulated evidence:

Region	1931		1932	
	December	April	December	April
United States <sup>a</sup> . . . . .	319	319	310	345
Canada . . . . .	133	133	70	75
Argentina . . . . .	85	80	65	65
Australia . . . . .	45	50	25	30
Danube basin . . . . .	53	53	38	30
India . . . . .	62	62	59	59
European importers	143	143	143	143
Afloat to Europe . . . . .	38	38	48	48
U.S. in Canada <sup>a</sup> . . . . .	15	15	6	20
Canadian in U.S. . . . .	6	6	5	5
Total . . . . .	899	899	769	820

<sup>a</sup> As of July 1.

Reduction of aggregate stocks in these areas by as much as 100-150 million bushels in the course of 1931-32 no longer seems probable, mainly because it has become fairly clear that stocks of United States wheat in North America on July 1, 1932, will not fall below those of 1931, but will stand substantially above.

On March 1, 1932, stocks on farms, in country mills and elevators, and in the visible (within the United States) were 498 million bushels. The reduction in these stocks between March 1 and July 1, 1931, was 186 million bushels. A substantially larger reduction is in prospect this year on account of heavier mill grindings (see p. 390), heavier exports, and a smaller decline in city mill stocks. Specific evidence of relatively heavy reduction in March-June is afforded by a somewhat larger March reduction in farm stocks this year than usual,<sup>2</sup> and by a sharp decline in visible supplies in March-April (see Chart 4, p. 386). But even a strikingly large reduction of farm, country elevator, and visible stocks

—say 220 million bushels—would reduce these stocks only to 280 million bushels by July 1.

City mill stocks (including wheat "stored for others") on July 1, 1932, may reasonably be expected to exceed the figure for 1931, which was 51 million bushels. Low wheat prices, rather wide spreads between near and distant futures, trade reports, and the assumption that the Stabilization Corporation will continue to store some of its wheat in city mills lead us to suppose that stocks in this position next July may prove to be somewhat the largest on record, roughly 65 million bushels. If so, the aggregate outward carryover may be 345 million bushels, some 26 million larger than the huge inward carryover, and 35 million larger than our December estimate.

Stocks of United States wheat now in store in Canada, mainly for account of the Grain Stabilization Corporation, have declined very little in recent months; and there is little prospect that the storage space in Canada will be needed for movement of the new Canadian crop before July 1. Although this basis is hardly adequate for estimating the probable level of these stocks at the end of next June, an increase rather than a decline from the level of last July 1 seems in prospect. The total outward carryover of United States wheat in North America now seems likely not to fall below the inward carryover by nearly 20 million bushels (our December estimate), but to exceed it by 30 million bushels or more. Of the total, the Stabilization Corporation will own much less than last year—probably around 100 million bushels as against 257 million on July 1, 1931.

Slight increases of the figures for probable year-end stocks in Canada and Australia rest mainly on upward revisions in the official crop estimates. The reduction of the prospective carryover in the Danube basin reflects our present view that net exports will be larger than we earlier antici-

<sup>1</sup> See WHEAT STUDIES, January 1932, VIII, 248.

<sup>2</sup> Official estimates of farm stocks on March 1 and April 1 are as follows, in million bushels:

Year	Mar. 1	Apr. 1	Reduction
1926-30 average . . . . .	128.4	97.1	31.3
1930 . . . . .	129.4	102.1	27.3
1931 . . . . .	161.4	115.7	45.7
1932 . . . . .	207.3	159.9	47.4

pated, by more than enough to offset increases in the official estimates of crops.

#### PRICES

Wheat price movements in April–July will depend not only upon the relations of supply and demand for old-crop wheat on the international market, but also upon changing prospects for the crops of 1932 and to some extent upon developments in the world trade cycle. We regard the last two factors as lying in the realm of conjecture rather than of prediction for which a reliable basis can be found. Even the first factor involves some important uncertainties, among which are possible developments in the sales policy of the Federal Farm Board and the extent to which import requirements for the closing months of the crop year have already been covered by forward purchases. In further discussion we take it as reasonable to assume that any new sales policy of the Farm Board which may be announced before July 1 for the crop year 1932–33 will be substantially the same as that followed thus far in 1931–32—namely (except in the event of a radical change in the world wheat situation) sales of not more than 5 million bushels of wheat monthly (cumulative through the year) in addition to sales to foreign governments. We further assume that importers have not covered an unusually large fraction of their requirements for the final months of the crop year.

On these assumptions, the prospective international statistical position for old-crop wheat appears favorable to strength rather than weakness in international wheat prices as judged by British parcels or Liverpool futures. Wheat stocks are low in continental Europe, and April–July import requirements appear rather heavy. The peak of the Southern Hemisphere export movement has been passed, and supplies available for export from Argentina and Australia are not large enough to fill as much as half of the probable import requirements. Neither India, Russia, nor the Danube basin can reasonably be expected

to export substantial quantities of wheat in April–July. Consequently North America must be called upon to furnish heavy exports; and it may be taken for granted that the United States and Canada are relatively strong holders, especially at the current extremely low level of wheat prices.

The prospects would be different if, with aggregate export surpluses of identical size, Argentina, Australia, and Russia held 100 million bushels more and the United States and Canada 100 million less. The distribution of export surpluses, not only their aggregate size, is important. The prospects would also be different if holders (including the Federal Farm Board and possibly the Canadian government) should change their attitude and become pressing sellers of the stocks remaining under their control; we take it that no such change is reasonably in prospect. The outlook for a small winter-wheat crop may preclude re-adjustment of Chicago to Liverpool futures prices in a degree sufficient to permit heavy commercial exports. With average or favorable new-crop developments, it seems probable that the current narrow spread between Winnipeg and Liverpool futures prices will tend to widen somewhat; this change is implied in our expectation of heavy April–July net exports from Canada.

It follows from earlier analysis of the outlook for international trade (see p. 398) and for domestic utilization of wheat in the United States (see p. 390) that world wheat visibles, and visible wheat supplies in North America in particular, will decline more than usual in the coming months. Other things equal, this would tend to keep international wheat prices firm.

Strength that may have its origin in prospective developments set forth above, however, could easily be offset by a combination of circumstances involving further intensification of the depression and prospects for a large world wheat crop in 1932; it could be enhanced by improvement in business and commodity prices, and by indications of a small world crop. Changing prospects for the new crop will presumably prove to be the dominant influence.

*This issue was written by M. K. Bennett, Helen C. Farnsworth, and Joseph S. Davis, with the advice and assistance of the staff of the Institute*

# APPENDIX

TABLE I.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING AREAS AND COUNTRIES, 1926-31\*  
(Million bushels)

Year	World	World ex-Russia	Northern Hemisphere ex-Russia	Four chief exporters	United States		Canada	Australia	Argentina	Soviet Russia	Lower Danube <sup>a</sup>	Other Europe	Northern Africa <sup>b</sup>	India
					Winter	Spring								
1926 ....	4,285	3,371	2,928	1,629	627	204	407	161	230	914	294	921	99	325
1927 ....	4,378	3,593	3,128	1,759	553	326	480	118	282	785	272	1,001	109	335
1928 ....	4,706	3,911	3,341	1,990	579	336	567	160	349	795	367	1,042	108	291
1929 ....	4,124	3,421	3,063	1,407	577	236	305	127	163	703	303	1,147	123	321
1930 ....	4,771	3,687	3,188	1,728	602	256	421	213	236	1,084	353	1,009	104	391
1931 ....	.....	3,622	3,162	1,597	787	105	304	175	226	...	364	1,076	120	347
Average 1926-30 .	4,453	3,597	3,130	1,703	588	272	436	156	252	856	318	1,024	109	333

Year	Hungary	Jugo-Slavia	Roumania	Bulgaria	Morocco	Algeria	Tunis	Egypt	British Isles	France	Germany	Italy	Belgium	Netherlands
1926 ....	74.9	71.4	110.9	36.5	25.0	23.6	13.0	37.2	52.2	231.8	95.4	220.6	12.8	5.49
1927 ....	76.9	56.6	96.7	42.1	28.2	28.3	8.1	44.3	57.2	276.1	120.5	195.8	16.3	6.16
1928 ....	99.2	103.3	115.5	49.2	28.1	30.3	12.1	37.3	51.0	281.3	141.6	228.6	17.2	7.34
1929 ....	75.0	95.0	99.8	33.2	31.8	33.3	12.3	45.2	50.9	337.3	123.1	260.1	13.2	5.47
1930 ....	84.3	80.3	130.8	57.3	21.3	32.4	10.4	39.8	43.3	228.1	139.2	210.1	13.2	6.06
1931 ....	69.2	98.8	135.3	61.2	34.7	25.6	13.6	46.1	38.9 <sup>c</sup>	269.6	155.5	247.9	15.3	6.27
Average 1926-30 .	82.1	81.3	110.7	43.7	26.9	29.6	11.2	40.8	50.9	270.9	124.0	223.0	14.5	6.10

Year	Scandinavia <sup>d</sup>	Baltic States <sup>e</sup>	Spain	Portugal	Switzerland	Austria	Czechoslovakia	Poland	Greece	Mexico	Japan, Chosen	South Africa	Chile, Uruguay	New Zealand
1926 ....	21.5	7.8	146.6	8.6	4.24	9.4	39.9	52.5	12.4	10.3	38.7	8.3	33.5	7.95
1927 ....	25.3	10.0	144.8	11.4	4.34	12.0	47.2	61.1	13.0	11.9	38.3	5.8	46.0	9.54
1928 ....	31.3	10.9	122.6	7.5	4.47	12.9	52.9	59.2	13.1	11.0	39.4	7.4	42.0	8.83
1929 ....	31.5	14.0	154.2	10.8	4.37	11.6	52.9	65.9	11.4	11.3	38.8	11.1	46.7	7.24
1930 ....	32.4	18.2	146.7	13.5	3.60	12.0	50.6	82.3	9.7	11.4	38.5	10.2	28.6	7.06
1931 ....	30.3	14.8	134.4	12.1	4.36	9.4	41.2	83.2	12.2	15.8	39.8	11.3	....	....
Average 1926-30 .	28.4	12.2	143.0	10.4	4.20	11.6	48.7	64.2	11.9	11.2	38.7	8.6	39.4	8.12

\* Data of U.S. Department of Agriculture and International Institute of Agriculture. Totals given in first three columns exclude China, Asia Minor, and a few minor producing areas. Dots (...) indicate that data are not available.

<sup>a</sup> Hungary, Jugo-Slavia, Roumania, Bulgaria.

<sup>b</sup> Morocco, Algeria, Tunis, Egypt.

<sup>c</sup> Estimating production in Ireland at 1.27 million bushels.

<sup>d</sup> Denmark, Norway, Sweden.

<sup>e</sup> Finland, Latvia, Estonia, Lithuania.

TABLE II.—WHEAT RECEIPTS IN NORTH AMERICA, WEEKLY, DECEMBER—MARCH 1931-32\*

(Million bushels)

Week ending	United States			Canada			Total
	14 primary markets <sup>a</sup>	South-west <sup>b</sup>	Minneapolis, Duluth	Fort William, Port Arthur	Vancouver, Prince Rupert		
Dec. 5.....	3.10	1.47	.79	2.85	1.24	4.09	
12.....	3.42	1.61	.90	2.12	1.64	3.76	
19.....	3.47	1.46	.85	2.15	1.92	4.07	
26.....	2.47	1.50	.48	1.50	1.24	2.74	
Jan. 2.....	2.74	1.68	.53	1.50	2.13	3.63	
9.....	3.44	2.06	.48	.90	2.79	3.69	
16.....	3.51	2.00	.71	.42	1.68	2.10	
23.....	4.31	2.23	.80	.38	1.20	1.58	
30.....	4.90	2.37	1.07	.31	1.87	2.18	
Feb. 6.....	4.95	2.96	.66	.33	1.67	2.00	
13.....	4.63	2.72	.71	.38	1.90	2.28	
20.....	6.26	3.15	.58	.52	1.51	2.03	
27.....	8.33	4.67	.67	.53	2.10	2.63	
Mar. 5.....	5.01	2.33	.78	.71	1.14	1.85	
12.....	3.67	1.68	.61	.55	1.67	2.22	
19.....	2.80	1.41	.60	.79	2.00	2.79	
26.....	2.01	.86	.60	.91	1.96	2.87	

\* United States data are unofficial figures compiled from the Chicago Daily Trade Bulletin; Fort William and Port Arthur data are official figures for net receipts furnished by Canadian Board of Grain Commissioners; Vancouver and Prince Rupert data are official figures for weeks ending Friday, compiled from Canadian Grain Statistics.

<sup>a</sup> Chicago, Detroit, Duluth, Indianapolis, Kansas City, Milwaukee, Minneapolis, Omaha, Peoria, Sioux City, St. Joseph, St. Louis, Toledo, and Wichita.

<sup>b</sup> Kansas City, Omaha, Wichita, and Galveston.

TABLE III.—WHEAT RECEIPTS IN NORTH AMERICA, MONTHLY, OCTOBER—MARCH, 1926-27 TO 1931-32\*

(Million bushels)

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	July-Mar. <sup>a</sup>
United States (14 primary markets) <sup>b</sup>							
1926-27....	37.1	29.8	22.4	24.6	21.0	16.6	348.7
1927-28....	73.2	44.8	26.5	23.5	22.5	26.3	437.1
1928-29....	84.4	43.5	33.0	22.5	28.7	27.2	469.5
1929-30....	36.3	20.6	22.9	17.5	19.9	16.7	376.8
1930-31....	28.9	24.6	21.5	29.5	30.7	30.8	413.1
1931-32....	32.7	26.4	13.8	17.1	25.0	14.2	333.4
Canada (leading terminal markets) <sup>b</sup>							
1926-27....	62.5	67.7	32.9	20.9	12.8	12.2	242.1
1927-28....	57.6	81.7	52.8	37.6	22.1	13.7	274.5
1928-29....	94.1	87.5	65.2	24.9	12.2	20.7	346.2
1929-30....	36.2	23.2	10.9	7.1	8.1	8.5	126.5
1930-31....	36.7	24.8	20.2	12.7	12.9	10.5	172.9
1931-32....	34.5	38.4	17.4	9.8	9.2	11.5	142.8

\* United States data unofficial, compiled from Survey of Current Business; Canadian data official, from Reports on the Grain Trade of Canada and Canadian Grain Statistics.

<sup>a</sup> For Canada, September—March.

<sup>b</sup> As in Table II.

TABLE IV.—WHEAT VISIBLE SUPPLIES, WEEKLY, DECEMBER—APRIL 1931-32\*

(Million bushels)

Week ending	United States grain		Canadian grain		Total North America	Afloat to Europe	U.K. ports
	United States	Canada	Canada	United States			
Dec. 5.....	233	30.0	167	19.6	450	33.8	28.6
12.....	228	30.0	169	19.9	447	29.7	28.2
19.....	227	29.2	171	19.7	447	31.1	28.0
26.....	227	29.2	172	18.9	447	31.1	27.2
Jan. 2.....	227	29.2	173	19.7	448	29.8	23.9
9.....	225	29.2	176	24.5	454	31.4	22.7
16.....	222	28.9	176	23.9	450	40.1	20.7
23.....	220	28.9	174	22.9	446	46.8	19.3
30.....	218	28.7	174	21.9	442	50.7	17.8
Feb. 6.....	217	28.7	173	21.0	440	54.4	16.1
13.....	215	28.2	172	19.4	435	57.4	15.2
20.....	215	27.9	171	17.7	432	57.4	14.1
27.....	216	27.7	172	14.8	431	58.0	17.2
Mar. 5.....	220	27.6	171	13.9	432	58.1	17.2
12.....	219	27.6	171	13.6	431	60.0	17.0
19.....	216	27.6	173	13.2	430	58.4	17.2
26.....	213	27.6	174	12.8	427	59.6	15.8

\* Data from U.S. Department of Agriculture, Commercial Stocks of Grain in Store in Principal U.S. Markets; Canadian Grain Statistics; and Corn Trade News.

TABLE V.—WORLD WHEAT VISIBLE SUPPLIES, DECEMBER—APRIL 1931-32, WITH COMPARISONS\*

(Million bushels)

Date	Total	United States <sup>a</sup>	Canada	Australia	Argentina	Afloat to Europe	U.K. ports
December 1							
1926.....	302.3	135.0	122.9	2.0	1.8	36.9	3.6
1927.....	351.8	159.8	120.9	0.8	3.6	57.1	9.6
1928.....	467.4	216.3	169.5	8.0	4.4	63.5	5.7
1929.....	562.5	283.4	220.8	1.8	7.3	28.6	20.6
1930.....	545.8	282.5	194.7	5.0	4.0	45.6	13.9
1931.....	571.4	313.5	182.1	5.8	4.8	35.7	29.5
1931-32							
Dec. 1....	571.4	313.5	182.1	5.8	4.8	35.7	29.5
Jan. 1....	638.0	304.5	192.8	80.0	7.0	29.8	23.9
Feb. 1....	660.2	290.5	190.6	100.0	10.7	50.7	17.8
Mar. 1....	639.9	284.9	180.7	85.5	13.6	58.0	17.2
Apr. 1....	623.4	276.7	182.2	75.0	15.4	58.7	15.4
April 1							
1927.....	344.7	89.0	107.3	53.0	14.7	75.7	5.0
1928.....	382.6	111.0	146.6	36.0	12.9	68.4	7.7
1929.....	498.5	174.7	177.1	53.0	14.7	71.0	8.0
1930.....	523.9	217.9	192.4	56.0	10.3	34.2	13.0
1931.....	605.3	272.9	178.4	84.2	9.2	48.0	12.6
1932.....	623.4	276.7	182.2	75.0	15.4	58.7	15.4

\* Data are from Broomhall's Corn Trade News, the Daily Trade Bulletin (Chicago) and U.S. Bureau of Agricultural Economics, Commercial Stocks of Grain in Store in Principal United States Markets.

<sup>a</sup> Broomhall's United States visible supply plus United States grain in store in Canada.

TABLE VI.—WHEAT STOCKS IN THE UNITED STATES AND CANADA, MARCH 1926-32\*

(Million bushels)

Year	United States (March 1)					Canada (March 31)						
	On farms	In country mills and elevators	Commercial stocks	Total in three positions <sup>a</sup>	U.S. grain in Canada	On farms	In country mills and elevators <sup>b</sup>	In terminal elevators	In transit	In flour in mills	Total in five positions	Canadian in U.S. <sup>c</sup>
1926.....	100.2	76.4	48.1 <sup>d</sup>	224.7	.5	49.0	23.8 <sup>e</sup>	72.9	8.3	6.5	160.5	12.9
1927.....	130.3	85.9	56.3	272.5	.4	51.0	27.9 <sup>e</sup>	74.3	14.7	6.5	174.4	10.1
1928.....	130.9	75.4	72.9	279.2	1.7	69.8	38.7	91.4	19.0	7.4	226.3	23.1
1929.....	151.4	84.7	126.4	362.5	2.1	64.2	54.8	109.3	12.6	8.7	249.6	32.3
1930.....	129.4	101.1	159.3	389.8	5.8	46.3	77.2	92.7	4.4	8.0	228.6	31.6
1931.....	161.4	83.2	208.7	453.3	4.9	93.6	82.8	86.4	7.3	10.0	280.1	17.5
1932.....	207.3	74.6	216.3	498.2	27.7	58.6	89.8	82.5	8.4	4.0	243.3	11.7

\* Official data of U.S. Department of Agriculture and Dominion Bureau of Statistics, chiefly from *Agriculture Yearbooks*, *Canada Year Books*, and press releases.

<sup>a</sup> Comparable data for city mill stocks are not available and hence cannot be included as they are for June 30. See WHEAT STUDIES, December 1931, Appendix Tables XXXI, XXXV.

<sup>b</sup> Strictly, "in country, private, and mill elevators in the Western Division," except as noted.

<sup>c</sup> In bond for export as wheat; excludes some bonded wheat in transit by rail.

<sup>d</sup> Bradstreet's visible.

<sup>e</sup> In "country elevators" only; stocks in "interior private and manufacturing elevators" included with "in terminal elevators."

TABLE VII.—UNITED STATES FLOUR PRODUCTION, EXPORTS, AND NET RETENTION, FROM 1925-26\*

(Million barrels)

Year	Oct.	Nov.	Dec.	Jan.	Feb.	July- Feb.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	July- Feb.	Mar.
		PRODUCTION: ALL REPORTING MILLS							PRODUCTION: ESTIMATED TOTAL					
1925-26.....	10.7	9.1	8.9	8.7	7.4	73.0	8.3	12.0	10.2	10.0	9.7	8.3	81.4	9.2
1926-27.....	10.7	9.6	8.9	8.6	8.0	76.7	8.9	11.8	10.6	9.8	9.5	8.8	84.5	9.8
1927-28.....	10.8	9.7	9.2	9.2	9.0	76.5	9.8	11.8	10.6	10.0	10.0	9.7	83.1	10.5
1928-29.....	11.6	9.9	9.3	10.0	9.0	79.2	9.2	12.4	10.6	9.9	10.7	9.6	84.9	9.8
1929-30.....	11.0	9.5	8.9	9.5	8.8	78.5	9.3	11.7	10.2	9.5	10.2	9.4	83.9	10.0
1930-31.....	10.8	9.2	9.0	9.2	8.2	76.9	8.7	11.5	9.8	9.6	9.9	8.8	82.2	9.4
1931-32.....	10.4	9.9	8.1	8.2	7.7	73.6	...	11.1	10.6	8.7	8.8	8.3	78.8	...
	EXPORTS AND SHIPMENTS TO POSSESSIONS							ESTIMATED NET RETENTION						
1925-26.....	1.06	.94	1.05	.73	.70	7.05	.73	10.9	9.2	8.9	8.9	7.6	74.3	8.5
1926-27.....	1.43	1.40	1.27	1.08	.90	9.96	.93	10.3	9.2	8.5	8.4	7.9	74.5	8.9
1927-28.....	1.56	1.38	1.18	1.29	1.00	9.65	1.05	10.2	9.2	8.8	8.7	8.7	73.5	9.5
1928-29.....	1.44	1.26	1.00	1.43	1.27	9.15	1.24	11.0	9.3	8.9	9.3	8.4	75.8	8.6
1929-30.....	1.38	1.15	1.16	1.30	.97	9.41	1.10	10.3	9.0	8.3	8.9	8.4	74.5	8.9
1930-31.....	1.39	1.20	.94	1.00	.81	9.06	.78	10.1	8.6	8.6	8.9	8.0	73.1	8.6
1931-32.....	.82	.91	.94	.90	.75	6.84	....	10.3	9.7	7.8	7.9	7.5	71.9	...

\* Reported production and trade data from U.S. Department of Commerce press releases, *Monthly Summary of Foreign Commerce*, and *Foodstuffs 'Round the World*. The estimates of total United States production are based on a detailed, but still partially incomplete, study of relations between monthly reported output and census totals and are subject to minor revisions.

TABLE VIII.—INTERNATIONAL SHIPMENTS OF WHEAT AND FLOUR, WEEKLY, DECEMBER—MARCH, 1931—32\*  
(Million bushels)

Week ending	Total	SHIPMENTS FROM							SHIPMENTS TO EUROPE				TO EX-EUROPE		
		North America	Argentina, Uruguay	Australia	South Russia	Danube	India	Other countries	Total	United Kingdom	Orders	Continent	Total	China, Japan	Others
Dec. 5.....	11.64	7.13	.67	.99	.98	1.42	...	.44	8.59	2.38	1.73	4.49	3.05	1.53	1.52
12.....	11.36	5.86	1.18	1.45	.52	1.86	...	.49	7.34	2.10	1.38	3.86	4.02	1.69	2.33
19.....	11.83	5.03	1.74	1.53	1.33	1.82	...	.38	8.33	2.48	2.30	3.55	3.50	1.62	1.88
26.....	12.43	4.27	2.45	3.37	1.26	.92	...	.17	8.45	2.82	3.52	2.10	3.98	2.14	1.84
Jan. 2.....	10.21	5.86	1.42	1.54	.27	1.06	...	.06	6.64	2.26	2.19	2.18	3.57	1.91	1.66
9.....	11.84	5.45	1.50	3.46	.51	.77	...	.14	8.10	2.22	3.29	2.58	3.74	1.66	2.08
16.....	16.76	5.08	2.74	6.41	1.46	.81	...	.16	12.63	3.85	5.61	3.18	4.13	2.18	1.95
23.....	19.11	5.46	3.86	7.67	.30	1.74	...	.09	13.06	2.94	5.45	4.68	6.05	3.55	2.50
30.....	14.14	4.78	4.17	4.00	.38	.75	...	.06	10.14	2.54	4.09	3.50	4.00	2.38	1.62
Feb. 6.....	15.78	5.77	4.21	4.66	.41	.64	...	.10	10.18	2.42	4.12	3.63	5.60	3.26	2.34
13.....	16.10	5.24	4.02	5.73	.35	.61	...	.14	10.22	1.74	4.07	4.41	5.88	3.70	2.18
20.....	15.34	5.67	4.23	4.54	.41	.42	...	.07	9.97	1.87	3.94	4.16	5.38	3.29	2.09
27.....	15.32	4.42	5.14	4.87	.11	.71	...	.06	11.91	2.63	4.41	4.87	3.41	1.94	1.47
Mar. 5.....	16.47	4.54	6.34	4.87	.14	.50	...	.08	12.51	2.22	4.23	6.06	3.96	2.13	1.83
12.....	17.98	4.74	7.11	5.12	.09	.73	...	.18	13.41	1.85	6.73	4.83	4.57	2.42	2.15
19.....	16.29	4.04	7.02	4.32	.26	.51	...	.14	11.71	2.33	4.98	4.41	4.58	2.59	1.99
26.....	14.01	5.52	4.35	3.02	.20	.66	...	.26	10.78	2.59	3.02	5.17	3.23	1.38	1.85

\* Here converted from data in Broomhall's *Corn Trade News*. Summations of 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.

TABLE IX.—UNITED STATES WHEAT AND FLOUR TRADE, FROM 1925—26\*  
(Thousand bushels)

Year	Oct.	Nov.	Dec.	Jan.	Feb.	July-Feb.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	July-Feb.	Mar.
	EXPORTS OF WHEAT GRAIN							EXPORTS OF FLOUR AS WHEAT						
1925-26....	4,354	4,696	3,695	2,412	1,700	39,443	3,770	4,758	4,100	4,741	3,176	3,042	31,328	3,268
1926-27....	17,589	14,340	9,622	8,078	4,889	123,384	5,084	6,510	6,319	5,679	4,743	4,111	44,827	4,099
1927-28....	29,236	20,731	6,917	5,956	2,276	130,707	2,740	7,111	6,271	5,294	5,853	4,450	43,641	4,752
1928-29....	22,058	10,562	7,641	3,399	3,214	79,379	3,487	6,509	5,633	4,413	6,433	5,734	40,937	5,603
1929-30....	8,767	9,977	7,149	8,245	5,185	73,212	2,414	6,159	5,178	5,279	5,828	4,350	42,414	4,907
1930-31....	6,311	3,266	2,713	1,290	137	57,013	1,357	6,250	5,436	4,193	4,442	3,484	40,650	3,360
1931-32....	11,873	9,519	7,896	4,074	4,650	68,041	5,749	3,690	4,031	4,204	4,062	3,346	30,396	2,806
	IMPORTS OF WHEAT GRAIN <sup>a</sup>							NET EXPORTS OF WHEAT AND FLOUR <sup>b</sup>						
1925-26....	3,049	2,892	2,064	1,451	520	12,768	94	6,079	5,964	6,415	4,146	4,248	58,194	6,961
1926-27....	1,816	2,443	2,084	803	973	11,119	108	22,285	18,215	13,218	12,015	8,029	157,148	9,080
1927-28....	1,625	2,131	2,051	683	1,764	10,308	1,698	34,720	24,870	10,159	11,124	4,964	164,037	5,785
1928-29....	1,900	2,580	1,087	3,130	1,755	15,886	1,503	26,665	13,617	10,967	6,702	7,193	104,435	7,587
1929-30....	367	788	1,145	994	1,674	6,937	2,449	14,569	14,375	11,289	13,079	7,864	108,737	4,871
1930-31....	2,757	1,608	1,330	1,486	1,005	13,659	1,201	9,803	7,092	5,576	4,246	2,618	84,001	3,517
1931-32....	1,871	1,044	805	1,268	776	9,848	724	13,691	12,507	11,295	6,868	7,220	88,586	7,831

\* Official data from *Monthly Summaries of Foreign Commerce* and direct from the Bureau of Foreign and Domestic Commerce. Exports exclude shipments to Alaska, Hawaii, Porto Rico. See WHEAT STUDIES, January 1932, Appendix Table XXII, for comparable July-September data.

<sup>a</sup> Almost wholly from Canada for milling in bond into flour for export.

<sup>b</sup> After deducting flour imports.

TABLE X.—NET EXPORTS AND NET IMPORTS OF WHEAT AND FLOUR, MONTHLY FROM AUGUST 1931, WITH SUMMATIONS AND COMPARISONS\*

(Million bushels)

## A. NET EXPORTS

Month or period	United States	Canada	Argentina	Australia	Four exporters	Hungary	Jugoslavia	Romania	Bulgaria	Four Danube exporters	Poland	Algeria	Tunisi	India
Aug. ....	10.56	14.24	5.43	8.04	38.3	1.32	4.35}	18.56	.45}	30.2	.14}	.57	1.28}	.02
Sept. ....	10.64	16.82	6.96	10.89	45.3	2.08	1.72}							
Oct. ....	13.69	21.41	5.58	7.72	48.4	3.47	1.55	5.88	1.50	12.4	.18}	.39	.21	.28
Nov. ....	12.51	29.58	5.87	6.48	54.4	4.44	1.80	5.76	1.38	13.4	.26}	.19	.20	.22
Dec. ....	11.30	24.36	7.62	9.40	52.7	2.32	1.19	1.40 <sup>a</sup>	.66	5.6	(.09)	.19	.14	.22
Jan. ....	6.87	10.95	12.13	19.54	49.7	.69	.62	....	.80	...	.06	.37	(.03)	.16
Feb. ....	7.22	11.41	17.70	20.92	57.2	.30	.30	....	1.27	...	.36	.67	.03	.17
Mar. ....	7.83	11.77	....	....	....	....	....	....	....	....	....	....	....	....
Aug.-Feb. 1930-31 ..	72.52 <sup>b</sup>	183.64 <sup>b</sup>	59.84 <sup>b</sup>	84.98 <sup>b</sup>	401.0 <sup>b</sup>	13.74	4.78	11.57	...	...	2.92	...	2.03	(1.06)
1931-32 ..	80.62 <sup>b</sup>	140.54 <sup>b</sup>	90.00 <sup>b</sup>	103.00 <sup>b</sup>	414.2 <sup>b</sup>	14.62	11.53	33.98	7.73	68.0	1.12	2.19	2.35	1.24
Average <sup>c</sup> ...	117.29 <sup>b</sup>	210.58 <sup>b</sup>	100.69 <sup>b</sup>	60.26 <sup>b</sup>	488.8 <sup>b</sup>	16.31	7.88	5.74	...	...	.40	2.10 <sup>d</sup>	2.05	.05

## B. NET IMPORTS

Month or period	United Kingdom	Irish Free State	British Isles total	Three variable importers				Belgium	Netherlands	Denmark	Norway	Sweden	Scandinavia total	Switzerland
				Total	Italy	Germany	France <sup>e</sup>							
Aug. ....	23.07	1.87	24.94	9.68	.71	1.74	7.23	3.81	1.79	.91	.60	.34	1.85	1.72
Sept. ....	31.89	1.94	33.83	5.12	.54	(.56)	5.14	3.98	3.16	2.14	.44	.32	2.90	2.08
Oct. ....	28.59	2.38	30.97	7.32	.58	(.37)	7.11	5.05	1.84	3.01	.94	.47	4.42	2.62
Nov. ....	22.42	1.20	23.62	5.63	.97	(.19)	4.85	3.74	2.65	2.76	1.37	.90	5.03	1.87
Dec. ....	15.60	1.63	17.23	6.61	.60	1.06	4.95	4.20	2.75	1.76	.95	.65	3.36	2.26
Jan. ....	10.29	1.01	11.34	6.23	1.45	1.61	3.17	2.54	2.70	.97	.60	.64	2.20	1.64
Feb. ....	17.12	....	....	....	2.27	2.42	3.32	2.51	2.37	.80	1.01	.74	2.55	.96
Mar. ....	19.54	....	....	....	...	...	...	....	2.42	....	...	....	....	....
Aug.-Feb. 1930-31 ..	133.60	10.43	144.03	88.55	44.21	17.28	27.06	24.97	24.32 <sup>b</sup>	6.36	5.05	3.57	14.98	11.81
1931-32 ..	148.98	11.02	160.00	50.55	7.12	5.71	35.77	25.83	19.68 <sup>b</sup>	12.35	5.91	4.06	22.31	13.16
Average <sup>c</sup> ...	121.82	10.80	132.62	101.77	35.47	37.96	28.34	23.81	21.17 <sup>b</sup>	5.86	4.55	4.26	14.67	10.41

## B. NET IMPORTS (Continued)

Month or period	Austria	Czecho-Slovakia	Greece	Spain	Portugal	Finland	Latvia	Estonia	Lithuania	Four Baltic States	Egypt	Japan	New Zealand	Union of South Africa
Aug. ....	.66	1.67	1.78	.01	.51	.41	.07	.07	.00	.55	.40	.67	.09}	.46
Sept. ....	.83	2.50	2.25	.01	.21	.41	.10	.04	.00	.55}	1.35	.55}	.03}	
Oct. ....	1.04	2.52	2.20	.00	.08	.66	.11	.08	.00	.85}				1.23
Nov. ....	1.84	2.71	1.91	(.05)	.05	.85	.08	.03	.00	.96}	.35	1.45}	.10}	
Dec. ....	1.88	2.82	1.80	.01	.12	.24	.05	.04	.00	.33}				.59
Jan. ....	1.43	1.46	1.64	.00	.01	.16	...	.02	...	...	...	...	...	
Feb. ....	.69	1.51	2.08	...	.03	.17	.07	.02	...	...				...
Aug.-Feb. 1930-31 ..	7.54	13.26	12.76	(.11)	.52	3.44	1.07	.61	(.59)	4.53	6.50	7.20	.42	
1931-32 ..	8.37	15.19	13.66	.00	1.01	2.90	.50	.30	.00	3.80	5.00	7.50	.50	1.00
Average <sup>c</sup> ...	9.61	11.39	12.21 <sup>f</sup>	...	.95 <sup>g</sup>	3.61	1.24	.66	...	....	6.43	7.45	.39 <sup>f</sup>	...

\* Data from official sources and International Institute of Agriculture. Dots (...) indicate that data are not available. Figures in parentheses represent: Under A, net imports; under B, net exports. Summations for August-February or August-March 1931-32 contain some estimates.

<sup>a</sup> Wheat only.

<sup>b</sup> August to March, not August to February.

<sup>c</sup> Five-year average, August-February 1926-27 to 1930-31.

<sup>d</sup> Four-year average, 1926-27 to 1929-30.

<sup>e</sup> Net imports in "commerce général," compiled directly from *Statistique mensuelle du commerce extérieur de la France*.

<sup>f</sup> Three-year average, 1928-29 to 1930-31.

<sup>g</sup> Two-year average, 1929-30 and 1930-31.



TABLE XI.—PRICES OF REPRESENTATIVE WHEATS IN BRITISH MARKETS AND PRINCIPAL EXPORTING COUNTRIES, WEEKLY FROM DECEMBER 1931\*

(U.S. cents per bushel)

Week ending	U. K. Liverpool (Tuesday prices)					United States					Canada		Argentina
	British parcels	No. 1 Manl-toba	No. 3 Manl-toba	Argentine Rosafé	Australian F.A.Q.	All classes and grades: 6 markets	No. 2 Hard Winter (Kansas City)	No. 2 Red Winter (St. Louis)	No. 1 Northern Spring (Minneapolis)	No. 2 Amber Durum (Minneapolis)	Weighted average (Winnipeg)	No. 3 Manl-toba (Winnipeg)	78-kilo (Buenos Aires)
Dec. 5 . . . . .	59	69 <sup>a</sup>	61	55	59	62	54	58	73	78	48	46	41
12 . . . . .	56	68	61	53	60	62	53	57	73	84	46	43	41
19 . . . . .	56	66	60	54	61	62	53	58	73	82	45	42	42
26 . . . . .	58	65	58	53	61	58	51	57	72	84	44	41	42
Jan. 2 . . . . .	59	65 <sup>a</sup>	59	53	61	58	51	56	71	83	44	43	42
9 . . . . .	58	67	60	54	60	59	52	57	75	86	47	43	42
16 . . . . .	57	68	63	54	59	61	53	56	72	86	47	43	41
23 . . . . .	55	68 <sup>b</sup>	64	53	58	63	54	58	76	90	48	44	40
30 . . . . .	55	68 <sup>b</sup>	63	51	57	61	51	56	74	85	49	44	39
Feb. 6 . . . . .	57	68 <sup>b</sup>	60	52	57	60	54	57	75	86	50	45	41
13 . . . . .	59	69 <sup>b</sup>	64	53	57	57	52	56	72	84	50	46	42
20 . . . . .	62	72	67	56	60	58	54	58	75	86	53	49	44
27 . . . . .	64	75 <sup>b</sup>	70	59	63 <sup>a</sup>	60	55	58	76	86	55	51	46
Mar. 5 . . . . .	65	74 <sup>ab</sup>	69	58	64	59	52	57	75	85	54	51	47
12 . . . . .	66	79 <sup>ab</sup>	70	60	66 <sup>a</sup>	59	53	56	75	81	55	52	47
19 . . . . .	63	74 <sup>ab</sup>	69	57	63 <sup>a</sup>	58	52	55	70	79	52	49	47 <sup>o</sup>
26 . . . . .	62	70 <sup>ab</sup>	65	54	62 <sup>a</sup>	56	47	52	65	74	51	46	..

\* For sources and methods of computation, see WHEAT STUDIES, January 1932, Appendix Table XXIII.

<sup>a</sup> Parcels to London.<sup>b</sup> No. 1 Manitoba (Vancouver).<sup>o</sup> 80-kilo from March 16.

TABLE XII.—MONTHLY AVERAGE PRICES OF DOMESTIC WHEAT IN EUROPE, SEPTEMBER–MARCH, FROM 1926–27\*

(U.S. cents per bushel)

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
	GERMANY (BERLIN)							FRANCE (PARIS)						
1926-27 . . . . .	171	172	178	174	172	172	173	180	191	195	186	191	185	178
1927-28 . . . . .	168	162	157	153	152	149	159	168	160	158	165	164	163	172
1928-29 . . . . .	136	138	137	133	135	140	144	164	167	166	163	165	169	172
1929-30 . . . . .	147	150	151	157	160	152	155	152	153	150	147	144	137	141
1930-31 . . . . .	155	147	160	161	168	177	186	175	173	176	177	179	187	190
1931-32 . . . . .	136	136	146	138	146	158	..	163	165	162	164	168	173	178
	ITALY (MILAN)							GREAT BRITAIN						
1926-27 . . . . .	203	221	220	231	213	211	211	146	148	162	155	155	154	152
1927-28 . . . . .	173	177	190	188	193	194	200	143	137	132	129	129	126	127
1928-29 . . . . .	181	188	187	187	192	196	195	119	124	128	125	125	127	127
1929-30 . . . . .	175	184	185	190	194	189	186	129	124	122	124	124	116	108
1930-31 . . . . .	177	170	163	146	149	154	149	95	91	87	80	73	67	67
1931-32 . . . . .	133	133	140	143	150	163	..	58	59	67	57	54	53	59

\* For sources and methods of computation, see WHEAT STUDIES, January 1932, Appendix Tables XXIV a, b.

TABLE XIII.—WHEAT DISPOSITION ESTIMATES FOR FOUR MAJOR EXPORTING COUNTRIES, FROM 1926-27\*  
(Million bushels)

Year	Domestic supplies			Domestic disappearance				Surplus over domestic use <sup>c</sup>	Net exports			End-year stocks
	Initial stocks	New crop	Total	Milled (net)	Seed use	Balancing item <sup>a</sup>	Total <sup>b</sup>		To Mar. 31	From April 1	Total	
A. UNITED STATES (JULY-JUNE)												
1926-27.....	99	831	930	501	84	18	603	327	168	41	209	118
1927-28.....	118	878	996	503	90	86	679	317	172	21	193	124
1928-29.....	124	915	1,039	511	84	57	652	387	114	31	145	242
1929-30.....	242	813	1,055	509	82	30	621	434	116	27	143	291
1930-31.....	291	858	1,149	487	77	150	714	435	90	26	116	319
1931-32 <sup>d</sup> .....	319	892	1,211	530	73	163	766	445	...	..	135	310
1931-32 <sup>e</sup> .....	319	892	1,211	495	75	171	741	470	96	29	125	345
B. CANADA (AUGUST-JULY)												
1926-27.....	36	407	443	43	39	21	103	340	210	82	292	48
1927-28.....	48	480	528	42	42	34	118	410	226	106	332	78
1928-29.....	78	567	645	44	44	47	135	510	314	92	406	104
1929-30.....	104	305	409	43	44	26	113	296	119	66	185	111
1930-31.....	111	421	532	44	39	58	141	391	184	74	258	133
1931-32 <sup>d</sup> .....	133	298	431	44	42	40	126	305	...	..	235	70
1931-32 <sup>e</sup> .....	133	304	437	44	42	41	127	305	141	94	235	75
C. ARGENTINA (AUGUST-JULY)												
1926-27.....	67	230	297	57	25	3	85	212	77	66	143	69
1927-28.....	69	282	351	60	27	-9	78	273	116	62	178	95
1928-29.....	95	349	444	61	25	4	90	354	135	89	224	130
1929-30.....	130	163	293	60	26	-8	78	215	116	34	150	65
1930-31.....	65	236	301	61	21	16	98	203	60	63	123	80
1931-32 <sup>d</sup> .....	85	219	304	62	21	6	89	215	...	..	150	65
1931-32 <sup>e</sup> .....	80	226	306	62	21	8	91	215	90 <sup>f</sup>	60	150	65
D. AUSTRALIA (AUGUST-JULY)												
1926-27.....	17	161	178	31	12	9	62	126	58	45	103	23
1927-28.....	23	118	141	32	15	-4	43	98	40	31	71	27
1928-29.....	27	160	187	29	15	7	51	136	78	31	109	27
1929-30.....	27	127	154	32	18	1	51	103	42	21	63	40
1930-31.....	40	213	253	32	13	6	51	202	87	65	152	50
1931-32 <sup>d</sup> .....	45	170	215	32	13	5	50	165	...	..	140	25
1931-32 <sup>e</sup> .....	50	175	225	32	13	5	50	175	103 <sup>f</sup>	42	145	30

\* For 1926-27 to 1930-31, condensed with necessary revisions from WHEAT STUDIES, December 1931, Appendix Tables XLI-XLIV. For 1931-32, official data so far as available, supplemented by our tentative forecasts. Net exports from the United States include shipments to possessions.

<sup>a</sup> Derived from the two columns preceding and the column following. Includes chiefly feed and waste, but also errors in other items of supply and disappearance.

<sup>b</sup> Derived from total supplies and the surplus over domestic use.

<sup>c</sup> Sum of net exports and end-year stocks.

<sup>d</sup> Estimates as of December 1931.

<sup>e</sup> Estimates as of April 1932.

<sup>f</sup> February and March figures estimated from Broomhall's weekly shipments.

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