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WORLD WHEAT SURVEY AND OUTLOOK MAY 1941

Helen C. Farnsworth

Problems of wheat scarcity in Europe and of large surpluses in the major exporting countries have demanded increasing attention over the past four months. In Europe, strenuous efforts have been directed toward stretching current food supplies, including wheat, and toward accomplishing the longer-range task of making the Continent self-sufficient in basic foods. In the overseas exporting countries, especially North America, steps have been taken to provide adequate storage for existing wheat surpluses and to prevent their further expansion during the next two crop years.

World wheat exports during August–March were probably smaller than in the corresponding period of any year since 1896–97. Shipments of overseas wheat to Continental Europe, practically all under blockade, were very small. British imports were apparently light, though much less sharply reduced, while total non-European takings were but slightly below their levels in other recent years. Since the beginning of April, international shipments have increased greatly, and those from North America, destined mainly to Britain, have temporarily risen to the highest peak recorded since December 1932. In the crop year as a whole, however, world net exports may not exceed 435 million bushels.

On August 1, 1941, world wheat stocks will presumably stand at a new record high level. Increases in North America and Argentina will more than offset reductions in Australia, Europe, and northern Africa. Unless the 1941 world crop should prove considerably smaller than is now anticipated, world wheat supplies will again be of record size in 1941–42. In view of the prospect for huge supplies in the United States, farmers have been called to vote on May 31 on the issue of wheat marketing quotas for 1941–42. If the referendum carries, "co-operating" growers will be able to obtain federal loans probably amounting to 85 per cent of parity prices.

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Superabundance of total wheat supplies and burdensome surpluses in North America co-exist with increasing stringency in Continental Europe ex-Danube. This broad picture is not greatly altered by recent downward revision in estimates of the 1940 wheat crop, which we now roughly appraise at 3,965 million bushels for the world ex-Russia ex-China.

The tightening of the wheat position on the European Continent has been reflected in reduced bread rations in several countries —France, perhaps Norway, and Finland—and in higher flour-extraction rates and increased non-wheat admixture requirements for bread. Even Germany, whose wheat and bread-grain position has seemed fairly secure, took steps after March to reduce wheat consumption by increasing the proportion of rye in the common bread and by distributing regional bread cards which will reduce the consumption of wheat bread in those regions where wheat consumption has recently expanded most.

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Continental Europe ex-Danube apparently received from outside sources only about 50 million bushels of wheat during August–March, or about 45 per cent of the average in corresponding periods of 1934–39. Most of the current imports came from the Danube basin, French North Africa, and the USSR, with apparently less than 20 million bushels authorized to pass through the British blockade from overseas. British imports were much better sustained, though we judge that these, too, were materially smaller than in any other recent year and roughly 20 million bushels below the five-year average.

In total, the August–March wheat imports of European net-importing countries seem likely to have approximated only 175 million bushels this year, as compared with 310 million last year and 260 million on the average in 1934–39. In contrast, non-European imports were probably not significantly reduced from last year, though they were definitely below average. Imports into China were unusually large, offsetting the reduced takings of Manchukuo. During the crop year as a whole, world exports may be expected to exceed 425 million bushels, but probably by only a small margin. Much will depend on the changing status of ocean shipping, on Spain's position in the European struggle, and on British policy regarding domestic storage of foreign wheat.

In spite of an anticipated sharp reduction in year-end stocks in Europe ex-Russia, the world wheat carryover of 1941 seems likely to stand at a new record high level, perhaps as much as 125 million bushels higher than last year. It is still too early to judge with reasonable accuracy the prospective size of the 1941 world wheat crop, but current information suggests that it may be about equal to or slightly smaller than last year's moderate harvest. There is fair prospect of a third successive year of unprecedentedly heavy wheat supplies. As in 1940–41, the anticipated large supplies of 1941–42 will be heavily concentrated in the four chief exporting countries and particularly in North America.

With wheat supplies of at least 1,220 million bushels in prospect for the United States in 1941–42, a referendum on wheat marketing quotas for the coming season will be submitted to American wheat growers on May 31. At present it is fair to expect that the referendum will be approved, and that the CCC loan system will continue in force for wheat.

For 1941–42, a loan rate of 85 per cent of parity has been approved by Congress and is expected to be approved by the President. This compares with 57 per cent in the current year. Anticipation of the increased rate was mainly responsible for the advance of roughly 25 cents in Chicago wheat futures between mid-February and mid-May. The adoption of wheat marketing quotas for 1941–42 would presumably have slight effect on the marketing of the 1941 crop. By discriminating more sharply between "co-operators" and "non-co-operators," however, it would encourage curtailment of acreage for the 1942 crop to the lower national quota likely to be specified.

Wheat Supplies

Over the past four months, there has been a general tendency to reduce estimates and approximations of the 1940 world wheat harvest. Official estimates standing in January for Australia, Argentina, Greece, and Sweden have been revised downward, and private crop approximations for Turkey, Tunis, Uruguay, and several countries in Europe ex-Danube have also been lowered (Tables I and II). Equally important, there have been no significant offsetting upward revisions.

Outside of Europe ex-Russia, a total reduction of roughly 65 million bushels is indicated by changes in estimates since mid-January. For Europe ex-Russia, we have been influenced by various reports to lower our former appraisal of the 1940 wheat harvest by 50 million bushels; but the facts regarding the European harvest are so obscure that the crop figure we now carry for that area may be as much as 75 million bushels too low or almost as much too high.

Such changes in production estimates do not alter the broad picture of the 1940 world wheat crop. Even as now appraised, at about 3,965 million bushels excluding Russia and China, that crop ranks as one of the four largest ever harvested, exceeded only in 1938, 1939, and probably 1928. For this large total, the two North American exporters, Argentina, India, and the Near East were primarily responsible. Australia secured the smallest outturn of wheat in 21 years; in Continental Europe, aggregate wheat harvests were notably small both within and outside the Danube basin; and the French North African crop was apparently appreciably below normal.

Total supplies.—Although the world wheat crop of 1940 now appears to have fallen short of the 1939 harvest by something like 230 million bushels, the total supply of wheat available to the world ex-Russia in 1940–41 was at least as large as, if not larger than, the record supply available in 1939–40. On August 1, 1940 the world carryover of old-crop wheat was apparently about 250 million bushels larger than the year before, thus well offsetting the indicated reduction in crop.

The large wheat supplies of 1940–41 were concentrated heavily in the four overseas exporting countries, and particularly in North America. Yet in none of the major producing areas except Continental Europe were the domestic wheat supplies notably small as compared with the average supplies of the five preceding years. Even in Continental Europe ex-Russia, this year's domestic wheat supplies were probably no smaller than those of 1936–37 and 1937–38, and they were apparently larger than in most years prior to 1933–34. Comparisons for the past six years are shown in the following table.

Wheat Crops Plus Carryovers in Major Areas, Annually from 1934–35

(*Million bushels*)

Crop year	U.S. wheat in North America	Canadian wheat in North America	Australia	Argentina	Europe ex-Russia		
					Total	British Isles	Continent
1934–35	800	480	217	359	1,996	118	1,878
1935–36	773	496	201	227	1,959	111	1,848
1936–37	769	346	194	310	1,810	105	1,705
1937–38	959	217	228	253	1,797	101	1,696
1938–39	1,085	385	205	439	2,078	116	1,962
1939–40	1,004	624	260	350	2,144	146	1,998
1940–41	1,100	852	209	346	1,875[a]	175[a]	1,700[a]
Average 1934–39	877	385	209	318	1,928	110	1,818

[a] Rough approximation.

The supply figures here shown for Europe ex-Russia for the current crop year are very rough approximations, based on the assumption that the 1940 crop of that area totaled about 1,350 million bushels and that the inward carryover was of record size. Actually,

the crop may have been considerably larger or smaller.

Much of the current uncertainty regarding the 1940 wheat harvest in Europe ex-Russia is attributable to conflicting reports of the French harvest. Last fall private approximations seemed to indicate an outturn of 225 to 250 million bushels in the whole of France; but recent press reports from Paris and Vichy claim that the harvest did not exceed 155 to 190 million.[1] Coming at a time when the Vichy government was appealing to the American government for shipments of about 18 million bushels of wheat,[2] these press claims are subject to diverse interpretations. Conceivably the French crop of 1940 actually fell below 200 million bushels and was the second or third smallest in more than half a century. On the other hand, the reduced estimates may have been issued for political reasons. It is clearly to the interest of German officials and of German-recognized native officials in the German-dominated areas to understate the food crops of 1940 in those countries that might conceivably obtain British permission for food imports through intercession of the American government. Having no secure basis for judgment on these various figures, we tentatively accept an approximation of 200 million bushels for purposes of calculation.

Exporters' stocks, April 1.—The large crop-year wheat supplies in the four major exporting countries were reflected in the high level of stocks shown in the following table. As of April 1, these were larger than ever before. This mainly reflected the huge wheat holdings in Canada. Australian and Argentine stocks had been larger in one or more of the five preceding years and in one or more of the earlier depression years as well, while United States stocks had been about equally large in 1932.

REPORTED WHEAT STOCKS IN FOUR MAJOR EXPORTING COUNTRIES ON APRIL 1, 1937–41

(Million bushels)

Year	Total	U.S. wheat in North America	Canadian wheat in North America	Australian visible (Broomhall)	Argentine commercial stocks
1937...	449	210	129	56	54
1938...	554	332	85	66	71
1939...	942	444	203	56	239
1940...	1,117	436	419	136	126
1941...	1,427	546	640	63	178

Somewhat similar relationships are shown by the weekly and monthly data on visible supplies presented in Chart 1 (p. 390). The extremely high level of the Canadian visible is the most striking feature of the chart. Also of interest is the fact that the level of the United States visible was lower during January–April 1941 than in the same months of 1932. Although total United States wheat stocks on April 1 were about equally large in 1932 and 1941, this year considerably more wheat remained on farms and in country mills and elevators. For this changed distribution, the federal wheat loan program was to a large extent responsible.

WORLD WHEAT EXPORTS

International exports of wheat and flour were notably small in the eight months from August to March—presumably the smallest for those months in any year since 1896–97. For many exporting countries, trade data are no longer reported, and we can estimate only roughly the volume of world net exports. The following table gives officially reported trade figures in roman type and our tentative approximations in italics.

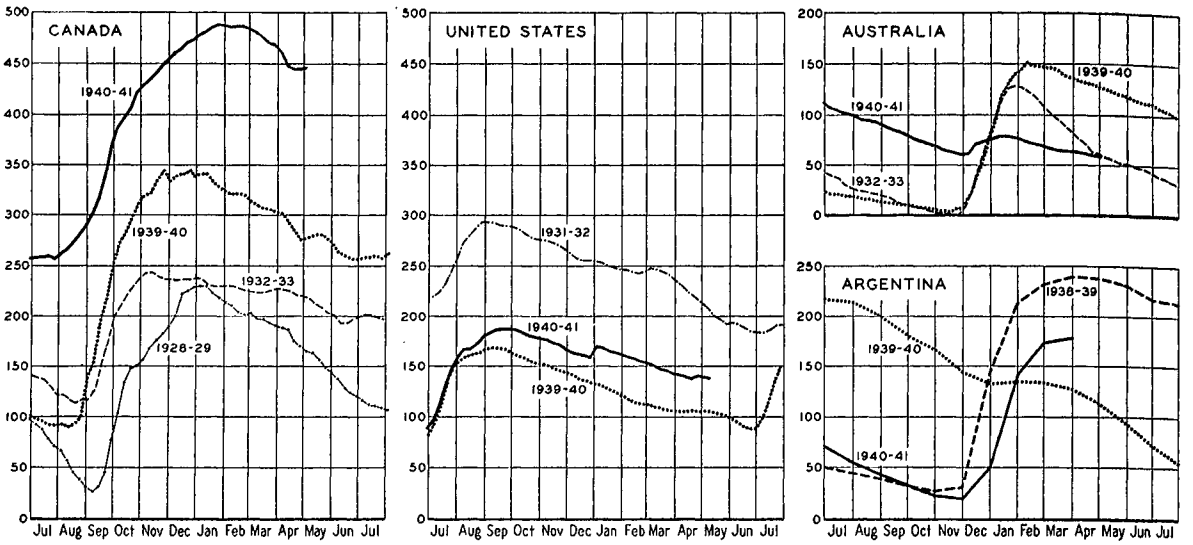
The approximated figures warrant brief explanation. The largest of these is our estimate of Australian exports, which seems to exceed some ideas current in the trade. As of November 30, 1940 the Australian Wheat Board is reported to have held 41.5 million bushels of 1939 wheat unsold and 36.0 million sold but not shipped out of total deliveries of 195.5 million bushels. Of the 17.7 million

[1] An unofficial approximation of 188 million bushels was published by the U.S. Dept. Agr. in *Foreign Crops and Markets*, Apr. 21, 1941, p. 526. For other recent estimates, see *New York Times*, Mar. 11, 1941, p. 2; *Der Führer*, Mar. 12, 1941; Broomhall's cable service, Apr. 21, 1941.

[2] On March 10, Marshal Pétain received American journalists to ask their support for his appeal to the United States government for food, including about 5 million quintals of wheat (*New York Times*, Mar. 11, 1941, p. 1).

CHART 1.—VISIBLE SUPPLIES OF WHEAT, 1940–41, WITH COMPARISONS*

(*Million bushels*)



* Data for certain series summarized in Table IV. Beginning Jan. 4, two new markets were added to the United States series.

bushels of 1938 wheat which the Wheat Board had taken over in the fall of 1939, all had been sold by November 1939, but much still remained unshipped as of December 1, 1939.[1] If the unshipped portion amounted to something like 12 million bushels, the Wheat Board had some 207 million bushels of 1938 and 1939 wheat to dispose of through export and sales to local millers during December–November 1939–40. On the reasonable assumption that local sales during those months came to about 35 million bushels, Australian net exports may be estimated at approximately 95 million bushels in December–November 1939–40, since the reported year-end holdings of the board totaled 77 million bushels. From this export figure one may approximate the volume of Australian exports in August–November 1940, since officially published data indicate that 55 million bushels were exported during December–June 1939–40,[2] and we previously estimated the July 1940 figure at 11 million bushels or slightly less than the reported June exports. This implies Australian exports of something like 28 million bushels in August–November 1940, or 7 million bushels monthly. Virtually no information is available on which to base an esti-

WORLD NET EXPORTS OF WHEAT AND FLOUR, AUGUST–MARCH 1940–41, WITH COMPARISONS

(*Million bushels*)

Country or group	1934–39 average	1937–38	1938–39	1939–40	1940–41
Canada[a]	123	67	110	129	109
United States	28[b]	72	68	34[c]	21[c]
Australia	69	70	61	45	60
Argentina	81	46	53	115	55
Four exporters	301	255	292	323	245
Danube exporters	38	45	55	67	20
USSR	21	37	34	05	
French North Africa	11	12	7	13	12
India	4	10	..[d]	1	0
Other countries	17	12	21	12	8
Grand total	392	371	409	416	285

[a] Through 1936–37, series A, Table VIII, adjusted for change in stocks of Canadian wheat in the United States; thereafter, series B, Table VIII.

[b] Net imports in 1934–37 disregarded.

[c] Export series in Table VIII, adjusted for changes of United States stocks in Canada. Figures for preceding years are based upon a different trade series, but are reasonably comparable.

[d] Net imports.

[1] See J. S. Davis, "The World Wheat Situation, 1939–40: A Review of the Crop Year," WHEAT STUDIES, December 1940, XVII, 166.

[2] Australia, Commonwealth Bureau of Census and Statistics, *Quarterly Summary of Australian Statistics* (Bull. 160, June 1940).

mate of exports in the four following months, though by December 31, only 61 million bushels were reported unsold and unshipped, suggesting exports of about 13 million in December.[1] This figure looks abnormally high; and we assume that in the three following months exports totaled only 20 million bushels, averaging less than in August–November.

The other export estimates do not warrant detailed discussion. The figure for French North Africa is based largely upon a statement by Admiral Darlan, of the Vichy government, that October–February shipments of grain by sea to France totaled 260,000 tons (9.5 million bushels).[2] We assume that the bulk of this grain was North African wheat, that exports prior to October were very small, and that March imports from North Africa were larger than the average imports of the five preceding months.

The Danubian export estimate has no good quantitative basis and may be considerably in error. It rests upon the assumptions that (1) Rumanian and Yugoslavian net exports were negligible, (2) Bulgarian exports were small, and (3) Hungarian exports amounted to about 7 million bushels. These assumptions seem to be in line with such trade data as have been reported. No figures are available for Bulgaria; but Yugoslavian exports totaled only .06 million bushels in August–September, Rumanian exports only .03 million during August–December, and Hungarian exports 4.23 million during July–December (Table VIII).

Russian exports represent the 3.7 million bushels which Russia apparently agreed to furnish Greece, small shipments reported in the press) to Sweden, Finland, and Belgium, and probably some small deliveries to Germany against the Russo-German trade agreement of January 1941.[3] Russia may have shipped a very substantial amount of wheat to Germany this year, but in the absence of any information on the subject, we are inclined to assume that such shipments have been small.

[1] Assuming that 3 million were used for domestic flour. Figures on board holdings taken from *Commercial Intelligence Journal*, Jan. 25, 1941, p. 90.

[2] *New York Times*, Mar. 28, 1941, p. 9.

[3] This called for grain exports of 2.5 million tons.

Estimated net exports from "other countries" include several million bushels of wheat from Japan, several million from Egypt (destined to Palestine, Cyprus, Greece, and Malta), and slight exports from Turkey to neighboring countries, particularly Greece. Gross exports from Japan and Egypt were presumably larger than the net export figures here indicated, since those two countries imported appreciable quantities of overseas wheat.

Specifically not included in the export total given above for the current crop year are the uncertain quantities of wheat that Germany took from areas within the former boundaries of Poland, Czechoslovakia, and France, and the moderate amounts of wheat that were allowed to flow from occupied France to the unoccupied zone and also to Belgium.

At about 285 million bushels, world net exports of wheat (including flour) during August–March 1940–41 were some 130 million bushels smaller than in the same months last year, and 70 million smaller than even in 1935–36, when the lowest exports of the interwar period were recorded. The reduced exports of the current season have been reflected in the trade of practically every wheat-exporting country. Even Canada, favored as compared with competing exporters by its shorter distance by sea from Britain, exported from its huge current wheat supplies almost 15 million bushels less than on the average during 1934–39.

Destination of exports.—Most of the big reduction in world wheat exports during August–March 1940–41 was due to reduced European imports—mainly those of Continental Europe. The British naval blockade and Britain's control over merchant shipping facilities kept all but a trickle of overseas wheat from going to the German-occupied area of the Continent; and Danubian exports, drawn from short crops, were the smallest in six years. British policy favored substantial shipments of Argentine wheat and maize to Spain (p. 396), of Canadian wheat to Portugal, and of Australian and other wheat to Greece. Moreover, after October there was relatively little British interference with food shipments from North Africa to unoccupied France. Wheat shipments by sea to other

Continental European countries were notably small, but something like 10 million bushels of Danubian wheat presumably went by land and river to the two Axis countries, Switzerland, and Greece.

As noted in the following section, British imports were also relatively light, reflecting heavy British shipping losses and the policy of the British government to reduce wheat stocks, presumably in order to use the available shipping space for other purposes. Of the total exports of wheat to Britain during August–March, perhaps not more than 5 to 8 per cent was sunk en route.[1]

Non-European imports of wheat and flour were increasingly handicapped during the period under review by scarcity of shipping and by high and rising freight rates. Whereas last autumn flour could be shipped from the Pacific Coast to North China in space quoted at $12.00 per ton, more than double that amount was paid in April–May. Advances in freight rates on other routes were substantial if less spectacular.

Despite these handicaps, non-European wheat imports during August–March were probably not significantly smaller this year than last, and were presumably even larger than in the same months of 1937–38. For this, the large Chinese takings of the current season were mainly responsible. Through March Chinese imports (mainly into Shanghai) probably reached 20 million bushels, as compared with 8.5 million last year and only 3.5 million in 1937–38. These sizable imports, and also those of a number of less important non-European importers, reflected in part speculative purchases of foreign wheat in anticipation of further advances in freight rates, increased shipping difficulties, and advances in commodity prices.[2]

In contrast, Manchukuoan imports were substantially reduced in August–March 1940–41 as compared with all other recent years except 1936–37 and 1937–38. The reduction in these imports reflected not large domestic grain supplies in Manchukuo, but a deficiency of foreign exchange, inadequate shipping facilities, and a shortage of Japanese wheat that might otherwise have been shipped in larger quantities to Manchukuo. In Japan, the demand for wheat as a substitute for scant supplies of rice was so much greater than usual that rationing appeared inevitable by mid-April.[3] In Manchukuo, rationing was already in effect at that time, with wheat supplies short partly because of the reduced imports and partly because of hoarding by farmers who were unwilling to deliver their grain to the government monopoly at the specified official prices.

Brazilian imports also were apparently somewhat smaller in August–March 1940–41 than in most other recent years. As usual North American shipments to Brazil were almost negligible, and Argentine shipments totaled only 20 million bushels, or 2.5 million monthly, as compared with average Brazilian imports of over 3 million monthly in each of the five preceding years except 1939–40. These particular imports presumably suffered less from shortage of shipping facilities than from other factors, including governmental controls designed to promote the use of domestic grain and other crops in the production of Brazilian flour.

Exports since April 1.—After the end of March, overseas shipments of wheat from the four major exporting countries rose abruptly to 10 and later 12 million bushels weekly (Chart 2).[4] At their peak in late April and early May, they stood higher than at any time since May 1940. Mainly representing extremely heavy takings of Canadian wheat by Britain, these shipments were primarily reflected in reported heavy weekly clearances from North America. Not since December 1932 had the average weekly shipment total from North America touched the mark of 8 million bushels reached in late April.

United States exports, included under North American shipments, presumably remained small after April 1. Increases in the govern-

[1] See the discussion on this point in our last survey, WHEAT STUDIES, January 1941, XVII, 235. Some trade sources accept an estimate of 10 per cent (Jackson and Curtis, *Monthly Grain and Cotton Report*, Mar. 5, 1941).

[2] Cf. *Foreign Crops and Markets*, Apr. 28, 1940, p. 603.

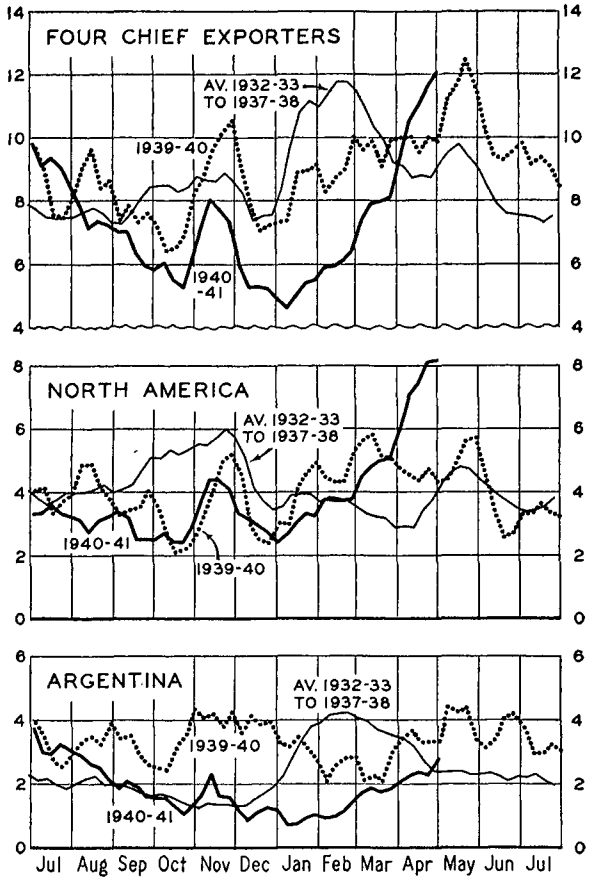
[3] *Ibid.*, p. 604.

[4] Including our approximation of 1.2 million bushels weekly from Australia.

ment subsidy on flour exports to other North American and South American countries to $1.05 on March 25 and to $1.35 on May 7 were made in response to previous advances in wheat prices on United States markets (p. 404), and did not materially improve the competitive position of United States export flour as compared with earlier months.

CHART 2.—INTERNATIONAL SHIPMENTS OF WHEAT AND FLOUR FROM OVERSEAS EXPORTING COUNTRIES, FROM JULY 1940, WITH COMPARISONS*

(Million bushels; 3-week moving averages)



* Based mainly on Broomhall's weekly data (Table VII) but including, for Australia, smoothed monthly official exports in September–June 1939–40 and our approximations for July–May 1940–41.

Argentine shipments, though certainly not large, still averaged appreciably higher after April 1 than they had in the four preceding months. A substantial portion of the increased Argentine shipments went to England, though shipments to Spain were also larger than they had been during most of the earlier period.

THE EUROPEAN SITUATION

On all phases of the European wheat and food situation, the available "information" is fragmentary and scattered, and, even worse, is partly open to suspicion of bias. There can be no reasonable hope of presenting an accurate appraisal of the wheat position throughout Europe. Yet the very fact that available materials pertaining to that position are notably inadequate, and in part untrustworthy, increases our obligation to study and critically evaluate those materials and to present our views of what the situation seems to be.

Crops.—The wheat harvest in Europe ex-Russia in 1940 was clearly one of the smallest, if not the smallest, since 1927. Outturns of rye, barley, and oats were less notably reduced. The European corn harvest was of fair size, and the potato crop was presumably a bumper.

With respect to wheat, it seems reasonable to accept the crop approximation of 1,350 million bushels currently carried by the United States Department of Agriculture for the 1939 boundaries of Europe ex-Russia.[1] This figure, with the aid of available official crop estimates and a few minor crop approximations of our own, can be broken down as indicated in the table on page 394 to show the estimated distribution of the 1940 wheat crop in the major political divisions of Europe.

Apparently all of the major areas specified, except the British Isles and Italy, produced substantially less wheat in 1940 than they had in 1939 or on the average in 1934–38. For Europe ex-Russia as a whole, the outturn was 20 per cent under that of 1939 and 15 per cent below the 1934–38 average. The largest declines seem to have taken place in the Danube basin and in the remaining German-controlled area.[2]

Within the latter wide area, the indicated reduction in wheat harvest between 1939 and 1940 was in the neighborhood of 22 per cent, and the reduction from the 1934–38 average

[1] The standing (February) estimate of the International Institute of Agriculture is 1,396 million.

[2] In the present discussion, Greece is not counted as a part of the German-controlled area, because that country was neutral or an ally of Britain during most of the crop year.

was almost the same. The reasonableness of this figure cannot be satisfactorily tested, for information is lacking even as to the acreage sown to wheat for 1940 in France and Greater Germany. Nor can the reasonableness of the indicated reductions be judged by the shortage of wheat for milling recently observed in the German-controlled area. Substantial supplies of wheat have undoubtedly been withheld from food use this year, partly through German-controlled storage of the large supplies commandeered or purchased by the occupying troops, partly through illegal hoarding on the part of peasants, and partly through illegal (but profitable) feeding of wheat to livestock. These factors would produce an *apparent* shortage greater than the *actual* shortage of wheat. And transportation difficulties, whether physical or imposed by the German military regime, have undoubtedly tended to accentuate the marked shortage of wheat in certain areas. At some future date the facts about the 1940–41 wheat supplies of Europe ex-Russia may be made clear; but today these facts may not be known unless to a few German officials who guard their secret well.

WHEAT PRODUCTION IN EUROPE EX-RUSSIA, 1940, WITH COMPARISONS

(*Million bushels*)

Area	1934–38 average	1939	1940
Europe ex-USSR (old boundaries)	1,597	1,695	1,350
British Isles	71	71	75
Continent (old boundaries)	1,526	1,624	1,275
Danube basin[a] (old boundaries)	362	451	296
Continent ex-Danube (old boundaries)	1,164	1,173	979
Baltic[b] and Russian Poland	52	57	45
Continent ex-Danube (new boundaries)	1,112	1,116	934
Neutrals[c] and Greece	217	209	189
Axis-controlled ex-Danube[d]	895	907	745
Italy	267	293	268
German-controlled ex-Danube[e]	628	614	477

[a] Hungary, Yugoslavia, Rumania, Bulgaria. Boundaries are as of 1939 for Hungary.
[b] Estonia, Latvia, Lithuania.
[c] Spain, Portugal, Switzerland, Sweden, and Finland.
[d] Exclusive of Greece.
[e] Germany (old boundaries), Austria, Bohemia-Moravia, Slovakia, all of former Poland except the part transferred to Russia, Norway, Denmark, the Low Countries, and all of France.

Although we cannot hope to judge the reasonableness of the 1940 crop figure here indicated for the German-controlled area, it seems proper to question the apparent implication of the scattered series of crop estimates and statements issued from Nazi Europe as to the distribution of wheat production within and around the German-dominated area. These seem to suggest that practically all of the countries surrounding Greater Germany harvested extremely poor wheat and bread-grain crops, while the outturn within Greater Germany itself was reduced only moderately from 1939 and even less as compared with the 1934–38 average.[1]

The recent low French crop approximations, with their possible political implications, have been discussed above (p. 389); the standing Danish estimate,[2] which implies a yield per acre of less than one-half of recent average yields and the lowest in more than half a century, surely cannot be accepted; and there is reason to suspect that the Swedish wheat crop was also underestimated. We judge that these countries and also Belgium and Holland harvested definitely poor wheat crops in 1940, but that many of the particular crop estimates circulated for these countries are considerably too low. Furthermore, we judge that the German wheat crop of 1940 was reduced less in percentage terms than the crops of France, Sweden, Denmark, and Belgium, though more than early German statements implied. If the total wheat harvest in the German-controlled area of importing Europe approximated 477 million bushels, the

[1] For example, we have seen no revision of early semiofficial statements from Germany that Germany's 1940 bread-grain harvest was only 2 per cent under a peacetime average (*New York Times*, Oct. 1, 1940, p. 9), and that all grains were down only about 10 per cent from 1939 (*Foreign Crops and Markets*, Oct. 14, 1940, p. 520).

[2] Specifically the estimate of 6.6 million bushels published in the U.S. Dept. Agr., *Wheat Situation*, January 1941.

figure used in the table, something like 200 million bushels may have been harvested in France, 230 million in Greater Germany and the General Government of Poland, and the remainder in Belgium, the Netherlands, Norway, Denmark, and Slovakia. As compared with 1939, these suggested figures imply reductions of 27, 17, and 25 per cent, respectively.

Wheat imports.—The great bulk of the wheat exports destined to Europe this year has gone to the British Isles. During July–February 1940–41 the United States reported exports of 3.5 million bushels to the British Isles and less than one million to the Continent ex-Russia; Argentina reported shipments of 27.7 million to the British Isles and only 6.4 million to the Continent; and Canada and Australia together probably sent something over 100 million bushels of wheat to the British Isles and less than 10 million to the Continent.[1] These figures suggest that the total imports of the United Kingdom and Eire during August–March may have approximated 135 million bushels less the amount of wheat lost en route through sinking. For such losses, we regard 10 million bushels, or nearly 8 per cent, as an ample allowance (p. 392). Ignoring special delays in arrival, therefore, we are inclined to take 125 million bushels as our "guestimate" of the net imports of the British Isles during August–March. In recent years imports within these months have ranged from 135 to 159 million and averaged 144 million.

The small overseas exports of wheat to Continental Europe (roughly 18 million bushels for importation during August–March) were supplemented by exports of perhaps something like 32 million from the Danube basin, northern Africa, Turkey, and Russia. As compared with the past years shown in the following table, total Continental imports of roughly 50 million bushels this year appear notably small.

EUROPEAN NET IMPORTS OF WHEAT AND FLOUR, AUGUST–MARCH 1940–41, WITH COMPARISONS*

(Million bushels)

Country or group	1934–39 average[a]	1935–36	1936–37	1937–38	1938–39	1939–40	1940–41
British Isles	144	142	144	135	159	*150*[b]	*125*[b]
Germany, Austria, Czechoslovakia	19	7	7	31	37	...[b]	...[b]
Italy	7	1	24	1	5	...[b]	...[b]
France	5	7	6	10	...[c]	...[b]	...[b]
Belgium	27	26	28	27	23	27	...[b]
Netherlands	16	14	14	17	20	19	...[b]
Scandinavia	12	11	10	9	10	*14*[d]	...[b]
Finland	2	2	2	2	2	...[b]	...[b]
Switzerland	11	11	12	10	12	*14*[d]	...[b]
Spain	5	...[e]	*4*	*10*	*11*	...[b]	...[b]
Portugal	1	...[c]	...[e]	...[e]	2	1	...[b]
Greece	9	9	14	10	6	7	...[b]
Continent	114	88	121	127	128	*158*[d]	*50*[b]
Total	258	230	265	262	287	*308*[d]	*175*[b]

* Figures in italics represent our rough approximations.
[a] Not deducting net exports.
[b] Data not reported.
[c] Net export.
[d] Official data not complete.
[e] Less than 500,000 bushels.

The major Continental importers during August–March 1940–41 were Germany, France, and Greece. Virtually no information is available as to the size of Germany's imports. We judge that about half of the Danubian exports went to Germany and that Germany also obtained several million bushels from Russia and Poland and perhaps a trickle of overseas grain that was successfully run through the British blockade. One might guess that the total wheat imports of Greater Germany (exclusive of takings from Poland) did not exceed 10 to 15 million bushels. But since Russian and Hungarian exports in particular may have been substantially larger or somewhat smaller than here indicated, the suggested import figure for Germany may be considerably in error.

France (occupied and unoccupied together) probably received something like 12 million

[1] Our estimate for Canada is based upon the reported distribution of clearances of Canadian wheat by final destination through November, the official report on the destination of Canadian exports in December, reported total clearances through February, and press statements regarding contracts for Canadian shipments of wheat to Portugal and Spain. The approximation to the distribution of Australian exports is based upon many scattered bits of information which cannot be regarded as satisfactory for the purpose. However, since Australian shipments to the British Isles were undoubtedly small in total during July–February, the error involved may not exceed 10 million bushels.

bushels of wheat from Northern Africa (p. 391), but these imports were partly offset by shipments of around one million bushels from the occupied zone to Belgium (see below) and small additional shipments to other parts of the German-occupied area and to Germany.[1]

Greek imports also were probably in the neighborhood of 10 million bushels. Of these, something like 3.7 million bushels presumably came from Russia, a couple of million probably came from other nearby countries—the Danube basin, Egypt, and Turkey—and the remainder originated mainly in Australia. Through February reported shipments of wheat flour to Greece by the American Red Cross totaled about 188,000 bushels in terms of wheat.

Spain, Portugal, Switzerland, Italy, and Belgium apparently received smaller but not negligible imports of wheat during August–March. Over this period, Spain imported under British navicerts both corn and wheat from Argentina,[2] wheat from Canada, and flour from the United States. Her total imports of wheat (including flour) probably approximated 6 million bushels through March: 5 million from Argentina, about a million from Canada, and small shipments of flour (representing about 200,000 bushels of wheat) from the American Red Cross.[3] Portuguese imports, also received under British navicerts, may have totaled about 3 million bushels, mostly from Canada though partly from Argentina.

Switzerland is reported to have completed arrangements for securing British navicerts in October; but because of the scarcity of shipping space, delays in obtaining navicerts for individual shipments, and delays in unloading and transhipping at Lisbon, it seems doubtful that Switzerland actually obtained much more than half a million bushels of overseas wheat through March.[4] On the other hand, Hungary exported almost a million bushels to Switzerland during July–December,[5] and probably additional small quantities in later months. Counting possible small takings from other Danubian countries, the total wheat imports of Switzerland may have amounted to 2 to 3 million bushels during August–March.

Italy and Belgium, cut off from overseas shipments by the British blockade, were almost wholly dependent on exports from other Continental European countries. Italy presumably drew her wheat imports from the Danube basin, and mainly from Hungary. During July–December, Hungarian exports to Italy totaled 2.0 million bushels: these, together with subsequent exports from Hungary and small shipments from the other Danubian countries, may have brought Italian net imports in August–March to almost 5 million bushels. Belgian imports probably did not exceed, even if they reached, 2 million.[6] The

[1] We assume that reports circulated last September–October, that Germany had demanded from France 29 to 37 million bushels of wheat, referred to the stock of wheat known to have been requisitioned by Germany in occupied France, and presumably left in that area to be drawn upon for use of the occupying troops and for such shipments as were believed necessary to unoccupied France, Belgium, etc. However, in this connection it is noteworthy that in March "blockade experts" in London were reported (*New York Times*, Mar. 28, p. 9) to have stated that during the one month ending January 15, 1941, France (occupied and unoccupied) shipped to Germany 38,272 tons of flour. If this was all wheat flour of 80 per cent extraction, the quantity of wheat involved would have been in the neighborhood of 1.8 million bushels. But part of the shipments may have been destined to Belgium and other parts of the German-occupied territory.

[2] During July–February reported shipments of Argentine maize to Spain totaled 4.9 million bushels, reported shipments of wheat 4.7 million.

[3] *New York Times*, Jan. 10, 1941, p. 6.

[4] Part of these may have come from Canada, but the major portion was presumably from Argentina. Switzerland's imports of Argentine oats, barley, and maize were apparently much larger than her imports of Argentine wheat. In late April, the British embassy announced in this country that henceforth no more navicerts would be granted for the shipment of various commodities, including wheat and other grains, from the United States to Switzerland, owing to the "increased centralization control of importing" in the latter country (*New York Times*, Apr. 25, 1941, p. 6).

[5] This is indicated by data on Hungarian exports published in *Bulletin statistique trimestriel Hongrois*, April–June and October–December 1940, XLIII, Nos. 2 and 4.

[6] A dispatch from Belgium via Berlin, published in the *New York Times*, Feb. 2, 1941, sec. 1, p. 24, reported that Germany was said to have had shipped into Belgium 20,000 tons (787,000 bushels) of rye and 41,000 tons (1,500,000 bushels) of wheat. This information was apparently secured through the special representatives of the National Committee on Food for the Small Democracies, then on an inquiry tour through Europe. At a later date (*New York Times*, Mar. 10, 1941, p. 6) ex-President Herbert Hoover is reported to have said "the Germans have already shipped 800,000

bulk of these presumably came from occupied France and the rest from Russia.

Of the other countries of importing Europe, only Finland and Sweden have clearly obtained over 100,000 bushels of wheat. According to various press reports,[1] Finland received over half a million bushels from Argentina, slightly less from Russia, and a quarter of a million through the American Red Cross. Through March the wheat imports of Finland may have totaled almost 1.5 million bushels. Sweden's imports were presumably smaller. Through January or early February Sweden is reported to have received under the Swedish-Russian trade agreement 3,000 tons (110,000 bushels) of Russian wheat,[2] and further small amounts were presumably secured in February–March. In total, however, these probably did not exceed 200,000 bushels.

Wheat utilization.—In Europe ex-Danube, and in the Danube basin as well, the total amount of wheat consumed and destroyed during August–April 1940–41 was considerably smaller than in the same months of any other recent year. We are inclined to guess that, exclusive of seed use (which was probably increased this year), the reduction in wheat disappearance as compared with 1938–39 or 1939–40 was almost 10 per cent in Europe ex-Danube and between 15 and 20 per cent in the Danube basin. In individual countries, the percentage reductions differed strikingly from the aggregate figures.

Feed use of wheat, already curtailed in 1939–40, was further restricted during August–March 1940–41. At present there is apparently no country in Europe in which millable wheat may legally be fed to livestock.[3]

Human use of wheat for food has also been reduced in most countries, though perhaps not in the two major belligerent nations—Britain and Germany. In the United Kingdom, the government continued its former policy of providing wheat bread of good quality in unrestricted amounts at a low price. Whereas most other European countries have this year required minimum extraction rates of 80 to 90 per cent in the milling of wheat flour, the British government maintained the minimum extraction rate at 72 per cent or below[4] until April 21, then conservatively raised it to only 75 per cent. Furthermore, with bread and flour rationing and special milling admixture regulations in force in almost every other European country, the British government maintained its earlier stand against rationing these products, and through mid-May, at least, had not resorted to admixture requirements.[5] In contrast, Germany kept her earlier controls over wheat milling, flour distribution, and bread consumption, and in April even tightened some of these controls moderately (p. 403). Yet, through April, the consumption of wheat for bread and other foods in Germany was probably not significantly lower than in either of the two preceding years, and the consumption of "wheat bread" may even have risen.[6] There is no question that the wheat breads in Germany, made of wheat flour of something like 80 per cent extraction, now combined with 15 per cent rye flour and 5 per cent potato starch, are inferior in quality to British bread; but the German milling and baking regulations through March could not have saved any substantial amount of wheat as compared with most other recent years, when the regulations were almost as restrictive.

Two other large European wheat consumers —Italy and Spain—show less than 10 per cent

bushels of bread grains into Belgium." The latter statement perhaps refers to the above-mentioned 20,000 tons of rye, which may well have originated in Germany. We assume that whatever shipments of *wheat* were sent by Germany into Belgium through March (whether more or less than a million bushels) originated not in Germany but in German-occupied France.

[1] For example, see *Der Bund*, Jan. 3, 1941.

[2] *Foreign Commerce Weekly*, Mar. 1, 1941, p. 361.

[3] The United Kingdom was one of the last countries to prohibit such feeding completely. After several efforts to reduce the amount of millable wheat fed, the British government definitely prohibited feeding of millable wheat as from Mar. 17, 1941. For details of the government order, see Broomhall's *Corn Trade News*, Mar. 19, 1941, p. 2.

[4] Up to Mar. 31, 1941 the specified minimum rate for domestic wheat was 70 per cent, for foreign wheat 72 per cent. On that date 72 per cent was established as the minimum extraction rate for all wheat, regardless of origin.

[5] Through April, at least, the British government had not carried out previously announced plans to enrich wheat flour with the addition of vitamin B_1.

[6] This view is expressed in *Deutsche Allgemeine Zeitung*, Mar. 29 (Apr. 4?), 1941.

reduction in calculated wheat disappearance this year as compared with 1938–39 and 1939–40. In these two countries wheat feeding has never been important, and therefore was not subject to reduction. In both, supplies of other foods have been unusually scarce this year, costs of living have risen, and the demand for bread and other cheap foods has presumably expanded. To conserve wheat supplies, the minimum extraction rate for bread wheat was raised from 78 to 85 per cent in Italy, and left at 85 per cent in Spain; 10, 15, and later 25 per cent corn flour was required as a component of all bread flour in Italy, while various high cereal admixtures continued to be specified in Spain; and both countries introduced some form of rationing—Italy for only flour, pastes, and rice, Spain for bread and all cereal products.

These measures of conservation would normally be associated with notably reduced wheat utilization, but the increased demand for bread in the present season presumably went far to offset their effectiveness. Moreover, in Spain human consumption of wheat had been so low in 1938–39 and 1939–40 (partly owing to governmental milling measures that were changed only moderately this year) that little further reduction could be expected. However, the low bread rations currently allowed in that country and the persistent authenticated reports of winter shortage of bread in the major cities suggest that Spanish wheat supplies and wheat consumption may have been substantially lower this year than in either of the two preceding years, and lower, too, than the crop and estimated trade and carryover figures imply.[1]

Probably in all other countries of Europe except Portugal, Greece, and Bulgaria, wheat consumption ex-seed was reduced more than 10 per cent during August–April 1940–41. Portugal and Greece were both able to obtain British navicerts for needed overseas supplies of wheat, and Bulgaria had not only ample but surplus supplies of her own. None of these three countries attempted to ration bread,[2] though Greece raised the minimum extraction rate for wheat flour from 85 to 90 per cent, and in January, Bulgaria specified a 15 per cent admixture of maize[3] in wheat flour. Portugal, faced with a reduced wheat crop, may have taken some minor steps to economize on wheat, but we have seen no reports of significant new measures. Presumably Portugal has been enforcing a fairly high extraction rate for wheat flour, and since January has required some admixture of maize, but the details of these measures are not known to us.

Of the remaining countries of Europe ex-Danube, three may be classed as neutrals (Sweden, Finland, Switzerland), the rest as countries occupied wholly or in part by German troops. British navicerts have been issued for shipments of wheat and other grains to Finland and Switzerland, but apparently not to Sweden, where domestic grain supplies have been reasonably adequate.[4] Even Finland and Switzerland have had difficulty obtaining the grain shipments that were regarded as necessary, largely because of the scarcity of shipping space and railroad facilities, and the extraordinary delays associated with wartime regulations and traffic demands.[5] Of these countries, only Switzerland has not resorted to bread rationing; and even that country has rationed, at declining rates, flour, groats, marcaroni, and maize. Furthermore, Switzerland has conserved wheat through increase of the minimum extraction rate from 80 to 85, and recently to 87 per cent, through strict limitation of the amount of high quality flour and groats that can be produced, and through the specification that from March 1 all bread flour must contain at least 5 per cent rye.[6] In spite of these restrictive measures and also early prohibition of the sale of

[1] We judge that the 1940 Spanish wheat crop was officially overestimated relative to the two preceding crops, or that for 1938–39 and 1939–40 we seriously underestimated the initial wheat carryovers.

[2] We refer here only to the situation through late April. After the military defeat of Greece, that country was no longer able to obtain navicerts for overseas imports, and the government apparently introduced some form of bread rationing at that time.

[3] In April, this was raised to 30 per cent.

[4] According to one report, the policy of the British in issuing navicerts has been to provide for the necessary food needs of neutrals, but not to permit accumulations of stocks in excess of two months' supplies. *Neue Zürcher Zeitung*, Mar. 23, 1941.

[5] *Ibid.*

[6] See *St. Galler Tagblatt*, Dec. 14, 1940, and Feb. 26, 1941.

fresh bread, Swiss bread consumption is said to have increased this year.[1] However, the increase has presumably not been great enough to prevent a material reduction in wheat utilization.

In Sweden and Finland wheat is of secondary importance, the common bread of the masses being made mainly from rye. Wheat utilization may thus be considerably reduced without necessarily implying strain in the general food position. In this respect, Sweden and Finland resemble Norway and Denmark, which are included in the German-occupied area. The bread situation in these four countries and also in other parts of the German-occupied territory can best be discussed with reference to the bread rations allowed in the different countries in April. These are shown in the following table in comparison with corresponding rations in January.

As yet it is too early to be sure of the level of "bread" rations in April in certain of the countries specified. Under existing conditions, such information is often seriously delayed except for the major countries where numerous American and neutral newspaper correspondents are located. Thus, we suspect, but have not definitely heard, that the Norwegian and Finnish bread rations were lower in April than in January; and we feel somewhat uncertain about the report that the Dutch ration was increased in April.[2]

Regardless of the minor errors that may exist in the table below, there is little question that the bread position of the United Kingdom, Greece, and the neutral nations as a whole was generally less tight through April 1941 than that of the group of German-occupied countries. In both groups there were exceptions to the general rule. Thus, the situation in Spain, which was allowed to import grain under British navicerts, was probably worse than in any other European country with the exception of the Government General of Poland. And in

EUROPEAN "BREAD" RATIONS, PER CAPITA FOR ADULTS, JANUARY AND APRIL 1941*

(Ounces per week)

Country	Jan. 1941	Apr. 1941
UK, Greece, and neutrals		
United Kingdom	Unlimited	Unlimited
Eire	Unlimited	Unlimited
Greece	Unlimited	Unlimited[a]
Switzerland	Unlimited[b]	Unlimited[b]
Portugal	Unlimited	Unlimited
Sweden	65–97[c]	65–97[c]
Finland	62–148[c]	62–148[cd]
Spain	20–43	20–43
Axis and occupied countries		
Italy	Unlimited[be]	Unlimited[be]
Germany	85–170	85–170[d]
Netherlands	{71} {89} –?[f]	{82} {103} –?[f]
Denmark	83–132(17)[c]	83–132(17)[c]
France (occupied and unoccupied)	74–99[g]	59–80[g]
Norway	73–122[c]	73–122[cd]
Belgium	56–112[h]	56–112[h]
Gen. Govt. Poland	...[i]	...[i]

* In so far as possible, these figures represent *total* rations for bread and baked goods made of wheat and rye, but exclusive of special rations for flour, groats, and pastes, except as specified. Ranges indicate the different rations allowed to "normal" consumers (low) and "very heavy workers" (high) except for Spain, where the lower limit represents the ration allowed the highest-income group, and the upper limit the ration allowed the lowest-income group.

[a] Rations for flour and bread said to have been introduced after the recent German occupation; but we have no detailed information on this.

[b] Flour, groats, and pastes rationed as follows in January and April respectively, in ounces per week: Switzerland, 12 and 8; Italy (including rice and, in April, maize flour for soup), 17 and 17–22.

[c] Inclusive of flour, groats, and pastes in terms of bread equivalent. Figures in parentheses for Denmark show the special rations for wheat bread in the total bread rations.

[d] This ration was perhaps reduced. But we have seen no definite report to that effect.

[e] Bread rationed only in restaurants.

[f] Basic ration 71 oz. wheat bread or 89 oz. rye bread until April, when placed at 82 oz. apparently for wheat bread. We assume that the rye bread ration was correspondingly increased, and that heavy workers have been allowed extra rations during the whole period.

[g] Exclusive of an allowance of about 9 oz. weekly to cover cake and baked goods in January and perhaps a smaller allowance for the same purpose in April. Flour and pastes rationed separately.

[h] Including flour. Small amounts of pastes allowed in addition.

[i] Different bread rations are reported in force in different cities of the General Government of Poland and for different groups of the population. For Warsaw rations of 49 and 55 oz. have been reported; these probably do not represent the complete range for that city.

[1] *Neue Zürcher Zeitung*, Mar. 27, 1941.

[2] According to Broomhall's cable service and also to the *New York Times*, Apr. 29, 1941, p. 2, the weekly ration of 71 oz. of wheat bread in effect through early April was subsequently made a 6-day ration. This would raise the weekly figure to 82 oz. Whether the alternative rye-bread ration of 89 oz. was similarly raised has not been specified: it may have been left unchanged or the new ration of 82 oz. may apply not to wheat bread but to a new type of mixed bread of poorer quality than the type previously rationed at 71 oz.

Denmark and the Netherlands, as well as in the two principal Axis nations, consumers were not materially restricted as to bread consumption. The bread rations, of course, fall far short of telling the whole story. In Spain, Poland, and certain other countries, "full" rations were not always obtainable; Italian consumers, not bothered by a bread ration, nevertheless felt keenly the pinch of restrictions on purchases of macaroni; and in most countries consumers had to put up with much less palatable bread than in previous years.

Between January and April there was no great extension in scope of the countries enforcing national bread rations. Countries that had not rationed bread in January maintained the same policy (with the possible exception of Greece) throughout April. On the other hand, existing bread rations were substantially lowered over this period in occupied and unoccupied France and perhaps in Norway and Finland. These reductions reflected increasing stringency in the bread-grain positions of the countries concerned. However, all countries feeling the pinch of scarcity of bread grains did not show this by tightening their rationing regulations. For example, the legal bread rations in Spain, Belgium, and apparently the General Government of Poland remained unchanged throughout the period, though bread-grain supplies in those countries threatened to run out long before the new harvests. The regular arrival of substantial quantities of Argentine wheat in Spain after mid-March apparently eased the most critical phase of the Spanish bread situation; and the Belgian position was somewhat strengthened by the arrival of bread-grain supplies from France, Germany, and Russia during February–April. These three countries, with extraction rates already high and admixture provisions in force, did not face the possibility of effecting substantial savings in bread-grain utilization by changing existing milling regulations. But several other countries, less adversely situated in previous months, adopted this method of meeting the increasing stringency in bread grain supplies.[1]

In general, the countries with bread rations of less than 60 ounces per week for "normal" consumers are the countries that are facing the greatest difficulties with regard to bread and total food supplies. Included in this group are Spain, the General Government of Poland, Belgium, and France. Norway should perhaps also be included in this group, on grounds of general food scarcity if not also because her basic bread ration may have been reduced to less than 60 ounces per week.[2] In these countries prewar food habits have had to be considerably modified. Meat, fats, and most of the choicer foods have been very scarce and in most countries rationed more strictly than bread; consumers have been forced to eat "black" bread or bread made of high-extraction flour mixed with rye, corn, or potato starch—never less than 24 to 48 hours after baking; and other cereals, potatoes, and the cheaper vegetables have been eaten in increased quantity by those who found their bread rations inadequate or who were temporarily unable to secure the full bread rations theoretically allotted to them. These and other adjustments have doubtless reduced the qualitative adequacy of the general diet in these countries; and in certain areas and among certain groups of people the attainable food supplies have been inadequate from a quantitative standpoint. Some persons have undoubtedly been hungry, without the available means to satisfy their hunger. Yet through mid-May we have seen no authenticated reports of actual starvation conditions in any of these countries.[3]

The food difficulties faced by Poland and France are primarily of German origin. Within their original boundaries, both of these countries could be said to be agriculturally

[1] For example, Eire, Germany, and France.

[2] Finland may also be in the group of countries with low bread rations, since some reduction in the Finnish ration may have been ordered in March or April. However, we judge that the general food position in Finland is less critical than in the other countries, and that essential food supplies can be shipped to that country with the permission of the British government.

[3] Such a situation presumably existed in parts of Poland (including the Warsaw area) in the winter, spring, and early summer of 1940. It may have persisted even after the 1940 crops were harvested. The present situation in Poland cannot well be evaluated, because very little news comes from that area.

self-sufficient. Even with eastern Poland cut off, the remaining Polish territory was capable of producing enough food to feed the remaining inhabitants. In this area supplies of bread grain may have been somewhat short for 1940–41 (partly because of German requisitioning in 1939–40), but the supplies of oats, barley, potatoes, cabbage, and other vegetables were undoubtedly adequate. Moreover, there would have been substantial supplementary supplies of meat and other protein foods, if these had not been drawn off by Germany either through outright confiscation or nominal purchase.

In France, Germany has contributed to the difficulty of the food problem in three ways: (1) the boundaries established between the occupied and unoccupied regions left the bulk of the basic food supplies, particularly bread grains, in the occupied zone, and the German government has not permitted freedom of trade in goods between the occupied and unoccupied areas; (2) Germany took much of the rolling stock of the French railroads and most of the gasoline stocks, thus complicating the normal problem of food distribution; and (3) the occupying army requisitioned large quantities of the food available in the occupied area. Presumably the bulk of the bread-grain stocks requisitioned were left in occupied France under German control, but large amounts of meat, fats, and the various luxury foods were sent to Germany.

The German government has apparently used its control over food in France as a political instrument to gain the economic and perhaps military co-operation of the Vichy government. After much discussion and negotiation, the Germans finally approved a barter-trade agreement between the occupied and unoccupied zones of France, which released to the unoccupied territory substantial quantities of bread grain, sugar, and potatoes, in exchange for livestock, table oil, vegetables, cheese, and wine. According to a statement by Jean Achard, Secretary of State for Supplies in unoccupied France, wheat shipments under the agreement, supposedly effective February 15, were not to exceed 40,000 tons (1.5 million bushels) monthly or 240,000 tons in total,[1] though German-controlled Paris papers had previously spoken of prospective shipments totalling 800,000 tons.[2] Achard stated further that the released supplies would be inadequate to insure the bread position of unoccupied France, and that additional imports of 490,000 tons (18 million bushels) would be required prior to the next harvest. For this quantity of wheat Marshal Pétain had earlier appealed to the United States government, which had then obtained Britain's permission for prompt shipment to Marseilles of 13,500 tons of flour (725,000 bushels in terms of wheat) under the supervision of the American Red Cross. Subsequently, the British government took a definite stand against further substantial shipments of food to unoccupied France, though that stand might be modified if the Vichy government should swing away from its recent policy of active "co-operation" with Germany.

Although the food supplies of France (including large old-crop stocks of wheat) have been heavily concentrated in the occupied zone, there have been continuous reports of food shortage in the Paris markets; and, except during the month of March, bread rations in the occupied zone have been maintained at the same levels as in the unoccupied area.[3] Although bread-grain supplies have been relatively shorter in the unoccupied area, the occupied zone has apparently been confronted with a greater relative shortage of potatoes. To meet this shortage, potatoes were rationed in certain "departments," and the German government apparently delivered 100,000 tons of potatoes to the occupied area.[4]

The bread ration in Belgium has been maintained at the present low level since June 1940. The extremely small wheat supplies of that country have been stretched by (1) prohibition of feeding of wheat, rye, maslin, and spelt, (2) establishment of an extraction rate of 85

[1] *New York Times*, Mar. 29, 1941, p. 2. These figures do not check with a statement published in *Foreign Crops and Markets*, Apr. 21, 1941, p. 526. This indicates that since December 1 the authorities have allowed 735,000 bushels of wheat to be sent each month from the occupied to the unoccupied zone.

[2] *New York Times*, Mar. 26, 1941, p. 5.

[3] This situation is probably attributable in part to German controls and requisitions, in part to the policy of the Vichy government.

[4] *St. Galler Tagblatt*, Jan. 15, 1941.

per cent, and (3) the admixture of other cereals, mainly rye, in bread flour. Even these measures, however, were apparently not adequate to maintain the bread ration unchanged throughout the crop year. Nor was there the possibility in Belgium of substituting potatoes for bread, since potatoes were also rationed and in such short supply that the rationed amounts were not always obtainable. Faced with a potentially critical food position in Belgium, Germany apparently had over 2 million bushels of bread grains delivered to that country (p. 396) and was said in March to be planning a further shipment of 3.2 million.[1] Additional small quantities of bread grain have undoubtedly been delivered under the Russo-Belgian trade treaty negotiated in February, and Germany has arranged at various times for shipments of potatoes from Holland and Germany. Meanwhile the British government has continued to resist outside pressure for relaxation of the blockade to allow shipments of food to German-occupied territory, stating that "there need be no scarcity amounting to famine and starvation if the enemy would distribute his supplies equitably."[2]

In the Danube basin there is no lack of food supplies this year, and except in certain localities no steps have been taken to ration consumption of such basic foods as bread. However, the reduced wheat crops in that area in 1940 (even though supplemented by large carryovers) left Yugoslavia and Rumania without export surpluses of wheat for the current season, and reduced the prospects for Hungarian exports. Accordingly, these three countries, probably partly under German influence, adopted measures to reduce wheat consumption, not only as compared with the high consumption levels of 1938–39 and 1939–40, but also as compared with consumption averages for other recent years. Except in Yugoslavia, where the government specified a minimum legal extraction rate of 80 per cent, these countries have relied mainly on measures requiring substantial admixtures of other cereals or potatoes in bread flour. Rumania required the admixture of 20 per cent or more[3] maize from February 1; Hungary early specified admixtures of potatoes and maize and raised these requirements effective March 1 to 15–25 per cent cooked potatoes and 20 per cent maize flour; and several of the governmental divisions of Yugoslavia provided for compulsory admixture of 30 per cent or more of maize.[4]

Prospective year-end carryovers.—Despite the evident tightness in the European wheat position this year, there is good reason to suppose that aggregate wheat carryovers will not be down to minimum levels either in the British Isles, or in Continental Europe ex-Danube, or in the Danube basin. In some countries, of course, wheat stocks will be reduced by August 1 to or below a minimum working basis—we expect stocks to be virtually exhausted in Poland, Belgium, unoccupied France, Greece, and perhaps Spain and Norway, and to be near minimum levels in Holland, Switzerland, and Portugal. But both Britain and Germany will probably again hold large carryovers; Germany may still control substantial reserves of requisitioned wheat in occupied France; and Italy will probably have a carryover of average size or larger. Moreover, wheat stocks in the Danube basin will presumably be sizable, though materially reduced from the high levels of the two preceding years.

Of major interest are the prospective holdings of Britain and Germany. Both of these countries were credited with record heavy carryovers in 1940, and both seem likely to hold somewhat smaller stocks in 1941. The size of the British stocks will depend in no small measure upon the quantity of wheat imported into Britain during May–July. At present we are inclined to guess that these imports will be of good size, and that British

[1] Statement by Mr. Hoover, *New York Times*, Mar. 10, 1941, p. 6.

[2] From the statement on blockade policy issued by the British Embassy (*New York Times*, Mar. 10, 1941, p. 6).

[3] Broomhall's cable service, Apr. 25, 1941, reports an admixture of 25 per cent. Previously, the same source (Jan. 27, 1941) indicated an admixture of 30 per cent, whereas the International Institute of Agriculture reported the figure as 20 per cent in *Monthly Crop Report and Agricultural Statistics*, February 1941, p. 55S.

[4] For example, in Croatia and Serbia, wheat bread had to contain 30 and 40 per cent of maize, respectively.

stocks of old-crop wheat on August 1 will be only about 25 million bushels smaller this year than last.

For Germany we anticipate a somewhat larger reduction, despite recent measures to curtail wheat consumption during the last third of the crop year. These included, effective March 10, the withdrawal of extra wheat flour rations to inhabitants of the southern and southwestern regions of Germany,[1] the introduction, on April 7, of regional bread cards that will reduce the amount of wheat bread and mixed bread that may be purchased in the traditionally rye-bread regions,[2] and the increase from April 15 in the required admixture of rye and potato starch in wheat flour.[3]

In total, we judge that the 1941 wheat carryover in Europe ex-Russia may be reduced by almost 200 million bushels from the record peak reached in 1940, but that it will be roughly equal to the average for 1934–38.

Prices and Spreads

Wheat prices in practically all countries are now dominated by government policies, but prices in the United States have fluctuated considerably, chiefly under the influence of changing prospects for 1941–42 loan rates.

Except in United States markets, wheat prices remained about stationary or rose slightly in rough accordance with government price schedules from mid-January to mid-May. Throughout Europe, wheat and bread prices have been under strict governmental control, with wheat prices fixed at different levels for producers and millers. In April, producers' prices in most European countries except Germany were at the highest levels in a decade in terms of domestic currency; but in terms of purchasing power, most European domestic wheats were not priced particularly high (Table X). In several countries, the great difficulties in the way of securing wheat have led to the emergence of "black markets" in which wheat has been sold at prices substantially above the legal levels.

In Argentina, wheat prices remained during January–May at the minimum levels established on December 1: 6.75 pesos per quintal to producers for 78-kilo wheat, f.a.s. Buenos Aires (roughly 55 U.S. cents per bushel). At this basic price, the Grain Regulating Board has been receiving practically all the wheat marketed in Argentina, and has been reselling to domestic millers at the basic minimum price of 9 pesos per quintal (roughly 73 cents per bushel). On February 13, the board ceased purchasing old-crop wheat, the private stocks of which had by then been reduced to a negligible quantity. Through March, the Grain Board is reported to have bought 4.75 million tons (174 million bushels, or about 72 per cent of the marketable portion) of the 1940 wheat crop and is believed to have sold only a small part of this—something like 18 million bushels.[4] On export sales to the United Kingdom, and apparently to most other countries as well, the board has resisted pressure to sell at prices much below the minimum level of 6.75 pesos per quintal, contending that the inadequacy of shipping facilities and not the level of Argentine wheat prices has been restricting export sales. In terms of United States currency, published export offers of Rosafé wheat to the United Kingdom have ranged between 50⅜ and 52¼ cents per bushel since mid-December.

The Australian Wheat Board has continued over this period to buy new-crop wheat from farmers at the guaranteed minimum price of 3*s.* 10*d.* (about 62 U.S. cents) per bushel for bagged wheat f.o.b. ports. Through mid-March the board's purchases were reported to have reached 62.7 million bushels, or slightly above the 62 million formerly expected to be delivered in total from the 1940 crop.[5] Australian f.o.b. quotations on wheat parcels to the United Kingdom remained throughout January and early February at 67⅞ cents (U.S.) per bushel, and were then raised to

[1] *Der Führer*, Mar. 2, 1941.

[2] This will change the relationship between the recent consumption of wheat, mixed, and rye bread but will leave the total bread ration unaltered (*Deutsche Allgemeine Zeitung*, Mar. 29 [Apr. 4?], 1941).

[3] Permissible from April 1 and mandatory from April 15, mills are required to mix 5 per cent potato starch flour and 15 per cent rye flour of type 997 with wheat flour of type 812 (*ibid.*, Mar. 23, 1941).

[4] Canada, Dominion Bureau of Statistics, *Monthly Review of the Wheat Situation*, Apr. 25, 1941, p. 9.

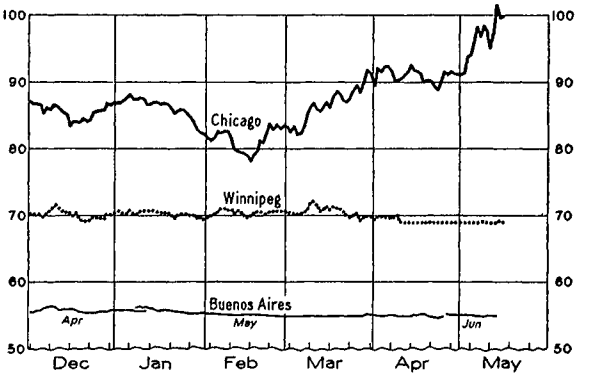
[5] This forecast, based on an expected crop of 83 million bushels, appeared in *Monthly Summary of the Wheat Situation in Australia*, January 1941.

69⅛ cents. No change from the latter price has since been reported.

North American prices.—Canadian wheat prices, both cash and futures, have remained almost as stable as Argentine and Australian prices over the past four months (Chart 3).

CHART 3.—WHEAT FUTURES PRICES, DAILY FROM DECEMBER 1940*

(U.S. cents per bushel)



* Closing prices, from Chicago *Daily Trade Bulletin* and Winnipeg *Grain Trade News*. May futures at Chicago and Winnipeg.

Winnipeg futures sold slightly above the fixed minimum levels of 75⅞ and 77½ Canadian cents (69 and 70½ U.S. cents) per bushel for May and July wheat, respectively, until mid-April, when they declined to and subsequently remained at the fixed minimum levels. The mid-April decline partly reflected bearish sentiment associated with the war in the Balkans, but bearish sentiment was also enhanced by renewed direction of attention to the Canadian wheat position.[1] Canadian cash wheat prices have tended slightly upward since January, roughly following, though standing a few cents above, the corresponding minimum prices (storage charges included).[2]

Wheat prices in United States markets were dominated during January–May by existing loan levels, market expectations of higher loan rates on the 1941 wheat crop, and general market sentiment based partly on war developments and partly on the anticipated general price effects of heavy governmental expenditures and prospective governmental controls. At Chicago, the May wheat future declined 10 cents from the peak of prices on January 6 to the low point of 78 cents on February 17, then rose almost 15 cents to a new and higher peak of 92 cents on April 5 (Chart 3). After a net loss of two cents over the next two trading days, futures prices changed but little through May 2. The next 11 days witnessed a sharp advance of roughly 10 cents to values of $1.01⅛, $.99½, and $1.00¼ for the May, July, and September futures respectively. At present (May 24), Chicago futures prices are about two cents under the levels reached on May 14.

The January–February price decline at Chicago was in part a reaction to the advance of late December and early January, which had carried wheat prices up to a point at which it was reasonable to expect some redemption of loan wheat. At that level, prices could not hold in the face of light mill purchases and of official stocks reports that called attention to the large amount of "free" wheat still remaining on farms and in public warehouses.

Moreover, speculative sentiment was at a low ebb in other commodity markets and on the New York stock exchange from mid-January to mid-February. The Moody index of sensitive commodity prices, which had been moving sharply upward during most of the earlier weeks of the crop year, not only failed to rise, but even showed a small net decline between January 10 and February 17 (Chart 4). More strikingly, the Dow-Jones average of the prices of 30 industrial stocks declined from 134 to 119 during that period. These declines, and the factors responsible for them (including fear of war developments in the spring),

[1] On April 15 the Canadian Wheat Board stated that since a wheat carryover of 550 million bushels was in prospect for July 31, 1941, it would not be possible for wheat producers to market as much wheat as usual in 1941–42. The board indicated that total Canadian wheat marketings would be limited to 230 million bushels and that wheat producers in the Prairie Provinces would be permitted to base their deliveries of wheat in 1941–42 on 65 per cent of their 1940 wheat acreage.

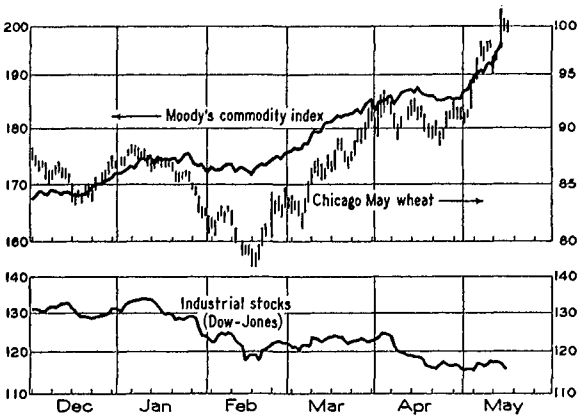
[2] The minimum price schedule for No. 3 Northern wheat at Fort William was as follows, in Canadian cents per bushel, with corresponding prices in American currency shown in parentheses: Jan. 8–30, 65 (59); Jan. 31—Feb. 22, 65½ (60); Feb. 23—Mar. 17, 66 (60); Mar. 18—Apr. 9, 66½ (60); Apr. 10—May 1, 67 (61); May 2–24, 67½ (61). The prices in American currency may be compared with the prices of No. 3 Manitoba at Winnipeg shown in Table XI.

were directly or indirectly reflected in the principal wheat markets of the country.

Despite these bearish factors, and in the face of continued favorable progress of the American winter-wheat crops, holders of "free" wheat showed no strong tendency to liquidate. Under the joint influence of light marketings and light mill, export, and speculative purchases, the open interest in Chicago wheat

CHART 4.—CHICAGO MAY WHEAT PRICES AND INDEX NUMBERS OF PRICES OF SENSITIVE COMMODITIES AND STOCKS, DAILY FROM DECEMBER 1940*

(Cents per bushel; per cent; logarithmic vertical scales)



* High and low prices of the Chicago future; index of closing prices of 15 sensitive commodities, base December 1931 = 100, compiled by Moody's Investors Service; index of closing prices of 30 industrial stocks, compiled by Dow-Jones News Service. The scales represent a change of 10 per cent in stocks prices by the same vertical distance as a change of 5 per cent in either the wheat price or the Moody index.

futures tended downward to January 21, establishing several successive new record lows on the way. Thereafter, there was a slight recovery in the volume of open commitments, followed by little change through mid-February.

In its initial stage, the price advance from February 17 to April 5 was probably partly a reaction to the sharp decline during the ten preceding days.[1] But the most important underlying factor throughout the entire course of this long advance was the rising expectation that the 1941–42 agricultural program would include higher loan rates for wheat. At the same time, prices in many other commodity markets were advancing, partly in reflection of increased ocean freights, but probably mainly under the influence of market anticipation of important price-raising effects from the Lend-Lease bill. That bill was signed by the President on March 11, and its enactment was almost immediately followed by an implementing Congressional appropriation of 7 billion dollars.

After April 5, continued anticipation of a higher loan rate for 1941 wheat helped to support United States wheat prices in the face of bearish war developments in the Balkans and an associated substantial decline in New York stocks prices (Chart 4). At Chicago, wheat futures prices declined several cents during the two or three trading days immediately following Germany's invasion of Greece and Yugoslavia on Sunday, April 6. But whereas New York stocks prices continued weak over the next few weeks, many commodities, including wheat, shortly showed a fair price recovery.

By May 3, wheat traders were generally anticipating that Congress would specify either a 75 or 85 per cent parity loan rate on 1941 wheat. The price advance to May 14 represented change from anticipation to conviction that the rate would not be below 75 per cent, and after May 12,[2] virtual certainty that the two Houses of Congress would agree on an 85 per cent rate. On May 13, the House expressed approval of the higher rate and on the following day the Senate took similar action. The President has not yet (May 24) signed the authorizing bill, but is expected to do so within a few days. This would leave only the uncertainty as to whether the farm referendum on wheat marketing quotas for 1941–42 will pass, thus making the 85 per cent loan rate effective (pp. 412–13).

Despite the upward tendency of wheat and other commodity prices and widespread anticipation of inflationary effects from heavy governmental expenditures, there was no significant increase in speculation in Chicago wheat futures after mid-February. Indeed, after February 17 the total open interest in Chicago wheat futures tended more or less

[1] The decline in open interest in wheat futures during the first week of the advance was said to be associated with short covering by professionals.

[2] On that date, the House and Senate conferees agreed on the 85 per cent loan rate.

steadily downward from 48.3 million bushels on February 17 to 42.8 million on March 29, and thereafter fluctuated between 42.8 and 44.6 million up to April 5. During the subsequent price decline and partial recovery there was no significant change, but with continued price stability from April 26 to May 2, the open interest rose to 46.2 million bushels and remained almost unchanged throughout the ensuing period of price advance to May 14.[1] Owners of unpledged cash wheat continued to hold firmly during these weeks, and mill and export purchases adequately absorbed the very moderate amounts of unpledged and redeemed wheat that were offered at the advancing prices.

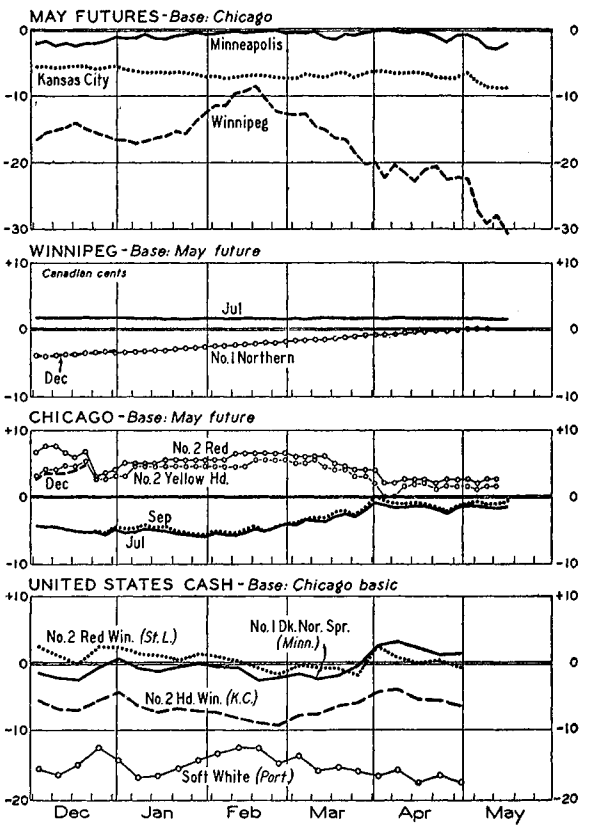
According to various reports of the Commodity Credit Corporation, redemptions of loan wheat between February 17 and April 5 did not exceed 10 to 12 million bushels; but after April 8, the reported redemptions approximated 5.5 million bushels weekly through May 6 and then rose to about 7.0 million during the week ending May 13. The latter figure was undoubtedly swelled by redemptions attracted by the advance of prices then under way. But since May 10 was the last day on which farmers could redeem loan wheat stored in warehouses,[2] redemptions during that week would presumably have been heavy even in the absence of further price increases. By May 13 the reported redemptions totaled 45 million bushels. Actual redemptions were probably appreciably higher, since the weekly reports of the CCC usually do not cover all transactions up to the reported date.

During the four months under review the CCC made no attempt to liquidate its increasing holdings of defaulted loan wheat. Prior to March 11, prices were too low to warrant significant offers from that body under its previously announced plan not to sell defaulted wheat of good condition at less than the loan rate plus accumulated storage costs. And on March 11 the CCC announced that no sales of government-owned wheat would be made in the near future, since prices had already risen high enough to warrant the redemption and sale by farmers of wheat they had stored as security against outstanding government loans.[3]

Chart 5, which shows the price spreads among wheat futures and leading cash wheats in North American markets, warrants only brief comment. This is particularly true of

CHART 5.—NORTH AMERICAN WHEAT PRICE SPREADS, WEEKLY FROM DECEMBER 1940*

(U.S. cents per bushel)



* Price differences based on Tuesday and Friday closing quotations, except for United States cash wheats; these are weekly averages of daily quotations at Chicago (taken as the base) and Portland, and weekly averages of all reported cash sales of the designated grades at Minneapolis, Kansas City, and St. Louis.

[1] From May 13 to May 20, however, the open interest declined more than 5 million bushels, probably reflecting some profit-taking after the House approved the 85 per cent loan rate.

[2] These loans technically matured on April 30; but at the beginning of April, the CCC anounced that farmers would be allowed an extra ten days to complete arrangements for repayments.

[3] Particularly in the Southwest, various trade groups contested this statement. Cf. *Modern Miller*, Mar. 15, p. 25; *Southwestern Miller*, Mar. 11, p. 25.

the Winnipeg-Chicago spread which reflects fully (in inverted form) the substantial changes in the Chicago May future, with Winnipeg futures practically constant.

Minneapolis and Kansas City May futures prices have roughly paralleled the course of the May future at Chicago since late January, though the early May advance was reflected less strongly in the former markets. Leading cash wheats at these three markets and at St. Louis and Portland have shown larger changes in spreads. On the general price decline from early January to February 17, soft white wheat at Portland declined much less than the wheats in eastern markets, while No. 2 Hard wheat at Kansas City declined more markedly than No. 2 Red at St. Louis or No. 1 Dark Northern at Minneapolis, and the latter two wheats in turn declined slightly more than did Chicago basic cash wheat. The action of the Portland market was in line with the usual tendency of that market not to follow fully the broad price movements in eastern markets; and this tendency was again apparent from February 17 to April 5, when Portland prices rose less than prices in the east. In contrast, cash wheats at Kansas City, and to a lesser extent at Minneapolis and St. Louis as well, showed larger price movements than Chicago basic cash wheat, both on the decline to mid-February and on the subsequent advance through early April.

When Chicago and Minneapolis wheat prices continued to rise during the first half of May, increasing attention began to be paid to the Winnipeg–Chicago and Winnipeg–Minneapolis price spreads. By May 20 basic cash wheat at Chicago was selling about 37 cents above No. 3 Northern at Winnipeg, and No. 1 Dark Northern at Minneapolis was selling about 35 cents above (Table XI). Such premiums clearly held the threat of future Canadian imports of wheat into the United States over the 42-cent tariff wall.[1]

It is noteworthy that cash premiums weakened, particularly at Chicago, during late February and March, and that the more distant futures then rose relative to the May. In April, July wheat at Chicago sold only 1 to 2 cents under May wheat, as compared with a discount of about 5 cents in late January. This was roughly in line with the expectation we expressed in January.[2]

Outlook for Trade

The total volume of world wheat exports in the current crop year will depend in no small measure upon the course of the European war over the next three months. However, if the war continues and the British naval blockade of the Continent remains effective, it seems reasonable to expect world exports to total only about 435 million bushels during the crop year as a whole.

Over the past four months, Germany's initiation of the Battle of the Atlantic, the associated increase in British shipping losses, and the movement of the German army into the Balkans have all operated to reduce the prospective volume of world wheat exports in 1940–41. Scarcity of shipping space and high freight rates are now seriously restricting the movement of wheat, not only to Continental Europe but also to non-European countries. In later months they may even affect British imports. Germany's successes in the Balkan area have added Greece to the group of countries affected by the British blockade. Moreover, after planning her Balkan and Mediterranean drives, Germany presumably left stored in the Danubian countries for her Balkan troops some of the wheat that otherwise might have been exported to Germany.

Future extension of the European conflict to Spain would presumably lead to virtual cessation of the expected large Argentine shipments to that country, thus restricting even further the world's possible export outlets for wheat. Through April, Argentina is reported to have shipped to Spain this year about 8.5 million bushels of wheat, and outstanding Argentine-Spanish contracts[3] call for later ex-

[1] Broomhall reported in his cable service on May 16 that "A Washington delegation headed by L. A. Wheeler . . . . visited Ottawa to discuss with Canadian authorities what should be done to check the possible importation of Canadian wheat into the States following the passage [by Congress] of the 85% parity loan bill. . . . ."

[2] Wheat Studies, January 1941, XVII, 255.

[3] Apparently a contract was negotiated in early February for the shipment of 500,000 tons (18.4 million bushels) of Argentine wheat to Spain; and a second contract, involving long-term credits for 14 million

ports of about 24 million bushels (though probably not all for shipment prior to August 1). In our present forecast of Argentine exports at 90 million bushels in 1940–41 (Table IX), we allow for the fulfillment of the major part of the existing unfilled Spanish contracts through shipments during May–July; but actual Argentine exports may be materially larger or smaller.

War and political developments in the Mediterranean area may also affect the size of North African exports over the next few months. On March 28, Secretary Jean Achard told American correspondents that he expected 125,000 tons (4.5 million bushels) of North African wheat to be imported into France during April–July.[1] Should the British lose control of the western Mediterranean, the volume of African imports might be somewhat larger. On the other hand, should Britain tighten her hold on the Mediterranean and should she also try further to restrict French imports, the flow of African wheat to France might be negligible.

On Britain's future attitude toward France depends not only the size of North African exports, but also the uncertain prospect of American shipments of wheat to unoccupied France. The current shortage of shipping facilities reduces the possibility of large relief shipments of American wheat to both Europe and China. However, the fact that the Vichy government could send French ships for such wheat as might be offered to that country reduces the importance of the shipping problem in decisions pertaining to exports to France. We cannot predict the course of American-British diplomacy as regards wheat shipments to unoccupied France; but as yet there seems to be more reason to believe that such shipments will be negligible than to anticipate that they will be large.[2]

Russian exports will depend primarily upon Soviet governmental policy, and only secondarily and indirectly upon war developments, so long as the Ukraine is not seriously threatened. Thus far in 1940–41 Russian exports have been relatively small, though the USSR has committed herself to deliveries of grain, including wheat, on trade agreements with Finland, Sweden, Belgium, Switzerland, and Germany. The total quantity of wheat specified in these agreements for shipment during 1940–41 is not a matter of public record. However, we incline to the view that the quantity is not large, and as yet see no good reason to expect Russian exports to exceed 10 to 15 million bushels during the current crop year.

Finally, some mention should be made of the uncertainties relating to British imports, and indirectly, therefore, to Canadian exports. The Battle of the Atlantic has materially complicated Britain's problem of securing foreign food supplies. Intensification of the European war (with its extension to southeastern Europe, Africa, and the Near East), increased shipping losses, and the American lend-lease program have reduced the amount of shipping space readily available for the transportation of food to Britain. It is therefore possible that only small quantities of wheat will be shipped to the United Kingdom during the next two and a half months and that British wheat stocks will be further reduced. On the other hand, the British government may decide to import wheat heavily in the near future, in anticipation of continued serious shipping losses and greater military demands upon the available shipping facilities in later months. The latter policy seems to have been followed during April and the first two weeks of May, but we do not expect the recent high rate of wheat shipments to Britain to continue. Should this expectation prove to be wrong, world wheat exports might considerably exceed 435 million bushels during 1940–41, and Canadian exports would also be larger than here indicated.

In spite of the many uncertainties now encountered in attempting to form a rough idea

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bushels, was signed in April. See *New York Times*, Feb. 9, 1941, sec. 1, p. 17; and *Foreign Crops and Markets*, Apr. 28, 1941, p. 600.

[1] *New York Times*, Mar. 29, 1941, p. 2.

[2] According to press reports, the State Department of the United States expressed a willingness on May 9 to discuss with France the possibility of shipping two cargoes of wheat a month to the unoccupied zone (*New York Times*, May 10, 1941, p. 4). Several days later, however, after the Vichy government had apparently made important concessions to Germany, the State Department indicated that further shipments would not be considered.

of the prospective volume of world trade in 1940–41, it is perhaps desirable to summarize our present impressions of the trade outlook in quantitative form, in comparison with data for other recent years. Most of the assumptions underlying these "guestimates" for the current season are stated briefly in the foregoing paragraphs; different assumptions, some of which would appear equally reasonable, might yield materially different results.

WORLD NET EXPORTS OF WHEAT AND FLOUR, ANNUALLY FROM 1933–34*

(*Million bushels*)

Aug.–July	Total	Canada	U.S.	Australia	Argentina	Danube, USSR	Others
1933–34...	557	192	33	86	147	69	30
1934–35...	540	163	..[a]	109	182	24	62
1935–36...	518	246	..[a]	102	70	54	46
1936–37...	623	210	..[a]	102	162	94	55
1937–38...	555	89[b]	117	126	72	97	54
1938–39...	643	158[b]	103	96	122	119	45
1939–40...	*625*	192[b]	44[c]	*86*	180	*87*	*35*
Forecast 1940–41...	*435*	*190*[b]	*28*[c]	*80*	*90*	*25*	*22*

* Figures in italics represent our present rough approximations and forecasts.

[a] Net imports, ignored in the totals.

[b] Series B shown in Table VIII, earlier figures based on Series A, adjusted for changes in stocks of Canadian wheat in the United States.

[c] Export series shown in Table VIII, adjusted for changes of United States stocks in Canada. Figures for preceding years are based upon somewhat different trade data, which are nevertheless reasonably comparable.

PROSPECTIVE CARRYOVERS AND CROPS OF 1941

Aggregate wheat supplies in the world ex-USSR will again be notably large in 1941–42, and probably of record size. This is clearly indicated by the record heavy carryover now in sight, and the level of planted and planned wheat acreage, even though it is still too early to make reliable forecasts of the size of the 1941 world wheat crop.

Anticipated carryovers.—Unless export developments differ markedly from current expectations, the United States carryover of old-crop wheat on July 1, 1941 will approximate 390 million bushels; the Canadian carryover in Canada on August 1 will approach 490 million, with something like 40 million bushels more Canadian wheat stored in the United States; and August 1 stocks in Argentina and Australia will be in the neighborhood of 155 and 70 million bushels respectively (Table IX).

Among the four major exporting countries, Canada alone seems to have utilized an abnormal amount of wheat domestically this year. Indeed, the official estimate of Canadian wheat stocks as of April 1 suggests that some 50 million bushels more wheat was fed and wasted in Canada during August–March 1940–41 than in the same months of the previous year. We judge that the *actual* increase in Canadian wheat utilization was less than implied by the April 1 stocks report, which perhaps understated the level of Canadian wheat supplies on that date. Nevertheless, Canadian wheat utilization has undoubtedly been increased this year, with wheat feeding unusually heavy in the Prairie Provinces. For the crop year as a whole, the amount of unmerchantable wheat and of merchantable wheat fed on producing farms was officially forecast as of April 1 at 53.0 million bushels as compared with 36.8 million last year. Probably never before has such a large amount of wheat been so utilized. Even though partially offset by reduction in Canadian wheat sowings, the heavy feeding and waste will presumably result in the highest total domestic disappearance figure on record.

In all four of the major exporting countries, the bulk of the old-crop stocks remaining on July 1 or August 1, 1941 will be held by special governmental agencies. On May 13, the Commodity Credit Corporation owned or held under loan 240 million bushels of United States wheat; and we doubt if these holdings will decline by more than about 30 million bushels before July 1. This implies that millers, dealers, and farmers in the United States may still hold about 180 million bushels privately on July 1. In Canada, Argentina, and Australia, privately owned stocks on August 1, 1941 will presumably be relatively smaller than in the United States, and less in the aggregate than for many a year. At 70 million bushels, our forecast of Australian stocks on August 1 may look high in comparison with recent reports that as of May 1 only 16 million bushels were available for export sale in Australia.[1]

[1] *Daily Trade Bulletin*, May 13, 1941.

Actually, however, these two estimates are not necessarily inconsistent, since substantial quantities of wheat that have been sold will presumably remain unshipped on August 1, and additional large quantities will then be on hand to cover domestic consumption and flour exports during August–November.

The prospective levels of year-end wheat stocks in other major positions as of August 1, 1941 are much more uncertain. We have already stated our belief, based on such inadequate evidence as is available, that the aggregate European carryover will be of average size or larger, though substantially reduced from the high levels of the two preceding years (p. 403). Stocks afloat to Europe and ex-Europe may reasonably be expected to be small as a result of light international shipments, with the European portion originating mainly in Canada and destined almost wholly for Britain.

WORLD WHEAT STOCKS EX-RUSSIA EX-ASIA, ABOUT AUGUST 1, 1941, WITH COMPARISONS

(Million bushels)

Position	1934–38 average	1938	1939	1940	1941 forecast
U.S. wheat in U.S.	160	153	252	282	390
U.S. wheat in Canada	0	0	1	1	0
Canadian wheat in Canada	112	24	95	273	490
Canadian wheat in U.S.	9	1	8	28	40
Australia	55	50	50	125	70
Argentina	76	72	230	75	155
Four exporters	412	300	636	784	1,145
Europe, French North Africa[a]	343	239	460	550[b]	350[b]
Afloat,[c] Egypt	42	54	54	66	30
Total	797	593	1,150	1,400[b]	1,525[b]

[a] Europe ex-Russia, and Morocco, Algeria, and Tunis.
[b] For areas included within 1939 boundaries.
[c] Afloat to Europe and to ex-Europe.

The figures summarized in the foregoing table clearly show that the anticipated record wheat stocks of 1,525 million bushels on August 1, 1941 will be heavily concentrated in the four major exporting nations, and particularly in North America. The Canadian carryover in North America is expected to be about 230 million bushels larger than the previous record one of 1940, and the United States carryover is expected to approximate the former record of 1932. Australian and Argentine stocks, both separately and in the aggregate, will presumably fall short of previous record levels, but will nevertheless stand high as compared with most earlier years.

New-crop prospects.—It now seems clear that the 1941 crop will not equal the standing record of 4,550 million bushels in 1938, and distinctly improbable that it will be as low as the 1934–36 average of about 3,500 million bushels. But what its position will be within this range of one billion bushels can not yet be foreseen. We are inclined to guess a figure of around 3,925 million bushels, not greatly different from last year's harvest; but the actual result will depend to a large extent upon subsequent weather conditions.

At present, 1941 preliminary crop estimates have been issued for only two countries. At 382 million bushels, the new Indian crop is now placed somewhat below that of last year, whereas the Syrian and Lebanon crop is reported to be a couple of million bushels larger than in 1940. In total, the indicated net reduction in these particular crops is 18 million bushels.

More important for the world wheat situation are the current prospects for the wheat crop of the United States. As of May 1, the American winter-wheat crop was officially forecast at 653 million bushels. This implies abandonment considerably below average and a high, but not record, yield per acre on a sown area of moderate size. The final estimate of the winter-wheat crop may differ considerably from the May forecast; but it is improbable that the difference will be anything like as great as last year, when a May forecast of 460 million bushels was subsequently revised to 589 million bushels. The United States spring-wheat crop has just been planted. In spite of a late spring in the Northwest, farmers are believed to have fulfilled their intentions as of March 1 to sow about 17.1 million acres to spring wheat. Moisture conditions are generally favorable in the spring-wheat belt, but it is still too early to count on better than average yields per acre. On the prospec-

tive area sown, a yield of slightly over 10 bushels per acre would result in a spring crop of 175 million bushels. At present we hesitate to suggest an outturn higher than this. On the other hand, conditions are now favorable in the spring-wheat area, and Secretary Wickard apparently allowed for a spring crop of 205 million bushels in his announcement on May 10 with regard to wheat marketing quotas in 1941–42. In total, therefore, the United States wheat crop of 1941 might now be forecast at 830 million bushels (on the basis of an expected spring crop of 175 million) or at 858 million (on the basis of a spring crop of 205 million).

In Canada, the government's new wheat program[1] together with other factors apparently influenced Canadian farmers to reduce their spring-wheat sowings about 25 per cent from last year. As of May 1, 1941, farmers expressed their intentions to plant spring wheat on only 21.1 million acres, as compared with a reported sown area of 28.0 million acres last year and 24.9 million on the average in 1935–39. The yield per acre is utterly unpredictable. If it should equal the 1926–40 average of 14.3 bushels, the outturn of Canadian spring wheat would total 302 million bushels and the entire Canadian crop would total about 315 million. Such a harvest would be about 25 million larger than provided for under the Wheat Board's plan to accept total marketings of 230 million bushels.

Throughout Europe great efforts have been made to expand the area planted to food and feed crops. In the Danube basin, announced long-range plans provide for the curtailment of wheat acreage in favor of increased plantings of oil seeds and textile and fodder crops for Germany; but for 1941, at least, there has probably been a significant increase in wheat plantings (mainly in Rumania) as compared with sowings within the same boundaries for 1940. Moreover, the Danubian wheat acreage would have been larger still this year if weather conditions had not been unfavorable for late seeding of winter wheat and early seeding of spring wheat, and if war developments had not seriously interfered with spring plantings.

In northwestern and central Europe, the area sown to wheat has undoubtedly been materially expanded. In the United Kingdom, 3 to 4 million acres have been added to the crop acreage since 1939 and a considerable portion of this has been sown to wheat. In Eire, efforts were made to double the wheat acreage, but unfavorable weather conditions permitted only part of the intended expansion. On the Continent, increases of roughly 10 per cent over 1940 seem to be indicated for Germany, Belgium, and Norway, and an increase of some 30 to 40 per cent for Switzerland.[2] In contrast, wheat sowings in Sweden have apparently been reduced about 8 per cent this year in favor of a much greater expansion (23 per cent) in rye plantings.[3] French wheat sowings are reported to have been increased 2.3 million acres as compared with the abnormally low sowings for 1940.[4]

In southern Europe, the area sown to wheat was apparently increased this year in Portugal and Spain, probably less appreciably expanded in Italy, and reduced in Greece. In Italy and Greece, shortage of labor and draft power attributable to military operations were primarily responsible for restricting desired expansion of wheat acreage.

Weather conditions have been neither notably unfavorable nor definitely favorable for the new European crop. In some countries

[1] Faced with a burdensome wheat carryover in excess of 500 million bushels and restricted export markets, the Canadian government adopted a program designed to reduce wheat plantings and to limit the financial outlay of the Canadian Wheat Board. Briefly, the program provides that the Wheat Board will purchase at a basic minimum price of 70 cents per bushel for No. 1 Northern wheat at Fort William–Port Arthur 230 million bushels of 1941 wheat. Quotas for the marketings of individual farmers are to be based upon 65 per cent of the wheat acreage each farmer had planted for 1940, or, in unusual cases, for specified earlier years. To compensate farmers acceding to the government's request for wheat-acreage contraction, the government has agreed to pay a bonus of $4.00 per acre for land withdrawn from wheat and left to summer fallow through July 1, 1941, and a bonus of $2.00 per acre for wheat land diverted to feed grains, rye, grass, or clover.

[2] *Monthly Bulletin of the International Institute of Agriculture*, November 1940, p. 663S; *Foreign Commerce Weekly*, Feb. 8, 1941, p. 235; *Foreign Crops and Markets*, Mar. 10, 1940, p. 298, and May 5, 1941, p. 644.

[3] *Foreign Crops and Markets*, May 5, 1941, p. 645.

[4] *New York Times*, April 24, 1941, p. 8.

early onset of winter curtailed late plantings of winter wheat, and throughout most of Europe a late spring restricted the volume of spring-wheat sowings and threatened to reduce yields. As of early May, the general condition of the growing wheat was apparently below normal in the Danube basin, Greece, and parts of western and southern Europe, including unoccupied France. However, favorable weather conditions during May–July could still result in average to above-average yields. Even with normal conditions during those months, the total European crop (1939 boundaries) might prove to be as much as 200 million bushels larger than the small 1940 crop, now placed at 1,350 million bushels.

Very little information is available with respect to other Northern Hemisphere crops. However, there is no reason at the present time to expect these crops to differ materially in the aggregate from their total in 1940.

In the Southern Hemisphere, wheat sowings are expected to be below average this year in both Australia and Argentina, but little change is anticipated as compared with last year. Neither of these countries resorted to compulsory acreage restriction for the 1941 crop, though in both a legal basis exists for such restriction by special government boards. Since purchases of 1941 wheat by the Australian Wheat Board are limited, under the new Australian program, to 140 million bushels, marketing quotas would presumably be assigned to individual farmers if the 1941 harvest should threaten to furnish marketings of more than the authorized quantity. At present, however, there is no reason to anticipate an excessive Australian harvest. If sowings should be the same this year as last, and if the yield per acre should prove to be of average size, Australia would harvest this year a wheat crop of somewhat less than 150 million bushels, suggesting marketings of only about 130 million. The yield per acre could, of course, be higher, though recent prolonged drought in Australia (particularly Western Australia) has operated against such a result.

The latest reports from Argentina indicate that farmers there are likely to plant about as much wheat this year as last, despite official recommendations of a reduction of 10 per cent. Sowing conditions in Argentina have been favorable in recent months, with subsoil moisture reserves satisfactory. An average yield per acre on a planted area equal to last year's would result in a crop of about 215 million bushels, or 55 million less than was harvested in 1940.

Prospective total wheat supplies.—Should the new world wheat crop prove, as suggested by the preceding figures, about equal to or 40 million bushels smaller than the 1940 harvest, and should old-crop stocks on about August 1, 1941 approximate 1,525 million bushels, the aggregate wheat supplies available for 1941–42 would be unprecedentedly large. The increase as compared with the record wheat supplies of 1939–40 and 1940–41 would be in the neighborhood of 85 to 100 million bushels, the increase above the 1934–39 average roughly 850 million. Again, as in the current year, the world's wheat supplies would be concentrated heavily in the four major exporting countries, and particularly in North America.

Marketing Quotas in the United States[1]

Wheat growers will vote on May 31 on the question of subjecting wheat marketing to quota restrictions in 1941–42. This will be the first referendum on wheat quotas. Under the Agricultural Adjustment Act of 1938, a technicality kept the issue from coming to a vote in the spring of that year.[2] In each of the next two years the statistical position was so appraised that no referendum was required, though it would have been mandatory in 1940 if the coming harvest had not been seriously underestimated.[3] For some time it has seemed clear that the statistical position for 1941–42, as officially determined on May 10, would require the Secretary of Agriculture to issue a referendum call.

Similar referenda on other commodities have failed to carry in only four instances: in December 1938, less than the required two-thirds majority was given by rice growers and by growers of burley, flue-cured, and fire-

[1] This section was written by Joseph S. Davis.

[2] Wheat Studies, May 1938, XIV, 348.

[3] *Ibid.*, December 1940, XVII, 170.

cured and dark air-cured tobaccos.[1] Other referenda were carried by ample majorities: the tobacco referenda of March–April 1938, October–November 1939, and July–November 1940 (the last for 3-year quotas); the four cotton referenda of 1938–40; and the 3-year-quota peanut referendum of April 1941.[2]

The wheat referendum will probably carry,[3] but this outcome is not assured. Very small wheat growers (with a "normal" production of 200 bushels or less) are exempt from quota restrictions and therefore ineligible to vote. Yet the total number of those eligible to vote, under the highly complex eligibility provisions, includes many whose stake in the result is small; and among these are an indeterminate number whose attitudes are lukewarm, cold, or hostile. How generally these will choose to vote, and how far those who do will consider more than their own individual interests, cannot be confidently asserted in advance. Campaign efforts by federal, state, country, and local organizations have been directed toward getting out a favorable vote, but appear to have been less vigorous in some states where there is less support for the AAA program in general and little interest in wheat loans.

The educational campaign has been conducted under difficulties because Congress has had under consideration joint resolutions and bills affecting eligibility to vote, penalties for excess marketings, loan rates, and appropriations for parity payments. Action on such measures in the second half of May might exert some influence on the vote, as well as on the consequences of approval or rejection of marketing quotas.

The most effective arguments of supporters are epitomized in the slogan, "No quota, no loans," and emphasis is put on the direct and indirect importance of the CCC loan system in maintaining the wheat income of all growers. If the marketing quota should fail to carry, the outstanding effect will be suspension of the loan system. In the light of precedents and current political and economic conditions, we are reluctant to infer that, if the referendum should fail, returns to wheat growers would be allowed to drop to the extent that withdrawal of the loan arrangements would imply.

If the marketing quota provisions go into effect on July 1, they will presumably have slight or negligible effect on the marketing of the 1941 crop,[4] as compared with that of 1940. "Co-operating" growers who have planted within their allotments, presumably including the great majority of commercial growers of any importance, will be able to market and/or put under loan all they raise; and the total volume of wheat subject to penalty will not bulk large. Wheat buyers will be subject to inconvenience to the extent that they are forced to share in policing the sales of non-co-operators and collecting the penalty.[5] The prime objective of the provisions, however, is to sharpen the discrimination against those who do not voluntarily "co-operate" in keeping their acreage within their allotments. The principal effect anticipated is that planting for the crop of 1942 will be kept close to or below the national acreage quota that will be established for that crop (probably under 60 million acres and perhaps below the present legal minimum of 55 million) instead of somewhat exceeding it as in recent years.

[1] U.S. Dept. Agr., Agr. Adj. Admin., Div. of Information, *Results of AAA Referenda, 1938 through 1940* (No. 1150).

[2] U.S. Dept. Agr., Press Release 2162–41, Apr. 28, 1941.

[3] Nat. C. Murray's estimate, based on returns from his crop correspondents in April, is that 74 per cent of those voting would vote Yes. Jackson and Curtis, *Monthly Grain and Cotton Report*, May 2, 1941.

[4] At least provided no material delays are encountered in getting "clearance" for wheat not subject to penalty.

[5] See Administrator R. M. Evans' address of Apr. 3, 1941, U.S. Dept. Agr. Press Release 1980–41.

The writer is indebted to the Office of Foreign Agricultural Relations of the United States Department of Agriculture for certain foreign information. The tables were prepared by Rosamond H. Peirce and Marion Theobald, and the charts by P. Stanley King and Jean Hoover Ballou.

APPENDIX TABLES

TABLE I.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING AREAS, 1935–40*

(Million bushels)

Year	World ex-Russia[a]			United States	Canada	Argentina, Australia	Europe ex-Russia				French North Africa[d]	India	Others ex-Russia[a]	USSR
	Total[a]	Northern Hemisphere	Southern Hemisphere				Total	Lower Danube[b]	Mediterranean[c]	Others				
1935 ..	3,557	3,184	373	626	282	286	1,575	302	490	783	70	363	355	1,133[e]
1936 ..	3,509	3,038	471	627	219	401	1,480	384	374	722	50	352	380	*1,128*
1937 ..	*3,812*	*3,344*	468	876	180	395	*1,537*	361	*451*	725	72	364	388	1,722
1938 ..	*4,551*	*3,944*	607	932	360	523	*1,847*	466	*449*	932	72	402	415	*1,502*
1939 ..	*4,198*	*3,794*	*404*	751	521	330	*1,695*	451[f]	456	*788*[f]	100	372	*429*	.....
1940[g]..	*4,082*	*3,637*	*445*	817	551	368	*1,400*	*300*[f]	*433*	*667*[f]	*68*	403	*475*	.....
1940[h]..	*3,965*	*3,540*	*425*	817	551	355	*1,350*	296[f]	429	*625*[f]	*64*	403	*425*	.....

* Data summarized from Table II (except for India and USSR). Figures in italics are in part unofficial approximations. Dots (...) indicate no data available.

[a] Excludes China, Iran, and Iraq.
[b] Hungary, Yugoslavia, Rumania, Bulgaria.
[c] Portugal, Spain, Italy, Greece.
[d] Morocco, Algeria, Tunis.
[e] Not comparable with later years.
[f] Danube increased, other Europe decreased, by 10–15 million bushels in comparison with earlier years by change in Hungarian-Czechoslovakian boundary.
[g] As of about Jan. 20, 1941, for 1939 boundaries.
[h] As of about May 20, 1941, for 1939 boundaries.

TABLE II.—WHEAT PRODUCTION IN PRINCIPAL PRODUCING COUNTRIES, 1935–40*

(Million bushels)

Year	U.S. winter	U.S. spring	Canada	Australia	Argentina	Uruguay	Chile	Brazil, Peru	Hungary	Yugoslavia	Rumania	Bulgaria	Morocco	Algeria	Tunis
1935.....	465.3	161.0	281.9	144.2	141.5	15.1	31.8	7.41	84.2	73.1	96.4	47.9	20.0	33.5	16.9
1936.....	519.9	106.9	219.2	151.4	249.9	9.2	28.6	8.36	87.8	107.4	128.7	60.4	12.2	29.8	8.1
1937.....	685.8	189.9	180.2	187.3	207.6	16.6	30.3	9.58	72.2	86.2	138.2	64.9	20.9	33.2	17.6
1938.....	688.1	243.6	360.0	155.4	367.4	15.5	35.5	10.52	98.8	111.3	177.2	79.0	23.2	34.9	14.0
1939.....	569.7	181.7	520.6	210.3	119.5	9.9	31.6	....	113.1	105.7	163.6	69.0	38.8	42.6	18.6
1940[a]....	589.2	227.5	551.4	91.9	275.7	....	....	....	75.0	69.3	89.3	....	23.9	*27.6*	*17.0*
1940[b]....	589.2	227.5	551.4	83.8	271.1	6.4	*30.1*	....	76.0	69.3	89.3	61.8	23.9	*27.6*	*12.5*

Year	United Kingdom	Eire	France	Italy	Germany	Austria	Czecho-Slovokia	Switzerland	Belgium[c]	Netherlands	Denmark	Norway	Sweden	Spain	Portugal
1935.....	65.4	6.69	285.0	282.8	171.5	15.5	62.1	5.97	17.1	16.7	14.7	1.87	23.6	158.0	22.1
1936.....	55.3	7.84	254.6	224.6	162.7	14.0	55.6	4.47	17.2	15.4	11.3	2.09	21.6	121.5	8.7
1937.....	56.4	6.99	257.8	296.3	164.1	14.7	51.3	6.18	16.8	12.7	13.5	2.50	25.7	*110.0*	14.7
1938.....	73.3	7.40	360.1	300.7	205.0	16.2	66.7	7.34	22.0	15.9	16.9	2.64	30.2	*96.0*	15.8
1939.....	61.6	9.52	273.5	293.2	206.3[d]		*40.0*[e]	5.89	13.8	15.3	15.4	2.86	31.4	105.7	19.0
1940[a]....	....	....	.....	268.2	.....		....	....	....	....	....	2.60	16.7	121.3	....
1940[b]....	....	11.68	.....	268.2	.....		....	5.40	....	....	....	2.60	15.9	121.3	9.9

Year	Poland	Lithuania	Latvia	Estonia	Finland	Greece	Turkey	Other Near East[f]	Egypt	Japan	Chosen	Manchukuo	Mexico	South Africa	New Zealand
1935.....	73.9	10.1	6.52	2.27	4.23	27.2	92.6	24.8	43.2	48.7	9.7	37.3	10.7	23.7	8.86
1936.....	78.4	8.0	5.27	2.43	5.26	19.5	141.6	20.3	45.7	45.2	8.2	35.2	13.6	16.1	7.17
1937.....	70.8	8.1	6.30	2.79	7.66	30.0	133.0	24.1	45.4	50.4	10.2	41.4	11.0	10.7	6.04
1938.....	79.8	9.2	7.05	3.14	9.40	36.0	156.7	27.3	45.9	45.2	10.4	34.3	11.8	17.1	5.56
1939.....	83.4	9.4	7.77	3.13	8.50	38.3	*154.5*	28.1	49.0	61.1	12.6	34.8	14.8	15.3	8.01
1940[a]....	....	....	....	2.79	5.99	34.2	191.1	....	49.8	66.1	....	32.0	13.0	17.2	....
1940[b]....	....	....	....	2.79	6.91	29.4	*150.8*	....	50.0	66.1	10.2	32.0	12.9	16.5	....

* Data of U.S. Department of Agriculture and International Institute of Agriculture. Figures in italics are unofficial approximations. Dots (...) indicate no data available.

[a] As of about Jan. 20, 1941, for 1939 boundaries.
[b] As of about May 20, 1941, for 1939 boundaries.
[c] Including Luxemburg.
[d] Including the Sudeten area.
[e] Bohemia-Moravia and Slovakia.
[f] Syria and Lebanon, Palestine, Cyprus.

TABLE III.—WHEAT RECEIPTS IN NORTH AMERICA, NOVEMBER–APRIL 1940–41, WITH COMPARISONS*

(*Million bushels*)

Year	United States (13 primary markets)							Canada (primary receipts in Prairie Provinces)[a]						
	Nov.	Dec.	Jan.	Feb.	March	Apr.	July–Apr.	Nov.	Dec.	Jan.	Feb.	March	Apr.	Aug.–Apr.
1935–36.....	14.5	9.9	9.3	5.5	9.8	7.4	203.6	21.0	14.2	3.2	2.1	7.2	4.6	198.8
1936–37.....	10.7	10.4	7.8	6.1	7.6	8.9	191.1	8.5	8.1	2.8	3.1	5.8	4.2	150.8
1937–38.....	16.1	10.6	10.9	8.5	10.6	10.9	299.7	9.8	5.2	5.6	3.2	4.0	4.6	115.8
1938–39.....	19.1	14.9	11.9	9.5	13.7	16.0	313.3	21.2	9.6	4.6	2.6	5.5	5.1	272.3
1939–40.....	12.2	11.5	9.4	11.4	21.9	28.4	296.6	36.7	15.3	4.5	5.5	7.9	6.0	386.8
1940–41.....	10.0	9.0	10.4	8.4	12.6	17.0	275.7	37.7	39.2	20.7	17.6	18.0	24.0	364.5

*United States data, unofficial, from *Survey of Current Business;* Canadian data, official, from *Canadian Grain Statistics.*

[a] From August 1939 including small receipts at interior and private mill elevators not previously included.

TABLE IV.—WHEAT VISIBLE SUPPLIES, JANUARY–MAY 1941, WITH COMPARISONS*

(*Million bushels*)

Date	Total	United States grain		Canadian grain		Total North America	Afloat to Europe	U.K. ports	Total U.K. and afloat	Australia	Argentina[b]
		United States	Canada	Canada[a]	United States						
Jan. 1											
1937.....	262.7	62.4	.0	81.6	27.8	171.8	35.9	9.0	44.9	44.5	31.5
1938.....	314.4	94.5	1.9	49.2	4.7	150.3	31.4	13.0	44.4	82.0	37.7
1939.....	563.0	128.7	.4	157.1	7.9	294.1	24.7	18.4	43.1	82.8	143.0
1940.....	.....	132.8	.8	301.0	38.4	473.0	....	....	....	77.0	132.4
1941.....	.....	169.8[c]	.3	424.0	53.8	647.9	....	....	....	76.0[d]	49.6
May 1											
1937.....	238.6	26.3	.0	55.9	10.3	92.5	51.0	12.3	63.3	39.5	43.3
1938.....	250.0	43.2	.7	38.0	.7	82.6	42.0	9.6	51.6	50.0	65.8
1939.....	546.2	74.9	.0	130.3	.8	206.0	32.5	24.2	56.7	46.5	237.0
1940.....	.....	105.6	.8	259.3	17.8	383.5	....	....	....	126.5	112.9
1941											
Feb. 1.....	.....	161.1[c]	.2	438.5	48.4	648.2	....	....	....	75.5	141.5
Mar. 1.....	.....	152.6[c]	.2	436.8	46.3	635.9	....	....	....	68.0	173.5
Apr. 1.....	.....	141.9[c]	.2	423.8	44.1	610.0	....	....	....	63.0[d]	177.8
May 1.....	.....	139.1[c]	.2	415.9	31.7	586.9	....	....	....	58.0	177.5

* Selected, for dates nearest the first of each month, from weekly data in *Commercial Stocks of Grain in Store in Principal U.S. Markets, Canadian Grain Statistics,* Broomhall's *Corn Trade News* (for Afloat to Europe, U.K. ports, and Australia), and *Boletin Informativo* for Argentina. Dots (...) indicate that data are not available.

[a] Excluding, for comparability, stocks in transit by rail which are now included in officially published totals.

[b] Official data on commercial stocks.

[c] Two markets, Enid, Oklahoma, and Amarillo, Texas, added to the total at the beginning of January 1941.

[d] Approximate.

TABLE V.—WHEAT STOCKS IN THE UNITED STATES AND CANADA, ABOUT APRIL 1, 1936–41*

(*Million bushels*)

Year	United States (April 1)						Canada (March 31)						
	On farms	In country mills and elevators	Commercial stocks	In city mills[a]	Total in four positions	U.S. grain in Canada	On farms	In country mills and elevators[b]	In terminal elevators	In transit	In flour mills[c]	Total in five positions	Canadian grain in U.S.
1936.....	99.0	49.3	49.9	72.1	270.3	.0	46.8	77.9	112.2	6.6	3.3	246.8	16.4
1937.....	71.5	38.2	34.7	66.0	210.4	.0	44.2	29.7	34.4	4.4	2.5	115.2	14.1
1938.....	124.6	71.8	54.4	79.9	330.7	1.0	39.0	18.5	23.4	1.4	1.3	83.6	1.1
1939.....	188.4	90.0	82.7	82.5	443.6	.1	61.2	47.6	83.9	7.0	1.3	201.0	1.8
1940.....	153.8	81.0	105.4	95.0	435.2	.8	106.2	127.9	153.6	7.1	2.0	396.8	22.3
1941.....	195.8	131.2	141.9	76.7	545.6	.2	157.6	252.3	167.0	17.0	1.6	595.5	44.0

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

[a] Estimates of U.S. Department of Agriculture, based on stocks in city mills reported to the Census Bureau, raised to allow for stocks in non-reporting mills.

[b] Includes private terminal elevators and flour mills in Western Division.

[c] In Eastern Division only.

TABLE VI.—UNITED STATES FLOUR PRODUCTION, EXPORTS, AND NET RETENTION, MONTHLY, JULY–APRIL 1940–41, WITH COMPARISONS*

(*Thousand barrels*)

Month or period	Production						Net exports and shipments to possessions			Estimated net retention		
	All reporting mills			Estimated total								
	1938–39	1939–40	1940–41	1938–39	1939–40	1940–41	1938–39	1939–40	1940–41	1938–39	1939–40	1940–41
July	8,507	8,432	8,504	9,021	8,942	9,018	447	947	439	8,574	7,995	8,579
Aug.	9,160	9,522	8,881	9,714	10,098	9,418	452	698	499	9,262	9,400	8,919
Sept.	9,699	11,191	9,288	10,285	11,867	9,850	444	741	452	9,841	11,126	9,398
Oct.	9,634	9,428	9,960	10,216	9,997	10,562	572	663	711	9,644	9,334	9,851
Nov.	8,838	8,298	8,737	9,372	8,800	9,265	466	610	786	8,906	8,190	8,479
Dec.	8,416	8,119	8,166	8,925	8,610	8,659	607	464	459	8,318	8,146	8,200
Jan.	8,476	8,649	8,818	8,989	9,171	9,351	547	471	436	8,442	8,700	8,915
Feb.	7,757	8,025	8,063	8,226	8,510	8,550	699	557	571	7,527	7,953	7,979
Mar.	8,951	8,320	8,764	9,492	8,823	9,293	611	740	341	8,881	8,083	8,952
Apr.	8,244	8,269	....	8,742	8,769	9,575[a]	802	478	400[a]	7,940	8,291	9,175[a]
July–Apr.	87,682	88,253	....	92,982	93,587	93,541[a]	5,647	6,369	5,094[a]	87,335	87,218	88,447[a]
July–June	104,638	104,448	....	110,962	110,761	....	7,171	7,163	....	103,791	103,598	103,600[a]

* Reported production and trade data from U.S. Department of Commerce, *Wheat Ground and Wheat Milling Products*, and Statement No. 3009. Total production and net retention are our estimates.

[a] Preliminary estimate.

TABLE VII.—INTERNATIONAL SHIPMENTS OF WHEAT AND FLOUR, WEEKLY FROM JANUARY 1941*

(*Million bushels*)

Week ending	Total[a]	Shipments from							Shipments to Europe				To ex-Europe		
		North America	Argentina[b]	Australia	South Russia	Danube	India	Other countries	Total	United Kingdom	Orders	Continent	Total	Brazil	Others
Jan. 4	3.38	1.98	1.29	...	.11	.00	...	.00	2.07	...	...	...	1.31	...	...
11	3.35	2.73	.62	...	.00	.00	...	.00	2.46	...	...	...	.89	...	...
18	3.59	3.33	.26	...	.00	.00	...	.00	3.06	...	...	...	.53	...	...
25	4.42	3.09	1.33	...	.00	.00	...	.00	3.41	...	...	...	1.01	...	...
Feb. 1	4.66	3.57	1.09	...	.00	.00	...	.00	3.56	...	...	...	1.10	...	...
8	3.81	3.11	.70	...	.00	.00	...	.00	3.13	...	...	...	.68	...	...
15	5.69	4.67	1.02	...	.00	.00	...	.00	4.91	...	...	...	.78	...	...
22	4.75	3.54	1.21	...	.00	.00	...	.00	3.41	...	...	...	1.34	...	...
Mar. 1	4.20	3.03	1.17	...	.00	.00	...	.00	3.54	...	...	...	.66	...	...
8	6.69	4.79	1.90	...	.00	.00	...	.00	5.31	...	...	...	1.38	...	...
15	7.76	5.70	2.06	...	.00	.00	...	.00	6.76	...	...	...	1.00	...	...
22	5.65	3.99	1.66	...	.00	.00	...	.00	4.35	...	...	...	1.30	...	...
29	6.92	5.30	1.62	...	.00	.00	...	.00	5.30	...	...	...	1.62	...	...
Apr. 5	8.27	6.01	2.26	...	.00	.00	...	.00	6.82	...	...	...	1.45	...	...
12	9.01	6.67	2.34	...	.00	.00	...	.00	8.05	...	...	...	.96	...	...
19	10.66	8.54	2.12	...	.00	.00	...	.00	9.19	...	...	...	1.47	...	...
26[c]	9.65	6.99	2.66	...	.00	.00	...	.00	8.40	...	...	...	1.25	...	...
May 3[c]	10.88	8.84	2.04	...	.00	.00	...	.00	9.40	...	...	...	1.48	...	...
10[c]	12.35	8.62	3.73	...	.00	.00	...	.00	10.47	...	...	...	1.88	...	...
17[c]	12.24	9.59	2.65	...	.00	.00	...	.00	10.71	...	...	...	1.53	...	...

* Here converted from data in Broomhall's *Corn Trade News*. Dots (...) indicate that data are not available.

[a] Excluding Australia.

[b] Including Uruguay.

[c] Preliminary.

TABLE VIII.—NET EXPORTS AND NET IMPORTS OF WHEAT AND FLOUR, MONTHLY FROM JULY 1940, WITH SUMMATIONS AND COMPARISONS*

(Million bushels)

A. NET EXPORTS *(In parentheses, net imports)*

Month or period	United States[a]	Canada[b]		Australia	Argentina	Hungary	Yugoslavia	Rumania	Turkey
		A	B						
July	3.31	13.26	12.05	....	13.51		.25	.12	.01
Aug.	2.69	13.99	11.56	....	10.66		.02	.03	.04
Sept.	2.39	11.98	9.62	....	7.56	4.23	.04	.00	.04
Oct.	3.81	13.03	10.81	....	6.58		...	.00	.01
Nov.	3.51	20.35	13.71	....	7.01		...	.00	.01
Dec.	1.92	13.32	8.95	....	5.57		...	.00	.00
Jan.	1.31	6.48	15.22	....	3.81	...	...	...	...
Feb.	2.05	12.19	18.11	....	5.50	...	...	...	...
Mar.	3.41	14.14	21.50	....	7.88	...	...	...	...
Aug.-Mar.									
1940-41	21.09	105.48	109.48	....	54.57	...	...	...	...
1939-40	34.45	144.34	129.40	44.47	115.34	31.00	8.00	23.91	.25
Average[c]	26.37	128.37	124.95	62.63	79.00	17.52	6.12	22.54	1.60

B. NET IMPORTS *(In parentheses, net exports)*

Month or period	Greece	Portugal	Egypt	Iraq	China	Cuba[d]	Brazil	Uruguay	New Zealand
July	1.21	.13	(.21)	(.06)	1.64	.28	2.59	.00	.23
Aug.	1.02	.00	...	(.03)	1.40	.29		.00	.34
Sept.	...	.47	...	(.00)	1.20	.32		.05	.31
Oct.	...	...	...	(.00)	2.91	.42	13.38	...	.13
Nov.	...	...	...	(.00)	2.72	.41		...	.18
Dec.	...	...	...	.03	2.91	.44		...	.09
Jan.	...	...	...	...	4.34[e]	.45	...	...	.16
Feb.	...	...	...	...	3.01[e]	.80	...	...	...
Mar.	...	...	...	...	...	.25	...	...	...
Aug.-Mar.									
1940-41	...	...	...	...	...	3.38	...	...	...
1939-40	7.00	.57	.12	...	8.46	3.38	22.97	(2.93)	.78
Average[c]	9.24	.69	(.09)	(1.68)	5.17	3.36	24.83	(2.24)	1.23

* Data from official sources and International Institute of Agriculture. Dots (...) indicate that data are not available. Official trade data no longer published for the United Kingdom, Eire, France, Italy, Germany, Czechoslovakia, Switzerland, Belgium, Netherlands, Denmark, Norway, Sweden, Spain, Finland, Poland, USSR, Bulgaria, Morocco, Algeria, Tunis, India, Manchukuo, Syria and Lebanon, and South Africa.

[a] Derived by subtracting imports of wheat and flour for consumption from total domestic exports of wheat and flour plus flour shipments to possessions. This series includes grain imports for milling in bond and exports of flour milled from foreign as well as from domestic grain. Flour is converted to grain equivalent at 4.7 bushels per barrel.

[b] Series A (carried previously) shows total customs exports of wheat and flour minus customs imports of wheat and flour. Series B is derived by subtracting customs imports of wheat and flour from the total of overseas clearances of Canadian wheat grain plus customs exports of Canadian flour plus United States imports of Canadian wheat for consumption and for milling in bond. Flour is converted to grain equivalent at 4.5 bushels per barrel. For a description of the difference between customs exports and overseas clearances of wheat, see Canada, Dominion Bureau of Statistics, *Monthly Review of the Wheat Situation*, Feb. 23, 1940, p. 3.

[c] Five years ending 1939-40.

[d] Gross imports of flour from the United States.

[e] Gross imports.

TABLE IX.—WHEAT DISPOSITION ESTIMATES, ANNUALLY FROM 1935-36*

(Million bushels)

Year	Domestic supplies			Domestic utilization				Surplus over domestic use[c]	Net exports			Year-end stocks
	Initial stocks	New crop	Total	Milled (net)	Seed use	Balancing item[a]	Total[b]		Total	To Mar. 31	From Apr. 1	
	A. UNITED STATES (JULY–JUNE)											
1935-36	147	626	773[d]	466	88	+105	659	114	(28)[e]	(24)[e]	(4)[e]	142
1936-37	142	627	769[d]	471	97	+141	709	60	(23)[e]	(24)[e]	1	83[f]
1937-38	83[f]	876	959	468	94	+137	699	260	107	75	32	153[f]
1938-39	153[f]	932	1,085	475	76	+173	724	361	109	80	29	252[f]
1939-40	252[f]	751	1,003	472	74	+128	674	329	47	41	6	282[f]
1940-41[g]	284[f]	817	1,101	475	77	+134	686	415	25	..	..	390
1940-41[h]	282[f]	817	1,099	475	75	+129	679	420	30	24	6	390
	B. CANADA (AUGUST–JULY)											
1935-36	202	282	484	45	34	+43	122	362	254	161	93	108
1936-37	108	219	327	44	34	+21	99	228	195	156	39	33
1937-38	33	180	213	43	33	+26	102	111	87	66	21	24
1938-39	24	360	384	47	35	+42	124	260	165	114	51	95
1939-40	95	521	616	49	36	+51	136	480	207	144	63	273
1940-41[g]	273	551	824	44	33	+57	134	690	180	...	..	510
1940-41[h]	273	551	824	43	29	+72	144	680	190	105	85	490
	C. AUSTRALIA (AUGUST–JULY)											
1935-36	57	144	201	33	13	+10	56	145	102	74	28	43
1936-37	43	151	194	32	15	+ 4	51	143	102	64	38	41
1937-38	41	187	228	30	15	+ 7	52	176	126	70	56	50
1938-39	50	155	205	31	14	+14	59	146	96	61	35	50
1939-40	50	210	260	32	13	+ 4	49	211	86	44	42	125
1940-41[g]	130	92	222	32	12	+18	62	160	80	..	..	80
1940-41[h]	125	84	209	32	12	+15	59	150	80	..	..	70
	D. ARGENTINA (AUGUST–JULY)											
1935-36	85	142	227	69	23	+ 5	97	130	70	53	17	60
1936-37	60	250	310	67	25	+11	103	207	162	127	35	45
1937-38	45	208	253	71	25	+13	109	144	72	46	26	72
1938-39	72	367	439	74	21	− 8	87	352	122	53	69	230
1939-40	230	120	350	73	21	+ 1	95	255	180	115	65	75
1940-41[g]	70	276	346	74	19	+13	106	240	105	...	..	135
1940-41[h]	75	271	346	74	21	+ 6	101	245	90	55	35	155

* Based on official data so far as possible; see WHEAT STUDIES, December 1940, Table XXX.

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

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

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

[d] Not including net imports.

[e] Net imports.

[f] Excluding new-crop wheat in some positions.

[g] Estimates as of January 1941.

[h] Estimates as of May 1941.

TABLE X.—EUROPEAN DOMESTIC WHEAT PRICES, APRIL 1941, WITH COMPARISONS*

(Indicated currency per quintal; except as noted for the U.K.)

April	United Kingdom (*shillings per cwt.*)		Germany[a] (*R M*)	France[a] (*francs*)	Italy[a] (*lire*)	Bulgaria[a] (*leva*)	Rumania (Bralla) (*lei*)	Hungary (Budapest) (*pengö*)	Yugoslavia (northern) (*dinars*)
	Standard	Gazette							
	A. DOMESTIC CURRENCY								
1937	10.0	10.08	20.8	148.5	118	300	536	20.7	173
1938	10.0	7.67	20.7	191.0	125	320	532	21.4	210
1939	10.0	4.25	21.3	214.5[b]	135	340	415	20.9	150
1940	11.0	7.12	21.2	208.0[b]	135	350	635	20.5	251
1941	14.5	14.60	21.2	228.0[b]	155	430	880[c]	24.1[a]	313[a]
	B. DEFLATED								
1937	10.4	10.5	27.0	169	130	487	683	26.6	241
1938	11.1	8.5	26.9	185	125	506	674	25.6	266
1939	11.8	5.0	27.7	199	131	507	494	24.3	195
1940	9.5	6.1	26.5	...[d]	...[d]	500	500	21.8	246
1941[e]	10.9	11.0	26.2	...[d]	...[d]	489	624	22.1	219

* Price data from official sources and the International Institute of Agriculture. Prices are deflated by general indexes of wholesale prices (1929 = 100) from the *Federal Reserve Bulletin*, and the League of Nations *Monthly Bulletin of Statistics*.

[a] Fixed price to producers; in Germany for the Berlin area.

[b] Less a tax of from 14 to 49 francs per quintal.

[c] Fixed price to producers for January 1941.

[d] Wholesale price index no longer available.

[e] Latest available index used.

TABLE XI.—SELECTED WHEAT PRICES, WEEKLY FROM JANUARY 1941, WITH COMPARISONS*

(U.S. cents per bushel)

Week ending	United States							Canada (Winnipeg)[a]				Argentina (B.A.)[a]		Australia f.o.b.
	Futures (Chicago)		Cash					Futures		Cash		Futures	Cash	
	May	July	Basic cash (Chi.)	No. 2 H.W. (K. C.)	No. 2 R.W. (St. L.)	No. 1 Dk.N.S. (Mnpls.)	Soft White (Port.)[b]	May	July	Wtd. average	No. 3 Man.	May[c]	78-kilo	
1940														
Jan. 6..	105	103	106	104	109	110	87	80	81	75	72	69	67	65
Feb. 3..	97	94	98	95	101	100	83	77	77	73	70	61	60	65
Mar. 2..	102	100	103	100	105	104	83	81	82	77	75	61	58	64
Apr. 6..	105	104	106	103	108	105	83	81	82	79	76	67	65	66
May 4..	107	106	108	105	110	109	85	81	82	80	76	78	77	69
1941														
Jan. 4..	87	82	90	86	92	91	76	70	72	65	62	55	55	70
11..	88	82	92	86	94	91	75	70	72	65	63	55	55	68
18..	87	82	91	84	92	90	75	70	72	64	63	56	55	68
25..	86	80	90	84	91	90	75	70	71	64	62	56	55	68
Feb. 1..	83	77	88	80	89	88	73	70	71	65	62	55	55	68
8..	82	76	87	79	88	86	73	71	72	66	63	55	55	68
15..	80	74	84	76	85	84	72	70	72	66	63	55	55	68
22..	80	75	85	76	84	83	73	70	72	67	64	55	55	68
Mar. 1..	83	79	89	80	87	87	74	70	72	67	64	55	55	69
8..	83	79	88	80	88	87	75	70	72	67	64	55	55	69
15..	86	83	91	84	90	89	76	71	73	68	65	55	55	69
22..	87	85	92	85	91	90	76	71	72	68	65	55	55	69
29..	89	87	92	87	91	92	77	70	71	68	65	55	55	69
Apr. 5..	91	90	93	88	95	95	76	70	71	67	65	55	55	69
12..	91	89	92	88	92	95	76	70	71	67	65	55	55	69
19..	91	90	93	88	93	96	76	69	70	67	65	55	55	69
26..	90	88	92	86	92	93	75	69	70	67	65	55	55	69
May 3..	92	90	93	87	93	95	76	69	70	67	65	55	55	69
10..	97	95	98	91	97	98	78	69	70	67	65	55	55	69

* For methods of computation see WHEAT STUDIES, December 1940, XVII, 217. For the United States, prices are from *Daily Trade Bulletin* and *Foreign Crops and Markets;* for Canada, *Grain Trade News* and *Canadian Grain Statistics;* for Buenos Aires, *Revista Oficial* and *Daily Trade Bulletin;* for Australia, Broomhall's cables.

[a] Converted at constant official exchange rate.

[b] Western White (Seattle) in 1940.

[c] March future through February 1940 and through January 11, 1941.

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